Glenmarkie Wind Farm

Environmental Impact Assessment Scoping Report

Vattenfall Wind Power Ltd

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SLR Project No.: **405.065136.00002**

8 September 2025

Revision: 03

Revision Record

Revision	Date	Prepared By	Checked By	Authorised By
01	21 August 2025	CT	ME	MF
02	3 September 2025	CT	ME	MF
03	8 September 2025	CT	ME	MF
	Click to enter a date.			
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Acronyms and Abbreviations

AILV	Abnormal Indivisible Load Vehicle
AM	Amplitude Modulation
AOD	Above ordnance datum
ATC	Automated Traffic Counter
ATV	All-terrain vehicle
BBPP	Breeding Bird Protection Plan
BERP	Biodiversity Enhancement and Restoration Plan
BERR	Department for Business, Enterprise and Regulatory Reform
BESS	Battery energy storage system
BGS	British Geological Society
BoCC	Birds of Conservation Concern
BTO	British Trust for Ornithology
CCC	Committee on Climate Change
CEMP	Construction Environmental Management Plan
CIEEM	Chartered Institute of Ecology and Environmental Management
CIRIA	Construction Industry Research and Information Association
CoPA	Control of Pollution Act 1971
COP	Conference of Parties
CRH	Collision Risk Height
CRM	Collision Risk Model
CRTN	Control of Road Traffic Noise
CTMP	Construction Traffic Management Plan
DECC	Department of Energy and Climate Change
DEFRA	Department for Environment, Food & Rural Affairs
DMRB	Design Manual for Roads and Bridges
DRP	Decommissioning and Restoration Plan
DTM	Digital Terrain Model
DWPA	Drinking Water Protection Area
EcIA	Ecological Impact Assessment
EC	European Council
ECU	Energy Consents Unit
EHO	Environmental Health Officer
EIA	Environmental Impact Assessment
FRA	Flood Risk Assessment
FWPM	Freshwater pearl mussel
GCN	Great Crested Newt

GDL	Gardens and Designed Landscapes
GET	Golden eagle topography
GLVIA3	Guidance of Landscape and Visual Impact Assessment, 3rd Edition
GPG	Good Practice Guide
GPP	Guidance for Pollution Prevention
GW	Gigawatt
GWDTE	Groundwater Dependent Terrestrial Ecosystems
HB	Height bands
HER	Historic Environment Record
HES	Historic Environment Scotland
HGV	Heavy Good Vehicle
HMP	Habitat Management Plan
HRA	Habitat Regulation Assessment
HRSG	Highland Raptor Study Group
IfA	Institute of Archaeologists
IoA	Institute of Acoustics
IOF	Important ornithological feature
IPCC	Intergovernmental Panel on Climate Change
ISEP	Institute of Sustainability and Environmental Professionals
JNCC	Joint Nature Conservation Committee
KM	Kilometre
LBS	Local Biodiversity Site
LCT	Landscape Character Type
LGV	Light Goods Vehicle
LI	Landscape Institute
LNR	Local Nature Reserve
LUC	Land Use Consultants
LVIA	Landscape and Visual Impact Assessment
MAGIC	Multi-Agency Geographic Information for the Countryside
MBA	Mountain Bothy Association
MBBS	Moorland Breeding Bird Surveys
MoD	Ministry of Defence
MMU	Minimum mapping unit
MW	Megawatt
NATS	National Air Traffic Services
NHZ	Natural Heritage Zone
NNR	National Nature Reserve
NPF4	National Planning Framework 4

NRTF	National Road Traffic Forecasts
NS	NatureScot
NSA	National Scenic Area
NSR	Noise Sensitive Receptors
NVC	National Vegetation Classification
OAM	Other Amplitude Modulation
OWESG	Onshore Wind Energy Supplementary Guidance
OWPS	Onshore Wind Policy Statement
PAN	Planning Advice Note
PCA	Peatland Condition Assessment
PLHRA	Peat Landslide Hazard Risk Assessment
PMP	Peat Management Plan
RECMP	Regional Eagle Conservation Management Plan
RSPB	Royal Society for the Protection of Birds
RVAA	Residential Visual Amenity Assessment
SAC	Special Areas of Conservation
SBL	Scottish Biodiversity List
SEI	Supplementary Environmental Information
SEPA	Scottish Environment Protection Agency
SES	Scottish Energy Strategy
SFCC	Scottish Fisheries Coordination Centre
SLA	Special Landscape Area
SLQ	Special Landscape Quality
SNH	Scottish Natural Heritage
SPA	Special Protection Area
SSSI	Site of Special Scientific Interest
SWT	Scottish Wildlife Trust
TGN	Technical Guidance Note
THC	The Highland Council
UK	United Kingdom
UKHAB	UK Habitat Classification
UXO	Unexploded Ordnance
WLA	Wild Land Assessment
WCA	Wildlife and Countryside Act
VP	Vantage point
ZoI	Zone of Influence
ZTV	Zone of Theoretical Visibility

1.0 Introduction

1.1 Background and Context

1.1.1 Vattenfall Wind Power Ltd (the Applicant) is intending to submit an application under Section 36 of the Electricity Act 1989 (as amended) to construct and operate a wind farm (the 'Proposed Development') on land located in the Monadhliath Mountains to the south-west of Inverness and east of Fort Augustus. The Proposed Development Site ('the Site') is located entirely within the administrative boundary of The Highland Council (THC). **Figure 1.1** shows the Site location and **Figure 1.2** shows the Site boundary for scoping purposes.

1.1.2 For the purpose of identifying scope, a maximum of up to 65 wind turbines has been assumed, with a tip height of up to 250 metres (m) and an indicative installed capacity for each wind turbine of 7.4 MW. In addition to the proposed wind turbines, it is assumed that the Proposed Development would comprise associated works and infrastructure including: crane hardstandings; access tracks; cabling; borrow pits; construction compounds; a single substation including control building and a permanent anemometry mast; and a possible battery energy storage system. The Proposed Development would require authorisation from Scottish Ministers under Section 36 of the Electricity Act 1989, as it would be a power generating station in excess of 50 megawatts (MW). The application would be submitted to the Energy Consents Unit (ECU) to administer on behalf of Scottish Ministers.

1.1.3 The Proposed Development falls under Schedule 2 of the Electricity Works (Environmental Impact Assessment) (Scotland) Regulations 2017 ('the EIA Regulations") as a generating station (Schedule 2(1)). A Schedule 2 development constitutes EIA development if it is likely to have significant effects on the environment by virtue of such factors as its nature, size or location as set out in Schedule 3 of the EIA Regulations

1.1.4 In recognition of the scale and nature of the Proposed Development, the Applicant proposes to undertake an EIA and submit an EIA Report in support of the Section 36 application.

1.1.5 This EIA Scoping Report serves as a formal request to the Scottish Ministers to provide a Scoping Opinion under Regulation 12 of the EIA Regulations. The EIA Scoping Opinion, consultation responses and the findings of the EIA process will be used to inform the final design of the Proposed Development and assess its predicted environmental effects, with a focus on the likely significant environmental effects and where they are proposed to be mitigated.

1.2 Need for the Development

1.2.1 The UK and Scottish Governments are committed to delivering a clean, affordable and secure energy system by 2030.

1.2.2 A large increase in the deployment of 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) (December 2022) 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 Section 36 application.

1.2.3 The UK Government's Clean Power Action Plan identifies that onshore wind is amongst the cheapest source of new electricity generation to build and operate at

scale. It states that to decarbonise the power sector by 2030 an additional 27 to 29 gigawatt (GW) of onshore wind is needed within Great Britain. That is a significant increase above current installed capacity, which currently stands at 14.8GW in Great Britain.

1.2.4 Onshore wind remains vital to Scotland's future energy mix, and current energy policy supports development to meet Scotland's legally binding net zero target. The Scottish Government remain committed to onshore wind as the lowest-cost new-build electricity generation in the UK.

1.2.5 The Scottish Energy Strategy (SES) 2017 sets a 2030 target for the equivalent of 50% of Scotland's heat, transport and electricity consumption to be supplied from renewable sources (the Draft Energy Strategy and Just Transition Plan (2023) maintains this target).

1.2.6 The OWPS, published in December 2022, sets out that the deployment of onshore wind is mission-critical for meeting our climate targets. The statement renews the commitment to onshore wind technology and sets an ambition for a minimum installed capacity of 20GW of onshore wind in Scotland by 2030, while recognising that we are in a nature crisis and that onshore wind farms must strike the right balance in how we care for and use our land.

1.2.7 SES and OWPS set out targets for the increase in the supply of renewable energy. The OWPS in particular reaffirms the vital role for onshore wind in meeting Scotland's energy generation and net zero emissions targets.

1.2.8 The Proposed Development relates to the generation of electricity from renewable energy sources and comes as a direct response to national planning, energy policy and climate change objectives.

1.2.9 NPF4, the SES, and the OWPS make it clear that renewable energy deployment remains a priority of the Scottish Government.

1.3 Purpose of the Scoping Report

1.3.1 Undertaking an EIA scoping study is regarded as good practice[1] and is considered to be an important step in the EIA process, as it allows all parties involved to agree the key environmental issues relevant to the Proposed Development and the methodology for their assessment. Scoping seeks to engage the planning authority (in this case, THC) and other stakeholders, at an early stage in the planning process; and ensures that key opinions, based on local understanding, are identified.

1.3.2 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 development proceeding, and therefore require further study;
- identify the technical subject areas that are unlikely to be subject to significant environmental effects and can be scoped out of further study;
- provide a basis for a consultation process with key consultees to agree the scope and content of the EIA with the ECU;

[1] A Handbook on EIA, Scottish Natural Heritage (SNH) (now NatureScot) revised 2018

- provide a basis for agreeing methodologies for undertaking required studies with the ECU, based upon currently available baseline data, Site characteristics and best practice in individual technical disciplines; and
- provide all statutory consultees, non-statutory consultees, and interested parties, with an opportunity to comment on the Proposed Development and its potential environmental effects at an early stage;

1.3.3 Upon receipt of the EIA Scoping Opinion from the Scottish Ministers, the Applicant will continue the EIA process that will lead to the preparation of an EIA Report, taking cognisance of the findings and responses received.

1.4 The Applicant

1.4.1 Vattenfall is one of Europe's largest producers and retailers of electricity and heat. Vattenfall's main markets are Sweden, Germany, the Netherlands, UK and Denmark, with a total of approximately 21,000 employees across all markets. The parent company, Vattenfall AB, is 100% owned by the Swedish state, and its headquarters are in Solna, Sweden.

1.4.2 For over a century, Vattenfall has electrified industries, supplied energy to people's homes and modernised our way of living through innovation and cooperation. As part of this, Vattenfall is aiming for net zero by 2040 across its own operations, suppliers and customers. They are working for fossil freedom.

1.4.3 Vattenfall has been in the UK for over 15 years, and operates 13 battery storage, onshore and offshore wind projects, with an installed capacity of 1.1 GW. Each year, these projects combined can:

- power 800,000 homes;
- save 1.35 million tonnes of CO_2; and
- take the equivalent of 680,000 cars off the road.

1.4.4 Vattenfall maintain a strong and growing wind portfolio, with over 3 gigawatts of capacity in operation and development.

1.4.5 Further information on Vattenfall can be found at https://group.vattenfall.com.

1.5 SLR Consulting Limited

1.5.1 SLR is a Registered Environmental Impact Assessor and Member of the Institute of Sustainability and Environmental Professionals (ISEP) 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 Geoenvironmental 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 scoping exercise for the Proposed Development, with input from Abseline in relation to landscape and visuals aspects and BiGGAR Economics in relation to socio-economic aspects.

1.7 Report Structure

1.7.1 Following this introduction, the remainder of the report comprises the following chapters:

- **Chapter 2** provides a description of the site and its surroundings in addition to a description of the Proposed Development;
- **Chapter 3** describes the proposed approach to EIA and consultation;
- **Chapter 4** outlines the legislation, energy policy and planning policy context for the Proposed Development;
- **Chapters 5 to 13** describe the environmental studies that are proposed to be undertaken to assess the impact of the Proposed Development on the environment; and
- **Chapter 14** presents a summary of the Scoping Report and the process for providing consultation responses to the ECU.

1.7.2 A number of figures accompany this Report, which are provided in **Appendix A**:

- **Figure 1.1** Site Location
- **Figure 1.2** Scoping Site Boundary
- **Figure 2.1** Indicative Site Layout
- **Figure 2.2** Cumulative Wind Farms
- **Figure 5.1** Zone of Theoretical Visibility – Bareground
- **Figure 5.2** Zone of Theoretical Visibility – Including Screening by Woodlands and Buildings
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1.8 References

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2.0 Description of the Proposed Development

2.1 The Development Site

2.1.1 The Site, as shown on **Figure 1.1**, is located entirely within the administrative boundary of THC and extends primarily over one Community Council area, Stratherrick and Foyers, with the far eastern edge of the site bordering on the southwest corner of Strathdearn Community Council's area. The Site lies approximately 30 km south of Inverness, approximately 8 km south-east of the settlement of Whitebridge and approximately 16 km east of the village of Fort Augustus.

2.1.2 The Site is located in the Monadhliath Mountains across hills that straddle Glen Markie. The area of the Site extends to approximately 4,211 ha.

2.1.3 The Site is situated on a mountain plateau where the most common habitats are often wet and heavily eroded moorlands with patches of bare peat and gullies, and numerous streams. There are several hills within the Site covered by heath and rockier montane habitats. The Site is used for extensive sheep grazing, grouse management and deer stalking.

2.1.4 The wind turbines would be situated at a high altitude, on ground above 668 m above ordnance datum (AOD), to approximately 870 m AOD near the summit of Carn Donnachaidh Beag within the southern extent of the Site.

2.1.5 The area surrounding the Site is sparsely settled with roads and dwellings typically following the route of glens or river corridors. The hills within the surrounding landscape are typically covered with heather moorland, with the landform generally being more low lying along Loch Ness to the north-west and the River Spey to the south-east.

2.1.6 There are a number of large operational and consented wind farms within the area, particularly to the north and south-west, with further schemes in planning. To the north, the Site is adjacent to the operational Corriegarth Wind Farm with 23 turbines and the consented Corriegarth 2 Wind Farm (14 turbines). To the south and south-west there is a cluster of three wind farms: operational Stronelairg Wind Farm (66 turbines); consented Cloiche Wind Farm (29 turbines); and consented Dell I Wind Farm (14 turbines) which is the subject of a revised application for nine turbines (Dell II Wind Farm). It is understood that the intention would be to construct Dell II instead of Dell I should permission be granted.

Statutory Designations

2.1.7 There are no statutory designations within the Site, however there are a number nearby as shown on **Figure 3.1** within **Appendix C**, which include:

- Monadhliath Special Area of Conservation (SAC) and Site of Special Scientific Interest (SSSI);
- River Spey SAC and SSSI;
- Creag Meagaigh SAC and SSSI;
- River Moriston SAC;
- Ness Woods SAC;
- Easter Ness Forest SSSI;
- Glen Tarff SSSI;

- Inverfarigaig SSSI;
- Creag Dhubh SSSI;
- Leveshie Wood SSSI; and
- Loch Bran SSSI.

2.1.8 There are no landscape designations within the Site. Nearby landscape designations are shown in **Figure 5.1** and include:

- The Cairngorms National Park; and
- The Cairngorm Mountains National Scenic Area (NSA).

2.1.9 There are no archaeological or cultural heritage designations within the Site; although there are a number of archaeological records (Canmore and Highland Historical Environment Records) within the Site.

2.1.10 There is one Scheduled Monument, and one Category A Listed Building within 10 km of the Site; as shown on **Figure 6.1**. There are no Inventoried Battlefields and Inventoried Gardens and Designed Landscapes or Conservation Areas within 10 km of the Site boundary. Additionally, there are no Category B or C Listed Buildings or Conservation Areas within 5 km of the Proposed Development.

2.2 The Cumulative Wind Farm Environment

2.2.1 The Highlands has extensive wind resource potential across the region. The location of cumulative sites within 25 km of the Site, and their status at the time of preparing this Scoping Report, are listed within **Table 2-1** and **Table 2-2**. The rationale for these sites is included in **Chapter 5 Landscape and Visual**. The locations of these wind farm sites in relation to the Proposed Development are shown on **Figure 2.2**.

Table 2-1: Cumulative Built and Consented Wind Farm Sites within a 25 km Radius

Wind Farm	Number of Turbines	Maximum Tip height
Ourack	17	180m
Farr	40	100m
Glen Kyllachy	20	110m
Dunmaglass	33	117.5m
Aberarder	12	130m
Corriegarth	23	119.3m
Corriegarth 2	14	149.9m
Bhlaraidh	32	135m
Bhlaraidh Extension	15	180m
Corrimony	5	100m
Cloiche	29	149.9m
Dell	14	130.5m
Stronelairg	66	135m
Millenium	26	125m

Wind Farm	Number of Turbines	Maximum Tip height
Plus a number of single turbines 7km or more from the Site		

Table 2-2: Cumulative Wind Farm Sites in Planning / Scoping within a 25 km Radius

Wind Farm	Number of Turbines	Maximum Tip height
Millenium East	8	200m
Culachy	8	200m
Chrathraich	14	180m
Fiodhag	46	149.9m
Loch Liath	13	200m
Cnoc Farasd	9	220m
Carn na Saobhnaidh	29	200m
Kyllachy	11	200m
Clune	27	200m
Highland	19	230m

2.3 Proposed Development Description

2.3.1 The Proposed Development would comprise the following main elements:

- up to 65 three-bladed horizontal axis wind turbines with a maximum blade tip height of up to 250 m;
- hardstanding areas e.g. crane hardstandings and laydown areas;
- borrow pits (dependent on availability of stone within the site);
- temporary construction compounds, including a concrete batching plant;
- new and upgraded access tracks including watercourse crossings, passing places and turning heads connecting infrastructure elements;
- a network of buried electrical and communication cables to be routed alongside the access tracks;
- a substation compound containing electrical infrastructure, control building, welfare facilities and meteorological and communications masts; and
- a possible battery energy storage system (BESS) compound.

2.3.2 An indicative layout has been prepared for the purposes of scoping, which considers known environmental constraints at this early stage in the EIA process. This is set out in **Figure 2.1**. This layout assumes two wind turbine clusters divided by Glen Markie. 23 wind turbines would be located to the north of Glen Markie, in the Northern Turbine Cluster, and 42 wind turbines would be located to the south, in the Southern Turbine Cluster.

2.3.3 The wind turbine and infrastructure layout will be subject to an iterative design process as part of the EIA. The design will therefore evolve as the EIA progresses,

taking into account environmental and technical constraints and feedback obtained during consultation with key consultees and the local community.

2.3.4 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 would be scoped back into the EIA process.

Wind Turbines

2.3.5 The Proposed Development would have an installed capacity of greater than 50 MW and based on the indicative site layout presented in **Figure 2.1**, this is currently anticipated to be up to 481 MW. The final choice of wind turbine model for construction will be dependent on the turbine economics and available technical options at the time of procurement.

2.3.6 **Table 2-3** shows the current turbine specifications being considered, as well as the turbine coordinates for the indicative layout shown in **Figure 2.1.**

Table 2-3: Turbine Coordinates and Turbine Specifications

Wind Turbine ID	Easting	Northing	Rotor Diameter	Tip Height
T1	257009	805029	170 m	250 m
T2	257128	805597	170 m	250 m
T3	256553	805176	170 m	250 m
T4	257696	804889	170 m	250 m
T5	256049	805230	170 m	250 m
T6	258225	804991	170 m	250 m
T7	255975	805620	170 m	250 m
T8	258460	805383	170 m	250 m
T9	256013	806013	170 m	250 m
T10	257814	805510	170 m	250 m
T11	255957	806437	170 m	250 m
T12	257262	806280	170 m	250 m
T13	256420	805726	170 m	250 m
T14	257881	806205	170 m	250 m
T15	256746	806169	170 m	250 m
T16	258362	805860	170 m	250 m
T17	258679	806305	170 m	250 m
T18	258595	804532	170 m	250 m
T19	258136	804247	170 m	250 m
T20	258478	803802	170 m	250 m
T21	258735	804131	170 m	250 m

Wind Turbine ID	Easting	Northing	Rotor Diameter	Tip Height
T22	259315	803980	170 m	250 m
T23	259237	804439	170 m	250 m
T24	259836	804329	170 m	250 m
T25	260171	804072	170 m	250 m
T26	259372	805008	170 m	250 m
T27	260366	804720	170 m	250 m
T28	259952	804862	170 m	250 m
T29	259529	805705	170 m	250 m
T30	260452	805218	170 m	250 m
T31	260759	805458	170 m	250 m
T32	260341	806035	170 m	250 m
T33	260883	806109	170 m	250 m
T34	260570	806416	170 m	250 m
T35	260015	806622	170 m	250 m
T36	259330	806740	170 m	250 m
T37	258879	807055	170 m	250 m
T38	259880	807449	170 m	250 m
T39	259515	807605	170 m	250 m
T40	259077	807921	170 m	250 m
T41	258478	807801	170 m	250 m
T42	257893	807216	170 m	250 m
T43	258350	809640	170 m	250 m
T44	258888	810023	170 m	250 m
T45	257918	809598	170 m	250 m
T46	258456	810315	170 m	250 m
T47	257398	809717	170 m	250 m
T48	258096	810535	170 m	250 m
T49	256813	809315	170 m	250 m
T50	257502	810408	170 m	250 m
T51	256896	809826	170 m	250 m
T52	256658	810197	170 m	250 m
T53	256760	810589	170 m	250 m
T54	256370	808960	170 m	250 m

Wind Turbine ID	Easting	Northing	Rotor Diameter	Tip Height
T55	255980	809221	170 m	250 m
T56	256277	809676	170 m	250 m
T57	256161	810513	170 m	250 m
T58	255684	810613	170 m	250 m
T59	255805	809977	170 m	250 m
T60	255504	809575	170 m	250 m
T61	255412	809111	170 m	250 m
T62	255063	809335	170 m	250 m
T63	255183	809845	170 m	250 m
T64	255277	810350	170 m	250 m
T65	254567	809711	170 m	250 m

Grid Connection

2.3.7 The grid connection will be subject to a separate application of consent under Section 37 of the Electricity Act 1989. The Proposed Development would have one grid connection, and it is anticipated that this would likely comprise a direct connection via approximately 13 km of overhead line, and possibly some parts of this comprising an underground line, to Melgarve substation. The precise cabling route has not yet been determined and will be the responsibility of the network operator in due course.

Access

2.3.8 Wind turbine components are expected to be delivered to the Site from the Port of Inverness. Access to the Site would be via the B862, with three potential access configurations currently under consideration. One option involves using both the proposed Dell II Wind Farm access track and the existing Stronelairg Wind Farm access track to reach the Southern Turbine Cluster, while the Northern Turbine cluster would be accessed via the existing Corriegarth Wind Farm access track. Alternatively, access may be achieved solely through either the Dell II/ Stronelairg route or the Corriegarth route, subject to the feasibility of constructing a connecting track between the two turbine clusters. New sections of access track will link the wind turbine locations within the Proposed Development.

Battery Storage

2.3.9 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 to release into the grid at a later date.

Borrow Pits

2.3.10 It is anticipated that borrow pits would be included as part of the Proposed Development, dependent on the availability of stone within the Site. 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.

2.3.11 Material for the construction of access tracks, hardstands and compounds 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.

2.4 Construction Works

2.4.1 It is anticipated that the construction phase of the Proposed Development would be completed over a period of approximately 36 months.

2.4.2 Temporary construction compounds would be required during construction. The temporary compounds would include site cabins and welfare facilities for construction workers and could also be used as a laydown area for the delivery of some materials.

2.4.3 All statutory legislation will be fully complied with during construction and Scottish Environment Protection Agency (SEPA) best practice guidance and Guidance for Pollution Prevention (GPP)[2] will be adhered to.

2.4.4 Construction mitigation and environmental protection measures would be implemented via a Construction Environmental Management Plan (CEMP). In the event that the consent application for the Proposed Development is approved, the CEMP will be issued to THC 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.

2.5 Wind Farm Lifecycle and Decommissioning

2.5.1 The Proposed Development would be designed with an operational life of 30 years. 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.

2.5.2 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.

2.5.3 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

[2] Guidance for Pollution Prevention prepared by NetRegs, a partnership between Northern Ireland Environment Agency (NIEA) and SEPA. Available at: https://www.netregs.org.uk/environmental-topics/guidance-for-pollution-prevention-gpp-documents/

period, the effects of decommissioning can in general be anticipated to be no greater than those arising from construction.

3.0 Approach to EIA

3.1 Approach to EIA

3.1.1 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. Consultation is an important part of the EIA process and assists in the identification of potential effects and mitigation measures.

3.1.2 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) (Scottish Government, 2017a), Planning Circular 1/2017: Environmental Impact Assessment Regulations (Scottish Government, 2017b), the best practice guidelines of the Institute of Sustainability & Environmental Professionals (ISEP) (formerly the Institute of Environmental Impact and Assessment (IEMA)) 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.

3.2 The EIA Report

3.2.1 The structure of the EIA Report will follow the requirements of the EIA Regulations and other relevant good practice guidance.

3.2.2 It is anticipated that the EIA Report will comprise the following volumes:

- Volume 1 – Non-Technical Summary (NTS);
- Volume 2 – EIA Report Main Text;
- Volume 3 – EIA Report Figures and Visualisations; and
- Volume 4 – Technical Appendices.

3.2.3 The following supporting documents would accompany the Section 36 application:

- Planning Statement;
- Design and Access Statement;
- Pre-Application Consultation Report; and
- Socio-Economic Report.

3.2.4 Volume 2 will likely comprise of the following chapters:

- Introduction;
- Proposed Development Description;
- Site Selection and Design Evolution;
- Approach to EIA and Consultation;
- Landscape and Visual Impact Assessment (LVIA);
- Archaeology and Cultural Heritage;
- Ecology;
- Ornithology;

- Geology, Hydrology, Hydrogeology, and Soils;
- Traffic and Transport;
- Noise and Vibration;
- Other Considerations including Aviation and Radar, Shadow Flicker, Telecomms and Climate and Carbon Balance; and
- Summary of Mitigation.

3.3 Consultation and Engagement

3.3.1 Consultation is an important part of the EIA process and will be reported within the EIA Report and supporting documentation as necessary.

3.3.2 The Applicant is committed to constructive dialogue with statutory and non-statutory consultees as well as the local community and others who have an interest in the Proposed Development, in order to consider feedback and inform the design development process.

3.3.3 A proposed list of statutory consultees, non-statutory consultees and interested parties who will be notified of the Proposed Development by the ECU is set out in **Appendix B**.

3.4 EIA Report Format

3.4.1 The EIA Report would 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.

3.5 References

ISEP (2015 – 2024). EIA Guidance. Available at: https://marketplace.mimeo.co.uk/IEMAonlinepublicationsshop#name=0&c=31e15f93-f447-4a7e-8fac-bae7ec040199

Scottish Natural Heritage (2018). Environmental Impact Assessment Handbook. Available at: https://web.archive.org/web/20220901050635/https://www.nature.scot/sites/default/files/2018-05/Publication%202018%20-%20Environmental%20Impact%20Assessment%20Handbook%20V5.pdf

Scottish Government (2017a). The Electricity Works (Environmental Impact Assessment) (Scotland) Regulations 2017. Available at: https://www.legislation.gov.uk/ssi/2017/101

Scottish Government (2017b). Planning Circular 1/2017: Environmental Impact Assessment Regulations. Available at: https://www.gov.scot/publications/planning-circular-1-2017-environmental-impact-assessment-regulations-2017/

4.0 Legislation, Energy Policy and Planning Policy Context

4.1 Introduction

4.1.1 The EIA Report will provide an overview of the relevant legislative and planning policy context within each chapter topic. Each assessment will have regard to national and local planning policy requirements, where relevant. However, it is not proposed to include a dedicated chapter on legislation, energy policy and planning policy context in the EIA Report.

4.1.2 Instead, it is proposed that a separate Planning Statement will be submitted with the Section 36 application. The Planning Statement will set out the relevant legislative context, energy policy considerations, and planning policy context for the Proposed Development. The Planning Statement will provide an assessment of the Proposed Development in relation to the statutory 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.

4.1.3 While 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.

4.2 Legislative Context

The Electricity Act 1989

4.2.1 The Proposed Development would have an installed capacity of over 50 MW and as such, the application would be made pursuant to Section 36 of the Electricity Act 1989.

4.2.2 Paragraph 3(2) of Schedule 9 of the Act requires the Scottish Ministers, in considering any relevant proposals for which their consent is required under Section 36, to have regard to:

- the desirability of the matters mentioned in paragraph 3(1)(a) of the Schedule; and,
- the extent to which the person by whom the proposals were formulated has complied with his duty.

4.2.3 The matters mentioned in paragraph 3(1)(a) are: the desirability of preserving natural beauty, conserving flora, fauna and geological or physiographical features of special interest and of protecting sites, buildings and objects of architectural, historical or archaeological interest.

4.2.4 The duty under paragraph 3(1)(b) requires the person who formulated the proposals to do what they reasonably can to mitigate any effect that the proposals would have on the natural beauty of the countryside or on any such flora, fauna, features, sites, buildings or objects. Sub-paragraph 1 can be relevant to an applicant if they hold a License at the date a Section 36 application is made.

4.2.5 The Act does not say that these are the only matters to be considered. Scottish Ministers will take into account other matters which would be material to their decision. These will include national energy policy, national and local planning

policy as well as the full scope of the environmental information submitted with the application.

The Town and Country Planning (Scotland) Act 1997

4.2.6 The principal planning statute in Scotland is the Town and Country Planning Act (Scotland) 1997 (as amended) (the 'Planning Act'). Section 57(2) of the Town and Country Planning (Scotland) Act 1997 (as amended) states that:

"On granting or varying a consent under section 36 or 37 of the Electricity Act 1989, the Scottish Ministers may give a direction for planning permission to be deemed to be granted, subject to such conditions (if any) as may be specified in the direction, for—

(a) so much of the operation or change of use to which the consent relates as constitutes development;

(b) any development ancillary to the operation or change of use to which the consent relates."

4.2.7 Section 25 of the Planning Act, to determine the application in accordance with the provisions of the development plan unless material considerations indicate otherwise, is not engaged. The Development Plan is however a relevant and important consideration that may be taken into account by Scottish Ministers in the determination of the application.

4.3 Energy Policy Considerations

4.3.1 The commitment to increase the amount of electricity generated from renewable sources is a vital response to climate change. Renewable energy generation will contribute to more secure and diverse energy supplies and support sustainable economic growth. The framework of international agreements, legally binding targets and climate change global advisory reports is the foundation upon which national (UK and Scottish) renewable energy policy is based.

4.3.2 The Planning Statement will highlight these policy documents and set out the hierarchy of EU, UK and Scottish Government energy policy.

4.3.3 At the International and European level, the following documents are considered to be relevant to the Proposed Development:

- The Conference of Parties (COP) 26 Glasgow Climate Pact (2021);
- The COP 21 UN Paris Agreement (2015);
- Intergovernmental Panel on Climate Change (IPCC) Reports on the Impacts of Global Warming (2016, 2021, 2023); and
- The United Nations Emissions Gap Report (2024).

4.3.4 The UK Government retains responsibility for the overall direction of energy policy, although some elements are devolved to the Scottish Government. The UK Government has published a series of policy documents setting out how targets can be achieved. In terms of UK renewable energy policy, the following documents are considered to be of most significant relevance to the Proposed Development:

- Committee on Climate Change (CCC) Progress Reports to Parliament on Reducing Emissions (2019- 2024);
- The UK Government's Energy Security Strategy (2022);

- The UK Government's Energy White Paper Powering our Net Zero Future (2020); and
- The UK Government's Clean Power 2030 Action Plan (2024).

4.3.5 The Scottish Government has published a number of policy documents and has set its own targets. The most relevant policy, legislative documents and more recent policy statements published by the Scottish Government include:

- The Scottish Energy Strategy (2017);
- The Scottish Government's declaration of a Climate Emergency (2019);
- The Scottish Climate Change Plan Update (2020);
- The Climate Change (Emissions Reduction Targets) (Scotland) Act 2019 and the legally binding net zero target for 2045;
- The Onshore Wind Policy Statement (2022);
- Scotland's Draft Energy Strategy and Just Transition Plan (2023);
- The Onshore Wind Sector Deal for Scotland (2023);
- CCC Progress Reports to Parliament on Reducing Emissions in Scotland (2019-2024);
  - Scottish Government's Response to the 2021 CCC Progress Report (2022);
  - Scottish Government's Response to the 2022 CCC Progress Report (2023);
  - Scottish Government's Response to the 2023 CCC Progress Report (2024);
- Scottish Climate Change Adaptation Programme: Progress Report 2023-2024 (2024); and
- The Climate Change (Emissions Reduction Targets) (Scotland) Act 2024.

4.3.6 The Proposed Development relates to the generation of electricity from renewable energy sources and comes as a direct response to national planning and energy policy objectives.

4.3.7 The Proposed Development would contribute to the attainment of emissions reduction, renewable energy and electricity targets at both the Scottish and UK levels. Detailed reference to the renewable energy policy framework will be provided in the Planning Statement.

4.4 Planning Policy Considerations

4.4.1 In addition to the energy policy considerations, the Planning Statement will also consider the Proposed Development against a range of planning policy documents. At this stage, the key planning policy documents that will be assessed within the Planning Statement are likely to comprise, but not necessarily be limited to the following:

- The requirements of Schedule 9 of the Electricity Act 1989 (as amended);
- National Planning Policy 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 document;
- The Inner Moray Firth Local Development Plan 2 (IMFLDP2) (2024); and
- The Dava Moor, Nairn and Monadhliath Area Wind Energy Landscape Sensitivity Pilot Study (2021)[3] (WELSPS).

4.5 Questions for Consultees

4.5.1 The following questions are directed to consultees:

a) 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 detailed chapter on Legislation, Energy Policy and Planning Policy Context in the EIA Report?

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

5.0 Landscape and Visual

5.1 Introduction

5.1.1 This chapter sets out the proposed approach to assessing the potential effects of the Proposed Development on landscape character and visual amenity through a Landscape and Visual Impact Assessment (LVIA).

5.1.2 The LVIA will consider effects on landscape fabric, landscape character, the special qualities of designated landscapes, and on visual receptors. Cumulative effects will also be considered, i.e. the incremental effects of the Proposed Development in combination with other existing and proposed wind farm developments.

5.1.3 It will examine the nature and extent of effects arising from the introduction of the proposed turbines, as well as the ancillary infrastructure (i.e. access tracks, masts, transformers etc.) which will be assessed during both the construction and operational phases of the Proposed Development.

5.1.4 The primary guidance for LVIA is the Landscape Institute and the Institute of Environmental Assessment's 2013 Guidelines for Landscape and Visual Impact Assessment, 3rd Edition (GLVIA3). In addition, NatureScot has published several documents that have been adopted as industry standard good practice for landscape and visual assessments of wind farm proposals.

5.2 Baseline Conditions

Study Area

5.2.1 A 45 km radius has been used to prepare a bare ground ZTV study (**Figure 5.1**). In addition, a further detailed ZTV study focussed on the proposed LVIA study area has been prepared as shown on **Figure 5.2**.

5.2.2 **Figure 5.2** shows the wind turbine tip heights and hub heights, with modelling of screening by woodland and buildings to provide a more realistic pattern of visibility. The hub visibility shows the extent of potential visibility of potential aviation lighting on the turbines, noting that not all turbines will necessarily require such lighting to be fitted. It is noted that in areas where there is active commercial forestry, the regular cycle of felling and replanting will result in localised changes to visibility however the overall pattern will remain relatively constant.

5.2.3 The ZTV studies show that the main areas of visibility would extend to approximately 5 km to the north-west and south-east and 15 km to the north-east and south-west. Beyond these areas visibility is shown to be very fragmented and would be largely confined to open/remote upland areas and summits. As shown on **Figure 5.2**, to the north and south-west of the turbine locations there are a number of operational and consented wind farms. It is considered that significant effects are unlikely to arise beyond the wind farms in these directions.

5.2.4 Based on the main areas of theoretical visibility and the presence of existing wind farms, a 15 km study area is likely to be adequate to identify all potentially significant effects to the north and south-west. In order to ensure that all significant effects are considered, landscape and visual effects will be considered within 30 km, as shown on **Figure 5.2**.

5.2.5 **Figure 5.2** indicates that the extent of aviation lighting visibility would follow a similar pattern to the visibility within the detailed study area described above.

Current Baseline

The Site and Wider Context

5.2.6 The Site is located within the Monadhliath Mountains across hills that straddle Glen Markie. It is approximately 30 km south of Inverness, approximately 16 km east of the village of Fort Augustus and approximately 8 km south-east of the settlement of Whitebridge, in the Scottish Highlands. The area is sparsely settled with roads and dwellings typically following the route of glens or river corridors. The nearest minor roads pass within approximately 1.5 km to the west and 7.5 km to the north-east. The A82, A86, A889 and A9 all pass within 10-15 km to the north-west and south-east. The hills within the surrounding landscape are typically covered with heather moorland, with the landform generally being more low lying along Loch Ness to the north-west and the River Spey to the south-east. There are a number of large operational and consented wind farms within the area, particularly to the north and south-west, with further schemes in planning. Core Paths in the surrounding area are generally concentrated along the banks of Loch Ness or in the upper Spey valley, with the closest located approximately 7.4 km to the south-east of the turbine locations.

Landscape Character

5.2.7 The Site is covered by the landscape sensitivity appraisal and strategic capacity conclusions for the Loch Ness area that forms part of the Highland Council Onshore Wind Energy Supplementary Guidance (OWESG). However, that guidance does not cover the whole of the study area. Given this, the NatureScot (2019) landscape character assessment will be used to identify landscape character receptors, with information from the OWESG used to supplement this as appropriate.

5.2.8 The Site is located within Landscape Character Type (LCT) 221 – Rolling Uplands – Inverness. The description of settlement within the LCT notes the presence of *"a number of large windfarm developments within this Landscape Character Type, in the southern and western margins of the Monadhliath mountains above Loch Ness and near Moy and Farr. These form prominent features in this landscape, highly visible in the open surroundings and create a focus in the landscape".*

Landscape Designations

5.2.9 The nearest nationally designated landscape (see **Figure 5.1**) is the Cairngorms National Park, located approximately 0.7 km to the south. The Cairngorm Mountains National Scenic Area (NSA) is also located 21.2 km to the east. In accordance with NatureScot's 2025 document 'Special Landscape Qualities - Guidance on assessing effects', an assessment of effects on the Special Landscape Qualities (SLQs) of the National Park will be prepared as a Technical Appendix to the Landscape and Visual chapter. As the NSA is located entirely within the National Park, the SLQ assessment will only use the National Park SLQ descriptions, as set out in the NatureScot guidance. Within the National Park, the ZTV studies indicate almost no visibility beyond 25 km from the proposed wind turbines. It is therefore suggested that the study area proposed for the SLQ assessment covers the extent of the National Park within 25 km of the proposed wind turbines, subject to confirmation through field survey work. **Table 5-1** below sets out the SLQs identified for the Cairngorms National Park in 'The Special Landscape Qualities of the Cairngorms National Park' and sets out those SLQs which are considered likely to be sensitive to the Proposed Development and would therefore be taken forward to the SLQ assessment.

Table 5-1: National Park Special Qualities

Special Landscape Quality	Sensitivity	Taken forward to assessment
General Qualities		
Magnificent mountains towering over moorland, forest and strath	As the Proposed Development would be located outside the National Park, there would be no direct impacts on the mountains, moorland, forest and strath within the National Park and the relationship between them.	No
Vastness of space, scale and height	Although the Proposed Development would be located outside the National Park, the scale of the proposed wind turbines within 0.7 km of the National Park has the potential to affect the perception of the scale for a localised area.	Yes
Strong juxtaposition of contrasting landscapes	As the Proposed Development would be located outside the National Park, there would be no direct impacts on the juxtaposition of contrasting landscapes within it.	No
A landscape of layers, from inhabited strath to remote, uninhabited upland	As the Proposed Development would be located outside the National Park, there would be no direct impacts on the layers within the landscape.	No
'The harmony of complicated curves'	Although the Proposed Development would be located outside the National Park, the proposed wind turbines within 0.7 km of the National Park have the potential to affect views of the curved hills and peaks.	Yes
Landscapes both cultural and natural	As the Proposed Development would be located outside the National Park, there would be no direct impacts on either cultural or natural landscapes.	No
The Mountains and Plateaux		
The unifying presence of the central mountains	As the Proposed Development would be located outside the National Park, there would be no direct impacts on the central mountains as a unifying feature.	No
An imposing massif of strong dramatic character	As the Proposed Development would be located outside the National Park, there would be no direct impacts on the massif as a whole.	No
The unique plateaux of vast scale, distinctive landforms and exposed, boulder strewn high ground	As the Proposed Development would be located outside the National Park, there would be no direct impacts on the plateaux.	No
The surrounding hills	As the Proposed Development would be located outside the National Park, there	No

Special Landscape Quality	Sensitivity	Taken forward to assessment
	would be no direct impacts on the 'lesser hills' and their accessibility.	
The drama of deep corries	As the Proposed Development would be located outside the National Park, there would be no direct impacts on the deep corries.	No
Exceptional glacial landforms	As the Proposed Development would be located outside the National Park, there would be no direct impacts on the glacial landforms.	No
Snowscapes	As the Proposed Development would be located outside the National Park, there would be no direct impacts on the presence of snow in the National Park.	No
Moorlands		
Extensive moorland, linking the farmland, woodland and the high tops	As the Proposed Development would be located outside the National Park, there would be no direct impacts on the areas of moorland.	No
A patchwork of muirburn	As the Proposed Development would be located outside the National Park, there would be no direct impacts on the patchwork of muirburn.	No
Glens and Straths		
Steep glens and high passes	There is some limited potential for views of the Proposed Development from glens and high passes.	Yes
Broad, farmed straths	The ZTV studies show almost no potential for visibility of the Proposed Development from the straths.	No
Renowned rivers	As the Proposed Development would be located outside the National Park, there would be no direct impacts on the rivers.	No
Beautiful lochs	The ZTV studies show almost no potential for visibility of the Proposed Development from any lochs.	No
Trees, Woods and Forests		
Dark and venerable pine forest	As the Proposed Development would be located outside the National Park, there would be no direct impacts on any pine forests.	No
Light and airy birch woods	As the Proposed Development would be located outside the National Park, there would be no direct impacts on any birch woods.	No
Parkland and policy woodlands	As the Proposed Development would be located outside the National Park, there	No

Special Landscape Quality	Sensitivity	Taken forward to assessment
	would be no direct impacts on any parkland or policy woodlands.	
Long association with forestry	As the Proposed Development would be located outside the National Park, there would be no direct impacts on any associations with legacy features of the forestry industry.	No
Wildlife and Nature		
Dominance of natural landforms	Although the Proposed Development would be located outside the National Park, the scale of the proposed wind turbines within 0.7 km of the National Park has the potential to affect the perception of the scale for a localised area.	Yes
Extensive tracts of natural vegetation	As the Proposed Development would be located outside the National Park, there would be no direct impacts on any natural vegetation.	No
Association with iconic animals	The Ecology and Ornithology chapters will consider any potential effects on iconic animals.	Yes
Wild land	The Proposed Development would be partly located within a Wild Land Area.	Yes
Wildness	The Wild Land Area Assessment will consider effects of the Proposed Development on the wildness of the Wild Land Area within which it is partly located and which extends into the National Park.	Yes
Visual and Sensory Qualities		
Layers of receding ridge lines	There is some potential for views of the Proposed Development breaking ridgelines.	Yes
Grand panoramas and framed views	There is some potential for the Proposed Development to be seen in panoramic views from within the National Park.	Yes
A landscape of many colours	As the Proposed Development would be located outside the National Park, there would be no direct impacts on the colours of the landscape.	No
Dark skies	As the Proposed Development would require aviation lighting, the potential for this to affect dark skies will be assessed within the landscape and visual assessment.	Yes
Attractive and contrasting textures	As the Proposed Development would be located outside the National Park, there would be no direct impacts on the textures of the landscape.	No

Special Landscape Quality	Sensitivity	Taken forward to assessment
The dominance of natural sounds	The noise chapter will consider any potential for effects from the Proposed Development.	Yes
Culture and History		
Distinctive planned towns	As the Proposed Development would be located outside the National Park, there would be no direct impacts on the settlement pattern.	No
Vernacular stone buildings	As the Proposed Development would be located outside the National Park, there would be no direct impacts on the vernacular buildings.	No
Dramatic, historical routes	Construction access to the Proposed Development would follow an approved route that is suitable for the delivery of wind turbine components.	No
The wistfulness of abandoned settlements	As the Proposed Development would be located outside the National Park, there would be no direct impacts on any abandoned settlements.	No
Focal cultural landmarks of castles, distilleries and bridges	As the Proposed Development would be located outside the National Park, there would be no direct impacts on any cultural landmarks.	No
The Royal connection	As the Proposed Development would be located outside the National Park, there would be no direct impacts on the Royal connection to the National Park.	No
Recreation		
A landscape of opportunities	As the Proposed Development would be located outside the National Park, there would be no direct impacts on recreational opportunities.	No
Spirituality	As the Proposed Development would be located outside the National Park, there would be no direct impacts on the spirituality of the National Park.	No

5.2.10 There are a number of Wild Land Areas (WLA) within 20 km as shown on **Figure 5.1**. The Proposed Development would be partly located within WLA 20: Monadhliath. Consequently, a Wild Land Assessment covering WLA 20 will be prepared as a Technical Appendix to the Landscape and Visual chapter, in accordance with NatureScot's 2023 document 'Assessing impacts on Wild Land Areas – technical guidance'. Given the relatively small size of WLA 20, the assessment will consider effects on the whole WLA. The WLA Description for WLA 20 identifies four key attributes and qualities of the WLA and these will all be considered as part of the assessment.

5.2.11 Locally designated landscapes within the detailed study area are shown by **Figure 5.2.** SLA 23: Ben Alder, Laggan and Glen Banchor (3.7 km, south-west) and SLA 20: Loch Ness and Duntelchaig (8.2 km, north-west) are likely to have intermittent visibility of the turbines and will be considered in the assessment. SLA 21: Loch Lochy and Loch Oich is proposed to be scoped out of the assessment due to distance and limited visibility.

Visual Receptors and Visual Amenity

5.2.12 As noted above, the area around the Site is sparsely settled. Settlement within 10 km is limited to individual and small clusters of dwellings along minor roads.

5.2.13 There are no Core Paths in close proximity to the Site. The closest are located approximately 7.4 km to the south-east, providing circular routes and connections between minor settlements. There is a notable lack of Core Paths in the upland areas where the landscape is less accessible.

5.2.14 Key transport routes within 15 km include the A82, A86, A889 and A9. The Highland Mainline railway line between Perth and Inverness passes approximately 12 km to the south-east of the proposed turbines. However, the ZTV studies indicate almost no visibility from this route.

5.2.15 The Great Glen Way passes within 13 km of the proposed wind turbines to the north-west, running between Fort William and Inverness and following the northern shore of Loch Ness within the proposed detailed study area. The Scottish National Trail passes within 7.3 km to the south-east and the Affric Kintail Way passes within 19.8 km to the north-west. In addition, the Great Glen Canoe Trail follows the navigable waterways of the Loch Ness, the Caledonian Canal and Loch Lochy, passing within 11.8 km to the north-west. These routes all follow valley features and are shown to have very limited potential visibility of the Proposed Development.

5.2.16 Sustrans national cycle route 7 runs between Sunderland and Inverness. It passes within 12.2 km of the proposed wind turbines, broadly following the route of the A9 to the north-east and south-east through river valleys. Sustrans national cycle route 78 links Oban and Inverness, and passes within 8 km of the proposed wind turbines to the west. Through the study area it follows minor roads along the side of Loch Ness. In both cases, the ZTV studies indicate almost no visibility from these routes.

5.2.17 There are four Gardens and Designed Landscapes (GDL) within the proposed 30 km study area, the nearest of which is Kinrara located 25.2 km east. Doune ofRothiemurchus is located 27.3 km east, Aldourie Castle 26 km north and Dochfour 28 km north. Dochfour is a private estate, and as such will not be considered as a publicly accessible location within the LVIA. As shown on **Figure 5.1** there would be no visibility of the Proposed Development from the other GDLs.

5.2.18 Effects on the heritage value and setting of GDLs will be considered within the cultural heritage chapter as appropriate.

Other Wind Farm Developments

5.2.19 As shown by **Figures 2.2 and 5.2**, the closest operational wind farms to the Site are Stronelairg located approximately 0.7 km south and Corriegarth located approximately 2.1 km north. The consented Cloiche Wind Farm is located to the east and west of Stronelairg, approximately 0.9 km south at the closest point. The consented Dell Wind Farm is 4.7 km to the south-west, with the consented Corriegarth 2 Wind Farm 1.5 km to the north. To the north-east and west there are further operational (Dunmaglass, Farr, Glen Kyllachy, Corrimony, Bhlaraidh, Millennium) and consented (Aberarder, Bhlaraidh Extension) wind farms.

Residential

5.2.20 The closest residential property to the proposed wind turbines is more than 2 km to the south-west and is not indicated as having any potential visibility of the proposed wind turbines. It is therefore proposed that a residential visual amenity assessment is not required for the Proposed Development.

5.3 Assessment Methodology

Legislation and policy

5.3.1 The Site is located within THC. Policy and local guidance relevant to the LVIA for the Proposed Development includes the following national and local policy:

- NPF4, Scottish Government, February 2023 – in particular policies 4 and 11;
- OWPS, Scottish Government, December 2022; and
- Highland-wide Local Development Plan, The Highland Council, April 2012 – in particular policies 57, 61 and 67.

5.3.2 There are other plans for different areas within THC which cover the study area, however these focus primarily on the development of settlement and the economy and are not considered further in this assessment.

5.3.3 Other local planning authorities within 30 km of the Site include a very limited area of Perth and Kinross beyond 23 km to the south-east and Cairngorms National Park. There are no local landscape designations within the area of Perth and Kinross that falls within the proposed study area, as shown on **Figure 5.2**.

Guidance

5.3.4 The LVIA will be undertaken in line with current guidance and good practice. This will be achieved using methodologies which have been developed in accordance with the applicable guidance, drawing on subsequent technical clarifications published by the Landscape Institute, and the experience of the chosen landscape consultant.

5.3.5 In accordance with GLVIA3, landscape and visual effects will be considered separately. GLVIA3 indicates that the sensitivity of landscape and visual receptors, should be assessed in terms of the susceptibility of the receptor to change and the value attached to the existing landscape or views.

5.3.6 The magnitude of change will be assessed in terms of the size and scale, geographical extent, duration and reversibility of the effect. These aspects will all be considered, to form a judgement regarding the overall significance of landscape and visual effects. The following guidance will be referred to where appropriate:

- Landscape Institute and the Institute of Environmental Management and Assessment (2013), Guidelines for Landscape and Visual Impact Assessment. Third Edition. (GLVIA3);
- Landscape Institute (2024) Landscape Institute Technical Guidance Note (TGN) 2024-01Notes and Clarifications on Aspects of Guidelines for Landscape and Visual Impact Assessment Third edition;
- NatureScot (2021), https://www.nature.scot/doc/guidance-assessing-cumulative-landscape-and-visual-impact-onshore-wind-energy-developments;
- NatureScot (2017), Siting and Designing Wind Farms in the Landscape;

- Landscape Institute (2019), Residential Visual Amenity Assessment (RVAA) – Technical Guidance Note 02/19;
- NatureScot (2023), General pre- application and scoping advice for onshore wind farms;
- NatureScot (2024), Guidance on Aviation Lighting Impact Assessment;
- NatureScot (2022), Landscape Sensitivity Assessment Guidance (Methodology);
- NatureScot (2025), Special Landscape Qualities - Guidance on assessing effects; and
- NatureScot (2023), Assessing impacts on Wild Land Areas – technical guidance.

5.3.7 In addition, supporting figures and visualisations will be prepared in accordance with the recommendations within Visual representation of wind farms: Guidance (NatureScot, 2017) and Highland Council standards, as set out within Visualisation Standards for Wind Energy Developments (Highland Council, 2016).

5.3.8 The following baseline studies will also be used to inform the LVIA:

- National Landscape Character Assessment, NatureScot, 2019;
- The Special Landscape Qualities of the Cairngorms National Park, Scottish Natural Heritage, 2010;
- THC Onshore Wind Energy Supplementary Guidance (OWESG), 2016 and Part 2b, 2017;
- THC Assessment of Highland Special Landscape Areas (2011); and
- Monadhliath Wild Land Area Description, NatureScot, 2017.

5.3.9 Character areas identified in the capacity studies will be assessed as the receptors in the consideration of effects on landscape character within their respective areas of coverage, with the national character areas used within other local authority areas. The character descriptions provided in the national character assessment will also be referred to. The documents relating to national and local designations will be used to inform the assessment of effects on the relevant designated areas.

5.4 Potential Impacts

5.4.1 The selection of receptors to include in the assessment is based on the requirement for EIA to consider the likely significant effects. Effects that are not likely to be significant do not require assessment under the EIA Regulations.

5.4.2 The primary form of mitigation for landscape and visual effects arising from large scale wind farm development is through iterative design of the layout of the turbines and associated infrastructure, with reference to key views, viewpoints and receptors.

5.4.3 Design evolution will be set out in detail in the design strategy that will form part of the EIA Report and will demonstrate how the design of the Proposed Development has sought to avoid, reduce or minimise landscape and visual effects wherever feasible.

5.4.4 Further mitigation will be considered where relevant and appropriate, and the residual effects taking account of the implementation of this mitigation will be presented in the assessment.

5.4.5 Effects arising from the Proposal will be considered at the following key stages. The nature of the potential effects relevant to the assessment for each stage will be:

Construction

5.4.6 The construction of the project would involve the delivery of materials and components to Site; groundworks to form the tracks, turbine foundations and hardstanding areas and the construction of the substation and control building. A crane would be used to erect the turbines and would be on site for a small part of the short-term construction period.

5.4.7 Effects during construction on landscape fabric would be expected arise from:

- Groundworks for the turbine foundations, crane hardstandings, control building/ substation and associated hardstanding areas and access tracks.

5.4.8 Effects during construction on landscape character would arise from:

- Short-term construction activity within the Site.
- Changes to landscape fabric as described above.
- Changes to views towards the Site which would include the crane (when on site), completed and partially completed turbines.

5.4.9 Effects during construction on visual receptors would arise from:

- Short-term movement of vehicles and plant, including large cranes, within and travelling to and from the Site to deliver and install the turbines and other site infrastructure.
- Changes to views towards the Site which would include the crane (when on site), completed and partially completed turbines, with increasing similarity to the operational scheme as turbine construction is completed.

5.4.10 Effects during construction on designated landscapes would arise from:

- Short-term changes to the special qualities as a result of views of the construction activity taking place within the Site.

Operation

5.4.11 The Proposed Development would be in operation for 40 years. Effects during operation on landscape fabric would arise from:

- changes as a result of the implementation of habitat management; and
- presence of the wind farm infrastructure.

5.4.12 Effects during operation on landscape character would arise from:

- physical changes to the host landscape, as set out above; and
- the presence and motion of the wind turbines and the presence of associated infrastructure within the Site.

5.4.13 Effects during operation on visual receptors would arise from:

- changes to views towards the Site to include the presence and motion of the wind turbines and other on-site infrastructure, both from static locations and when moving along routes.

5.4.14 Effects during operation on designated landscapes would arise from:

- changes to the special qualities as a result of visibility of the wind turbines when viewed from designated landscapes.

Decommissioning

5.4.15 Effects during decommissioning would be short-term and similar to those arising during construction except in reverse.

Impact Assessment

Assessing Landscape Effects

5.4.16 Effects will be assessed on Landscape Character Types identified by the 2019 NatureScot Landscape Character Assessment. Information from the Highland Council Onshore Wind Energy Guidance will inform the baseline for each Landscape Character Type.

5.4.17 Effects on the National Park will be assessed using NatureScot's 'Special Landscape Qualities - Guidance on assessing effects', based on the special qualities set out within NatureScot's 2010 report 'The Special Landscape Qualities of the Cairngorms National Park'.

5.4.18 Effects on Local Landscape Areas will be assessed based on the special qualities as set out in THC's Assessment of Highland Special Landscape Areas (2011).

5.4.19 Effects on Wild Land Area 20: Monadhliath will be assessed using 'Assessing impacts on Wild Land Areas – technical guidance' and based on the Wild Land Area description set out within NatureScot's 2017 Wild Land Area Description report.

Visual Effects

5.4.20 The assessment of visual effects will focus on public amenity and will consider the effects on the views people see when in settlements; using roads and recreational routes; at tourist and recreational destinations and from near, but not within, their private homes and gardens. All visual receptors with theoretical visibility of the Proposed Development within the detailed study area will be considered within the LVIA.

Viewpoints

5.4.21 Viewpoint analysis is used to inform the LVIA from selected viewpoints within the study area. The purpose of this is to assess both the scale of visual impact for receptors and to help guide the assessment of the overall effect on visual amenity and landscape character. The viewpoints have been selected to represent views from a range of distances, directions and receptor types (landscape character, visual receptors, specific viewpoints known for their valued views, visitor destination and designated landscapes) in the proposed study area as set out in **Table 5-2**.

Table 5-2: Proposed Viewpoints

VP	Location	Easting	Northing	Distance, Direction	Receptors	Visualisation types
1	Calpa Mor	266950	810945	7.6 km, east	Walkers, visitors to Wild Land Area.	NatureScot and THC
2	Geal Charn	256137	798771	5.5 km, south west	Walkers, visitors to National Park and Wild Land Area.	NatureScot and THC
3	Carn Dubh	251251	809333	3.6 km, west	Residents, walkers.	NatureScot and THC
4	Loch Killin near Garrogie Lodge	252301	811382	3 km, north west	Residents, walkers.	NatureScot and THC
5	Near Corrigarth Lodge	251004	817193	8.1 km, north west	Residents, walkers.	NatureScot and THC
6	A82/Loch Ness	248276	822034	13.7 km, north west	Residents, road users, visitors to SLA.	NatureScot and THC (incl. night)
7	Meall Fuarmhonaidh	245893	822193	15.2 km, north west	Walkers, visitors to SLA.	NatureScot and THC
8	B862 adjacent to Loch Ceo Glais	258547	828668	18 km, north	Residents, walkers, local road users, visitors to SLA.	NatureScot and THC
9	A82/Great Glen Way	252885	830130	19.9 km, north west	Residents, walkers on the Great Glen Way, road users, visitors to SLA.	NatureScot and THC (incl. night)
10	Meall na h-Eiling	253818	832499	22.1 km, north west	Walkers, visitors to SLA.	NatureScot and THC
11	Burach	238302	814134	17.1 km, north west	Walkers, visitors to SLA.	Wireline only
12	Carn Liath	247227	790327	17.4 km, south west	Walkers, visitors to SLA and Wild Land Area.	Wireline only
13	Geal Charn (Ardverikie Forest)	250392	781136	24 km, south west	Walkers, visitors to SLA and Wild Land Area.	Wireline only
14	Carn Dearg Mor	282328	791186	25.7 km, south east	Walkers, visitors to National Park and Wild Land Area.	Wireline only
15	Sgor Gaoith	290302	798960	30.3 km, south east	Walkers, visitors to National Park, NSA and Wild Land Area.	NatureScot and THC
16	Geal-Charn Mor	283631	812327	23.6 km, east	Walkers, visitors to National Park and Wild Land Area.	NatureScot and THC

Visualisations

5.4.22 Visualisations from the proposed viewpoints will be prepared in line with relevant guidance, as set out in **paragraph 5.3.7**. For most viewpoints, visualisations to both NatureScot and THC standards will be provided for daytime, including indication of the position of aviation lights in NatureScot format 53.5-degree wirelines. For night viewpoints, night photomontages (including cumulative) will be provided in addition.

5.4.23 Those viewpoints where wirelines only are indicated represent distant viewpoints from open/remote upland areas and summits, where visitor numbers are likely to be low. The wireframes will allow consideration of the relationship to existing and consented wind farms, whilst providing a proportionate response to the number of visual receptors likely to access the views. In addition, for viewpoints 12 and 13, the proposed wind turbines would largely be seen beyond existing operational wind farms.

Night-time Assessment

5.4.24 There is a distinction between light pollution or nuisance (which would be the subject of a technical lighting assessment) and the effect of lighting on visual amenity at night. For wind farm aviation lighting, NatureScot's 'Guidance on Aviation Lighting Impact Assessment' is used to inform the methodology and discussions will be held with the Civil Aviation Authority (CAA) regarding a wind turbine lighting scheme that would seek to reduce the number of wind turbines being lit to a number of the perimeter wind turbine. It is proposed that a 25 km study area is sufficient to assess all likely significant night-time effects, covering the main extent of hub height visibility as shown on **Figure 5.2**. The assessment would analyse effects at assessment viewpoints, assess effects for visual receptors in locations where people are likely to be present at night. Recreational routes and other outdoor recreational locations are generally unlikely to be used at night (unless they are lit or specifically promoted for e.g. stargazing) and will not be considered. Effects on designated areas will be assessed where dark skies contribute to the SLQs. Effects on landscape character will not be assessed in accordance with the NatureScot guidance.

Residential Visual Amenity

5.4.25 As previously noted, it is proposed that a Residential Visual Amenity Assessment (RVAA) is not required, given the distance of residential properties from the proposed wind turbines and the lack of visibility from the closest properties.

Potential Effects Scoped out of Detailed Assessment

5.4.26 Based on the baseline conditions recorded and distance from the proposed turbines, it is proposed that the following are scoped out:

- Landscape and visual receptors beyond 30 km;
- Effects on the SLQs of the Cairngorms National Park identified in **Table 5-1**;
- SLA 21: Loch Lochy and Loch Oich;
- Effects on visual receptors within Gardens and Designed Landscapes;
- Visual receptors within the study area where there would be no visibility of the Proposed Development; and
- Effects on residential visual amenity.

5.5 Cumulative Effects

Cumulative Assessment Methodology

5.5.1 Cumulative assessment will be undertaken to identify impacts arising from the Proposed Development when considered together with other wind development in the area.

5.5.2 The proposed study area for cumulative effects is 30 km. Wind farms will be included where they consist of 3 or more turbines which either exceed 50m to tip height; or are 50m or below and within 5 km of the proposed turbines.

5.5.3 Operational and consented wind farms will be included as part of the existing and future baseline respectively, and considered within the main LVIA (except where it is considered that a consented wind farm may not be constructed).

5.5.4 Wind farms at the application stage will be considered within the cumulative assessment.

5.5.5 Wind farms at the scoping stage will typically not be included within the cumulative assessment, but may be included if there is sufficient information available to make an assessment and:

- the inclusion of a particular project is specifically requested by a consultee;
- they are within 10 km of the proposed turbines and an application is expected at a similar time to that for the Proposed Development.

5.5.6 Other wind farms currently in planning and scoping which may require consideration within the assessment for cumulative landscape and visual effects are listed in **Table 2-1** and **Table 2-2** of **Chapter 2 Description of the Proposed Development**, and their location in relation to the Proposed Development is shown on **Figure 2.2**. This information will be updated going forward as necessary.

5.6 Mitigation

5.6.1 Design guidance prepared by NatureScot and THC will inform the evolving design and mitigation of landscape and visual effects. This will include refining the layout to minimise effects on landscape and visual receptors and on the landscape designations identified. In addition, the NatureScot guidance on assessing effects on SLQs makes reference to developing design objectives which respond to SLQs. The design of the Proposed Development will respond to relevant SLQs for the National Park.

5.7 Consultation

5.7.1 NatureScot and THC will be consulted with regards to agreeing the scope of the LVIA as proposed within this chapter, to finalise agreement on study areas, documented baseline and viewpoint locations.

5.8 Summary of Scope

5.8.1 The LVIA will consider effects on:

- landscape fabric;
- landscape character within 30 km of the proposed wind turbines, using the Landscape Character Types identified by the 2019 NatureScot Landscape Character Assessment as the basis of assessment;

- visual receptors within 30km of the proposed wind turbines, where the ZTV studies indicate potential for visibility of the Proposed Development;
- the special qualities of designated landscapes, including the Cairngorms National Park and SLAs; and
- Wild Land Area 20: Monadhliath.

5.8.2 Cumulative effects will also be considered i.e., the incremental effects of the Proposed Development in combination with other existing and proposed wind farm developments.

5.9 Questions for Consultees

5.9.1 The following questions are directed to consultees:

a) Is the proposed study area adequate to identify all potentially significant effects?

b) Do you agree with the list of receptors to be scoped out?

c) Table 5-1 sets out which SLQs are identified at this preliminary stage as likely to require detailed consideration within the SLQ assessment, and this will be refined through further desk based analysis and site survey work (as set out within NatureScot guidance). At this preliminary stage, are there any additional SLQs which consultees think should be considered?

d) Do you agree with the proposed viewpoint locations and method of visualisation?

e) Do you agree with the proposed night-time viewpoint locations?

f) Are there any cumulative developments in planning or scoping not listed in **Table 2-1** and **2-2** in **Chapter 2: Description of the Proposed Development** which you consider should be included?

g) Do you agree that a residential visual amenity can be scoped out?

5.10 References

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6.0 Cultural Heritage and Archaeology

6.1 Introduction

6.1.1 The 'cultural heritage' of an area comprises archaeological sites, historic buildings, Inventoried GDLs, Inventoried Battlefields and other historic environment features.

6.1.2 The Historic Environment Desk-Based Assessment will:

- set out the cultural heritage baseline of the Site;
- assess the archaeological potential of the Site;
- assess the effects of the proposals on the cultural heritage resource, within the context of relevant legislation and planning policy; and
- determine whether, where any predicted adverse effects are identified, these effects can be mitigated.

6.1.3 It will consider direct effects (such as physical disturbance) and indirect effects (such as vibration).

6.1.4 The proposed approach to the assessment of effects on cultural heritage is set out below.

6.1.5 This chapter is supported by the following figure:

- **Figure 6.1** – Designated Cultural Heritage Assets in relation to the ZTV.

6.2 Assessment Methodology

Standards

6.2.1 The assessment will be undertaken in accordance with all relevant statutes, policies, and guidance, including the Chartered Institute for Archaeologists' Code of Conduct (CIfA, revised 2022) and Standard and Guidance for Historic Environment Desk-based Assessment (CIfA, revised 2020).

Legislation, Policy and Guidance

Legislation

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

- The Ancient Monuments and Archaeological Areas Act 1979; and
- The Planning (Listed Buildings and Conservations Areas (Scotland) Act 1997.

Planning Policy

6.2.3 The Scottish Government, Historic Environment Scotland and the Highland Council have issued a number of statements of policy with respect to dealing with the historic environment in the planning system:

- NPF4 (2023);
- Onshore Wind Turbines: Planning Advice (2014);
- Planning Advice Note 2/2011: Planning and Archaeology;
- Historic Environment Policy for Scotland (HEPS 2019);

- Designation Policy and Selection Guidance (2020); and
- Highland-wide Local Development Plan (2012) relevant policies including;
  - Policy 57: Natural, Built and Cultural Heritage.

Guidelines and Technical Standards

6.2.4 Relevant guidance and technical standard documents comprise:

- Our Past, Our Future: The Strategy for Scotland's Historic Environment (2023); and
- Chartered Institute for Archaeologists Standard and Guidance for Historic Environment Desk Based Assessment (2014, updated 2020).

6.2.5 The Proposed Development is in an area where significant survey work has been undertaken for other nearby wind farm applications, as well as the nearby River E hydro-electric scheme, and the baseline and potential impacts are well known.

6.2.6 A detailed cultural heritage impact appraisal has been undertaken as part of this Scoping Report to:

- identify cultural heritage assets that may be subject to significant effects, both within the limits of the Proposed Development and within 10km[4] of the proposed turbines (see **Figure 6.1**);
- establish the potential for currently unknown archaeological assets to lie within the site;
- assess the predicted effects on these assets; and
- propose a programme of mitigation where appropriate.

6.2.7 The assessment has been undertaken by SLR Consulting Ltd.

6.3 Environmental Baseline and Potential Sources of Impact

Within the Site

6.3.1 There are no designated heritage assets within the Site boundary. An online review of Highland Historical Environment Records (HER) and Canmore has indicated that there are six non-designated heritage assets within the Site boundary, all of which are recorded along the extent of the existing section of access track to the northeast, comprised of undated assets of a domestic or agricultural nature.

6.3.2 The Highland HER shows most heritage assets located in close proximity to the Site boundary, along the valleys of the River Fechlin and its tributary the Allt Breineag. These assets of assets of an agricultural nature, primarily date to the medieval or post-medieval periods, with some evidence of prehistoric activity, primarily of an agricultural or domestic nature. There is a further small concentration of assets contained within the valley of the Allt Breineag, largely comprised of assets of a post-medieval agricultural or domestic nature, such as farmsteads, sheepfolds and field systems, which may have formed a former township. A similar grouping of assets, all of a post-medieval domestic or agricultural nature, can be

[4] 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.

found along the Glenmarkie Burn, which runs through the valley between the two main groups of turbines.

6.3.3 The above depicts a distribution of activity, dating from the prehistoric to agricultural medieval to post-medieval settlement, focused within the lower valleys of the landscape. This indicates that the potential for further archaeological remains to exist within the Site is minimal, being upland areas comprising wet, boggy upland conditions that would be unfavourable for activity compared to location of recorded assets in the valley below. Any activity is likely to be agricultural in nature and likely post-medieval in date, and as such would be considered heritage assets of lower significance. Their removal would be considered no more than a minor impact, with suitable mitigation being preservation by record.

6.3.4 The potential for direct and indirect impacts on both recorded and unrecorded heritage assets will be discussed in a Desk-Based Assessment which shall support the application. A full commercial HER data search will be undertaken ahead of the baseline survey and used to inform an understanding of key constraints. A Site walkover will also be conducted in order to inform the Desk-Based Assessment and to effectively ground-truth existing records and accurately plot additional sites of an archaeological/historic origin.

Outwith the Site

6.3.5 A high-level heritage appraisal has been carried out in relation to all nationally significant designated heritage assets within 10 km of the Site (see **Figure 6.1**). There is one Scheduled Monument within 10km of the proposed turbines, burial mounds 350m NE of Dell Farm (**SM4536**).

6.3.6 There is one Category A Listed Building within 10km of the proposed turbines, namely, Whitebridge, the Old Bridge over River Foyers (**LB1874**).

6.3.7 There are no Inventoried Battlefields and Inventoried Gardens and Designed Landscapes or Conservation Areas within 10 km of the Site boundary. In addition, there are no Category B or C Listed Buildings or Conservation Areas within 5km of the Proposed Development.

Dell Farm, burial mound 350m NE of (SM4536)

6.3.8 Dell Farm burial mound (SM4536) comprises a group of burial mounds of at least three round and four oblong or trapezoidal burials dating to the first millennium AD. At least five small round cairns are recorded within the vicinity of the larger burial mounds, as well some small enclosures and low banks, suggested to be the remains of later domestic structures.

6.3.9 The asset is located within Stratherrick, c.0.4km to the south of the confluence of the River Fechlin and the Allt an Lòin, where it forms the River Foyers, which flows north towards Loch Ness. The asset is therefore located within a junction of Stratherrick to the north-east and south-west, and the glen of the River Foyers to the north.

6.3.10 The asset is positioned on an interfluve at the confluence of two watercourses and is likely to be the primary contribution to the significance of its setting, with a high proportion of burials from the Pictish period being located near a watercourse, suggesting a strong relationship between burial practices/beliefs and water. Additionally, its prominent position on the rise of the interfluve would have likely been intentional to make the monument a prominent feature along the approach from the south of the asset within Stratherrick, and would have created the sense of the monument being surrounded by watercourses, with focused views northward

down the River Foyers. The relationship between the monument, its position on the rise on an interfluve and the three watercourses contributes to how we can further understand, experience and appreciate this asset as a Pictish funerary and ritualistic monument within its setting.

6.3.11 The closest turbine to the asset, T64, is located c.9.0km to the southeast of the asset. The ZTV predicts that up to four turbines would be visible in views from the asset to the south-east. The turbines would not feature in key views which contribute toward the significance of the asset; no turbines would be present within views along the approach to the monument from the south of Stratherrick facing north, or from the asset facing north towards the confluence of the watercourses. The turbines would also not be present within views along Stratherrick from the monument, facing north-east or south-west. The views toward the monument, and its relationship with the valleys and their watercourses would remain unimpacted.

6.3.12 Visibility of up to four turbines in long distance, south-east views which do not contribute to the aspect of the asset's setting from which it derives significance would not be considered to affect the ability to appreciate, understand or experience the asset and its setting. As such it is scoped out of further assessment.

Whitebridge, Old Bridge Over River Foyers (LB1874)

6.3.13 This asset comprises an A-Listed military bridge, constructed in 1732 as part of General George Wade's Military Road through the Great Glen to cross the River Fechlin. The bridge was initially constructed to enable military personnel to cross the watercourse, to aid with the British Government's goal of asserting control over the region following the 1715 Jacobite Rebellion. The bridge supported the road linking the military garrisons at Inverness and Fort Augustus, featuring a single tall semicircular arch with a 40-foot span, anchored on rock outcrops. Unlike most Highland bridges, the arch-ring was constructed from squared masonry and included a decorative keystone and a string course.

6.3.14 The setting of the bridge comprises its position over River Fechlin, providing a route to the other side of the watercourse. Its primary significance derives from its historical interest as part of the early military road network in Scotland. Long distance views do not contribute to its significance, as the bridge was constructed primarily for this practical function.

6.3.15 The closest turbine to the asset is T65, located c.8.0km to the southeast. Based on the current layout, the ZTV shows no turbines are predicted to be visible from the asset.

6.3.16 Should changes to the layout occur to an extent that turbines would be visible from this asset, it is considered that there would be no potential effects upon its setting. Long-distance views are of no significance to the asset, peripheral views of a small number of turbines would not be considered to impact upon the ability to appreciate, understand or experience the asset and its relationship with the River Fechlin and the military road. It is therefore scoped out of further assessment.

6.4 Matters Scoped Out of Assessment

6.4.1 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 monument have been scoped out of assessment. Assets that have been scoped in may be scoped out and vice versa, dependent on the final layout or as a result of consultee comments.

6.4.2 Category B Listed Buildings located outwith 5km of the Site have been scoped out of any further assessment, with the exception of those wherein specific views are

considered to contribute to their significance and/or to the ability to understand, appreciate and experience them.

6.4.3 As per best practice guidance within NatureScot EIA Handbook (2018), 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.

6.4.4 The significance of a Conservation Area derives from its local heritage and the assets that it contains, rather than the wider landscape. As such, any conservation area outwith 5km has been scoped out, with the justification that, even if visibility between the Proposed Development and the conservation areas may still occur, the conservation areas' significance would not be diminished.

6.5 Cumulative Effects

6.5.1 Cumulative effects will be assessed in line with the guidance provided in the EIA Handbook. A cumulative effect is considered to occur when there is a combination of:

- a significance of effect on an asset or group of assets due to changes resulting from the proposed development; and
- an impact on the same asset or group of assets resulting from other wind farm development (consented or proposed, but not operational) within the surrounding landscape.

6.5.2 Assets with a minor or higher significance of effect resulting from the Proposed Development in isolation will be considered for cumulative assessment, as these assets are most likely to be susceptible to significant cumulative effects.

6.5.3 Wind farm developments will be considered for cumulative impacts as follows:

- wind farm planning applications within 15km of an asset which have been submitted and have a decision pending; and
- wind farm planning applications within 15km of an asset that have been granted permission but not yet constructed.

6.5.4 Wind farms that are under construction when the assessment is undertaken are considered as part of the baseline environment for operational impact assessments. Any effect resulting from operational wind farms has been considered as part of the baseline setting of the asset.

6.6 Mitigation

6.6.1 Where adverse effects on cultural heritage assets are possible, the magnitude of effect can be reduced through measures to prevent, reduce and/or, where possible, offset these effects.

6.6.2 Suitable measures for minimising effects through ground disturbance 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.

6.6.3 Suitable measures for reducing or removing any setting effects might include:

- alteration of the proposed turbine layout; and/or
- reduction of proposed turbine heights.

6.7 Consultation

6.7.1 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 ZTV (**Figure 9.1**)**.** This will filter out those assets that do not require further assessment. It will also be used to identify and agree on the most potentially sensitive assets; these may then require computer-generated visualisations to be produced as part of their assessment, in liaison with consultees.

6.7.2 Consultation will be undertaken with Historic Environment Scotland (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 GDLs, and Inventoried Battlefields. THC Historic Environment Team will be consulted in relation to non-designated heritage assets and designated heritage assets of regional significance, and any non-designated assets which they consider to be of higher significance.

6.8 Summary of Scope

6.8.1 On the basis of the work undertaken to date the professional judgement of the SLR Cultural Heritage Team, and experience of other comparable projects, it is considered that any impacts to the setting of cultural heritage assets and any cumulative impacts as a result of the Proposed Development can be scoped out of further assessment within the Environmental Impact Assessment.

6.8.2 As such, Cultural Heritage will not be assessed within the EIA Report but will be addressed as a desk-based assessment and appended to support the planning application.

6.9 Questions for Consultees

6.9.1 The following questions are directed to consultees:

a) Do consultees agree that all matters in regard to Cultural Heritage can be scoped out of further EIA?

7.0 Ecology

7.1 Introduction

7.1.1 This chapter considers the scope of work required to assess potential significant effects on (non-avian) ecological features during the construction and operational phases of the Proposed Development. Ornithological effects are considered separately (see **Chapter 8**).

7.1.2 This chapter is supported by the following appendix:

- **Appendix C** Ecological (Non-avian) Desk Study.

7.2 Baseline Conditions

7.2.1 This section is based on a review of relevant existing data identified through online resources, including data provided in the Environmental Impact Assessment (EIA) Reports for other nearby wind farm developments (i.e. wind farms within 5 km of the Site boundary), as summarised in **Table 7-1** (full details are provided in **Appendix C**).

Table 7-1: Sources of Ecological Data

Source	Baseline Information Provided
Land Use Consultants (2024). Dell II Wind Farm EIA Report, Chapter 6: Ecology	• Desk-based study covering: the application site for Dell II Wind Farm; a 10 km buffer for statutory designated sites; and a 2 km buffer for non-statutory designated sites and legally protected / notable species; • Habitat and vegetation survey reports; • Protected species survey reports; and • Outline Habitat Restoration Management Plan (oHRMP).
SSER (2020) Cloiche Wind Farm EIA Report, Chapter 8: Ecology and SSER (2022) Cloiche Wind Farm: Additional Information	• Desk-based study covering: the application site for Cloiche Wind Farm and a 10 km buffer for statutory and non-statutory sites designated sites and legally protected or notable species; • Habitat and vegetation survey report; • Protected species survey report; • Fish population and stream hydrochemistry report; and • Outline Habitat Management Plan (oHMP).
Arcus (2020) Corriegarth II Wind Farm EIA Report, Chapter 7: Ecology	• Desk-based study covering: the application site for Corriegarth II Wind Farm; a 10 km buffer for statutory designated sites; and a 2 km buffer for non-statutory designated sites and legally protected / notable species; • Habitat and vegetation survey reports; • Protected species survey report; • Bat survey report; and • Fisheries habitat survey report.

Source	Baseline Information Provided
SSER (2012) Stronelairg Wind Farm Environmental Statement, Chapter 11: Ecology	• Desk-based study covering: the application site for Stronelairg and a 10 km buffer for statutory designated sites and legally protected or notable species; • Habitat and vegetation survey report; • Fish and freshwater pearl mussel (FWPM) (*Margaritafera margaritafera*) survey reports; • Protected species survey report; and • Bat survey report.
NatureScot Sitelink web-based application[5]	• Statutory designated nature conservation sites within Scotland.
Multi Agency Geographic Information for the Countryside (MAGIC) web-based mapping tool[6]	• Statutory and non-statutory designated nature conservation sites within Scotland.
Spatial Hub Scotland[7] website	• Local Nature Conservation Sites.
National Biodiversity Network (NBN) Atlas[8] website	• Commercially available records (Creative Commons Attribution licence [CC-BY]) relating to protected or otherwise notable species within 2km of the Main Site and associated access tracks. Includes records held by the Highland Biological Recording Group (HBRG).
Ancient Woodland Inventory (Scotland)[9]	• Ancient woodland of (semi-natural origin) and long-established woodland (of plantation origin) within Scotland.
Aerial imagery (Google Earth[10] and Bing Maps[11])	• Potential habitats and features of nature conservation interest.
Ordnance Survey 1st and 2nd edition mapping	• Potential habitats and features of nature conservation interest.
Carbon and Peatland 2016 Map of Scotland[12]	• Distribution of carbon-rich and peat soil across Scotland and associated values (soil class).

Study Area

7.2.2 The ‘study area’ incorporates the area over which desk and field-based data will be gathered to inform the ecological assessment. The study area will differ according

[5] https://sitelink.nature.scot/map

[6] https://magic.defra.gov.uk/

[7] Details of Local Nature Conservations Sites available online at: https://maps.spatialhub.scot/data_preview_map/

[8] https://nbnatlas.org/

[9] https://map.environment.gov.scot/sewebmap/

[10] https://earth.google.com/web

[11] https://www.bing.com/maps/

[12] https://soils.environment.gov.scot/maps/thematic-maps/carbon-and-peatland-2016-map/

to each ecological feature concerned, based on relevant good practice guidance. Specific study areas associated with the ecological assessment will include:

- the Site (all land within the red line boundary of the Proposed Development, including access tracks);
- the Main Site (the area bounded by the Site boundary, excluding access tracks); and
- access tracks. For the purpose of this chapter of the report, and as shown in **Appendix C, Figure 1.2**:
    - Access Track A – relates to the existing access track associated with Corriegarth Wind Farm;
    - Access Track B – proposed access track associated with Dell II Wind Farm (in planning);
    - Access Track C – a 450m stretch of proposed access track linking Dell II and Stronelairg Wind Farm access tracks; and
    - Access Track D – relates to the existing access track associated with Stronelairg Wind Farm.
- desk study search areas (10 km search radius from the Site boundary for sites of International / European and National importance, plus a 2 km radius for non-statutory designated sites and legally protected and notable species (see **Appendix C**)); and
- field survey areas (incorporating the Main Site and Access Tracks B and C, except where stated, and associated survey buffer areas specific to each individual survey type).

Current Baseline

Designated Sites

Statutory Designated Sites

7.2.3 There are three designated sites within 2km of the Site that are designated primarily for their non-avian ecological features of conservation interest. Details of each are summarised in **Table 7-2**.

Table 7-2: Statutory Designated Sites within 2km

Site Name	Designation	Distance and direction from Site	Reasons for Designation (non-avian)	Connectivity
Monadhliath	Special Area of Conservation (SAC)	0km south. Immediately adjacent to the southern boundary of the Main Site.	Monadhliath qualifies as an SAC for supporting one of the most extensive areas of high-altitude blanket bog in the UK, including oceanic blanket bog and lichen-rich bog with *Cladonia* spp. on high plateaus.	Given the position of the Main Site boundary in relation to the Monadhliath SAC and SSSI, direct habitat connectivity exists. However, infrastructure

Site Name	Designation	Distance and direction from Site	Reasons for Designation (non-avian)	Connectivity
	Site of Special Scientific Interest (SSSI)		Notified features of the SSSI are blanket bog, vascular plant assemblage and the black mountain moth *(Glacies coracina)*.	associated with the Main Site is located both downgradient and downstream of the boundary of this designated site.
Loch Bran	SSSI	1 km north of the entrance to Access Track A.	Loch Bran is notified for supporting eleven species of dragonfly, including the nationally scarce species the brilliant emerald *(Somatochlora metallica)*.	Given the distance (over 1km from the Main Site access point) and location (within an area of forestry, separated from the Site by the B862 road) of this designated site, habitat connectivity is considered unlikely. In addition, there is no hydrological connectivity between Loch Bran and the Site.

7.2.4 A total of 11 further statutory designated sites with non-avian qualifying / notified features are present within 10km of the Main Site and access tracks. Of these, eight are designated for supporting terrestrial habitats of nature conservation value (Ness Woods SAC, Easter Ness Forest, Inverfarigaig, Glen Tarff, Leveshie Wood, and Creag Dubh SSSIs, and Creag Meagaidh SAC and SSSI). Given that the closest of these are located 2.4 km north-east of the Site (Ness Woods and Easter Ness Forest), habitat connectivity is considered unlikely.

7.2.5 Three statutory designated sites within 10km are designated for supporting populations of otter (*Lutra lutra*) and / or other aquatic fauna (FWPM, sea lamprey [*Petromyzon marinus*] and Atlantic salmon [*Salmo salar*]):

- Ness Woods SAC – located 2.4 km north-west of the entrance to Access Track B at closest point. No direct hydrological connectivity with the Site;
- River Moriston SAC – located 5.03 km north-west of the of the entrance to Access Track B at closest point. Situated within a different hydrological catchment with no direct connectivity to the Main Site or access tracks; and
- River Spey SAC – located 6.11 km south-east of the Main Site at closest point. As this river forms part of a separate catchment area (Spey catchment) to watercourses present on Site (River Ness catchment), hydrological connectivity with the Main Site is not considered to exist.

7.2.6 For full details relating to statutory designated sites within 10 km, please refer to the desk study report in **Appendix C**.

Non-Statutory Designated Sites

7.2.7 No data relating to non-statutory sites of nature conservation importance located within 2km of the Site boundary were returned through the online data search.

Other Sites of Nature Conservation Importance

7.2.8 Several stands of ancient and / or long-established woodland are present within 2km of the Main Site boundary and associated access tracks, two of which are located immediately adjacent to the most northernly proposed access track (Access Track A) (**Appendix C, Figure 3.2**).

7.2.9 No ancient woodland habitat was identified within the Main Site through the AWI online tool.

Habitats

Access Tracks

Access Track A

7.2.10 Based on a review of the online Carbon and Peatland Map[13] (**Appendix C, Figure 3.3**), soils associated with Access Track A are primarily mineral in nature (no peatland habitat present), with areas assigned as 'Class 4' (areas not associated with peatland habitat or carbon rich soil) and 'Class 5' (carbon-rich soil with no peatland habitats recorded) also present. Across more gently sloping ground located adjacent to, and extending between, watercourses, 'Class 1' priority peatland habitat and 'Class 2' peatland (nationally important carbon rich soils with deep peat and priority peatland habitat) are present.

Access Track B

7.2.11 Habitats associated with the proposed Dell II access track are formed of woodland (mixed and coniferous) and grassland habitats at lower elevations, with mosaics of dry heath and acid grassland, linear stands of acid flush, wet heath and extensive areas of blanket bog at higher elevations (LUC, 2024). The Allt Breineag watercourse and associated tributaries are located to the west of the proposed access track.

7.2.12 Soils associated with proposed Access Track B are formed of mineral soil near the entrance, leading into 'Class 5' carbon rich soil, before grading into 'Class 1' priority peatland at higher elevations on more gently sloping land. Areas of mineral soils are also present near the top of the proposed access track, associated with shallow rocky soils on hill summits.

Access Track C

7.2.13 The dominant habitat type associated with proposed Access Track C is 'Class 1' priority peatland. Headwaters of the Allt a' Choire Odhair (a tributary of Allt Odhar watercourse) intersect Access Track C, flowing west to east.

Access Track D

7.2.14 A review of the online Carbon and Peatland Map[13] indicates that soil types surrounding Access Track D are formed of 'Class 1' priority peatland. Small pockets

[13] Available at: https://soils.environment.gov.scot/maps/thematic-maps/carbon-and-peatland-2016-map/

of Class 5 (carbon rich soil with no peat) and Class 1 (mineral soils) were also noted.

7.2.15 In a more detailed assessment, the Phase 1 habitat survey for Stronelairg Wind Farm (SSER, 2012) identified that habitats surrounding the access track were formed primarily of wet modified bog and intact blanket bog, with sections of bare peat and mosaics of dry heath and acid grassland also present. Linear bands of acid flush were also noted to intersect the access route and surrounding mire habitats.

Main Site

7.2.16 Based on a review of the online Carbon and Peatland Map[13] (**Appendix C, Figure 3.3**), the majority of the Main Site consists of 'Class 1' priority peatland habitat. This habitat is generally situated at higher elevations across more gentle sloping ground, often adjacent to, and extending between, upland tributaries and headwater streams. Smaller pockets of 'Class 2' peat (nationally important carbon rich soils with deep peat and priority peatland habitat), 'Class 3' peat (wet, acidic habitat – indicating the potential presence of wet heath on carbon rich soil with occasional deep peat) and 'Class 5' peat (areas of carbon-rich soil with no peatland habitats recorded) are also present in these areas.

7.2.17 Extensive areas of mineral soil (not associated with peatland habitat) are present across the sleep slopes of Glenmarkie Burn valley. Small pockets of mineral soil are also present on hilltops within the southern section of the Main Site (e.g. associated with the summits of Meallan Odhar and Carn Donnachaidh Beag), and on the northern slopes of A'Mharcanach within the northern section of the Main Site (**Appendix A, Figure 3.3**).

7.2.18 The Glenmarkie Burn and Allt Cam Ban and associated un-named tributaries intersect the centre of the Main Site, flowing north-east to south-west, and east to west, respectively, through a river valley towards the River Killin. Within the northern section of the Main Site, upland watercourses drain into the Glenmarkie Burn and River Fechlin. Several waterbodies (Loch Feith a' Phuill and other un-named headwater lochans) are present at the top of headwater streams within the northern section of the Main Site.

7.2.19 While stands of woodland are present adjacent to proposed access tracks, no woodland habitat is present within the Main Site itself.

Protected and Notable Species

7.2.20 A review of available baseline data compiled to inform environmental assessments for other proposed and operational renewable energy developments within 5km of the Site identified range of protected and notable species records, which are summarised below. For full details, please refer to **Appendix C**.

7.2.21 The following protected and notable species have been identified in the area surrounding the Site and potential therefore exists for such species to utilise the Site itself:

- otter activity, in the form of resting sites, feeding remains and spraints;
- water vole *(Arvicola amphibius)* activity in the form of active colonies with burrows, runways, and latrines;
- low levels of bat activity (in-flight records), attributed to common pipistrelle *(Pipistrellus pipistrellus)*, soprano pipistrelle *(Pipistrellus pygmeaus)*, and species of the genus *Myotis:*

  - a single soprano pipistrelle pass was recorded 681 m AOD in 2011, during bat activity transect surveys associated with Stonelairg Wind Farm (SSER, 2012); and
  - generally low levels of common pipistrelle activity were recorded during static detector surveys carried out to inform the EIA for Corriegarth II Wind Farm in 2019. A slight increase was recorded during the month of July, whereby activity scores increased from 'low' to 'low-moderate' at four monitoring locations and from 'low' to 'moderate' at one monitoring location (Arcus, 2020). Static detectors also recorded generally low levels of soprano pipistrelle activity across the site, with a single monitoring point scoring 'moderate-high' activity during the month of July. The altitudes for which the increased common and soprano pipistrelle activity levels were recorded at the Corriegarth II site were 670 m AOD and 690 m AOD respectively. These altitudes are at the lower end of proposed turbine location altitudes within the Glenamarkie Site, which would range from 668 – 866 m AOD.
  - very low levels of *Myotis* activity were recorded during the surveys for Corriegarth II Wind Farm, with a total of five passes recorded.
  - bats were scoped out of the Cloiche Wind Farm and Dell II Wind Farm EIAs on account of exposed upland habitats being considered unsuitable for supporting populations of commuting, foraging and roosting bats.
- badger *(Meles meles)* activity, in the form of setts;
- common lizard (*Zootoca viviparia*);
- mountain hare (*Lepus timidus*);
- common frog (*Rana temporaria*).
- small pearl-bordered fritillary (*Boloria selene*); and
- brown trout (*Salmo trutta*).

7.2.22 Through ongoing ornithology surveys conducted since 2024 (Chapter 8), evidence of mountain hare, badger, otter, and water vole has been recorded within the Main Site and surrounding area. Additionally, a pine marten (*Martes martes*) was observed near Loch Killin. Two potential Scottish wildcat (*Felis silvestris*) scats and grouse kill were also recorded within, and adjacent to, the Main Site during spring / summer 2025. For further details, please refer to **Appendix C**.

7.3 Assessment Methodology

Baseline Data Collection

7.3.1 Based on information gathered to inform this Scoping report, the following surveys are likely to be required to establish baseline ecological conditions at the Main Site, Access Track B, and Access Track C to inform the assessment of potential effects on ecological features as a result of the Proposed Development:

- UK Habitat Classification (UKHab) and National Vegetation Classification (NVC) survey;
- survey for protected and notable species (otter, water vole, badger, red squirrel (*Sciurus vulgaris*), pine marten, Scottish wildcat, and mountain hare); and
- fish habitat suitability (including for FWPM).

7.3.2 In accordance with current pre-application guidance (NatureScot, 2024) surveys for terrestrial invertebrates and amphibians are not considered necessary to inform the EIA. Surveys for reptiles are also not considered necessary, or practical given the size and location of the Site. Instead, a habitat-based assessment would be carried out to inform the assessment of potential impacts and the need for mitigation measures during construction.

7.3.3 At this stage, no baseline ecological surveys are proposed for Access Track A (constructed track associated with Corriegarth I and II Wind Farms) or Access Track D (constructed track associated with Stronelairg Wind Farm). For further details, please refer to **Section 7.8**.

Field Survey Methodology

Habitat and Vegetation Survey

7.3.4 Habitat surveys will be carried out within the Main Site, Access Track B and Access Track C with an associated 250m buffer (where accessible). Historically, initial habitat surveys have been carried out following Phase 1 methodology (JNCC, 2010). However, the Phase 1 survey is now being replaced with a more modern survey method, the UK Habitat Classification (UKHab, 2023), which is better suited for identifying priority habitats. The UKHab surveys will be completed to a minimum detail of Level 4, where possible, using the landscape scale minimum mapping unit (MMU).

7.3.5 NVC is a detailed classification system for mapping and recording vegetation communities using plant species presence and abundance. The NVC will map, in detail, the baseline vegetation communities present on site, identify communities of nature conservation importance, and highlight vegetation communities that may indicate the presence of Groundwater Dependent Terrestrial Ecosystems (GWDTEs). The NVC survey will be limited to semi-natural habitats and will exclude modified habitats such as coniferous plantation woodland and modified grassland. The NVC would be conducted in accordance with standard methodology and guidelines (Rodwell, 1991 *et seq*; and Rodwell, 2006).

7.3.6 The NVC data will inform the scheme design and ecological impact assessment, as well as providing baseline data to inform a detailed GWDTE assessment (which would be carried out as part of the Geology, Hydrology, Hydrogeology and Soils assessment – see **Chapter 9**).

Protected Species

7.3.7 The survey for otter and water vole will comprise a walkover of all waterbodies, associated banks, and up to 20 m from bank tops, extending to 250m up and downstream of the Main Site boundary, Access Track B and Access Track C (where access allows). The survey will be completed by a team of two surveyors to comply with health and safety requirements associated with work near water. Surveys will be carried out in accordance with best practice guidance associated with otter and water vole (Chanin 2003; NatureScot, 2024a,b; Strachan and Moorhouse, 2011; Dean *et al.*, 2016).

7.3.8 Surveys for other protected terrestrial species will be conducted within the Main Site, Access Track B and Access Track C, and an associated 50m buffer, in accordance with best practice guidance (e.g. NatureScot, 2024c-f; Gurnell *et al.,* 2009).

7.3.9 The results of the preliminary protected species survey outlined above will inform the need for any further surveys that may be required to confirm presence / likely

absence, or population assessments, for certain species (e.g. trail camera monitoring to identify wildcat presence / likely absence).

7.3.10 A daytime bat walkover (DBW) will be conducted for Access Track B, in accordance with current good practice guidance (Collins, 2023) to assess and record any habitats suitable for bats to roost, commute and forage. The DBW will determine whether further bat surveys may be needed (e.g. if potentially suitable roosting features may be affected).

Fish and Aquatic Invertebrates

7.3.11 A walkover fish habitat assessment to assess the quality of watercourses for supporting freshwater fish will be carried out in watercourses associated with the Main Site, Access Track B and C, and an associated 100m buffer. During the survey, each mapped watercourse and surrounding habitat will be characterised and assessed according to the following criteria:

- predominant channel substrate and flow-types;
- habitat features;
- modifications to the channel and banks;
- channel vegetation types;
- vegetation structure of the banks and banktop; and
- land-use.

7.3.12 This information will be used to classify freshwater habitats within the Main Site and associate 100m buffer into types according to their suitability for different life stages (e.g. spawning, fry, parr, juvenile) in accordance with the Scottish Fisheries Coordination Centre (SFCC) training course manual (SFCC, 2007).

7.3.13 The watercourses within the Main Site itself appear unlikely to be suitable for FWPM, given the altitude and steepness of the topography, however FWPM are known to be present within the surrounding area. Suitability for FWPM will therefore be considered as part of the fish habitat assessment.

7.3.14 To support the assessment of suitability for FWPM, basic water quality monitoring would be conducted in-tandem with the fish habitat assessment. In-situ measurements covering a basic suite, including but not limited to pH, conductivity, dissolved oxygen and / or total dissolved / suspended solids, would be undertaken on potentially suitable watercourses. Water quality parameters would be compared to known preferences of FWPM to indicate suitability to support the species.

7.3.15 If suitable habitats for fish are identified during the fish habitat assessment, electrofishing surveys would be conducted in accordance with the SFCC methodology (SFCC, 2007; Hendry and Cragg-Hine, 1997).

Method of Assessment

7.3.16 The Ecological Impact Assessment (EcIA) for the Proposed Development will be conducted in accordance with current Chartered Institute of Ecology and Environmental Management (CIEEM) EcIA guidelines (CIEEM, 2024). It will also draw on other, more specific guidelines as appropriate, e.g. current NatureScot guidance relating to peatland, carbon-rich soils and priority peatland habitats (NatureScot, 2023). The EcIA reporting process will involve the following steps:

- summarise and evaluate the findings of baseline ecological assessments to establish important ecological features (i.e., features of sufficient value and / or

those subject to legal protection, for which detailed assessment is necessary). Based on information detailed within this scoping report, features of ecological importance will include, but will not necessarily be limited to: habitats of nature conservation importance (blanket bog, heathland and potential GWDTE communities); protected and notable terrestrial mammal species; and fish;

- identify and characterise impacts on important ecological features during the construction, operational and decommissioning phases. In accordance with the CIEEM guidelines when describing impacts, reference will be made to the following: magnitude (e.g., 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);
- assess the significance of predicted effects[14] on ecological features using appropriate guidance and professional judgement. Assessment of significance will be based on the assumption that standard mitigation measures, in line with standard construction good practice measures, will be embedded as part of the Proposed Development;
- incorporate additional measures to avoid and mitigate (reduce) potentially significant effects (if required);
- identify appropriate compensation measures to offset significant residual effects (if required);
- identify opportunities for biodiversity enhancements[15]; and
- assess cumulative effects (see **Section 7.5**).

7.3.17 Potential impacts on deer welfare, habitats, neighbouring and other interests (e.g. access and recreation, road safety etc.) will be considered as part of the EIA, based on information on deer numbers and existing management provided by the landowner. A more detailed deer management statement / plan is considered unlikely to be required at this stage, but if necessary, would be produced in accordance with relevant guidance.

7.4 Potential Impacts

Construction

7.4.1 During construction of the Proposed Development, in the absence of mitigation, it is anticipated that impacts may arise from:

- direct loss and temporary and / or permanent damage to sensitive habitats and notable plant species relating to construction of access tracks, construction compounds, turbine hardstanding areas and other infrastructure. This includes impacts relating to drainage and changes in hydrological connectivity of mire habitats, or airborne pollution (i.e. dust);

[14] A ‘significant effect’ is an effect that is sufficiently important to require assessment and reporting so that the decision maker is adequately informed of the environmental consequences of permitting a project. Significant effects can include effects on the structure and function of designated sites and the conservation status of habitats or species.

[15] In order to accord with the biodiversity provisions of National Planning Framework 4 (NPF4), development proposals should demonstrate that they contribute to the enhancement of biodiversity.

- spread / introduction of invasive non-native species through contaminated machinery and personnel movement and ground excavation works;
- temporary and / or permanent impacts to groundwater flows and chemistry affecting potential GWDTEs during the construction phase, particularly where deep excavations are required (e.g. cut and fill excavations or borrow pits);
- temporary disturbance to legally protected and / or notable species through impacts of noise, human presence and artificial light;
- temporary and / or permanent loss of habitat for protected and / or notable species, and loss or damage to resting sites and food resource;
- direct, permanent impact in the form of injury / mortality to protected and / or notable species, e.g. from collision with vehicular traffic; and
- sedimentation or pollution of watercourses (e.g. through ground excavation and associated dewatering processes, hydrocarbon spills / leaks, overflow / leaking of concrete washout areas, and movement of vehicular traffic), leading to impacts to aquatic species.

Operation

7.4.2 During operation of the Proposed Development, in the absence of mitigation, it is anticipated that impacts may arise from:

- temporary disturbance and displacement of protected or notable fauna in relation to vehicular traffic, noise and presence of site operatives; and
- mortality of protected or notable fauna as a result of traffic related collisions.

7.4.3 Environmental incidents and accidents (e.g. spillages) into freshwater habitats, impacting fish and aquatic invertebrates and subsequent prey availability for other protected or notable species. It should be noted that potential for the above impacts will be much lower during the operational phase of the Proposed Development in comparison to the construction phase.

Decommissioning

7.4.4 During decommissioning of the Proposed Development, potential effects on ecological features would be expected to be similar in nature (although not necessarily in extent or intensity) to those during the construction phase, which can be considered to be representative of reasonable worst-case decommissioning effects. On this basis it is therefore not proposed to undertake a separate assessment of the decommissioning phase.

7.5 Cumulative Effects

7.5.1 Cumulative effects could arise from the interaction between the Proposed Development and other developments nearby. In accordance with current guidance (CIEEM, 2024), developments to be incorporated in the cumulative impact assessment would include:

- proposals for which consent has been applied for which are awaiting determination;
- projects that have been consented but which have not yet been started, or which have been started but are not yet complete; and
- proposals which have been refused planning permission but which are subject to appeal and the appeal is undetermined.

7.5.2 For most (non-avian) ecological features, potential cumulative effects are only likely to be significant for other developments within the same hydrological catchment(s) or located within the regular range of more mobile species. As such, on the basis that assessment for bats is scoped out (**Section 7.8**), the cumulative assessment will be restricted to other developments within the same hydrological catchment(s) and / or within 2 km of the Site.

7.6 Mitigation

7.6.1 Mitigation, compensation and enhancement measures would be developed, as appropriate, and details provided in the ecology chapter of the EIA Report. The primary form of mitigation would be avoidance by design, e.g. the avoidance, where possible, of sensitive habitats. A range of 'standard' good practice measures would also be implemented during construction to avoid and reduce impacts. An Outline Construction Environmental Management Plan (oCEMP) will be included in the EIA Report, to form the basis of the final CEMP which would be produced and agreed post consent. Outline details of compensation for significant residual ecological effects and details of proposed biodiversity enhancements will be provided in an outline Biodiversity Enhancement and Restoration Plan (oBERP) to be included as part of the EIA Report. A detailed BERP would subsequently be produced and agreed post consent.

7.7 Consultation

7.7.1 To date there has been no consultation with statutory and non-statutory bodies in relation to non-avian ecology and the Proposed Development. However, following receipt of scoping responses, further consultation will be carried out, as required, prior to submission of the EIA Report, with expected consultees including:

- NatureScot;
- SEPA;
- THC's Ecologist; and
- Ness District Salmon Fisheries Board.

7.8 Summary of Scope

Survey and Assessment of Access Tracks A and D

7.8.1 We seek to scope out all forms of ecological survey and assessment of Access Track A and D for the following reason:

- access Tracks A and D comprise constructed access tracks associated with Corriegarth II Wind Farm and Stronelairg Wind Farm. At present, it is assumed that no further works to these access tracks (e.g. to support transport of infrastructure associated with the Proposed Development) are anticipated, and therefore significant effects on ecological features are considered unlikely.

Bats

7.8.2 Habitats within the Main Site (primarily open moorland, lacking in trees or built structures, with linear commuting features limited to upland watercourses) are generally considered to be of low suitability for bats (Collins, 2023). Combined with the high altitude of the Main Site, it is not anticipated that bats will be present in numbers which could potentially be susceptible to significant effects. It is therefore proposed to scope out bat activity surveys within the Main Site. This mirrors the

approach taken by other nearby wind farm developments; for example, both Cloiche and Dell II agreed with NatureScot to scope out surveys for bats due to elevation and poor habitat suitability. Where bat surveys were completed at nearby sites (e.g. Stronelairg and Corriegarth II) generally low levels of bat activity were recorded and no significant effect on the conservation of bat populations were predicted as a result of the developments. The Proposed Development is situated at a higher elevation than all of the sites listed above and supports limited commuting and foraging habitat, with no features suitable for roosting bats identified within the Main Site.

7.8.3 In addition to scoping out bat surveys within the Main Site and Access Tracks A and D, we also propose to scope out survey and assessment for bats associated with Access Track C. This is a proposed short section of track linking the proposed Dell II access track and the access track associated with Stronelairg Wind Farm. Habitats within, and surrounding, this proposed section of track are formed of upland peatland, with no trees or built structures, and limited linear features suitable for supporting commuting, foraging or roosting bats. As such, significant effects on the nature conservation of bat species in this area are considered unlikely.

Great Crested Newt

7.8.4 It is not anticipated that Great Crested Newt (GCN) *(Triturus cristatus)* will be present on Site. Due to its location and elevation, the Site is situated within an area considered unsuitable for GCN (ARG, 2010; O'Brien *et al.,* 2017). The maximum altitude at which GCN have been recorded is 450m, and the incidence of GCN drops significantly above 250m (McInerny, 2018). Therefore, it is proposed to scope out the assessment of potential effects on GCN within the EIA.

Effects on Designated Sites

7.8.5 The following designated sites within 10 km are not likely to be affected by the Proposed Development in relation to their non-avian ecological qualifying / interest features, due to intervening distance and / or lack of direct hydrological connection. Consideration of these sites is therefore proposed to be scoped out of the assessment:

- Ness Woods SAC;
- River Moriston SAC;
- River Spey SAC;
- Creag Meagaidh SAC;
- Loch Bran SSSI;
- Easter Ness Forest SSSI;
- Inverfarigaig SSSI;
- Glen Tarff SSSI;
- Leveshie Wood SSSI;
- Cearg Dubh SSSI; and
- Creag Meagaigh SSSI.

7.8.6 Monadhliath SAC and SSSI is located directly adjacent to the south-east boundary of the Main Site and therefore remains scoped in at this stage. However, it is noted that this designated site is located upslope from the Main Site and is therefore

unlikely to be subject to hydrological effects resulting from the Proposed Development. Provided an appropriate buffer is provided between the SAC / SSSI and proposed infrastructure, direct effects on the habitats and species for which the SAC / SSSI is classified are also unlikely.

7.8.7 Given the limited potential for adverse effects on European Sites classified for non-avian ecological features it is not proposed to produce a separate shadow Habitat Regulations Assessment (HRA) report. Rather it is intended to provide sufficient information to inform the determination of Likely Significant Effects for Monadhliath SAC, and appropriate assessment under the Conservation (Natural Habitats &c) Regulations 1994 (as amended in Scotland), if required, within the EIA Report.

7.9 Questions for Consultees

7.9.1 The following questions are directed to consultees:

a) Please can consultees confirm they are happy with the approaches detailed in this Scoping Report, including the matters proposed to be scoped out of further assessment?

b) Please can consultees confirm that a separate shadow HRA screening report is not required and that sufficient information to inform the determination of Likely Significant Effects on European Sites can be provided within the EIA Report?

c) Please can consultees provide any relevant information and specific comments regarding the potential for FWPM to be present in watercourses within and immediately downstream of the Site?

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8.0 Ornithology

8.1 Introduction

8.1.1 This chapter of the Scoping Report considers the scope of work required to assess potential significant effects associated with ornithology, during the construction, operational and decommissioning phases of the Proposed Development. Non-avian ecological effects are considered separately in **Chapter 7**.

8.1.2 In accordance with CIEEM guidelines (CIEEM, 2024), this ornithology scoping exercise aims to:

- establish an initial understanding of the baseline ornithological conditions and the potential significant effects that could arise;
- determine and agree the zone of influence of the Proposed Development and which important ornithological features could be significantly affected;
- determine and agree the proposed surveys and methods for survey, evaluation and assessment; and
- determine and agree the content of the Ornithological Impact Assessment.

8.2 Baseline Conditions

Study Area

8.2.1 The Site is located approximately 8 km south-east of the settlement of Whitebridge and approximately 16 km east of the village of Fort Augustus, within the western Monadhliath Mountains, as described in **Chapter 2**. The Site is split into Northern and Southern Turbine Clusters and corresponding Core Survey Areas, for ornithology survey purposes, divided by Glen Markie and is situated at a high elevation with the highest peak of Carn Donnachaidh reaching approximately 870 m AOD. The south shore of Loch Killin and the River Killin Valley falls within the 2 km buffer of the Northern Core Survey Area. The scoping Site boundary, Core Survey Areas and buffers are illustrated on **Figure 8.1**, and vantage point (VP) locations and viewsheds are illustrated in **Figure 8.2**.

8.2.2 The Site is situated on a mountain plateau where the most common habitats are often wet and heavily eroded moorlands with patches of bare peat and gullies, and numerous streams. There are several hills within the Site covered by heath and rockier montane habitats.

8.2.3 The Site is used for extensive sheep grazing, grouse management and deer stalking. There are no buildings or gravel tracks within the Site and human disturbance is limited to occasional visits by gamekeepers using an all-terrain vehicle (ATV).

8.2.4 There are a number of large operational and consented wind farms within the area, particularly to the north and south-west, with further schemes in planning.

Scope of desk study

8.2.5 A desk study was undertaken to inform the scope of surveys and the ornithology impact assessment. A search was undertaken using the Multi-Agency Geographic

Information for the Countryside (MAGIC) website (DEFRA, 2025) and NatureScot SiteLink website (NatureScot, 2025c) for:

- Special Protection Areas (SPA), Ramsar sites, SSSI and National Nature Reserves (NNR) with cited ornithological features within 20km of the Site boundary; and
- Local Nature Reserves (LNR) with ornithological interest features and Royal Society for the Protection of Birds (RSPB) reserves within 5 km of the Site boundary.

8.2.6 Data searches were undertaken for records of protected and conservation priority species, specifically those listed on:

- Annex I of European Council (EC) directive 2009/147/EC ('the Birds Directive');
- Schedule 1 of the Wildlife and Countryside Act (WCA) 1981 (as amended);
- Birds of Conservation Concern (BoCC) Red and Amber; and
- Scottish Biodiversity List (SBL).

8.2.7 Searches were undertaken with the following organisations:

- British Trust for Ornithology (BTO) and Royal Society for the Protection of Birds (RSPB) for records within 10 km of the Site central location; and
- Highland Raptor Study Group (HRSG), for protected and priority raptor and owl species records from within 6 km of the Core Survey Areas.

8.2.8 The Highland Biological Recording Group was approached but advised that it does not hold bird records.

8.2.9 Publicly available information on protected and/or notable avian species was also collated from the following:

- EIA report and baseline ornithology survey report for the consented Cloiche Wind Farm;
- EIA report, Supplementary Environmental Information (SEI) report, and baseline ornithology survey reports for the consented Corriegarth 2 Wind Farm; and
- EIA report and baseline ornithology survey reports for Dell 2 Wind Farm.

8.2.10 A search for ornithology monitoring reports for the Corriegarth and Stronelairg Wind Farms was undertaken but the reports are not in the public domain.

Field survey scope and methodologies

8.2.11 The baseline ornithology surveys started in March 2024 and will be completed in March 2026. The surveys have been conducted within the Northern and Southern Core Survey Areas and associated buffer zones where these fell within the land access boundary (**Figure 8.1**). Additional distribution surveys are planned for the 2026 breeding season to encompass areas within the scoping boundary not previously included in the Core Survey Areas. The scope and survey area will be agreed once detailed design is known.

8.2.12 The scope was based on current NatureScot (SNH, 2017, updated 2025) guidance. A bespoke survey approach was proposed in the non-breeding season due to the limited vehicular access, expected snow cover and adverse mountain weather conditions in the core winter months (December-February). The VP survey effort was front loaded with increased effort between September and November (six to

nine hours per VP per month). Sampling continued between December to February, with three hours per VP per month undertaken for the more accessible VPs only and an increased effort of three to nine hours per VP in March. The temporal distribution of the survey effort was in line with the expected lower activity level of the most frequently recorded target species, golden eagle, in the core winter period, as illustrated for example by the ornithological study for the Cloiche Wind Farm (Nevis Environmental, 2020).The seasonal variation in the VP survey effort and sampling from more accessible VPs was consulted and agreed with NatureScot via email dated 11 July 2024.

8.2.13 The scope of the completed and planned surveys is summarised in **Table 8-1**.

Table 8-1: Scope of Ornithology Surveys at Glenmarkie Wind Farm, March 2024 – July 2026

Survey Type	Dates Undertaken	Methodology
Flight Activity Vantage Point (VP) Surveys	April – August 2024 (completed) April – August 2025 (ongoing)	Breeding season surveys based on 36 hours of survey from each of seven VPs.
	September 2024 – March 2025 (completed) September 2025 – March 2026 (planned)	Non-breeding season surveys based on 36 hours of survey from each of seven VPs. Reduced effort during core winter months as described above.
Moorland Breeding Bird Surveys (MBBS)	April – July 2024 (completed) April – July 2025 (completed)	Four visits using an adapted Brown & Shepherd (1993) methodology, as recommended by Calladine et al. (2009), covering open habitats within a 500m buffer from the Core Survey Areas.
Targeted Breeding Raptor and Owl Surveys	March – July 2024 (completed) February – July 2025 (completed)	Four visits to suitable habitat within 2 km of the Core Survey Areas. Methods following Hardey *et al*. (2013).
Targeted Dotterel (*Charadrius morinellus*) Surveys	July 2024 (completed) July 2025 (completed)	One visit in early July along transects distributed 100m apart in suitable habitats as outlined in Gilbert *et al*. (1998).
Targeted Diver Surveys	May 2024 (completed)	Lochs with suitability for breeding divers within 1 km of the Site Boundary were surveyed in 2024 to confirm presence/ absence of these species, and to determine the outcome of any breeding attempts. One potentially suitable loch for red-throated diver (*Gavia stellata*) was identified, Loch Feith a' Phuill (**Figure 8.1**). The loch has been monitored for breeding divers as part of flight activity surveys from VP1 and distribution surveys in 2025.
Additional Moorland Breeding Bird Surveys (MBBS) and Targeted	April – July 2026	Four MBBS visits using an adapted Brown & Shepherd (1993) methodology, as recommended by Calladine et al. (2009), covering open habitats within a 500m buffer from the planned

Survey Type	Dates Undertaken	Methodology
Raptor Surveys in Gap Areas		infrastructure outside of the Core Survey Area. Four raptor survey visits to suitable habitat within 2 km of the Core Survey Areas. Methods following Hardey *et al*. (2013).

8.2.14 Except for one turbine (T20), the whole scoping turbine array has been covered by the viewsheds of the seven vantage points (**Figure 8.2**) providing a representative coverage of the whole Site. Through the design process, it is anticipated that T20 will be moved within the current viewshed of VP3 and therefore no adjustments have been made to the viewshed coverage.

8.2.15 Small areas of the scoping boundary have not been covered by baseline distribution surveys, especially to the north of the Northern Turbine Cluster where access was not available beyond the landowner boundary. These areas will contain new access tracks and potentially other infrastructure hence a single breeding season of distribution surveys (MBBS and targeted raptor surveys) is planned within these gap areas between April and July 2026.

8.2.16 It is anticipated that upgrading works of existing tracks will be minor and therefore additional distribution surveys along these tracks are not planned. We will undertake a desk study review of available data for these areas from previous surveys undertaken for Schedule 1 and Annex I species and black grouse. Pre-construction surveys will be carried out for the existing tracks upgrade areas, which will be underpinned by a Breeding Bird Protection Plan (BBPP).

Flight Activity Surveys

8.2.17 Flight Activity VP surveys were undertaken from seven locations in the first breeding season (April and August 2024) and the first non-breeding season (2024-25), following the standard NatureScot methodology advocating a minimum survey effort of 36 hours per VP during a single season (SNH, 2017, updated 2025). The second breeding season VP surveys are near completion (August 2025) with the second non-breeding season to be completed by March 2026 and Additional VP3 surveys (April – August 2026) to cover T20. As explained in paragraph 8.2.1 and agreed with NatureScot, the survey effort was increased in the autumn 2024 and March 2025 to mitigate against adverse mountain weather conditions in the core winter months (December – February). This approach will be applied again in the second non-breeding season 2025-26.

8.2.18 The main purpose of VP surveys was to collect data on target species that will enable estimates to be made of:

- The time spent flying over the Site;
- The relative use by birds of different parts of the Site;
- The proportion of flying time spent at Collision Risk Height (CRH)[16]; and
- An index of flight activity for secondary species within the Site.

8.2.19 VPs were selected to cover as much as possible of the maximum potential turbine layout plus, where possible, and a 500m buffer included to account for inaccuracies of flight line recording. The viewshed is the area visible from each VP within a 2 km

[16] CRH is the height between the lower and upper rotor sweep heights.

radius and 180 degree viewing arc. The VP viewsheds were estimated using GIS ZTV software with a surface offset of 30 m. The VP locations and the viewsheds are shown in **Figure 8.2**. No surveys from VPs located within the viewshed of another VP were conducted simultaneously, as per NatureScot guidance.

8.2.20 Primary target species were limited to those that are likely to be affected by wind farms. The following target species were selected:

- all Annex I, Schedule 1 and/or BoCC5 red listed raptor and owl species, including golden eagle (*Aquila chrysaetos*), white-tailed eagle (*Haliaeetus albicilla*), goshawk (*Accipiter gentilis*), red kite (*Milvus milvus*), hen harrier (*Circus cyaneus*), peregrine (*Falco peregrinus*), merlin (*Falco columbarius*) and short-eared owl (*Asio flammeus*)*;*
- all waterbird species, including wildfowl (ducks, geese and swans other than feral geese and mallard (*Anas platyrhynchos*)), rails, divers, grebes;
- all wader species; and
- following the NatureScot update of Scottish Natural Heritage (SNH) (2017) guidance, all gull species became primary target species from March 2025.

8.2.21 Secondary target species were those species which are susceptible to impacts from wind farms and/ or are of regional or local conservation concern. Recording of secondary species is subsidiary to the recording of target species. The following secondary species were selected: red grouse (*Lagopus scotica*), ptarmigan (*Lagopus muta*), buzzard (*Buteo buteo*), kestrel (*Falco tinnunculus*), sparrowhawk (*Accipiter nisus*), raven (*Corvus corax*), cormorant (*Phalacrocorax carbo*), herons and gull species (up to March 2025). A summary of observations of secondary species was recorded at the end of each five-minute period during VP watches, in accordance with NatureScot guidance.

8.2.22 The VP watches were spread throughout daylight hours. The following height bands (HBs) have been used between April 2024 and August 2025:

- HB1 - <10 m;
- HB2 - 10-30 m;
- HB3 – 30-150 m;
- HB4 – 150-220 m; and
- HB5 - >220 m.

8.2.23 Indicative turbine rotor diameter has been confirmed as 170 m and the hub height at 165 m. Therefore, there will be 80 m rotor offset from the ground and the tip height at 250 m. We will include a proportion of HB3 flights all HB5 flights in the Collision Risk Model (CRM).

Moorland Breeding Bird Surveys (MBBS)

8.2.24 Surveys for breeding moorland target species were carried out between April and July 2024 and April and July 2025 within the Core Survey Area plus 500m buffer where access was available (within the landowner boundary). Additional MBBS surveys will be undertaken in gap areas between the Core Survey Area and the scoping boundary in the 2026 breeding season. Surveys followed current guidance (SNH, 2017, updated 2025), which includes recommendations set out in Calladine et al. (2009), requiring an adapted Brown & Shepherd (1993) method with four

survey visits at least seven days apart between April and early July in suitable weather conditions.

8.2.25 The methodology is suitable for recording most wader species, as well as breeding skuas, gulls, grouse and wildfowl. Recording of moorland passerines is not required. Target species were those moorland species listed on Annex I, Schedule 1 and/or BoCC Red and Amber, in accordance with NatureScot guidance, which are known or likely to occur within the survey area.

8.2.26 As described in Brown & Shepherd (1993), Gilbert *et al.* 1998 and in Bibby *et al.* (1992), on completion of the surveys, identification of breeding territories was undertaken by comparing the survey maps from each visit. Records from each survey visit were collated and combined into single species maps, enabling territory analysis to be carried out.

Targeted Breeding Raptor and Owl Surveys

8.2.27 Species-specific surveys were undertaken for raptors and owls likely to occur within the survey area between March and July 2024 and February and July 2025, following the relevant methods detailed within Hardey *et al*. (2013). The survey covered the Core Survey Area plus a 2km buffer where access was available. Additional targeted raptor surveys will be undertaken in gaps areas between the Core Survey Area and the scoping boundary in the 2026 breeding season.

8.2.28 Target species were all Annex I, Schedule 1 and BoCC Red listed raptors and owls known or likely to occur within the survey area. The target species selected included: golden eagle; white-tailed eagle; goshawk; red kite; hen harrier; peregrine; merlin; barn owl (*Tyto alba*); and short-eared owl.

8.2.29 Surveys were carried out under a Schedule 1 survey licence issued by NatureScot, registration number 260271. Monitoring of golden eagle nest sites was coordinated with the HRSG and carried out remotely from vantage points during the nesting period to confirm occupancy and breeding success. Caution was applied during VP (Year 1) and walkover surveys not to disturb nesting golden eagles and merlin.

8.2.30 Secondary species were other raptor and owl species, which might be susceptible to impacts from wind farms and/ or are of regional or local conservation concern. Selected secondary species included: buzzard; sparrowhawk; kestrel; and non-target owl species.

Targeted Dotterel Surveys

8.2.31 A separate survey approach was taken to estimate the number of dotterel breeding attempts, as outlined in Gilbert *et al*. (1998).

8.2.32 One visit was carried out in suitable montane habitats characterised by heaths, prostrate dwarf-shrubs, small herbs and lichens, to count single males in July 2024 and 2025. Surveyors walked transects distributed 100m apart in suitable habitats.

Targeted Diver Surveys

8.2.33 Lochs with suitability for breeding divers within 1 km of the Core Survey Area were surveyed to confirm presence/ absence of these species, and to determine the outcome of any breeding attempts. One potentially suitable loch for red-throated divers (*Gavia stellata*) was identified, Loch Feith a' Phuill (**Figure 8.1)**, which was located within the viewshed of VP1. Subsequently, the Loch was checked for presence/ absence within the required time frames described in Gilbert *et al*. (1998) as part of flight activity surveys from VP1 on: 3, 9 and 13 May 2024; 4 and 24 June

2024; and 14 July 2024; and as part of MBBS surveys on 24 April, 28 May, 12 June and 2 July 2024.

8.2.34 The loch was checked in 2025 as part of the VP1 and distribution surveys.

Survey Limitations

8.2.35 Surveys were carried out within the parameters of current guidelines in terms of timings, effort, weather conditions and methods required. However, there were the following limitations.

8.2.36 Due to no survey access beyond the landowner boundary, the MBBS and raptor surveys did not cover a full 500m and 2km buffer respectively in the eastern part of the Site. Instead, birds were recorded up to 100m from the Site boundary perimeter for MBBS.

8.2.37 No eagle targeted raptor surveys were conducted beyond 2km of the Site boundary. However, the data on the breeding eagle species within 6km of the Site boundary was obtained from the HRSG.

8.2.38 Surveys were undertaken across a range of suitable weather conditions, with several surveys having to be re-scheduled or aborted due to low cloud, heavy rain and/ or strong wind.

8.2.39 Most of the flight activity surveys were undertaken during the day with early morning and late evening periods rarely covered due to the remote location of five out of seven VPs with over an hour walk across challenging terrain to reach them on foot (on top of at least one hour driving time within the Site), and a health and safety restriction prohibiting working in the dark. Moreover, the Site was often covered in clouds in early hours of the day restricting surveys at high altitudes. However, sampling during morning and late afternoon hours was undertaken for all of the VPs capturing higher level of activity of diurnal bird species.

Results of desk study

Statutory designated sites

8.2.40 There are five SPAs, two Ramsar sites, seven SSSIs and two NNRs within 20 km of the turbine layout. Sites with internationally and nationally designated ornithological features within the search area are summarised in **Table 8-2** and **Table 8-3**, respectively. The locations of these designated sites relative to the Site are illustrated in **Figure 8.3**.

8.2.41 There are no RSPB reserves, LNR, Scottish Wildlife Trust (SWT) reserves or Local Nature Conservation Sites (including Local Biodiversity Sites (LBS)) within 5 km of the Core Survey Areas.

8.2.42 The relevance of each designated site has been assessed by comparing its proximity to the proposed development with the foraging ranges of qualifying ornithological features, as per SNH (2016).

8.2.43 The Monadhliath SSSI, which borders the Site, is notified for its breeding bird assemblage, including the following non-passerine species/groups: raptors, dotterel, dunlin, golden plover and red grouse. Creag Meagaidh SSSI approximately 11.5km from the Site, is within the maximum foraging range of golden plover, a listed species in the notified breeding bird assemblage. The River Spey - Insh Marshes SPA, Ramsar and SSSI, located 12.4km from the Site, are outside the core foraging ranges of all qualifying species, except osprey (*Pandion haliaetus*). Ospreys, with a core foraging range of 10km, some regular foraging up to 20km and

a maximum recorded range of 28km (NatureScot, 2016), have been recorded foraging on Loch Killin during field surveys. The proposed development falls outside the foraging range of all other qualifying/listed ornithological features.

Table 8-2: Details of European and internationally designated ornithological sites within the 20 km search area

Designated Site	Distance from Site (km)*	Area of designation (ha)	Qualifying features[2] and potential connectivity[17] (bold)	Status of designated features and assessment date[18]
Loch Knockie and nearby Lochs SPA	9.2	396.4	Breeding: • Slavonian grebe (*Podiceps auritus*)	• Unfavourable. No change July 2002.
River Spey – Insh Marshes SPA	12.4	1157.26	Breeding: • **Osprey** • Spotted crake (*Porzana porzana*) • Wigeon (*Mareca pelelope*) • Wood sandpiper (*Tringa glareola*)	• Favourable. Maintained September 2009. • Favourable. Maintained December 2000. • Unfavourable. No change March 2022. • Recovering. Unfavourable Declining December 2000.
			Non-breeding: • Hen harrier • Whooper swan (*Cygnus cygnus*)	• Favourable. Maintained February 2010. • Favourable. Maintained December 2000.
River Spey – Insh Marshes Ramsar	12.4	1157.26	Breeding: • **Osprey** • Spotted crake • Wood sandpiper • Wigeon	• Favourable. Maintained September 2009 • Not assessed • Not assessed • Unfavourable. No change.
			Non-breeding: • Whooper swan	• Favourable. Maintained March 2010.
Creag Meagaidh SPA	13.1	2856.17	Breeding: • Dotterel	• Unfavourable. Declining July 2011.
Loch Ruthven SPA	16.6	200.84	Breeding: • Slavonian grebe	• Unfavourable. Declining September 2023.
Loch Ruthven Ramsar	16.6	200.84	Breeding: • Slavonian grebe	• Favourable. Maintained May 2009.

[17] Assessing connectivity with special protection areas (2016) NatureScot. Available at: https://www.nature.scot/doc/assessing-connectivity-special-protection-areas [Accessed in May 2025].

[18] https://informatics.sepa.org.uk/ProtectedNatureSites/ [Accessed in May 2025]

Designated Site	Distance from Site (km)*	Area of designation (ha)	Qualifying features[2] and potential connectivity[17] (bold)	Status of designated features and assessment date[18]
North Inverness Lochs SPA	19.3	123.18	Breeding: • Slavonian grebe	• Favourable. Maintained May 2009.
* The distance data shown was calculated from the boundary of each designated site to the boundary of the turbine layout).				

Table 8-3: Details of nationally designated ornithological sites within the 20 km search area

Designated Site	Distance from Site* (km)	Area of designation (ha)	Ornithological notified interests	Status of designated features and assessment date[18]
Monadhliath SSSI	0	10671.11	Breeding bird assemblage including: • Raptors • Dotterel • Golden plover • Dunlin • Ring ouzel (*Turdus torquatus*) • Wheatear (*Oenanthe oenanthe*) • Stonechat (*Saxicola rubicola*) • Red grouse • Meadow pipit (*Anthus pratensis*) • Dipper (*Cinclus cinclus*)	Favourable. Maintained May 2022.
			Breeding: • Dotterel (population of national importance).	Unfavourable. No change July 2011.
Knockie Lochs SSSI	9.2	141.27	Breeding: • Slavonian grebe	Unfavourable. No change August 2002.
Creag Meagaidh SSSI	11.5	7033.13	Breeding bird assemblage: • Golden eagle • Black grouse • Golden plover • Ring ouzel • Twite (*Linaria flavirostris*) • Dotterel	Favourable. Maintained June 2013.
Glendoe Lochans SSSI	11.6	254.65	Breeding: • Common scoter (*Melanitta nigra*) • Slavonian grebe	Favourable. Maintained March 2005. Favourable. Maintained August 2002.

Designated Site	Distance from Site* (km)	Area of designation (ha)	Ornithological notified interests	Status of designated features and assessment date[18]
River Spey – Insh Marshes SSSI	12.4	1158.77	Breeding bird assemblage: • Osprey • Wigeon • Shoveler (*Spactula clypeata*) • Goldeneye (*Bucephula clangula*) • Redshank (*Tringa totanus*) • Snipe (*Gallinago gallinago*) • Curlew (*Numenius arquata*) • Whooper swan	Favourable. Maintained July 2001.
			Breeding: • Osprey	Favourable. Maintained September 2009.
Creag Meagaidh NNR	15.8	3948	*"The summit plateau is one of the largest areas of woolly-fringe moss heath in the Highlands. There are internationally important numbers of dotterel breeding on the plateau."* (NatureScot, 2025). The NNR overlaps with the Creag Meagaidh SPA, SAC and SSSI and is managed by NatureScot.	No information
Insh Marshes NNR	16.1	695	Insh Marshes is a 10km long site on the River Spey floodplain and is managed by the RSPB. The site supports large populations of breeding waders, such as curlew, lapwing, redshank and snipe (RSPB, 2025).	No information
Loch Ruthven SSSI	16.6	201.15	Breeding bird assemblage: • Little grebe (*Tachybaptus ruficollis*) • Wigeon • Tufted duck (*Aythya fuligula*) • Red-breasted merganser (*Mergus serrator*)	Favourable. Maintained June 2010.

Designated Site	Distance from Site* (km)	Area of designation (ha)	Ornithological notified interests	Status of designated features and assessment date[18]
			• Oystercatcher (*Haematopus ostralegus*) • Snipe • Curlew	
			Slavonian grebe, breeding. *"Loch Ruthven is the single most important breeding site for Slavonian grebe in the British Isles, supporting approximately half of the British breeding population".* NatureScot (2025a)	Unfavourable. Declining September 2023.
Dubh Lochs SSSI	19.3	16.09	Breeding: • Slavonian grebe	Favourable. Maintained July 2003.
* The distance data shown was calculated from the boundary of each designated site to the boundary of the turbine layout.				

Results from BTO data search

8.2.44 Four Annex I/ Schedule 1 species were confirmed breeding from historic and contemporary data at a 10 km resolution (golden plover, dunlin, osprey and merlin) and seven species were recorded present in the non-breeding season (whooper swan, golden plover, golden eagle, hen harrier, red kite, peregrine and short-eared owl).

HRSG Data

8.2.45 The data requested from the HRSG returned four active golden eagle breeding territories within 6 km of the Core Survey Area.

8.2.46 The HRSG did not return any other breeding raptor species records for the requested Area of Search (AoS).

RSPB

8.2.47 The data requested from the RSPB returned a single record of a pair of twite in suitable habitat within the Core Survey Area in July 2013. The record was categorised as Probable Breeding. The RSPB did not return any other ornithological records for the requested AoS.

Cloiche Wind Farm

8.2.48 The nearest turbine of the recently consented Cloiche Wind Farm is located approximately 800m to the south of the Southern Core Survey Area (**Figure 8.3**) and the Cloiche study area partially overlapped with the Southern Core Survey

Area. The ornithology results for Cloiche Wind Farm come from surveys conducted between August 2018 and August 2019 (MBEC, 2020).

8.2.49 The most frequently observed target species during the Cloiche flight activity surveys was golden eagle, which constituted 46% of total flight records. The surveys also recorded notable activity of greylag goose (*Anser anser*) (c.12%), red kite (c.10%) and white-tailed eagle (c.9%).

8.2.50 There were several raptor species recorded (red kite, white-tailed eagle, hen harrier, golden eagle, osprey, merlin and peregrine) but breeding for any of them was not confirmed. Four active golden eagle territories overlap with the study area.

8.2.51 Golden plover, ringed plover, dunlin, common sandpiper (*Actitis hypoleucos*) and snipe were all recorded breeding within the core survey area in 2019. Other notable breeding birds included red grouse and four pairs of teal (*Anas crecca*).

8.2.52 NatureScot in their response to the Cloiche Wind Farm application advised that the development will not cause total loss of any breeding species within the breeding bird assemblage of Monadhliath SSSI. As the breeding bird assemblage feature is based on the range of species breeding in the SSSI, and not on the number of pairs of those species present, it was concluded that the development would not have an adverse impact on this feature.

Corriegarth 2 Wind Farm

8.2.53 The nearest turbines of the consented Corriegarth 2 Wind Farm are located approximately 1,350 m to the north from the Northern Core Survey Area. Bird monitoring surveys have been undertaken for the operational Corriegarth 1 Wind Farm (2015-2018) (Nevis Environmental, 2020) and breeding bird surveys for Corriegarth 2 EIA were undertaken from January 2019 to March 2020 (Nevis Environmental, 2020a, Corriegarth Wind Farm Ltd., 2020 and 2022).

8.2.54 The most frequently recorded species during the Corriegarth 1 monitoring (2015-18) and Corriegarth 2 baseline surveys (2019-20) was red kite (357 and 40 flights respectively) followed by golden eagle (100 and 11 flights), peregrine (51 and 5 flights) and white-tailed eagle (31 and 3 flights). Species recorded less frequently included golden plover, hen harrier and pink-footed goose (*Anser brachyrhynchus*).

8.2.55 Three active golden eagle territories were identified with the study area, the nearest approximately 3 km from the nearest proposed turbine location. One probable territory of peregrine was recorded to the north-west of the site.

8.2.56 Eight golden plover and eight dunlin territories were reported from 2019 surveys. Other notable breeding species included common sandpiper and red grouse.

8.2.57 NatureScot concluded that due to the separation distance (19 km) there is no connectivity between The River Spey – Insh Marches SPA and the Corriegarth 2 Wind Farm development. NatureScot agreed with the applicant that the proposal will not adversely affect the conservation status of the NHZ 10 golden eagle, white-tailed eagle or any other target species.

Dell 2 Wind Farm

8.2.58 Bird surveys were undertaken between April 2021 and March 2022. Breeding season distribution surveys were conducted in a single season (moorland breeding bird survey, raptor surveys, black grouse surveys and waterbody surveys for Slavonian grebe).

8.2.59 The most frequently recorded species during flight activity surveys was golden eagle (29 flights), followed by red kite (8), white-tailed eagle (6) and golden plover

(4). Other species recorded included whooper swan (2), dunlin (2), hen harrier (1), merlin (1) and peregrine (1).

8.2.60 Breeding raptors included golden eagle (1-2 territories), merlin (1-4), peregrine (1) osprey (one just outside of the 2km buffer) and white-tailed eagle (1). No evidence of breeding was recorded for red kite and hen harrier.

8.2.61 The following wader breeding territories were recorded: dunlin (7), greenshank (*Tringa nebularia*) (2), lapwing (*Vanellus vanellus*) (2), golden plover (9), curlew (3), snipe (10) and common sandpiper (3). Other notable species included teal (2 territories).

8.2.62 NatureScot welcomed the applicant's intention to produce a Construction Breeding Bird Protection Plan and recommended that this includes mitigation included in the EIA Report to protect Schedule 1 species and black grouse. NatureScot welcomed GET modelling for golden eagle and recommended that the loss of foraging habitat was assessed cumulatively with the consented Cloiche and Carriegarth 2 wind farms if they were not considered already.

Summary of baseline field survey results to date

8.2.63 The results of the baseline field surveys will be reported within the EIA report and associated technical appendices. The second-year breeding bird surveys are ongoing and the non-breeding season surveys are planned for September 2025 to March 2026 followed by Additional VP3, MBBS and raptor surveys in gap areas between core survey areas and the scoping boundary. A summary of the key findings so far from the first year of surveys is provided below.

Flight Activity Surveys

8.2.64 During the breeding season (April – August 2024), a total of 125 flights of 176 individuals from 11 primary target species were recorded. Flights were recorded of pink-footed goose (1), teal (2), golden plover (18), dunlin (6), greenshank (1), red-throated diver (1), golden eagle (73), red kite (14), white-tailed eagle (2), merlin (5) and peregrine (2).

8.2.65 During the non-breeding season (September 2024 – March 2025), a total of 76 flights of 504 individuals from ten species were recorded. Flights were recorded of greylag goose (1), pink-footed goose (3 of a total of 409 individuals), golden plover (2), snipe (1), golden eagle (52), hen harrier (1), red kite (7), white-tailed eagle (4), merlin (1) and peregrine (4).

8.2.66 Flight activity surveys for the 2025 breeding season have not been fully completed at the time of writing (July 2025), however after 30 hours of surveys per VP completed (out of the 36 hours required), there have been a much lower level of flight activity recorded so far compared to the 2024 breeding season with only 57 flights recorded of 371 individuals from six species. Three flights were recorded for pink-footed goose (301 individuals), dunlin (10 flights), golden eagle (16 flights), red kite (four flights), white-tailed eagle (10 flights) and merlin (one flight). The largest decrease in flight activity during the breeding season was recorded for golden eagles (73 flights in 2024 and 16 flights in 2025), most likely because adult birds from a nearby territory were incubating in 2025 while the brood failed early in the 2024 season.

Moorland Breeding Bird Survey

8.2.67 Seven moorland breeding bird species were recorded as part of the MBBS in 2024 and 2025 as shown in **Table 8-4**.

Table 8-4: Summary of results for moorland breeding birds in the Northern and Southern Core Survey Areas in 2024 and 2025 (in brackets)

Species	No. of confirmed territories in 2024 and (2025) - North	No. of confirmed territories in 2024 and (2025) - South	Summary of observations and distribution
Teal	0 (0)	1 (1)	One territory confirmed in the Southern Core Survey Area in both years.
Red grouse	16 (6)	17 (8)	Recorded across the Site but in much lower densities in 2025 compared to the year before.
Ptarmigan	0 (0)	1 (3)	One territory was identified on Carn Donnachaidh Beag in the Southern Core Survey Area in 2024 and three territories in 2025, all in the Southern Core Survey Area.
Golden plover	7 (10)	17 (14)	Widely distributed across both Core Survey Areas.
Dunlin	3 (6)	9 (12)	Widely distributed across both Core Survey Area, recorded in higher densities in 2025 compared to the year before.
Snipe	0 (1)	3 (10)	Ten confirmed territories were identified in 2025 compared to only three in 2024 in the Southern Core Survey Area in 2024.
Common sandpiper	0 (1)	1 (2)	One territory was identified in 2024 and two territories in 2025 the Southern Core Survey Area in 2024. One additional territory was confirmed on Loch Feith a' Phuill in 2025.

Targeted Breeding Raptor and Owl Survey

8.2.68 Records of hunting **osprey** were made on Loch Killin in both breeding seasons.

8.2.69 **Golden eagles** were the most frequently recorded raptor species as part of the Breeding Raptor and Owl Surveys. A pair of an adult male and immature female (3-4 calendar year bird) was seen in April 2024 around an eyrie (EA2-B) within the 2 km survey area; however, the nest was not active. A new nest site (EA2-C) was discovered but the brood failed early in the 2024 season. In 2025, the breeding pair at nest EA2-B successfully fledged a juvenile, indicating confirmed productivity for the season.

8.2.70 Rabbit plucking were found in a conifer plantation within 2km buffer of the Northern Development Area most likely of **goshawk**, which have been seen off site down Killin River valley. No breeding was confirmed within the study area.

8.2.71 **Hen harrier** female/immature bird was observed mobbed by a merlin on 27 February 2024 in the buffer of the Northern Core Survey Area. One record of a ringtail was made just outside of the 2km buffer of the Southern Core Survey Area in April 2025.

8.2.72 Several **red kite** observations were made in the Northern Core Survey Area and its buffer in both years, however there was no evidence of breeding behaviour and nesting was not confirmed.

8.2.73 An immature **white-tailed eagle** was recorded on 26 February 2024 in the Southern Survey Area near the operational Cloiche WF. An adult bird was also recorded south of Killin Loch on 26 June 2024. Two records of white-tailed eagles were made in April and May of 2025 during raptor surveys.

8.2.74 There were no sightings of **barn owl** in both years, however a roost was confirmed in a croft shed in the Killin valley. An accumulation of fresh pellets was found in 2024 but there was no evidence of recent activity in the shed in 2025, and no nesting was confirmed.

8.2.75 A single **short-eared owl** was recorded hunting on 26 February 2024 in the Southern Survey Area.

8.2.76 A total of nine records of **merlin** were made throughout the 2024 season during raptor surveys including birds displaying territorial behaviour and numerous plucking posts in the buffer zone of the Northern Survey Area. However, despite four dedicated watches in this area, neither nests nor fledged birds were recorded. In 2025, three territories were detected, including one in the same area as in 2024 (failed early), second pair defending territory in July (likely successful) and a nest with two chicks begging recorded on 16 July 2025.

8.2.77 Two records of **peregrine** were made on 26 March and 11 April 2024 in the Northern and Southern Survey Areas respectively but not breeding was confirmed that year. In 2025, successful breeding with two chicks fledged was confirmed just outside of the 2 km buffer of the Northern Core Survey Area.

Targeted Dotterel Surveys

8.2.78 One, or potentially two, singing females were recorded on 2 July 2024 in the Northern Survey Area, and one singing female was recorded on 5 July 2024 in the Southern Survey Area. Two records of singing females were made in May 2025 (north and south), but no males were seen during targeted surveys in both breeding seasons and therefore nesting could not be confirmed.

Targeted Diver Surveys

8.2.79 A single red-throated diver was recorded on Loch Feith a' Phuill as part of the MBBS on 22 April 2024, but no subsequent records were made. Divers were not recorded in the 2025 breeding season.

8.3 Assessment Methodology

8.3.1 The approach and method to the assessment will be informed by the following legislation, policy and guidance.

Legislation

- The Conservation (Natural Habitats &c) Regulations 1994 (as amended in Scotland) (the Habitats Regulations);
- The Wildlife and Countryside Act (WCA) 1981, as amended in Scotland;
- The Wildlife and Natural Environment (Scotland) Act 2011;
- The Nature Conservation (Scotland) Act 2004; and

- The Electricity Works (Environmental Impact Assessment) (Scotland) Regulations 2017.

Policy

- Highland Nature Biodiversity Action Plan;
- National Planning Framework 4:
- Scottish Biodiversity List (SBL);
- Scottish Government Draft Planning Guidance: Biodiversity; and
- The Scottish Biodiversity Strategy to 2045.

Data sources and planned surveys

8.3.2 Following the completion of the first study year (March 2024 – March 2025), the second breeding season survey is currently underway (April – August 2025) and the second non-breeding season surveys are planned (September 2025 – March 2026). Following a review of the scoping boundary, further distribution surveys will be required in the 2026 breeding season. The full scope of surveys is detailed in **Table 8-1**.

8.3.3 The baseline ornithology surveys started in March 2024 and will be completed in March 2026. The surveys have been conducted within the Northern and Southern Core Survey Areas and associated buffer zones where these fell within the land access boundary (**Figure 8.1**). Additional distribution surveys are planned for the 2026 breeding season to encompass areas within the scoping boundary not previously included in the Core Survey Areas. The scope and survey area will be agreed once detailed design is known.

8.3.4 The scope was based on current NatureScot (SNH, 2017, updated 2025) guidance. A bespoke survey approach was proposed in the non-breeding season due to the limited vehicular access, expected snow cover and adverse mountain weather conditions in the core winter months (December – February). The VP survey effort was front loaded with increased effort between September and November (six to nine hours per VP per month). Sampling continued between December to February, with three hours per month undertaken for the more accessible VPs only and an increased effort of three to nine hours per VP in March. The temporarl distribution of the survey effort was in line with the expected lower activity level of the most frequently recorded target species, golden eagle, in the core winter period, as illustrated for example by the ornithological study for the Cloiche Wind Farm (Nevis Environmental, 2020). The seasonal variation in the VP survey effort and sampling from more accessible VPs was consulted and agreed with NatureScot via email dated 11 July 2024.

8.3.5 The scope of the complete and planned surveys is summarised in **Table 8-1**.

8.3.6 Updated information on golden eagle territory distribution and breeding success of territories within 6 km of the Site boundary will be sought from the HRSG to inform the EIA. Golden eagle topography (GET) model data have been sourced and will be presented in the EIA.

Assessment of effects

8.3.7 The assessment and reporting process will follow CIEEM guidelines (CIEEM, 2018, updated 2024) with reference to relevant NatureScot guidance as appropriate. The intended process is set out below:

- Further desk studies and collation of existing material, including all baseline survey data collected, raptor study group data and information from other nearby wind farm developments;
- Identification of the important ornithological features (IOFs) at the Site; from survey work completed, which will likely include:
  - golden eagle (due to breeding with the study area and levels of flight activity);
  - red kite (due to level of flight activity);
  - merlin (due to breeding within the study area); and
  - wader community, in particular dunlin and golden plover (due to the number of breeding pairs within the study area) as well as probable breeding of dotterel (to be confirmed).
- Evaluation of the potential impacts of the Proposed Development during construction, operation and decommissioning and the effects these could have on the IOFs;
- Ornithological features will be considered within a defined geographical context. The following geographic frame of reference will be used:
  - International;
  - National (i.e. Scotland);
  - Regional (i.e. Natural Heritage Zone (NHZ) 10, Central Highlands);
  - Local (i.e. the Site plus circa 10km); and
  - Less than local.
- Analysis of data including collision mortality modelling, if required, for those IOFs with sufficient flight activity within the collision risk zone (NatureScot, 2024; Band, 2007), and assessing the potential displacement of IOFs with significant populations within the Site;
- Evaluation of the significance of effects by considering the impacts on the IOFs 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;
  - frequency and timing (i.e., the number of times an activity occurs); and
  - reversibility, i.e., will the impact be permanent or reversible over a given timescale.
- Applying the mitigation hierarchy and 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 biodiversity enhancement; and
- Cumulative effects assessment.

Cumulative assessment

8.3.8 Cumulative assessment will be undertaken for each of the IOFs identified within the EIA. The assessment will include operational projects, projects under construction, consented projects which are not yet under construction and projects for which planning applications have been submitted but have not yet been determined.

8.3.9 With regard to the scale of the cumulative assessment, NatureScot (2018) guidance indicates that the default approach should be to assess cumulative effects at the Natural Heritage Zone (NHZ) scale, unless there is a reasonable alternative. The relevant NHZ for Glenmarkie Wind Farm is Central Highlands (NHZ 10).

8.4 Potential Impacts

8.4.1 The key ornithological issues relating to the Proposed Development are the potential for it to adversely affect the conservation status of bird species with statutory protection (e.g. qualifying features for designated sites or listed on Schedule 1 of the Wildlife & Countryside Act, as amended) or otherwise those of high conservation concern, through habitat loss, disturbance, displacement, barrier effects and/or collisions with turbines. Potential negative impacts (direct or indirect) on birds could arise during the construction, operation and decommissioning stages. These are defined as follows:

Construction phase impacts

Direct land take

8.4.2 Direct land take for the installation of the Proposed Development infrastructure (turbine bases, sub-station, access tracks, borrow pits, etc.) would result in the long-term 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.

Disturbance and displacement

8.4.3 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/or winter survival.

Destruction of nests

8.4.4 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. The EIA will propose measures to address this impact through mitigation such as seasonal timing of certain construction works, pre-construction

surveys and the employment of an Ecological Clerk of Works (ECoW) during construction.

Operational phase impacts

Disturbance/displacement and barrier effects

8.4.5 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. Barrier effects can be caused by the presence of operational turbines. They can potentially create an obstacle to the regular movements of birds, which will be considered in the EIA.

Collision Risk

8.4.6 The EIA will consider the potential collision risk 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, notably its 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. These will be considered in the EIA.

8.4.7 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).

8.4.8 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). 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.

Decommissioning Impacts

8.4.9 During decommissioning of the Proposed Development, it can be assumed that the process of decommissioning will likely result in similar impacts to that of the construction phase but with a lesser magnitude and of a shorter period. On this basis it is therefore not proposed to undertake a separate assessment of the decommissioning phase.

8.5 Cumulative Effects

8.5.1 It is also important to assess the cumulative impacts of this and other operational, consented and proposed wind farms that may affect the broader populations of birds identified as target species in the survey area. NatureScot (2018) guidance on cumulative assessment 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;
- 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.

8.5.2 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. 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.

8.6 Mitigation

8.6.1 The mitigation hierarchy principles will be followed (avoidance, mitigation, compensation, enhancement) incorporating emerging results into scheme design, which will be set out in detail in the EIA Report. Mitigation, compensation and enhancement measures are dependent on the assessment of impacts in the EIA. Outline details will be provided in the EIA Report with further details provided in an Outline CEMP and Outline Habitat Management Plan, to be included as part of the EIA Report. The Outline CEMP will form the basis of the final CEMP which will be produced and agreed post-consent. A detailed HMP will also be produced and agreed post-consent.

8.7 Consultation

8.7.1 Further consultation will be undertaken with NatureScot, Highland Council and other relevant organisations as required following receipt of scoping responses.

8.8 Summary of Scope

8.8.1 Matters to be scoped out of the EIA with respect to Ornithology include:

- effects on species whose populations are below a certain geographic level of importance. In accordance with CIEEM (2018, updated 2024) guidelines, detailed assessment is only required for species with a certain level of importance or above. For Glenmarkie Wind Farm, it is proposed to assess only species of local importance and above;
- impacts on Species/ Groups not Susceptible to Significant Effects from Wind Farms. As specified in current NatureScot guidance (SNH 2017), impacts on species groups such as passerines (songbirds) which are not considered vulnerable to significant effects from wind farm developments are proposed to be scoped out;
- surveys of the existing access tracks, subject to the level of works planned;
- two years of distribution surveys for new access tracks once identified. One breeding season of distribution surveys is proposed for these areas;

- HRA, assuming very limited activity recorded for those species which have been highlighted as having potential connectivity, i.e. osprey of the River Spey – Insh Marshes SPA and Ramsar; and
- impacts on the breeding bird assemblage feature of the Monadhliath SSSI, as we expect the same conclusion from NatureScot as for the Cloiche Wind Farm which determined that the development would not result in the total loss of any breeding species within the assemblage, as the feature is defined by the diversity of breeding species present on the SSSI (rather than the number of breeding pairs) and therefore, the proposed development was not expected to adversely affect this ornithological feature.

8.9 Questions for Consultees

8.9.1 The following questions are directed to consultees:

a) Do consultees agree that the scope of surveys and effort (completed and planned) are sufficient to inform the assessment and that the proposed assessment methodologies are appropriate?

b) Do consultees agree that all the statutory and non-statutory designated sites within the potential Zone of Influence (ZoI) have been identified?

c) Do consultees agree with the identified IOFs and potential impacts?

d) Do consultees agree with the matters proposed to be scoped out?

e) Would consultees be willing to share details of the Regional Eagle Conservation Management Plan (RECMP) and what actions have been implemented so far?

f) Are consultees aware of any other relevant consultees and additional sources of data, not referred to above, that may be relevant to the assessment?

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9.0 Geology, Hydrology, Hydrogeology and Soils

9.1 Introduction

9.1.1 This chapter outlines the proposed scope of the EIA Report to assess the potential significant effects from the Proposed Development on geology, hydrology, hydrogeology and soils (including peat).

9.2 Baseline Conditions

Study Area

9.2.1 The study area for geology, peat and soils will be within the Site boundary, the hydrological and hydrogeological study area will extend to 500m from the Site boundary. These study areas have been used to describe the current geology, hydrology and hydrogeology baseline conditions in the sections below.

Current Baseline

Site Setting

9.2.2 The Proposed Development is located within the Monadhliath Mountains approximately 16 km east of Fort Augustus and approximately 8 km south-east of the settlement of Whitebridge.

9.2.3 Elevations range from approximately 200 m AOD near the proposed access to the Site from the B862 to approximately 870 m AOD near the summit of Carn Donnachaidh Beag within the southern extent of the Site. Elevations generally decrease towards the Glenmarkie Burn within the centre of the Site and north westwards towards Loch Ness. The proposed wind turbines are generally situated at an elevation greater than 650 m AOD.

9.2.4 The closest Meteorological Office climate station is Fort Augustus whichrecorded an annual average rainfall of 1,359.4 mm in the standard period 1991-2020. In 2024, the Site and its surrounds recorded an average rainfall of 1,492 mm.

Geology and Hydrogeology

9.2.5 The northern extent of the Site is shown by British Geological Survey (BGS) mapping to be generally underlain by several metamorphic units comprising semipelites of the Monadhilath Semipelite Formation and psammites from the Loch Laggan Psammite Formation. The southern extent of the Site is shown to be underlain by igneous granodiorites of the Allt Crom Formation with rafts of several psammites. The northern most extent of the Site, near the B862, is shown to be underlain by igneous bedrocks of the Foyers Igneous Complex comprising granodiorite and quartz-diorite (**Figure 9.2**).

9.2.6 BGS mapping shows several inferred faults and thrust faults noted in the south east of the site and intersecting with the existing access tracks.

9.2.7 BGS mapping indicates no Artificial Ground recorded within the Site.

9.2.8 The overlying superficial deposits, where present, are shown by BGS mapping to generally comprise of peat and glacial, as shown in **Figure 9.3**. Small areas of hummocky glacial deposits, glacial sand and gravel, alluvial fans and alluvium are

noted within the northern extent of the Site. It is noted that large parts of the Site have not been mapped by the BGS.

9.2.9 The peat, glacial till and bedrock deposits are unlikely to contain significant amounts of groundwater. The bedrock has been classified by BGS as a low productivity aquifer, where small amounts of groundwater may be present within the near surface weathered zones, secondary fractures and rare springs.

9.2.10 The Site is located within the Northern Highlands groundwater body (SEPA ID: 150709) which is currently classified as having a Good overall status (**Figure 9.6**).

Mineral Resources, Quarrying and Mining

9.2.11 The Site is not located within a development high risk area or coal mining reporting area according to the Mining Remediation Authority (formerly the Coal Authority).

9.2.12 A review of BGS mapping indicates two mines and quarries located on the north access track, Garthbeg and Carn a' Choire Sheilich Pit. Both mines and quarries have ceased works.

Unexploded Ordnance (UXO)

9.2.13 The Zetica website was reviewed for potential Unexploded Ordnance (UXO) and indicated that the Site is within a low bomb risk area.

Soils and Peat

9.2.14 The National Soil Map of Scotland indicates that soils beneath the Site generally comprise of dystrophic blanket peat and subalpine soils.

9.2.15 The northern extent of the Site is also shown to be underlain by small areas of humus iron podzols, noncalcareous gleys, alluvial soils, peaty gleys and peaty podzols. The Glenmarkie Burn within the centre of the Site is shown to be underlain by peaty rankers.

Agricultural soils

9.2.16 Review of peatland classification mapping19 published by SNH (now NatureScot) was undertaken to identify potential areas of peatland within the Site. The peatland classification mapping is a high level planning tool which provides an indication of the likely presence of peat on each individually-mapped area, at a coarse scale, and should be supplemented by further site specific surveys (peat depth probing and assessment of peat condition) where peat is identified.

9.2.17 The peatland classification mapping[19] indicates that the majority of the Site is underlain by Class 1 and Class 3 peatlands, as shown in **Figure 9.4**. The northern extent of the Site is underlain by areas of Class 2 and mineral soils (Class 0). The southern extent of the Site is underlain by areas of Class 2, Class 5.

9.2.18 Class 1 and Class 2 peatlands are considered nationally important priority peatland habitats, carbon rich soils and deep peat which are considered to be of high conservation value. Class 3 and Class 5 peatlands are not considered priority peatland habitats, however soils remain carbon rich with areas of deep peat. Mineral soils (Class 0) are not considered representative of peatland habitats.

9.2.19 An initial Phase 1 low resolution peat depth survey has been undertaken across the Site with the exception of existing access tracks and areas of very steep slopes

[19] https://soils.environment.gov.scot/maps/thematic-maps/carbon-and-peatland-2016-map/

around the Glenmarkie Burn, the results of the peat depth survey and survey area extents are shown in **Figure 9.5**. Peat is defined as peat soil recorded >0.5m in thickness. Peaty soils have been defined as <0.5m (not defined as peat). Peaty soils are typically found on topographic highs and hillslopes on the Site, with deep peat deposits recorded in low-lying areas, such as valleys, depressions and gentle slopes. The deepest peat deposits were recorded 6.2 m in the north-east of the Site.

9.2.20 A Preliminary Peatland Condition Assessment (PCA) indicates that the majority of the Site is in Drained Hagg Gulley Condition with extensive areas of peat pans which are Actively Eroding. There are also extensive areas of burning in the south-western part of the Site as well as limited artificial drainage. Fragments of better condition peatland remain with pools and higher sphagnum cover as well as intact montane heath. These areas of identified higher sensitivity have been used to refine the scoping layout to reduce impacts to peatland. The Proposed Development design would be further refined following detailed PCA used during each major design iteration to guide and evidence adherence to the mitigation hierarchy as required by Policy 5 (Soils) of NPF4.

9.2.21 The Proposed Development design would be further refined following Phase II probing surveys and would been designed to largely avoid areas of deep peat >1m, in accordance with Policy 5 (Soils) of NPF4.

Hydrology and Designated Sites

9.2.22 The entire Site is located within the River Ness surface water catchment, specifically the River Foyers sub catchment. The River Foyers flows generally north-westwards to the north of the Site before discharging into Loch Ness approximately 3.6 km north-west of the Site. The hydrological features of the Site are shown in **Figure 9.1.**

9.2.23 The majority of the Site is drained by several tributaries of the River Foyers. Much of the Proposed Development is drained by the River Fechlin and the River Killin (a tributary of the River Fechlin) sub catchments. The western boundary of the Site, including the proposed western access track, is drained by the Allt Breineag whilst the proposed north-eastern access track is drained by the Allt an Loin.

9.2.24 A small section of the proposed western access track is located within the River Tarff sub catchment, which flows west and north-west to the west of the Site before discharging into Loch Ness approximately 10 km west of the Site.

9.2.25 All the watercourses monitored by SEPA which drain the Site have been currently classified with an overall status of Moderate to Good.

9.2.26 The entire River Ness catchment has been designated as a Drinking Water Protected Area (DWPA). The River Tarff and Loch Ness catchments have also been designated as DWPAs.

9.2.27 Watercourses and groundwater within the Site may also support local private supplies due to the rural nature of the Site. THC private water supply database indicates that there are 20 private water supply sources within 500m of the Site boundary.

9.2.28 SEPA flood mapping indicates there is a risk of fluvial and surface water flooding across the Site, however, flood extents are largely confined to the immediate watercourse corridors. A wider area of fluvial flooding is noted along the northern

extent of the Site and crosses the proposed access tracks. The Site is not considered to be at risk of coastal or groundwater flooding.

9.2.29 A Review of NatureScot's SiteLink indicates that the south-eastern boundary of the Site borders but does not encroach the Monadhliath SAC and SSSI which has been designated for upland habitats, including blanket bog habitats, breeding bird assemblage, black mountain moths and vascular plant assemblage. The designated sites are either located upstream of the Proposed Development or within a different surface water catchment to the Proposed Development. It is therefore considered that the SAC and SSSI are not hydraulically connected to the Proposed Development.

9.2.30 No other designated sites are noted within 500m of the Site boundary

9.3 Assessment Methodology

Legislation Policy and Guidance

9.3.1 The geology, peat, hydrology and hydrogeology chapter will be prepared with reference to best practice guidance and legislation, including (but not limited to):

Legislation

- EC Water Framework Directive (2000/60/EC);
- EU Drinking Water Directive (98/83/EC);
- Environmental Protection Act 1990;
- The Flood Risk Management (Scotland) Act 2009;
- 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;
- The Water Supply (Water Quality) (Scotland) Regulations 2001; and
- Private Water Supplies (Scotland) Regulations 2006.

Policy

- National Planning Framework 4 (NPF4); and
- The Highland Council Local Development Plan 2 (2024).

Guidance

- Good Practice During Wind Farm Construction, Fifth edition (NatureScot, 2024);
- Guidance on Assessing Impacts of Development Proposals on Groundwater Dependent Terrestrial Ecosystems (SEPA, 2024);
- Guidance on Assessing Impacts of Development Proposals on Groundwater Abstractions (SEPA, 2024);
- Control of Water Pollution from Linear Construction Projects – Technical Guidance, C648 (CIRIA, 2006);

- Engineering in the Water Environment: Good Practice Guides – River Crossings and Soils (SEPA, 2010);
- The SuDS Manual C753 (CIRIA, 2015);
- Environmental Good Practice on Site C741 (CIRIA, 2015);
- NetRegs, Guidance for Pollution Prevention (GPP – various);
- Developments on Peat and Offsite Uses of Waste Peat (Scottish Environment Protection Agency, 2017);
- Peat Landslide Hazard and Risk Assessments: Best Practice Guide for Proposed Electricity Generation Developments (Scottish Government, 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);
- Advising on peatland, carbon-rich soils and priority habitats in development management (NatureScot, 2023);
- Technical Compendium: Good Practice for Peatland Restoration Techniques (NatureScot, Peatland Action, 2022); and
- Peatland Survey. Guidance on Developments on Peatland. (Scottish Government, SNH, SEPA, 2017).

Proposed Surveys and Methodology

9.3.2 The potential effects from the Proposed Development on geology, hydrology, hydrogeology and soils (including peat) will be assessed in the EIA Report by completing a desk study and field investigation followed by an impact assessment, the processes of which are detailed below.

Study Area

9.3.3 The study area for peat and soils will be within the Site boundary. The geological, hydrological and hydrogeological study area will extend to 500m from the site boundary and the cumulative effects study area will extend to 5km from the site boundary.

Desk Study

9.3.4 An initial desk study will be undertaken to determine and confirm the baseline characteristics by reviewing available information relating to soils and peat, geology, hydrology, and hydrogeology such as groundwater resources, licensed and unlicensed groundwater and surface water abstractions, public and private water supplies, surface water flows, flooding, rainfall data, water quality and soil data. This will include review of published geological maps, Ordnance Survey maps, aerial photographs, and site-specific data such as site existing available peat probing data, digital terrain models (slope plans) and geological literature.

9.3.5 The desk study will identify sensitive features which may potentially be affected by the Proposed Development and will confirm the geological, hydrogeological, and hydrological environment.

Field Surveys

9.3.6 The hydrological assessment specialists will liaise closely with the project ecology and geology / geotechnical specialists to ensure that appropriate information is gathered to allow a comprehensive impact assessment to be completed.

9.3.7 A detailed site visit and walkover survey will be undertaken, to:

- verify the information collected during the desk and baseline study;
- identify drainage patterns, areas vulnerable to erosion or sediment deposition, and any pollution risks;
- visit any identified GWDTEs (in consultation with the project ecologists);
- visit any public and private water supplies within the study area that might be affected by the Proposed Development to confirm details of the location of the abstraction, its type and use, as required;
- prepare a schedule of potential watercourse crossings;
- assess the Site geomorphology and conduct additional Phase II peat depth probing and assessment of peatland condition, as required; and
- inspect rock exposures, establish by probing an estimate overburden thicknesses (a probe is pushed vertically into the ground to refusal and the depth is recorded).

9.3.8 The desk study and field surveys will be used to identify potential development constraints and be used as part of the design of the Proposed Development.

9.3.9 Once the desk study is completed and sensitive soil and peat, geological and water features are confirmed an EIA Report will be prepared to assess the potential effects on soils and peat, geology hydrology and hydrogeology as a result of the construction and operation of the Proposed Development.

Assessment of Effects

9.3.10 The purpose of this assessment will be to:

- if peat is identified then identify any areas susceptible to peat slide, using peat thickness and Digital Terrain Model (DTM) data to analyse slopes;
- assist in the micrositing of turbines and tracks in areas of no peat or shallow peat and in the least hydrogeologically and hydrologically sensitive areas by applying buffer zones around watercourses and other hydrological features;

- assess potential effects on soils, peat and geology;
- determine what the likely effects of the Proposed Development are on the hydrological regime, including water quality, flow and drainage;
- assess potential effects on water (including groundwater) dependent habitats;
- determine suitable mitigation measures to prevent significant hydrological and hydrogeological effects; and
- develop an acceptable code for working on the Proposed Development that will adopt best practice procedures, effective management and control of on-site activities to reduce or offset any detrimental effects on the geological, hydrogeological and hydrological environment.

9.3.11 It is anticipated the EIA Report would include the following technical appendices:

- peat landslide hazard and risk assessment (PLHRA);
- peat condition assessment and peat management plan (PCA and PMP);
- schedule of watercourse crossings;
- DWPA and private water risk assessment; and
- GWDTE risk assessment.

9.3.12 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.

9.3.13 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.

9.3.14 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.

9.3.15 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.

9.3.16 A review of other existing and proposed developments near the Proposed Development will be undertaken and potential impacts on geology, hydrology, hydrogeology and soils will be assessed to identify cumulative impacts. With regard to the Proposed Development, it is likely that mitigation measures will be proposed that will have a neutral effect or provide betterment compared to baseline conditions. It is considered unlikely that there will be any significant residual or cumulative impact to report.

Peat Management Plan, Peatland Condition Assessment and Peat Landslide Hazard and Risk Assessment

9.3.17 A PCA will be completed to identify areas of peatland in near natural condition and areas of priority peatland which should be avoided during the design of the Proposed Development in accordance with Policy 5 (Soils) of NPF4.

9.3.18 A Stage 1 PMP will be prepared as a supporting technical appendix in line with NPF4, SEPA Regulatory Position Statement: Developments on Peat (2012) and NatureScot Good Practice During Wind Farm Construction guidance. The Waste Framework Directive (WFD) 2008/98/EC, transposed into National Law under The Waste Management Licensing (Scotland) Regulations 2011, sets out a requirement to apply a waste hierarchy. In terms of this project, this hierarchy should be considered as follows:

- prevent excavation;
- reduce volumes of peat excavated; and
- reuse excavated peat in a manner to which it is suited.

9.3.19 The following works will be completed:

- peat depths within the Site will be presented as a 10m grid at proposed infrastructure locations (the probing will also provide information of the substrate below the peat);
- a limited (in terms of aerial extent) 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 sub-strata confirmed by inspection of watercourses;
- the investigation will consider turbine locations, access routes, compounds and borrow pits for signs of existing or potential peat instability;
- augering of a representative selection of peat probe locations will be undertaken and the proportion of acrotelmic and catotelmic peat recorded; and
- output from the field survey will comprise a record of investigation locations and summary of peat depths and augering results.

9.3.20 A PLHRA will be completed using the site survey data and slope analysis (using DTM data), if required by best practice guidance, highlighting areas that may be impacted by a peat slide so that appropriate mitigation measures and can be identified.

Borrow Pit Assessment

9.3.21 Suitability of materials on the Site will be verified 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.

9.4 Potential Impacts

9.4.1 Without mitigation or adherence to best practice, impacts on soils and peat, geology, hydrology and hydrogeology could occur during the construction and operational phases of the Proposed Development. A summary of the potential effects on soils, peat, geology, hydrology and hydrogeology resulting from construction, and operation of the Proposed Development is provided below. These will be considered in the EIA Report.

Potential Impacts During Construction

9.4.2 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 if present);
- 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, or saturation of peat deposits, from dewatering excavations;
- potential change of groundwater flow paths and contribution to areas of peat and GWDTEs;
- disturbance of watercourse bed and banks from the construction of culverts;
- potential adverse impacts to water dependent designated sites, public and private water supplies; and
- disturbance and or pollution resulting from borrow pit formation and use.

Potential Impacts During Operation

9.4.3 The following potential impacts during the operational phase will be considered in the EIA Report:

- increased runoff rates and flood risk, resulting from increases in areas of tracks and hard standing 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 abstractions for water supplies, particularly any supplies dependent on groundwater; and
- pollution impacts on surface water quality from maintenance work.

Potential Impacts During Decommissioning

9.4.4 Potential impacts arising during decommissioning of the Proposed Development would likely be similar to those during the construction phase, but would depend on the exact nature of the decommissioning activities that take place. Mitigation similar to that implemented during the construction and operational phases, although updated to reflect changes in legislation / guidance, would be implemented to ensure the significance of impacts arising is minimised. On this basis it is therefore not proposed to undertake a separate assessment of decommissioning phase.

9.5 Cumulative Effects

9.5.1 A review of other existing and proposed developments near the Proposed Development will be undertaken and potential impacts on geology, hydrology,

hydrogeology and soils will be assessed to identify cumulative impacts. With regard to the Proposed Development, it is likely that mitigation measures will be proposed that will have a neutral effect or provide betterment compared to baseline conditions. It is considered unlikely that there will be any significant residual or cumulative impact to report.

9.5.2 The cumulative effects on geological, soil, hydrological and hydrogeological receptors will be assessed using the surface water catchments within the study area, with a maximum downstream distance of 5km from the Site boundary.

9.6 Mitigation

9.6.1 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.

9.6.2 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 50 m will be applied to watercourses shown on 1:10,000 scale mapping;
- site-specific peat probing will be undertaken in accordance with current best practice guidance to allow a PLHRA and PMP to be prepared;
- a site-specific PLHRA will be prepared, and areas of potential increased peat slide risk will be avoided or mitigation measures to manage these risks;
- a PCA will be prepared to identify areas of peatland in near natural condition and priority peatland to support avoidance by design of the Proposed Development;
- a PMP will be prepared to show how the integrity of soil and peat will be safeguarded; and
- impacts on private water supply sources and areas of GWDTE will be avoided.

9.6.3 There is much best practice guidance which has been developed to assist developers minimise the risks associated with wind farm construction and operation 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 and carbon rich soils.

9.6.4 Good practice measures will be applied in relation to pollution risk, and management of surface run-off rates and volumes. This will form part of the final CEMP to be implemented for the proposed development.

9.7 Consultation

9.7.1 As part of the consultation phase of the project, environmental data and views of the Proposed Development will be sought from:

- THC;
- NatureScot;
- SEPA;
- Scottish Water;
- Ness and Beauly Fisheries Trust; and

- Ness District Salmon Fishery Board

9.8 Summary of Scope

9.8.1 It is proposed that the potential impacts outlined above will be assessed as part of the EIA Report.

9.8.2 At this stage, it is proposed that the following can be scoped out of detailed assessment:

- it is proposed to scope out effects on geology. While there will be effects arising from rock extraction for borrow pits, track construction and for turbine and crane pad areas, these are limited in area and are not likely to extend beyond the immediate Proposed Development footprint. No particularly sensitive geological features have been identified within the Site. Potential effects on carbon rich soils and peat will be assessed in full.
- a standalone Flood Risk Assessment (FRA). Published mapping confirms that flooding at the Site is limited to fluvial and surface water flooding which is largely confined to the immediate watercourse corridors. It is proposed, therefore, that a simple screening of potential flooding sources (fluvial, coastal, groundwater, infrastructure etc.) is presented in the EIA Report and measures that would be used to control the rate and quality of runoff will be specified in the EIA Report.
- a Drainage Impact Assessment. Design standards and measures which would be used to control and manage incident rainfall would be specified in the EIA Report. A site drainage design plan would be prepared as part of the detailed site design (post planning) and form part of the final Construction and Environmental Management Plan. This would be submitted to SEPA for approval at that stage.
- baseline water quality monitoring as part of the baseline assessment. Classification data is available from SEPA for the watercourses at Site and there are no known sources of potential water pollution at the Site that might give rise for the need for water quality monitoring.
- a separate assessment of the decommissioning phase. Impacts arising during decommissioning are likely to be similar to those during the construction phase. Mitigation similar to that implemented during the construction and operational phases, although updated to reflect changes in legislation / guidance, would be implemented to ensure the significance of impacts arising is minimised.

9.9 Questions for Consultees

9.9.1 The following questions are directed to consultees:

a) It is not proposed to prepare a standalone FRA however a simple screening of potential flooding sources (fluvial, coastal, pluvial, groundwater etc.) and measures that would be used to control flood risk to and from the Proposed Development will be presented in the EIA Report. Is this approach acceptable?

b) It is not proposed to prepare a detailed drainage design. Rather measures that would be used to control the rate and quality of runoff will be specified in the EIA Report, if acceptable?

c) Site investigations, including detailed peat probing, augering and peatland condition assessment, private water survey, and GWDTE assessment will be undertaken as part of the proposed assessment. Should any additional investigation or data sources be considered when assessing baseline conditions?

d) 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 as there is published data that can be used to characterise baseline conditions and complete the impact assessment. Is this acceptable?

e) Please advise if there is any specific information or methodology that should be used / followed as part of the private water supply risk assessment?

f) Do you agree that the scope of the proposed assessment is appropriate?

10.0 Traffic and Transport

10.1 Introduction

10.1.1 This Chapter of the Scoping Report outlines the proposed method to assess the potential effects associated with traffic and transport during the construction, operation and decommissioning of the Proposed Development. The assessment method will follow the guidance in the Institute of Environmental Management and Assessment (IEMA)20 Guidelines: Environmental Assessment of Traffic and Movement, July 2023. The method will involve:

- establishing the environmental baseline;
- identifying potential sources of impact;
- quantifying impacts;
- assessing effects;
- identifying mitigation;
- assessing cumulative effects; and
- identifying residual effects.

10.2 Baseline Conditions

Study Area

10.2.1 The baseline for the transport network around the Proposed Development will be established via a combination of site visits, collation of existing data and collection of new data. The study area for assessment will comprise the public road network likely to be used by traffic generated by the Proposed Development. The extent of the study area will be refined through the assessment, but it is likely to comprise:

- the B862 between the access to the Proposed Development and the junction with B851 (approximately 16 km);
- the B851 between the junction with the B862 and the A9 (approximately 22 km); and
- the A9 in the vicinity of the junction with the B851.

10.2.2 The route via the B851 and B862 comprises a mixture of a single carriageway road (with one lane in each direction) and a single-track road with passing places. The B851 passes through the settlements of Inverarnie, Farr, Brinmore and East Croachy before connecting to the B862. The B862 passes through the settlements of Errogie and Lochgarthside before reaching the potential Corriegarth site access point, or passes the further settlement of Whitebridge before reaching the potential Dell II site access. Several homes, fields and other developments directly access these roads, including Stratherrick Public Hall and Stratherrick Primary School which directly access the B862 while Farr Primary School directly accesses the B851.

10.2.3 The B851 and B862 have been subject to road improvements to facilitate the movement of both abnormal loads and general construction traffic to and from

[20] Note that as of July 2025, IEMA became the Institute of Sustainability and Environmental Professionals (ISEP)

nearby wind farm sites, for example in relation to Dunmaglass Wind Farm and Aberarder Wind Farm.

10.2.4 The A9 is a mix of single carriageway (with one lane in each direction) and dual carriageway (with two lanes in each direction). The A9 is a trunk road (hence under the control of Transport Scotland) and links Scrabster with the M9. All other roads within the study area are under the control of THC.

Current Baseline

10.2.5 The above roads will be visited by members of the project team to record their nature, noting characteristics such as their configuration, presence of footways, speed limits, any restrictions on the passage of vehicles, and to identify any sensitive receptors. The IEMA Guidelines identify such receptors as:

- people at home;
- people at work;
- sensitive and/or vulnerable groups (including young age, older age, income, health status, social disadvantage and access and geographic factors);
- locations with concentrations of vulnerable users (e.g. hospitals, places of worship and schools);
- retail areas;
- recreational areas;
- tourist attractions;
- collision clusters and routes with road safety concerns; and
- junctions and highway links at (or over) capacity.

10.2.6 Data on accidents within the last three years on the roads within the study area will be collated from the Crashmap website. The roads authorities for the roads in the study area will be consulted to understand if there are any locations on the road network within the study area where there have been atypically-high accident rates and if there are any plans for remedial works or improvements at those locations.

10.2.7 Traffic data will be extracted from Transport Scotland's traffic survey database for sites 'ATC01007 A9 Daviot (B851) to Inshes (B9006)' and 'JTC00367 A9 Moy 2+1 South'.Traffic surveys will also be commissioned at locations on the B862 and B851. These surveys will be carried out by Automatic Traffic Counter (ATC) for one week.

10.2.8 The status of the South Loch Ness Road Improvement Strategy will be discussed with officers in THC and it will be reflected in the EIA Report as necessary.

Future Baseline

10.2.9 The number of future baseline vehicle movements on the roads in the study area will be estimated by applying a 'low growth' factor from the National Road Traffic Forecasts (NRTF) database to the observed baseline vehicle movements. The factor will be based on the anticipated year of construction of the Proposed Development.

10.3 Assessment Methodology

Legislation, Policy and Guidance

10.3.1 The assessment will be informed by the following legislation:

- The Electricity Works (Environmental Impact Assessment) (Scotland) Regulations 2017;
- The Road Vehicles (Construction and Use) Regulations (1986); and
- The Road Vehicles (Authorisation of Special Types) (General) Order 2003.

10.3.2 The IEMA Guidelines referred to above will be used to assess of the traffic and transport effects of the Proposed Development. The assessment will also be informed by:

- Circular 1/2017 The Town and Country Planning (Environmental Impact Assessment) (Scotland) Regulations 2017, The Scottish Government;
- Roads And Transport Guidelines for New Developments, The Highland Council, May 2013;
- Guidance on the Preparation of Transport Assessments, The Highland Council, November 2014;
- National Roads Development Guide, SCOTS
- Transport Assessment Guidance, Transport Scotland;
- Planning Advice Note: PAN 75 - Planning For Transport, The Scottish Government; and
- Design Manual for Roads and Bridges (DMRB) TA 46/97 Traffic Flow Ranges for Use in the Assessment of New Rural Roads. (Although TA 46/97 has been withdrawn from the DMRB, Transport Scotland state that it remains applicable to trunk road projects in Scotland.)

Method

Construction

10.3.3 The Proposed Development would generate demand for transport during its construction and this demand would have the potential to impact on users of the transport network and potentially have an effect on those users. Transport demand would be generated during construction by staff traveling to and from the Site and plant, components, materials and supplies being delivered to or removed from the Site. This transport demand would lead to additional cars, vans, Light Goods Vehicles (LGVs) and Heavy Goods Vehicles (HGVs) on the road network.

10.3.4 The number of typical daily construction-related vehicle movements that would be generated during each month of the construction programme will be estimated. These estimates will reflect the activities that would take place during the various phases of the construction programme and the amount of materials and number of items of equipment that would need to be delivered to or removed from the Site.

10.3.5 The number of staff likely to be present during each week or month of the construction programme will be estimated based on the Applicant's experience of other similar developments, and the phasing plan for the Proposed Development.

Professional judgment will be applied to estimate the routes taken by vehicles travelling to and from the Site.

10.3.6 The delivery of the turbine components during construction (and possibly some of the BESS components) would require Abnormal Indivisible Load Vehicle (AILV) movements as some of the vehicles carrying the components would have at least one dimension that exceeds the maxima in The Road Vehicles (Construction and Use) Regulations 1986. The assessment of the traffic and transport effects of the Proposed Development will be accompanied by an investigation of the feasibility of the AILVs routeing to the Site. The potential effects from the passage of these AILVs will be considered in the EIA Report.

10.3.7 A 'low' growth factor from the NRTF dataset will be applied to the observed traffic flows to make them representative of traffic flows that could be expected during the year when construction of the Proposed Development could be expected to commence

Operation

10.3.8 The Proposed Development would generate only a handful of maintenance and inspection vehicle movements once operational and these would be expected to cause no significant traffic and transport-related effects. Hence, assessment of potential effects during operation are proposed to be scoped out of the assessment.

Decommissioning

10.3.9 Decommissioning of the Proposed Development is likely to generate fewer trips than construction as some elements of the Proposed Development may remain in place after decommissioning. Notwithstanding that, the decommissioning of the Proposed Development would occur so far into the future that the information collected on the existing baseline would be of limited relevance. Furthermore, any projections of the future baseline would likely be too uncertain to be useful. Hence, assessment of potential effects during decommissioning are proposed to be scoped out of the assessment.

10.4 Potential Impacts

10.4.1 The additional vehicle movements expected to be generated by the construction of the Proposed Development will be compared to the baseline traffic flows and the percentage increase in all vehicles and in HGVs only will be calculated. These increases will then be reviewed against the IEMA Guidelines, which state:

"Following the determination of a study area, it is recommended the competent traffic and movement expert applies two broad rules of thumb as criteria to assist in delimiting the scale and extent of the environmental assessment:

Rule 1 *Include highway links where traffic flows will increase by more than 30% (or the number of heavy goods vehicles will increase by more than 30%)*

Rule 2 *Include highway links of high sensitivity where traffic flows have increased by 10% or more."*

10.4.2 All sections of road within the study would be subject to the threshold in Rule 1. The application of Rule 2 in the IEMA Guidelines requires the identification of "*any other*

link or location where it is felt specific environmental or population sensitivities may occur".

10.4.3 It is proposed that sections of road will be identified as being of high sensitivity based on the extract from the IEMA Guidelines in paragraph 10.2.5 and if they are subject to substantial use by sensitive groups (e.g. children, elderly or mobility impaired), they are at sensitive locations (e.g. fronted by schools, hospitals or care homes) or they have been identified by the relevant roads authority has having atypically-high accident rates.

10.4.4 Where the estimated increase in traffic arising from the construction of the Proposed Development does not breach the relevant 'Rule 1' or 'Rule 2' threshold for any section of road, the significance of any effects would be concluded to be negligible and not significant in EIA terms. No further assessment work would be undertaken on such sections.

10.4.5 Where the estimated increase in traffic arising from the construction of the Proposed Development breaches the relevant threshold for any section of road, assessment of the potential effects would be undertaken as described in the following section.

Potential Effects

10.4.6 Where the appropriate threshold is breached for a section of road, the effects of the traffic estimated to be generated during the construction of the Proposed Development will be considered on the following issues.

Severance

10.4.7 Severance is the perceived division that can occur within a community when it becomes separated by major transport infrastructure and the separation of people from places and other people. The IEMA Guidelines state that "*Changes in traffic flow of 30%, 60% and 90% are regarded as producing 'slight', 'moderate' and 'substantial' changes in severance respectively*" and "*caution needs to be observed when applying these thresholds as very low baseline flows are unlikely to experience severance impacts even with high percentage changes in traffic*."

Road Vehicle Driver and Passenger Delay

10.4.8 The IEMA Guidelines state that "*Traffic delays to non-development traffic can occur at several points on the network surrounding a development site*." Regarding the significance of effects, the Guidelines state that "*These delays are only likely to be significant when the traffic on the network surrounding the development is already at, or close to, the capacity of the system*."

10.4.9 No detailed traffic modelling (which would quantify delays to drivers) is proposed given the predominately rural nature of the road network around the Site and the likelihood, based on professional judgment, that there is substantial spare capacity on that network.

Non-Motorised User Delay

10.4.10 The IEMA Guidelines state that "*Pedestrian delay and severance are closely related effects and can be grouped together. Changes in the volume, composition or speed of traffic may affect the ability of people to cross roads. In general, increases in traffic levels are likely to lead to greater increases in delay. Delays will also depend*

on the general level of pedestrian activity, visibility and general physical conditions of the development site."

10.4.11 Regarding the significance of effects, the Guidelines state that "*Given the range of local factors and conditions that can influence pedestrian delay (e.g. a discrete delay may have a lesser impact in an urban environment than a rural setting), it is not considered wise to set down definitive thresholds. Instead it is recommended that the competent traffic and movement expert use their judgement to determine whether pedestrian delay constitutes a significant effect*."

Non-Motorised User Amenity

10.4.12 The IEMA Guidelines define this as "*the relative pleasantness of a journey, and is considered to be affected by traffic flow, traffic composition and pavement width/separation from traffic*." The IEMA Guidelines also suggest that *"A tentative threshold for judging the significance of changes in pedestrian amenity would be where the traffic flow (or HGV component) is halved or doubled*" and that "*Thresholds are expressed as a starting point for any assessment and typically have been derived from studies of major changes in traffic flow and therefore should be used cautiously in any assessment. The assessment of amenity should pay full regard to specific local conditions*."

Fear and Intimidation of and by Road Users

10.4.13 This considers the effects that moving vehicles have on people. It considers matters such as the volume of traffic, the proportion of heavy vehicles, the speed of vehicles and the proximity of traffic to people. The IEMA Guidelines set out a means to calculate a 'Degree of hazard score' based on the amount, composition and speed of traffic. This score is then used to identify a 'Level of fear and intimidation'; the degree of change in that level compared to the baseline is then used to categorise the magnitude of change.

Road User and Pedestrian Safety

10.4.14 The assessment of accidents relates to the potential for the traffic generated by a development to change accident rates on the road network. The IEMA Guidelines discuss a 'Safe System' approach but also state "*It is recommended that the traffic and movement expert engages with the relevant authorities to determine the best approach for determining the significance of road safety effects*".

10.4.15 THC as roads authority for the roads in the study area other than the A9 has a duty under Section 39 of the Road Traffic Act 1988 to *"carry out studies into accidents arising out of the use of vehicles on roads or parts of roads* […] *within their area*" and *"in the light of those studies, take such measures as appear to the authority to be appropriate to prevent such accidents, including* […] *the construction, improvement, maintenance or repair of roads for the maintenance of which they are responsible*".

10.4.16 The roads authorities will be consulted to determine if there are any locations on any of the roads within the study area which have atypically high accident rates and, if so, what plans, if any, they have to address those rates.

Hazardous / Large Loads

10.4.17 As mentioned above, the Proposed Development will require some AILV movements to deliver some turbine components and there may also be AILV

movements required to deliver some BESS components. A report on the feasibility of delivering these components will be included as an appendix to the EIA Report.

10.4.18 The number of such movements will be determined, and their potential significance will be based on the extent of works, if any, required to accommodate the vehicles, their number and the sections of road that they will use. There are, however, established procedures in place to manage such movements and it is considered that a risk or catastrophe analysis as described in paragraph 3.50 of the IEMA Guidelines is not required.

Magnitude of Impact

10.4.19 The magnitude of impact for each of the effects listed above will be on a scale of high, medium, low and negligible. The suggested application of that scale to each of the effects is shown in **Table 10-1**.

Table 10-1: Suggested Categorisation of Impact Magnitude by Potential Effect

Effect	Impact Magnitude			
	High	Medium	Low	Negligible
Severance	Change in road link traffic flow of over 90%.	Change in road link traffic flow of 60% to less than 90%.	Change in road link traffic flow of 30% to less than 60%.	Change in road link traffic flow of less than 30%.
Road Vehicle Driver and Passenger Delay	Judgement based on the individual characteristics of sections of road.			Change in road link traffic flow of less than 10%.
Non-Motorised User Delay	Judgement based on the individual characteristics of sections of road.			Change in road link traffic flow of less than 10%.
Non-Motorised User Amenity	Judgement based on the individual characteristics of sections of road with change in total traffic flows or HGVs of 100% or more.			Change in total traffic flows or HGV flows of less than 100%.
Fear and Intimidation of and by Road Users	Two changes in level of fear and intimidation.	One change in level of fear and intimidation with >400 vehicle increase in average 18 hour vehicle flow or >500 Heavy Vehicles (HV) increase in total 18 hour HV flows.	One change in level of fear and intimidation with <400 vehicle increase in average 18 hour vehicle flow or <500 HV increase in total 18 hour HV flows.	No change in Level of fear and intimidation.
Road User and Pedestrian Safety	Judgement based on accident data. Low or negligible impact likely if section of road under consideration has not been identified by the relevant roads authority as having an atypically high accident rate.			Change in road link traffic flow of less than 10%.
Hazardous / Large Loads	Judgement based on number of such movements and nature of affected road network.			

Receptor Sensitivity

10.4.20 The sensitivity of receptors on the sections of road in the study area to potential effects from additional vehicle movements arising from the construction of the Proposed Development would be categorised. That suggested categorisation is shown in **Table 10-2**.

Table 10-2: Suggested Categorisation of Receptor Sensitivity

Receptor Sensitivity	Description
High	Receptors of greatest sensitivity to traffic flows: schools, colleges, playgrounds, accident cluster sites (if identified as such by roads authority), retirement homes, urban/ residential roads without footways that are used by pedestrians.
Medium	Traffic flow sensitive receptors: congested junctions, doctors' surgeries, hospitals, shopping areas with roadside frontage, roads with narrow footways, unsegregated cycleways, community centres, parks, recreation facilities.
Low	Receptors with some sensitivity to traffic flow: places of worship, public open space, nature conservation areas, listed buildings, tourist attractions, residential areas with adequate footways, sections of road with pedestrian crossing facilities and sections of road with footways remote from the carriageway (either by presence of a verge or of on-street parking).
Negligible	Receptors with low sensitivity to traffic flows and those sufficiently distant from affected roads/ junctions.

Significance of Effect

10.4.21 A suggested effect significance matrix based on impact magnitude and receptor sensitivity is shown in **Table 10-3**.

Table 10-3: Suggested Effect Significance Matrix based on Impact Magnitude and Receptor Sensitivity

Receptor Sensitivity	Impact Magnitude			
	High	Medium	Low	Negligible
High	Major	Major	Moderate	Minor
Medium	Major	Moderate	Minor	Negligible
Low	Moderate	Minor	Negligible	Negligible
Negligible	Minor	Negligible	Negligible	Negligible

10.5 Cumulative Effects

10.5.1 A cumulative assessment will be undertaken which will establish the cumulative increase in vehicle movements arising from the Proposed Development and any other developments which are consented but not yet implemented and which would increase traffic on the same sections of the road network as the Proposed Development.

10.5.2 This approach is consistent with Schedule 4, Paragraph 5 of The EIA Regulations which requires that EIA Reports provide "*A description of the likely significant*

effects of the development on the environment resulting from, inter alia: […] *(e)the cumulation of effects with other existing and/or approved projects*".

10.5.3 This approach is also consistent with the Scottish Government's document Planning Circular 1/2017: Guidance on The Town and Country Planning (Environmental Impact Assessment) (Scotland) Regulations 2017 which states "*Generally, it would not be feasible to consider the cumulative effects with other applications which have not yet been determined, since there can be no certainty that they will receive planning permission*".

10.5.4 The significance of predicted cumulative effects will be assessed using the same process as described above.

10.6 Mitigation

10.6.1 The options to embed primary mitigation in the design of the Proposed Development will be considered throughout the design process. Examples of primary mitigation would be using on-site borrow pits and batching plants. These examples are primary mitigation as they would generate fewer vehicle movements on the public road network than would be generated if all materials were imported to the Site.

10.6.2 Secondary mitigation measures will be suggested to avoid any potential significant effects. An example of such a measure would be stipulating that HGVs to and from the Site should avoid a specific route or avoid passing by a sensitive receptor at specific times.

10.6.3 Tertiary mitigation measures would include standard practices that are commonly implemented by contractors. Examples of such mitigation would be sheeting of loads (to prevent dust) and wheel washes (to prevent mud and debris being deposited on the public road).

10.6.4 Secondary and Tertiary measures would be described in a Construction Traffic Management Plan (CTMP). The traffic and transport chapter of the EIA Report will summarise the measures that could be included in a CTMP. The satisfactory submission of a CTMP could be made a condition of any consent granted for the Proposed Development.

10.6.5 Any further mitigation measures that may be required to address cumulative effects will be identified.

10.7 Consultation

10.7.1 The roads authorities will be consulted to understand if there are any locations on the road network within the study area where there have been atypically-high accident rates and if there are any plans for remedial works or improvements at those locations. THC will be consulted to understand the status of the South Loch Ness Road Improvement Strategy.

10.8 Summary of Scope

10.8.1 The scope of the traffic and transport chapter of the EIA Report will cover potential effects associated with traffic and transport during the construction, operational and decommissioning of the Proposed Development. Potential effects during operation and construction will be scoped out of the assessment.

10.8.2 The assessment will follow the guidance in the IEMA Guidelines. Current and future baseline vehicle movements will be estimated for the roads within the study area. The additional vehicle movements estimated to be generated during the

construction of the Proposed Development will be compared to these baseline estimates and assessed if the resulting increases breach the appropriate thresholds in the IEMA Guidelines.

10.9 Questions for Consultees

10.9.1 The following questions are directed to consultees:

a) Can you please advise of any developments that should be considered as part of the cumulative assessment?

b) Can you please advise of any upcoming changes you are aware of to the transport network surrounding the Site?

c) Can you please advise of any comments you may have on the suggested scope?

d) Can you please advise if there are any locations on the roads within the study area that have atypically-high accident rates and what works (if any) are proposed at such locations to address those rates ?

e) Do consultees agree with items proposed to be scoped out?

11.0 Noise and Vibration

11.1 Introduction

11.1.1 This chapter considers the potentially significant effects of noise during the Site preparation and construction, operation, and decommissioning phases of the Proposed Development which will require further consideration within the EIA Report.

11.1.2 This Scoping chapter sets out the key issues identified and proposes a method and standards for assessment of noise in the EIA Report.

11.1.3 Consultation with THC Environmental Health Officers (EHOs) will continue throughout the assessment process to agree the following:

- the status of identified potential Noise Sensitive Receptors (NSRs);
- noise monitoring positions for the baseline survey (if required);
- identification of potentially cumulative developments and a detailed method for the consideration of potential cumulative effects; and
- the derivation of appropriate ETSU noise limits, with apportionment for cumulative developments if appropriate.

11.2 Environmental Baseline

11.2.1 The Site is split into the Northern and Southern Turbine Clusters divided by Glen Markie and is situated at high altitude above 668 m AOD., with the top peak of Carn Donnachaidh reaching approximately 870m AOD.

11.2.2 In respect to noise impact assessment the below key aspects of the Proposed Development will need to be considered:

Construction Phase

- permanent wind turbine foundations;
- hardstanding areas for erection cranes at each wind turbine location;
- borrow pits (dependent on availability of stone within the site);
- a network of on-site tracks including watercourse crossings, passing places, turning heads and an access track and site entrance from the public road network;
- a network of buried electrical and communication cables to be routed alongside the access tracks;
- a substation compound containing electrical infrastructure, control building, welfare facilities and meteorological and communications masts; and
- temporary construction compounds including a concrete batching plant.

Operational Phase

11.2.3 The proposed turbine parameters for the scheme that will be modelled for noise impact are:

- up to 65 wind turbines;
- 170m rotor diameter, 165m hub height, 250m tip height;

- indicative turbine power rating = 7.4 MW;
- anticipated generating capacity = up to 481 MW (65 x 7.4) (note the scoping layout is a theoretical maximum); and
- a possible BESS compound.

11.2.4 The Proposed Development is located within a rural location, with residential settlements interspersed outwith the Site boundary.

11.2.5 There are several scattered residential properties around the Proposed Development with the closest occupied properties located to the south and west predominantly.

11.2.6 **Chapter 2 Description of the Proposed Development** summarises other wind farms in the vicinity which are in turn discussed further within this chapter in respect to cumulative noise impacts.

11.3 Potential Sources of Impact

11.3.1 The Proposed Development will introduce new noise sources into the area, both during the construction and operational phases. Significant adverse impacts can be prevented by restricting noise levels due to the Proposed Development to within noise limits determined in accordance with appropriate guidance, as detailed below.

11.4 Method of Assessment and Reporting

Guidance and Legislation

11.4.1 The following documents will be referenced in the EIA Report chapter:

- The Control of Pollution Act (CoPA) 1974;
- Planning Advice Note (PAN) 1/2011: Planning and Noise;
- The Working Group on Noise from Wind Turbines The Assessment & Rating of Noise from Wind Farms (ETSU-R-97) (1996);
- Institute of Acoustics (IoA) Bulletin Article Volume 34 No. 2, March / April 2009;
- Institute of Acoustics (IoA) (2013) A good practice guide to the application of ETSU-R-97 for wind turbine noise assessment (IoA GPG) and associated Supplementary Guidance Notes (SGS);
- British Standard BS5228 (2009) Part 1: Noise + A1 (2014) Code of practice for noise and vibration control on construction and open sites;
- British Standard BS4142:2014+A1:2019 Methods for rating and assessing industrial and commercial sound;
- Design Manual for Roads and Bridges (DMRB); and
- Calculation of Road Traffic Noise (CRTN).

11.4.2 Where THC have their own noise-related requirements, these will also be considered in the EIA Report chapter.

11.4.3 We request that any such requirements (not highlighted herein) should be highlighted in the Scoping response received.

Proposed Study Area

11.4.4 The nearest noise-sensitive receptors surrounding the Proposed Development will be considered within the noise assessment, as well as receptors located in proximity to cumulative wind farm developments.

11.4.5 Cumulative wind farm developments within 10 km of the Proposed Development will be considered within the cumulative operational noise assessment.

11.4.6 Some of the identified cumulative wind farms considered by the wider EIA team will fall into this boundary; others will be scoped out at the EIA Report stage. The justification will be highlighted where relevant at this stage also.

Field Survey

11.4.7 A baseline noise survey is typically undertaken in accordance with the IoA GPG for NSRs; however this is only achievable where the baseline noise environment does not include significant existing wind turbine noise.

Typical Survey Methodology

11.4.8 Generally, wind speed measurements will be collected, likely by a remote-sensing SoDAR or LiDAR device, and standardised to 10 m in accordance with the method provided in the IoA GPG. Micro-siting of the baseline survey locations will seek to exclude influence from non-representative noise sources such as plant, boiler flues, heat pumps, vegetation and any existing wind turbines.

11.4.9 A record of the installation of monitoring locations will be provided to the EHO for review following the commissioning visit. Records of the baseline data analysis will be provided to the EHOs, identifying periods of rainfall excluded from the analysis and any other treatments of the data.

Approach to Glenmarkie

11.4.10 Given the density of existing wind farm developments in the vicinity of the Site, we anticipate that it may not be possible to measure background noise levels in the absence of wind turbine noise at NSRs in these areas. SLR recognises that there are numerous operational and proposed wind farms within a 25 km radius.

11.4.11 **Table 2-1** and **Table 2-2** within **Chapter 2 Description of the Proposed Development** present information known at the time of preparing the Scoping Report regarding built, consented and in planning / scoping wind farms within 25 km of the Site. The locations of these wind farm sites in relation to the Proposed Development are shown on **Figure 2.2**. This information will be updated during the course of the EIA as necessary.

11.4.12 Of greatest interest in respect to cumulative noise assessment at key receptors are likely to be the following wind farms:

- Corriegarth I and II;
- Stronelairg;
- Dell; and
- Cloiche.

11.4.13 Dependent on the magnitude of predicted impacts other wind farms may also warrant consideration including but not exclusively at certain receptors:

- Culachy;

- Aberarder; and
- Dunmaglass .

11.4.14 Suitable background noise levels for assessment from existing public domain approvals at NSRs in the vicinity will therefore be agreed through consultation with EHOs based on existing and consented schemes in the surround.

11.4.15 Where other receptors are identified between scoping and production of the Noise and Vibration chapter or through cumulative assessment exercises these will be accommodated into noise modelling exercises undertaken.

11.4.16 Note: Where contributions from the proposed development at Glenmarkie are at least 10dB below the 35dB L_{A90} fixed limit (≤25dB $L_{A90,T}$) during initial modelling, contribution (including cumulative) will be negligible at identified receptors, thus said receptors will be screened out of further detailed assessment, the EHO will be consulted where relevant. This is likely to encompass a 10-15km study area.

11.5 Legislation, Policy and Guidelines

11.5.1 Relevant legislation and guidance documents have been reviewed and taken into account as part of this assessment. Legislation of particular relevance is outlined below.

11.5.2 For a development of this nature, there is no specific all-encompassing legislation relating to the standards associated with noise emission/effects. Noise legislation, where it does exist, tends to be either EU-derived and focussed on specific items of noise-emitting plant or on more general nuisance, such as that addressed by the provisions of the Environmental Protection Act 1990 (UK Government, 1990).

11.5.3 In lieu of any specific legislation, assessing the effect of such a development must draw on information from a variety of sources. This assessment therefore makes reference to a number of British Standards, official planning policy and advice notes and national guidance.

Environmental Protection Act 1990

11.5.4 Section 79 of the Act defines statutory nuisance with regard to noise and determines that local planning authorities have a duty to detect such nuisances in their area and, where a complaint of a statutory nuisance is made to it by a person living within its area, to take such steps as are reasonably practicable to investigate the complaint.

11.5.5 Section 80 of the Act provides local planning authorities with powers to serve an abatement notice requiring the abatement of a nuisance or requiring works to be executed to prevent their occurrence. It is a potential defence against failure to comply with an abatement notice where Best Practicable Means were used to prevent or counteract the effects of the nuisance.

11.5.6 The Act also defines the concept of “Best Practicable Means” (BPM):

- ‘practicable’ means reasonably practicable having regard among other things to local conditions and circumstances, to the current state of technical knowledge and to the financial implications;
- the means to be employed include the design, installation, maintenance and manner and periods of operation of plant and machinery, and the design, construction and maintenance of buildings and structures;
- the test is to apply only so far as compatible with any duty imposed by law; and

- the test is to apply only so far as compatible with safety and safe working conditions, and with the exigencies of any emergency or unforeseeable circumstances.

Scottish Government Online Planning Advice: Planning Advice Note 1/2011 and Technical Advice Note

11.5.7 Published in March 2011 and last updated in 2014, Planning Advice Note 1/2011 (Scottish Government (2014b)) (PAN 1/2011) provides advice on the role of the planning system in helping to prevent and limit adverse effects of noise. Information and advice on noise assessment methods are provided in the accompanying Technical Advice Note: Assessment of Noise (Scottish Government (2011b)) (TAN). Included within the PAN document and the accompanying TAN are details of the legislation, technical standards, and codes of practice for specific noise issues.

11.5.8 Regarding noise from wind turbines, paragraph 29 of PAN 1/2011 states the following:

"*There are two sources of noise from wind turbines – the mechanical noise from the turbines and the aerodynamic noise from the blades. Mechanical noise is related to engineering design. Aerodynamic noise varies with rotor design and wind speed and is generally greatest at low speeds. Good acoustical design and siting of turbines is essential to minimise the potential to generate noise. Web based planning advice on renewable technologies for onshore wind turbines provides advice on 'The Assessment and Rating of Noise from Wind Farms' (ETSU-R-97) published by the former Department of Trade and Industry (DTI) and the findings of the Salford University report into Aerodynamic Modulation of Wind Turbine Noise*."

11.5.9 Regarding appropriate assessment methods, the 'web-based planning advice' referred to in PAN 1/2011 is contained in an online document titled 'Onshore Wind Turbines', published by the Scottish Government (updated 2014). The document is summarised in the corresponding section below, and also refers to the use of ETSU-R 97 The Assessment and Rating of Noise from Wind Farms (The Working Group on Noise from Wind Turbines, 1996) assessment guidance (discussed in Paragraphs 11.5.19 – 11.5.35).

11.5.10 The IoA has since published 'a Good Practice Guide to the application of ETSU R-97 for the assessment and rating of wind turbine noise' (IoA, 2013), which is summarised in Paragraphs 11.5.36 -11.5.52.

11.5.11 Neither PAN 1/2011 nor the associated TAN provide specific guidance on the assessment of noise from fixed plant, but the TAN includes an example assessment scenario for 'New noisy development (incl. commercial and recreation) affecting a noise sensitive building', which is based on BS4142:1997: 'Method for rating industrial noise affecting mixed residential and industrial areas'. This British Standard has been superseded by BS4142:2014+A1:2019 'Methods for rating and assessing industrial and commercial sound' (BSi, 2019). The standard is summarised in Paragraphs 11.5.60 - 11.5.68.

11.5.12 In summary, national planning policy on the assessment of operational noise impacts from wind farms stipulates the use of the ETSU-R-97 assessment method and application of the IoA Good Practice Guide (IoA GPG). These guidance documents, and others relevant to the assessment of possible noise impacts generated by the Proposed Development, are summarised below.

Onshore Wind – Policy Statement 2022

11.5.13 The Scottish Government has provided an updated onshore wind policy statement, published in December 2022 following a consultation process which sought views on how to tackle barriers to deployment of wind turbines and securing the maximum economic benefit from developments. The Statement confirms a requirement for a substantial increase in installed capacity of all renewable technologies, and the aim to maintain the supportive policy and regulatory framework to enable an increase specifically in onshore wind deployment.

11.5.14 Regarding noise, the Statement notes that, "the UK Government has been considering the extent to which ETSU-R-97 may require updating to ensure it is aligned with the potential effects from more modern turbines. The Scottish Government supports this work and we anticipate the results of a short-term review project in due course." However, the Statement goes on to say, "Until such time as new guidance is produced, ETSU-R-97 should continue to be followed by applicants and used to assess and rate noise from wind energy developments."

11.5.15 Regarding the IoA Good Practice Guide to the application of ETSU R-97 the Statement notes that "The Scottish Government recognises this guide as a useful tool which developers can use in conjunction with ETSU-R-97."

Regional and Local Planning Policy

11.5.16 Policies relevant to noise within THC's planning guidance are briefly summarised below.

The Highland Council (THC) - Onshore Wind Energy Supplementary Guidance

11.5.17 THC's supplementary guidance notes that ETSU-R-97 and the IoA GPG are the appropriate guidance for the evaluation of noise from 'large' wind turbines (those with a rotor diameter of greater than 16 m). The guidance further notes that all wind farm proposals should seek the lower end of the range indicated in the ETSU-R-97 guidance, and THC may seek limits which are lower still in certain circumstances.

Guidance

11.5.18 This assessment will be undertaken in accordance with the following best practice guidelines and guidance summarised below in respect to the noise impact assessments to be undertaken.

Assessment of Operational Noise

ETSU-R-97: The Assessment and Rating of Noise from Windfarms (ETSU-R-97)

11.5.19 As referenced for use in PAN/2011 and the online planning advice for renewable technologies: Onshore wind turbines, this document was written by a Noise Working Group including developers, noise consultants and environmental health officers, set up in 1995 by the Department of Trade and Industry through ETSU (the Energy Technology Support Unit).

11.5.20 ETSU-R-97 presents a consensus view of the working group and was prepared to present a common approach to the assessment of noise from wind turbines. The

document states that noise from wind turbines or wind farms should be assessed against site specific noise limits.

11.5.21 Noise limits are derived based on a series of acceptable lower limits and based on an allowable exceedance above the prevailing background noise level, including consideration of a variety of different prevailing wind speed conditions. The noise limits should be derived for external areas used for relaxation, or areas where a quiet noise environment is highly desirable. Separate limits are required for night-time and daytime periods. Night-time limits are derived drawing upon measured night-time background noise levels, whilst daytime limits are derived drawing upon the background noise levels arising during 'quiet daytime' periods.

11.5.22 Night-time is defined as the period between 23:00 and 07:00 hours, whilst quiet daytime periods are defined as:

- 18:00 to 23:00 hours on all days;
- 13:00 to 18:00 hours on Saturdays and Sundays; and
- 07:00 to 13:00 hours on Sundays.

11.5.23 For daytime, the suggested limits are 5 dB above the prevailing background noise level determined during quiet daytime periods, or 35 to 40 dB(A), whichever is the higher. The absolute criterion between the 35 to 40 dB(A) range is selected taking account of:

- the site environs (e.g. number of local receptors);
- the energy generation capacity (e.g. number of kWh that can be generated) of the Proposed Development; and
- the associated duration and level of exposure.

11.5.24 During night-time, the suggested limits are 5 dB above the prevailing night time background noise level or 43 dB(A), whichever is the higher. The absolute criterion for the night-time is higher than that for the daytime, as the derivation of this limit is based on preventing sleep disturbance within a building whereas for the daytime, limits are based on occupation of external spaces used for relaxation.

11.5.25 It is required that the prevailing background noise levels be determined in terms of the $L_{A90,10min}$ noise index for both quiet daytime and night-time periods, for wind conditions ranging from 2 ms-1 to 12 ms-1.

11.5.26 The noise limits are calculated by undertaking a regression analysis of the $L_{A90,10min}$ noise levels and the prevailing average wind speed for the same 10-minute period, when measured or determined at 10 m above ground at the location of the proposed turbines. The allowable limit is then defined at +5 dB above the average noise level at each wind speed (as defined by the regression analysis), or the absolute noise level lower limit, whichever is the higher (assuming no financial involvement within the scheme).

11.5.27 ETSU-R-97 also provides a simplified fixed noise limit of 35 dB $L_{A90,10min}$ at all wind speeds, which may be applied to avoid the need to measure background noise levels. The 'simplified ETSU limit' typically applies both during the daytime and night time period.

11.5.28 Where a property has a financial involvement in the scheme, the document allows a relaxation of the derived noise limits, stating that:

11.5.29 *"It is widely accepted that the level of disturbance or annoyance caused by a noise source is not only dependent upon the level and character of noise but also the receiver's attitude towards the noise source in general. If the residents at the noise-*

sensitive properties were financially involved in the project, then higher noise limits will be appropriate".

11.5.30 The guidance goes on to state that it is "*recommended that both the day and night-time lower fixed limits can be increased to 45 dB(A) and the consideration should be given to increasing the permissible margin above background where the occupier of the property has some financial involvement in the wind farm".* The amount by which the permissible margin above background can be relaxed is not specified, but the allowable relaxation to 45 dB(A) of the lower limits is an increase of (at least) 5 dB during the daytime and 2 dB during the night-time, so similar levels of relaxation might also be applied to the background related element of the noise level limits.

11.5.31 The ETSU guidance states that the derived limits should be applied to noise from the proposed wind farm or turbines in terms of the $L_{A90,T}$ index, and that the $L_{A90,T}$ of the wind farm noise is typically 1.5 dB to 2.5 dB lower than the $L_{Aeq,T}$ measured over the same period.

11.5.32 The derived noise limits are applicable to both the aerodynamic (e.g. 'blade swish') and mechanical (e.g. generator related) components of wind farm noise.

11.5.33 Where noise from the wind farm is tonal, a correction of between 2 dB and 5 dB is to be applied to the wind farm noise. Guidance is provided on how to determine the level of correction required, but typically, for Proposed Developments, the need for any applicable correction is confirmed by the independent wind turbine-specific noise tests, following standard test procedures, provided by manufacturers.

11.5.34 It is stated within the ETSU-R-97 guidance *that "The Noise Working Group is of the opinion that absolute noise limits and margins above background should relate to the cumulative effect of all wind turbines in the area which contribute to the noise received at the properties in question. It is clearly unreasonable to suggest that because a wind farm was constructed in the vicinity in the past which resulted in increased noise levels at some properties, that residents of those properties are now able to tolerate still higher noise levels. The existing wind farm should not be considered as part of the prevailing background noise".*

11.5.35 Accordingly, where an existing wind farm contributes to the prevailing background noise levels, it is necessary to either include for the contribution of this wind farm when comparing against the allowable noise limit or correct for this contribution when deriving a limit applicable to the Proposed Development acting alone.

Good Practice Guide to the Application of ETSU-R-97 (IoA GPG)

11.5.36 The IoA GPG[21] presents the report of a 'noise working group' (NWG) assembled in response to a request from the former Department of Energy & Climate Change (DECC). The guide is intended to represent current good practice in applying the ETSU-R-97 method to assessing the noise impact of wind turbine developments with a power rating of over 50 kW.

11.5.37 In addition to detailed consideration of various issues and factors concerned with current 'state of the art' knowledge of UK wind turbine noise assessment, a series of 'summary boxes' (SBs) highlighting key guidance points are included.

11.5.38 The SBs provide clarification and updated guidance on a range of matters relating to ETSU R-97 noise assessments, including consultation with relevant stakeholders, background noise survey methodology, noise survey data analysis,

[21] Discussion Document

derivation of noise limits, noise prediction model input data, algorithms and parameters, cumulative impact assessment procedures, assessment reporting, planning conditions and amplitude modulation. A set of supplementary guidance notes (SGNs) also form part of the publication and include further specific detail for different technical areas.

11.5.39 The detail of the IoA GPG has been considered in the preparation of this assessment. Some of the key considerations relevant to this assessment are summarised as follows:

11.5.40 Background noise surveys should be carried out for sufficient duration to obtain a suitably-sized dataset; as a guideline, it is suggested that no fewer than 200 data points be obtained within each of the night-time and amenity hour periods for a given survey location, with no fewer than five data points within each contiguous wind speed integer interval (for pitch regulated turbines), up to the wind speed at which the maximum sound power level is reached. Where the data has been filtered by wind direction the guideline values are reduced.

11.5.41 Background noise survey data should be analysed, and anomalous periods of noise removed from the dataset; anomalous noise might include rain-affected periods and increased noise from watercourses following rainfall, seasonal effects such as early-morning birdsong (‘dawn chorus’), atypical traffic movements and other unusual noise sources affecting measured levels.

11.5.42 Due to the potential for non-standard site-specific wind shear (i.e. differences in wind speed at different heights above the ground – a ‘standard’ profile increases logarithmically with height) background noise levels should be correlated with 10 m height wind speeds derived using a method that ‘standardises’ the wind speeds using the assumed shear profile. Since wind turbine sound power levels are determined using the same shear profile, this procedure ensures a link between the predicted sound levels at a given hub height wind speed and the background noise levels at receptors near the ground under the same wind speed conditions (obtained using the ‘standardised’ 10 m height wind speed).

11.5.43 Derivation of the prevailing background noise levels should be carried out using polynomial regression analysis, of order one to four, depending on the nature of the noise environment. The regression curve used should reach minimum and maximum values at the lowest and highest wind speeds for which the dataset is valid, respectively.

11.5.44 Calculations of predicted wind turbine noise may be carried out using ISO 9613 2: Acoustics – Attenuation of Sound during Propagation Outdoors (International Organization for Standardization, 1996); preferred receptor heights, meteorological and ground absorption input parameters for this calculation procedure are given.

11.5.45 Turbine sound power level source data should include appropriate uncertainty corrections. Guidance is given for determining when such uncertainty corrections have been inherently included in turbine source emission data.

11.5.46 A correction for topographic screening of a maximum -2 dB may be applied where there is no line of sight between the turbine (tip) and the receptor (4 m above ground level).

11.5.47 A correction for constructive reflection within valleys of +3 dB should apply where concave topography is determined to lie between the turbine and the receptor point.

11.5.48 ‘Excess amplitude modulation’ (i.e. where the wind turbine noise has higher variability with momentary time than the 2 – 3 dB(A) considered within ETSU-R-97) is still the subject of research; current practice (at the time of publishing of the IoA

GPG) in relation to determining applications for wind turbine developments is to not impose a planning condition specific to this phenomenon.

11.5.49 In addition to the above, the IoA GPG confirms that the ETSU-R-97 noise level limits should be applied cumulatively and provides guidance on appropriate assessment methods for a variety of different cumulative scenarios. These scenarios include ‘concurrent applications’, ‘existing wind farm consented with less than total ETSU-R-97 limits’, ‘existing wind farm/s consented to the total ETSU-R-97 limits currently operating’, and ‘permitted wind farms consented to total ETSU-R-97 limits but not yet constructed’.

11.5.50 In the section titled ‘existing wind farm/s, consented to the total ETSU-R-97 limits, currently operating’ it is stated that “In the first instance, the consented noise limits should be used within the cumulative noise impact calculations unless otherwise agreed with the local authority. Provided the sum of the noise limits derived for the site when added to those already consented for the operational sites does not exceed the limits that would otherwise be within the requirements of ETSU R-97 for the cumulative impact, then the noise limits derived for the site can be applied directly”.

11.5.51 In practical terms this can be achieved by ensuring that the noise limit for the Proposed Development is set 10 dB or more below that permitted to be generated by the existing development.

11.5.52 It is, however, then discussed that this may not always be necessary, e.g. where there is a ‘controlling property’, whereby compliance with the noise limit at that controlling property would result in noise levels never realising the noise level limit ‘in full’ at another property (e.g. because the second property is further removed from the existing development), thereby leaving a proportion of the limits available for use at the second property by the subsequently Proposed Development. Another reason that is discussed is where there is no realistic prospect of the existing wind farm producing noise levels up to the consented limit, again thereby leaving a proportion of the limit available for the subsequently Proposed Development.

11.5.53 The process provided in the IoA GPG for determining appropriate noise limits applicable at specific properties is summarised as follows:

- identify cumulative developments, i.e. those from which the predicted level at properties within the study area are within 10 dB of the Proposed Development. Developments from which the predicted levels are 10 dB or greater different to that of the Proposed Development may be scoped out of further analysis;
- determine the consented noise limits for other developments applicable at properties where cumulative effects may occur;
- predict noise levels from cumulative developments and identify controlling properties (typically those closest to the specific wind farm/turbine without financial involvement; assuming compliance with noise limits at these properties will limit the maximum noise level possible at more distant properties); and
- confirm that the predicted levels from cumulative developments do not exceed noise limits at controlling properties.

Updates to ETSU-R-97- UK Government Consultation (2025)

11.5.54 As of 4th July 2025, proposed revisions to the ETSU-R-97 assessment methods for wind turbine noise have been put to public consultation[22] by the Department for Energy Security & Net Zero.

11.5.55 Key proposed revisions that may be relevant at the time of production for the principal EIA Report Chapter for noise include:

- alignment of day and night fixed limits for wind turbine noise, with the raise of the lower value for the day-time noise limit range to 37 dB L_{A90}; and
- expanded guidance on amplitude modulation assessment (particularly pertaining to assessment at existing wind farms).

11.5.56 A number of other technical updates have been made to the guidance, which seek to deliver on wider recommendations made in the 2023 Scoping Review. These include:

- updated descriptions of the profile of noise emissions from wind turbines, and relevant wind speed references and range, given evolutions in the technology since 1996;
- clarification of guidance on determining noise limits such that developments are prioritised according to generation capacity;
- providing clarification on the interpretation of 'financially involved' receptors for the application of noise controls;
- developing further guidance on cumulative impacts, incorporating existing evidence and best practice advice;
- providing example planning condition wording and associated technical notes which can be referenced to simplify planning controls; and
- defining the way in which character corrections are to be calculated and combined.

11.5.57 At present this updated guidance remains in public consultation, as such if whilst it may be appropriate it be referred to in future assessment work, subject to the feedback received during the public consultation, and subsequent developments in the guidance resulting if reissued or formalised.

11.5.58 SLR consider the present existing guidance remains the most pertinent to the enclosed assessment in all aspects.

11.5.59 Conflicts with existing THC guidance will be discussed with the EHO at the appropriate time.

BS4142:2014+A1:2019 – Methods for Rating and Assessing Industrial and Commercial Sound

11.5.60 BS4142[23] is applicable for use in the assessment of control BESS, electrical building / substation and transformer noise.

[22] Updated Guidance for the Assessment and Rating of Wind Turbine Noise: consultation

[23] BS 4142:2014+A1:2019 | 30 Jun 2019 | BSI Knowledge

11.5.61 It sets out a method for rating and assessing sound of an industrial and/or commercial nature, including “sound from fixed installations which comprise mechanical and electrical plant and equipment”.

11.5.62 The assessment procedure contained within BS4142 requires that initially the ‘rating level’ ($L_{Ar,Tr)}$ that is (or would be) generated by the source under assessment is determined, externally, at the assessment location. Where this source does not include any acoustic features, such as tonality, impulsivity or intermittency etc., then the rating level equals the specific sound level, which is the sound pressure level produced by the source using the $L_{Aeq,T}$ noise index. Where the source under assessment does include acoustic characteristics, then a series of corrections are added to the specific sound level to determine the rating level. The degree of correction applied to determine the rating level depends upon the results of either subjective or objective appraisals.

11.5.63 The background sound level at the assessment location, measured using the $L_{A90,T}$ index, is then subtracted from the rating level. The result provides an indication of the magnitude of impact, where the greater the difference, the greater the magnitude of impact.

11.5.64 The following guidance is presented regarding the difference between the rating and background levels:

- a difference of around +10 dB or more is likely to be an indication of a significant adverse impact, depending on the context;
- a difference of around +5 dB is likely to be an indication of an adverse impact, depending on the context; and
- the lower the rating level is relative to the measured background sound level, the less likely it is that the specific sound source will have an adverse impact or a significant adverse impact

11.5.65 Where the rating level does not exceed the background sound level, this is an indication of the specific sound source having a low impact, depending on the context.

11.5.66 The degree of impact is also dependent upon the context in which the sound arises. Factors that are considered with respect to context include: the absolute level of sound, and the character and level of the residual sound (that in absence of the source under assessment) compared to the character and level of the specific sound.

11.5.67 With regard to the absolute level the guidance states, that *“where background sound levels and rating levels are low, absolute levels might be as, or more relevant than the margin by which the rating level exceeds the background. This is especially true at night”.*

11.5.68 Earlier iterations of BS4142 have recommended that background noise levels of 30 dB L_{A90} and below and rating levels of 35 dB $L_{Ar,Tr}$ and below may be considered objectively low.

Assessment of Operational Noise

11.5.69 Consultation will be undertaken with THC to agree standards and methodology for assessment. The identity of the closest NSRs will be agreed and any financial involvement established. Any relevant wind energy schemes that should be

included in the cumulative assessment, whether in planning, consented or operational, (see paragraph 11.4.11) will also be identified and agreed.

11.5.70 Any requirement for baseline monitoring will be established based on the results of predictive noise modelling, which will be undertaken using suitable software. The noise model will consider both the likely contribution from the Proposed Development as well as the cumulative effects of other relevant schemes.

11.5.71 A candidate turbine will be selected for the Proposed Development, the verified noise emission details of which will be reproduced in the EIA Report chapter (A-weighted and octave band data) for critical wind speeds.

11.5.72 Where the received operational noise level is predicted to exceed 35dB $L_{A90,10min}$ at any of the closest identified NSRs then baseline monitoring will be undertaken, unless existing consented noise limits for cumulative developments apply and suitable baseline noise data can be identified. Appropriate locations and, where relevant, proxies for baseline monitoring will be agreed in advance of the works with the EHO.

11.5.73 All baseline noise monitoring will be undertaken in accordance with the IoA Good Practice Guide. Day and night-time operational noise limits across the range of critical wind speeds (typically 3 – 12m/s) will be established at the closest identified NSR in accordance with ETSU-R-97 and any specific requirements of THC.

11.5.74 Where the potential for cumulative effects is identified, i.e. where predicted operational noise levels for the Proposed Development under down-wind conditions (ISO9613 propagation method) are within 10 dB of the predicted level for cumulative schemes, further consideration of potential cumulative effects will be undertaken. A review of consented noise limits will be undertaken for NSRs potentially affected by cumulative noise, and a detailed approach to apportionment of cumulative noise limits agreed in consultation with the EHO.

11.5.75 If required, detailed predictions accounting for directivity effects will be undertaken in accordance with guidance provided in the Good Practice Guide.

11.5.76 For the purposes of the cumulative assessment (if applicable), the geographical location of each of the turbines relative to a given NSR will be considered and acoustic corrections applied as appropriate for wind direction. This supports the notion that a given NSR is unlikely to be simultaneously downwind of all turbines. Corrections will be derived in accordance with the guidance set out in the IoA Good Practice Guide.

11.5.77 Comparison of predicted scheme and cumulative operational noise levels will be undertaken with the established day and night time limits (taking account of financial involvement of any relevant NSRs in the Proposed Development) and where any exceedance at any critical wind speed is noted, mitigation measures will be considered.

Assessment of Construction Noise

11.5.78 A construction noise assessment will be undertaken in accordance with BS5228-1: 2009+A1:2014 *'Code of practice for noise and vibration control on construction and open sites - Noise'*[24]. Potential impacts from construction noise and, where appropriate, vibration, will be assessed at the closest identified NSRs. Predictions

BS 5228-1:2009+A1:2014 - Code of practice for noise and vibration control on construction and open sites. Noise[24]

of noise will be based on the likely site preparation and construction methods and programme.

11.5.79 Where appropriate, the assessment of construction noise will also consider off-site activities such as construction traffic and deliveries, where the necessary information is available. Construction noise can be effectively controlled by employing appropriate best-practice methods and limiting hours of work at sites close to Noise Sensitive Receptors (NSRs).

Consultation

11.5.80 SLR will undertake direct consultation with the EHO via correspondence regarding representative baseline noise survey locations and the approach to cumulative assessment.

11.5.81 The EHO may be invited to witness installation of the baseline noise survey equipment to agree the suitability of measurement micro siting in accordance with the Good Practice Guide.

11.5.82 Where access to private land is subsequently refused SLR may then seek agreement of suitable accessible proxy measurement locations within the developers-controlled site boundary which would be chosen so as to still be considered representative of sensitive receptors in the surround, this would be undertaken to facilitate assessments in a timely manner and in accordance with the Good Practice Guide.

11.5.83 Any commentary received on methodology, items scoped in and out of assessment, and perceived mitigation needs will be captured within the EIA Noise and Vibration Chapter.

11.6 Matters Scoped Out

11.6.1 There are various aspects that are proposed to be scoped out of the assessment.

Operational Offsite Traffic Noise Impact

11.6.2 As operational road traffic flow would be negligible, operational traffic noise has been scoped out of further assessment.

Decommissioning

11.6.3 Noise and vibration from decommissioning activities would be similar to, but lesser than, those during the construction phase. Compliance with the same appropriate criteria during both phases would be met and therefore no separate assessment of the decommissioning effects is proposed.

Construction Vibration

11.6.4 Research undertaken by Snow[25] found that levels of ground-borne vibration 100 m from the nearest wind turbine were significantly below criteria for *'critical working areas'* given by British Standard BS 6472:1992[26], and were lower than limits specified for residential premises by an even greater margin.

[25] 16 ETSU (1997), Low Frequency Noise and Vibrations Measurement at a Modern Wind Farm, prepared by D J Snow

[26] 7 BS 6472:1992 Evaluation of human exposure to vibration in buildings (1 Hz to 80 Hz)

11.6.5 Whilst ground-borne vibration from wind turbines can be detected using sophisticated instruments several kilometres (km) from the wind farm site as reported by Keele University[27]. This report clearly shows that, although detectable using highly sensitive instruments, the magnitude of the vibration is orders of magnitude below the human level of perception and does not pose any risk to human health.

11.6.6 Given the separation distances involved (>1km), vibration associated with construction and operation of the Proposed Development at the closest sensitive receptors will therefore be negligible, therefore construction, and operational phase vibration impacts have been scoped out of further assessment

11.6.7 Traffic flows associated with the operational phase of the Proposed Development will be negligible given the type of development (on average <1 vehicle movement per day), therefore operational road traffic noise has been scoped out of further assessment. This chapter considers the potential noise effects of the Proposed Development on receptors sensitive to noise during the construction phase and the operational phase.

Low Frequency Noise and Infrasound Study

11.6.8 A study[28], published in 2006 by acoustic consultants Hayes McKenzie on the behalf of the Department of Trade and Industry (DTI), investigated low frequency noise from wind farms.

11.6.9 This study concluded that there is no evidence of health effects arising from infrasound or low frequency noise generated by wind turbines, but that complaints attributed to low frequency noise were, in fact, possibly due to a phenomenon known as Amplitude Modulation (AM).

11.6.10 Further, in February 2013, the Environmental Protection Authority of South Australia published the results of a study into infrasound levels near wind farms[29].

11.6.11 This study measured infrasound levels at urban locations, rural locations with wind turbines close by, and rural locations with no wind turbines in the vicinity.

11.6.12 It found that infrasound levels near wind farms are comparable to levels away from wind farms in both urban and rural locations.

11.6.13 Infrasound levels were also measured during organised shut downs of the wind farms; the results showed that there was no noticeable difference in infrasound levels whether the turbines were active or inactive.

11.6.14 Bowdler et al. (2009)[30] concludes that:

"...there is no robust evidence that low frequency noise (including 'infrasound') or ground-borne vibration from wind farms generally has adverse effects on wind farm neighbours".

[27] 8 Microseismic and infrasound monitoring of low frequency noise and vibrations from wind farms: recommendations on the siting of wind farms in the vicinity of Eskdalemuir, Scotland". Keele University, 2005

[28]The measurement of low frequency noise at three UK wind farms, Hayes Mckenzie, The Department for Trade and Industry, URN 06/1412, 2006.

[29]10 Environment Protection authority (2013) Infrasound levels near wind farms and in other environments [Online] Available at: http://www.epa.sa.gov.au/xstd_files/Noise/Report/infrasound.pdf (Accessed 15/06/2021)

[30]Bowdler et al. (2009). Prediction and Assessment of Wind Turbine Noise: Agreement about relevant factors for noise assessment from wind energy projects. Acoustic Bulletin, Vol 34 No2 March/April 2009, Institute of Acoustics.

11.6.15 Therefore, low frequency noise and infrasound should remain scoped out of the noise impact assessment for wind turbines.

Research into Amplitude Modulation (AM)

11.6.16 A study31 was carried out on behalf of the Department for Business, Enterprise and Regulatory Reform (BERR) by the University of Salford, which investigated the incidence of noise complaints associated with wind farms and whether these were associated with AM.

11.6.17 This report defined AM as aerodynamic noise from wind turbines with a greater degree of fluctuation than normal at blade passing frequency (occasionally referred to elsewhere as 'other AM' (OAM)).

11.6.18 Its aims were to ascertain the prevalence of AM on UK wind farm sites, to try to gain a better understanding of the likely causes, and to establish whether further research into AM is required.

11.6.19 The study concluded that AM has occurred at only a small number of wind farms in the UK (4 of 133), and only for between 7% and 15% of the time. It also states that, at the time of writing, the causes of AM were not well understood and that prediction of the effect was not currently possible.

11.6.20 This research was updated in 2013 by an in-depth study undertaken by Renewable UK[32] , which identified that many of the previously suggested causes of AM have little or no association to the occurrence of AM in practice.

11.6.21 The generation of AM is based upon the interaction of a number of factors, the combination and contributions of which are unique to each site. With the current knowledge, it is not possible to predict whether any particular site is more or less likely to give rise to AM, and the incidence of AM occurring at any particular site remains low, as identified in the University of Salford study.

11.6.22 In 2016, the IOA proposed a measurement technique[33] to quantify the level of AM present in any particular sample of wind farm noise.

11.6.23 This technique is supported by the Department of Business, Energy & Industrial Strategy (BEIS, formerly the Department of Energy & Climate Change) who have published guidance[34,] which follows on from the conclusions of the IOA study in order to define an appropriate assessment method for AM, including a penalty scheme and an outline planning condition.

11.6.24 Notwithstanding this, the suggested outline planning condition is as yet unvalidated, remains in a draft form and would require site-specific legal advice on its appropriateness to a specific development.

11.6.25 Section 7.2.1 of the GPG therefore remains current, stating*:*

"The evidence in relation to 'Excess' or 'Other' Amplitude Modulation (AM) is still developing. At the time of writing, current practice is not to assign a planning condition to deal with AM"

[31] Research into aerodynamic modulation of wind turbine noise'. Report by University of Salford, The Department for Business, Enterprise and Regulatory Reform, URN 07/1235, July 2007.

[32] Renewable UK, 2013: Wind Turbine Amplitude Modulation: Research to Improve Understanding as to its Cause and Effects

[33] 4 Institute of Acoustics, (2016) A Method for Rating Amplitude Modulation in Wind Turbine Noise

[34] BEIS, (2016), Review of the evidence on the response to amplitude modulation from wind turbines.

11.6.26 In summary the incidence of AM occurring at any particular site is low; it is not possible to predict whether any particular site is more or less likely to give rise to AM, and no appropriate planning condition has yet been established. As such, it is not considered necessary to carry out a specific assessment of AM.

11.6.27 Therefore, amplitude modulation should remain scoped out of the noise impact assessment for wind turbines.

11.6.28 For the purposes of the noise and vibration assessment all noise sensitive receptors are residential properties.

Summary

11.6.29 **Table 11-1** below summarises the potential impacts proposed to be scoped in and out of the EIA Report.

Table 11-1: **Receptors and Impacts Scoped In and Out**

Potential impacts	Construction	Operation	Decommissioning
Noise affecting human receptors	✓	✓	×
Vibration affecting human receptors	✓	×	×
Traffic noise affecting human receptors	✓	×	×
Cumulative impacts	✓	✓	×

11.7 Questions to Consultees

11.7.1 The following questions have been designed to ensure that the proposed methodologies and assessment are carried out in a robust manner and to the satisfaction of the determining authorities:

a) Do consultees agree with the proposed assessment methodologies, specifically the use of ETSU-R-97 and the IOA GPG to assess operational noise and BS5228 to assess construction noise?

b) Do consultees agree that assessment of vibration, infrasound, low frequency noise and amplitude modulation be scoped out of the EIA?

c) It is proposed that cumulative noise from the wind farms is assessed in isolation from any other forms of development which have their own assessment criteria and methodologies and are therefore not comparable. Is this agreeable to consultees?

d) Are consultees aware of any additional potential noise-sensitive receptors, such as new housing developments?

e) Are consultees aware of any other wind energy developments which should be taken into consideration in the cumulative noise assessment?

f) What are the Council's requirements for the provision of information on noise during construction?

12.0 Socio-economics, Tourism and Recreation

12.1 Introduction

12.1.1 BiGGAR Economics has been commissioned to undertake a socio-economic assessment of the Proposed Development. Socio-economic 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.

12.1.2 Nevertheless, it will be necessary to determine whether the Proposed Development is likely to comply with Policy 11 of NPF4, specifically paragraph (c), which 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".*

12.1.3 Furthermore, it will also be important to consider THC's Social Value Charter for Renewables Investment, which sets out the Council's expectations for the sorts of commitments that renewables companies could make to ensure that their projects maximise local benefit to the area, in relation to the Proposed Development.

12.1.4 As such, it is proposed that a separate report on socio-economics will be provided and submitted alongside the EIA Report.

12.1.5 The socio-economics report will be undertaken in line with draft guidance published by Scottish Renewables in March 2025. The socio-economics report will include, amongst other things, consideration of employment generation and any indirect or induced effects from the Proposed Development, which, in addition to turbines, might include a BESS.

12.1.6 To maintain consistency with previous assessments and ensure the report meets the needs of all stakeholders, the report will also consider potential effects on tourism.

12.2 Baseline Conditions

Study Area

12.2.1 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, recreation and tourism baseline within the local area.

12.2.2 The baseline description will cover and compare the study areas of:

- Local Area (defined as the electoral wards of Aird and Loch Ness, Inverness South and Badenoch and Strathspey);
- Highland; and
- Scotland.

12.2.3 The economic impacts will be quantified for Highland, and Scotland.

Current Baseline

Population Estimates

12.2.4 The current data indicates that the Local Area has a population of 42,033, which accounts for 17.8% of the total population of Highland.

12.2.5 The Local Area has an older population, with 20.8% of the population aged 65 or over. In comparison, 19.3% of the Scottish population is aged 65 or over. Similarly, 62.3% of the population in the Local Area are aged between 16-64, compared to 64.2% of the Scottish population.

Table 12-1: Population Estimates by Age, 2023

	Local Area	Highland	Scotland
Total Population	42,033	236,330	5,419,267
% under 16	16.9%	15.6%	16.5%
% age 16 - 64	62.3%	60.2%	64.2%
% aged 65 and over	20.8%	24.2%	19.3%

Population Projections

12.2.6 The National Records of Scotland provide population projections at local authority and Scottish level. While information is not available at electoral ward level, current population estimates and future trends at local authority level can be used to form a view of more localised trends.

12.2.7 The total population of Highland is projected to decrease from 235,540 to 233,250 between 2018 and 2043. During the same period, the population of Scotland is projected to increase by 1.7%.

12.2.8 Highland is also projected to experience an ageing population, with the share of the working age population expected to fall from 60.2% to 56.0%, which implies a loss of around 11,140 working age people from Highland.

Table 12-2: Population Projections by Age, 2018-2043

	Highland		Scotland	
	2018	2043	2018	2043
Total Population	235,540	233,250	5,438,100	5,770,152
% under 16	15.6%	14.3%	16.5%	14.1%
% age 16 - 64	60.2%	56.0%	64.2%	61.1%
% aged 65 and over	24.2%	29.8%	19.3%	24.8%

Economic Activity

12.2.9 The economic activity rate in Highland is the higher than that of Scotland as a whole, with 81.5% of the population aged between 16 and 64 either in employment or looking for work. The unemployment rate in Highland (2.2%) was below the Scottish average (3.2%). The median annual gross wage was also slightly lower for residents of Highland (£31,530) than for residents of Scotland (£31,890).

Table 12-3: Economic Activity, Jan 2024-Dec 2024

	Highland	Scotland
Economic Activity Rate	81.5%	77.0%
Unemployment Rate	2.2%	3.2%
Median Annual Gross Income (All Residents)	£31,530	£31,890

Industrial Structure

12.2.10 As shown in the table below, the accommodation and food service activities sector is particularly important to the Local Area, accounting for 18.0% of all jobs in the area. This is higher than that of the Highland (12.5%) and Scotland (8.6%). This indicates importance of tourism to the economy of the Local Area.

12.2.11 Similarly, the wholesale and retail trade sector is the second largest employer in the Local Area (15.7%) employing a larger proportion of the workforce compared to the Highland (13.7%) and Scotland as a whole (13.2%).

12.2.12 The economic opportunities from the development, construction and operation of the Proposed Development are likely to be within specific sectors. These include construction and professional, scientific and technical services. The construction sector accounts for 8.0% of jobs in the Local Area, which is higher than that of the Highland (6.3%) and Scotland (5.1%). There are more people employed in professional, scientific and technical activities in the Local Area than in Highland and Scotland as a whole.

Table 12-4: Industrial Structure, 2023

	Local Area	Highland	Scotland
Accommodation and food service activities	18.0%	12.5%	8.6%
Wholesale and retail trade; repair of motor vehicles and motorcycles	15.7%	13.7%	13.2%
Human health and social work activities	10.3%	15.3%	15.6%
Construction	8.0%	6.3%	5.1%
Arts, entertainment and recreation	8.0%	3.1%	2.7%
Professional, scientific and technical activities	7.9%	4.7%	7.2%
Education	6.1%	7.0%	8.2%
Administrative and support service activities	4.8%	4.7%	6.8%
Agriculture, forestry and fishing	3.9%	10.6%	3.4%
Public administration and defence; compulsory social security	3.5%	4.7%	6.2%
Manufacturing	3.1%	4.7%	6.7%
Transportation and storage	2.8%	4.7%	4.5%
Real estate activities	2.5%	1.3%	1.5%
Other service activities	2.5%	1.3%	1.7%
Information and communication	0.9%	1.9%	3.1%

	Local Area	Highland	Scotland
Electricity, gas, steam and air conditioning supply	0.7%	0.9%	0.7%
Financial and insurance activities	0.7%	0.6%	3.2%
Mining and quarrying	0.5%	0.3%	0.9%
Water supply; sewerage, waste management and remediation activities	0.1%	1.9%	0.8%

Education

12.2.13 In Highland, 49.2% of the population have achieved a qualification at RQF Level 4 or above, which is equivalent to a higher education certificate. This compares with 54.5% across Scotland. The proportion of people qualified to RQF Level 3 or above is the same in both Highland and Scotland as a whole, at 72.5%.

12.2.14 However, a slightly greater proportion of people in Highland have qualifications at RQF Level 2 or above (89.2%) compared to the Scottish average (87.4%). The proportion of people with qualifications at RQF Level 1 or above is also marginally higher in Highland (89.2%) than in Scotland overall (88.6%).

Table 12-5: Education Levels, 2022

	Highland	Scotland
% with RQF4+	49.2%	54.5%
% with RQF 3+	72.5%	72.5%
% with RQF2+	89.2%	87.4%
% with RQF1+	89.2%	88.6%
% with other qualifications (RQF)	-	3.4%
% with no qualifications (RQF)	-	8.0%

12.3 Assessment Methodology

Legislation, Policy and Guidance

12.3.1 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 DECC in 2012 on the direct and wider economic benefits of the onshore wind sector to the UK economy and a subsequent update to this report published by RenewableUK in 2015.

12.3.2 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 and recreation interests. The proposed method will consider specific attractions or tourism facilities to assess if there could be any effects from the development.

12.3.3 For recreational assets, guidance has been provided by NatureScot (NS) on how to assess effects on recreational amenity and the approach outlined will be used. This takes into consideration a number of potential effects, including direct effect on

facilities, such as limitation or restrictions on access, and effects on the intrinsic quality of the resources enjoyed by people. In general, this guidance would consider recreational and access impacts to potentially be significant if:

- permanent or long-term effects on the resources on which enjoyment of the natural heritage depends, in particular where facilities have been provided by SNH or others under statutory powers;
- permanent or long-term change that would affect the integrity and long-term sustainable management of facilities which were provided by SNH or others under statutory powers;
- where there are recreational resources for open air recreation pursuits affected by the proposal which have more than local use or importance, especially if that importance is national in significance;
- major constraints on or improvements for access or accessibility to designated natural heritage sites; and
- where mitigation and/or compensatory or alternative recreational provision is considered to be inadequate.

12.3.4 It is also essential to take into consideration for the assessment NPF4, the national spatial strategy for Scotland. The document considers:

- Scotland's spatial principles;
- national planning policy;
- national developments; and
- regional priorities.

12.3.5 In the context of energy generation, Policy 11 is relevant to the socio-economic impact of the Proposed Development. Policy 11c 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).

12.3.6 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.

12.3.7 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 the Local Area the employment in tourism related sectors accounts for a higher percentage of total employment in the area (26%) compared to both Highland (16%) and Scotland (11%). 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. A tourism analysis will therefore be included in the socio-economic report.

Approach

12.3.8 It is anticipated that the contents of the standalone report will include:

- introduction, including scope of assessment and methodology;
- economic development and tourism strategic context;
- baseline socio-economic context;

- baseline tourism and recreation context;
- socio-economic assessment;
- tourism and recreation impact assessment;
- proposed measures and actions to maximise local economic and community impacts;
- proposed measures and actions to mitigate any harmful effects (if required); and
- summary of findings and conclusion.

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

12.3.10 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.

12.3.11 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.

12.3.12 In order to assess effects on tourism and recreation assets, the features that make them distinctive and attractive, such as how they display local heritage, will be identified. The potential impact of the Proposed Development on those key features will then assessed, with consideration of chapters of the EIA Report where relevant, to determine the magnitude of change.

12.4 Potential Impacts

12.4.1 The impacts that will be considered in this assessment will include the potential socio-economic, tourism and recreation impacts associated with the Proposed Development.

12.4.2 An economic impact analysis will be undertaken using the methodology developed by BiGGAR Economics; this methodology has been used to assess over 150 onshore wind farms across the UK. The potential socio-economic impacts that will be considered are:

- temporary effects on the regional and/or national economy due to expenditure during the construction phase;
- permanent effects on the regional and/or national economy 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 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 and/or any social value commitments during the operational phase of the development.

12.4.3 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.

12.4.4 In 2021 this study was updated, and research identified 16 wind farms with a capacity of at least 10 megawatts that became operational between 2015 and 2019. Analysis of trends in tourism employment in the locality of these wind farms (15 km radius) found that 11 of the 16 areas had experienced more growth in tourism employment than for Scotland as a whole. For 13 of the 16 windfarms, trends in tourism employment in the locality had outperformed the local authority in which they were based. This work reflected an update of previous work undertaken by BiGGAR Economics in 2017 that considered 28 wind farms constructed between 2009 and 2015 and the trends in tourism employment in the areas local to these developments. The analysis found that there was no relationship between the development of onshore wind farms and tourism employment at the level of the Scottish economy, at the local authority level nor in the areas immediately surrounding wind farm developments.

12.4.5 Nevertheless, the tourism sector is an important contributor to the Scottish economy, and so there is merit in considering whether the development will have any effect on the tourism sector. This assessment will consider the potential effects that the development could have on tourism attractions, routes, trail, and local accommodation providers. This will consider the implications of any effects identified for the tourism sector in the local area and wider region.

12.5 Mitigation

12.5.1 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.

12.5.2 Other measures will be identified as part of the standalone socio-economic and tourism assessment.

12.6 Consultation

12.6.1 The assessment will use desk-based information sources to assess the likely effects, supplemented by consultation with stakeholders if relevant.

12.7 Summary of Scope

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

12.8 Questions for Consultees

12.8.1 The following questions are directed to consultees:

a) Do consultees agree with the approach of scoping socio-economics, tourism and recreation out of the EIA and into a standalone report to better address the socio-economics requirements of NPF4?

b) Do consultees agree that the scope of the proposed socio-economic assessment is appropriate?

c) Are there specific socio-economic effects that consultees think should be considered in the standalone report?

13.0 Other Considerations

13.1 Introduction

13.1.1 A single chapter of the EIA Report 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. The chapter would also contain non-environmental elements often contained within EIA Report. It is anticipated that this chapter would include discussion of the following issues:

- Infrastructure, Telecommunications and Broadcast Services;
- Aviation and Radar;
- Climate and Carbon Balance;
- Ice Throw;
- Shadow Flicker;
- Air Quality;
- Population and Human Health;
- Waste and Environmental Management; and
- Major Accidents and Disasters.

13.2 Existing Infrastructure, Telecommunications and Broadcast Services

Infrastructure

13.2.1 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.

Telecommunications

13.2.2 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.

13.2.3 Consultation will be undertaken with Ofcom and key providers of these services in order to ascertain any potential telecommunications issues.

Television Reception

13.2.4 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 Proposed Development 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.

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

Other Terrestrial Broadcasts

13.2.6 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).

13.2.7 It is therefore proposed that an assessment of potential effects on broadcast radio is scoped out of the EIA.

Fixed Links

13.2.8 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 EIA Report.

13.3 Aviation and Radar

13.3.1 Assessment of the effects of the Proposed Development on military and civil aviation will be undertaken through consultation with NATS, Ministry of Defence (MoD) and other relevant authorities. EIA Reports for applications for the nearby wind farms of Corriegarth 2, Dell II and Cloiche have identified no issues with regards to aviation (subject to standard mitigation) and, therefore, no issues are anticipated for the Proposed Development. If no potential effects on radar are identified by consultees, then aviation and radar will be scoped out of the EIA.

13.3.2 If it is assessed that the Proposed Development may have an adverse impact on nearby Air Traffic Control (ATC) radars or MoD low flying operation, a separate aviation assessment would be commissioned and if required, mitigation measures would be proposed.

13.4 Climate and Carbon Balance

13.4.1 The EIA Regulations include for consideration of potentially significant effects on climate, which includes greenhouse gas emissions. As a renewable energy project, the Proposed Development is likely to result in a significant saving in carbon and therefore benefit to the UK climate.

13.4.2 The main aims of the calculation are: to quantify sources of carbon emissions associated with the Proposed Development (i.e., from construction, operation and transportation of materials, as well as loss of peat as relevant); to quantify the carbon emissions which will be saved by constructing the Proposed Development; and to calculate the length of time for the project to become a ‘net avoider’, rather than a ‘net emitter’ of carbon dioxide emissions. The length of time is termed the ‘payback time’.

13.4.3 A carbon balance assessment will be undertaken for the Proposed Development using guidance Calculating Potential Carbon Losses and Savings from Wind Farms

on Scottish Peatlands (Nayak et al., 2008; Nayak et al., 2010 and Smith et al., 2011).

13.5 Ice Throw

13.5.1 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.

13.5.2 The risk associated with ice throw affecting members of the public is considered to be very low given the remote location of the Proposed Development.

13.5.3 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.

13.5.4 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.

13.5.5 It is therefore proposed that ice throw is scoped out of the EIA.

13.6 Shadow Flicker

13.6.1 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.

13.6.2 THC's Onshore Wind Supplementary Guidance (2016) requires that wind farm applications undertake shadow flicker assessments for a minimum distance of 11 rotor diameters.

13.6.3 The rotor diameter of the proposed wind turbines is anticipated to be up to 170 m; so the potential area in which shadow flicker could occur would be up to 1,870 m from the proposed turbine locations (plus any additional micrositing). The nearest residential property is Killin Lodge (approximately 2,230 m to the nearest proposed turbine, and 1,700m from the Site boundary. OS and aerial mapping shows a bothy located approximately 200m outwith the Site boundary, 1,170 m from the nearest proposed turbine, however, it is not included in the list of mountain bothy association (MBA) maintained bothies, and is therefore unlikely to be regularly (or potentially ever) inhabited.

13.6.4 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 eleven 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.

13.6.5 Based on the design of the Proposed Development undertaken to date, and the number of residential properties found in the surrounding area, it is unlikely that a

full shadow flicker assessment will be required for the EIA, as there don't appear to be any residential properties within 11 rotor diameters of the proposed wind turbines.

13.7 Air Quality

13.7.1 Given the 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 EIA Report.

13.7.2 Consideration will be given within the Ecology and Geology, Hydrology, Hydrogeology and Soils 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 EIA Report Chapters.

13.8 Population and Human Health

13.8.1 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.

13.8.2 It is therefore proposed that population and human health effects of the Proposed Development are incorporated within the relevant chapter of the EIA Report, as appropriate, under each of the other relevant topic headings e.g. noise and / or socio-economic effects. Where no significant effects are likely these will be scoped out of the assessment.

13.9 Waste and Environmental Management

13.9.1 The Applicant is committed to pollution prevention and environmental protection. As such an environmental management strategy to minimise the potential environmental effects of the Proposed Development will be developed as part of the outline CEMP.

13.9.2 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 Digital Terrain Model data), highlighting areas that may be impacted by a peat landslide so that appropriate mitigation measures can be identified.

13.9.3 If the Proposed Development is granted consent, 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 construction practices that can be incorporated into the Proposed Development to minimise the use of raw materials and maximise the use of secondary aggregates will be identified.

13.10 Major Accidents and Disasters

13.10.1 The scope for the EIA to consider major accidents and disasters has been initially considered in **Table 13-1**. 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.

13.10.2 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 13-1: Major Accidents and Disasters

Major Accident or Disaster	Risk due to Location	Risk due to Proposed Development	Scoped in/out due to risk	Rationale	EIA Report Chapter
Earthquakes	No	No	Out	Any earthquakes in the vicinity of the Proposed Development are predicted to be of a very small magnitude. The design of foundations would enable turbines to withstand such low magnitude events.	n/a
Biological hazards: epidemics	Very Low	Very Low	Out	The likelihood of any epidemics affecting the construction or operation of the Proposed Development is predicted to be very low.	n/a
Biological hazards: animal and insect infestation	Very Low	Very Low	Out	The likelihood of any animal and insect infestations affecting the construction or operation of the Proposed Development is considered to be very low.	n/a
Famine / food insecurity	Negligible	Very Low	Out	The likelihood of famine/food insecurity affecting the construction or operation of the Proposed Development is considered to be negligible.	n/a
Tsunamis	No	No	Out	The location of the Proposed Development and its distance from the marine environment means there is no risk of Tsunamis affecting the Proposed Development	n/a
Volcanic eruptions	No	No	Out	There are no active volcanos anywhere near the Proposed Development	n/a
Displaced populations	Negligible	Very Low	Out	Displacement at a population level is not considered to have occurred in the vicinity of	n/a

Major Accident or Disaster	Risk due to Location	Risk due to Proposed Development	Scoped in/out due to risk	Rationale	EIA Report Chapter
				the Proposed Development.	
Severe weather; droughts	Very low	No	Out	Drought conditions would not affect the operation of the Proposed Development.	n/a
Landslide/subsidence	Low	Low	In	If surveys record significant quantities of peat at the site a peat landslide and hazard risk assessment would be undertaken.	Peat Management, Carbon Balance
Severe Weather; storms	Medium	No	Out	Turbines have lightning conductors and when wind speeds are at a level which could cause damage to components would automatically shut down.	n/a
Severe weather; extreme temperatures	Low	Very low	Out	Location leads to relatively low icing risk, remote location, turbine sensors, mitigation as follows: • Service crews would be trained in relation to ice throw • Ice risk conditions would be monitored by the operator of the Proposed Development • Public notices to be displayed at access points to alert the public and staff the potential risk of ice throw under certain weather conditions.	n/a
Cyber attacks	No	No	Out	n/a	n/a
Floods	Low	Very Low	In	Damage to infrastructure and / or turbines from flooding, or increased flood risk elsewhere.	Site Selection and Design Evolution, Geology, Hydrology, Hydrogeology and Soils.
Terrorist Incidents	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	Abnormal loads or an increase in traffic could	Design Evolution and

Major Accident or Disaster	Risk due to Location	Risk due to Proposed Development	Scoped in/out due to risk	Rationale	EIA Report Chapter
			loads and increase in traffic from construction.	increase - accident risk. Increase in risk if public road network is unsuitable for such traffic.	Traffic and Transport.
Industrial accidents	No	Yes	In – from construction and maintenance	Increased risk of industrial accidents due to working at height, manual labour, high voltages and use of specialist plant. All relevant health and safety legislation and industry best practice would be followed.	Site Selection and Design Evolution, Utilities and Infrastructure.
Urban Fires	No	No	Out	n/a	n/a

13.11 Questions for Consultees

13.11.1 The following questions are directed to consultees:

a) Consultees are requested to confirm that television reception, broadcast radio, ice throw, air quality and major accidents and disasters can be scoped out of the assessments?

14.0 Summary

14.1 Summary and Conclusions

14.1.1 This Scoping Report outlines the proposed technical and environmental assessments 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 is set out. This Scoping Report seeks the views of the relevant consultees on the proposed EIA and the content of the EIA Report. Should consultees have any further information requests to inform inputs into the Scoping Opinion the Applicant would be happy to discuss any further requirements.

14.2 Responding to this Scoping Report

14.2.1 Consultee responses to this Scoping Report should be directed to the ECU, who can be contacted via email: Econsult_Admin@gov.scot.

14.2.2 The Applicant will welcome such responses to inform the scope of the EIA to be undertaken for the Proposed Development and will undertake further consultation as necessary with consultees as the EIA progresses.

Appendix A Figures

Glenmarkie Wind Farm

Environmental Impact Assessment Scoping Report

Vattenfall Wind Power LtdWind Power Ltd

SLR Project No.: 405.065136.00002

08 September 2025

Appendix B Proposed Consultee List

Glenmarkie Wind Farm

Environmental Impact Assessment Scoping Report

Vattenfall Wind Power LtdWind Power Ltd

SLR Project No.: 405.065136.00002

08 September 2025

Statutory Consultees

- The Highland Council
- SEPA
- NatureScot
- Historic Environment Scotland

Internal Scottish Government Advisors

- Transport Scotland

Non-Statutory Consultees (other public bodies)

- Aberdeen Airport
- British Horse Society Scotland
- BT
- Cairngorms National Park Authority
- Civil Aviation Authority – Airspace
- Crown Estate Scotland
- Defence Infrastructure Organisation
- Fisheries Management Scotland
- Ness District Salmon Fisheries Board
- Ness and Beauly Fisheries Trust
- Highland and Islands Airports Limited
- John Muir Trust
- Joint Radio Company
- Mountaineering Scotland
- NATS Scotland
- RSPB Scotland
- Scottish Rights of Way and Access Society
- Scottish Water
- Scottish Wildlife Trust
- Scottish Wild Land Group
- Visit Scotland
- Stratherrick and Foyers Community Council
- Strathdearn Community Council
- Strathnairn Community Council
- Fort Augustus and Glenmoriston Community Council

Others

- Health and Safety Executive
- Highland Gliding Club Ltd

- Scottish & Southern Electricity Networks
- Scottish Power Energy Networks
- Scottish Gas Networks

Appendix C Ecological (Non-avian) Desk Study

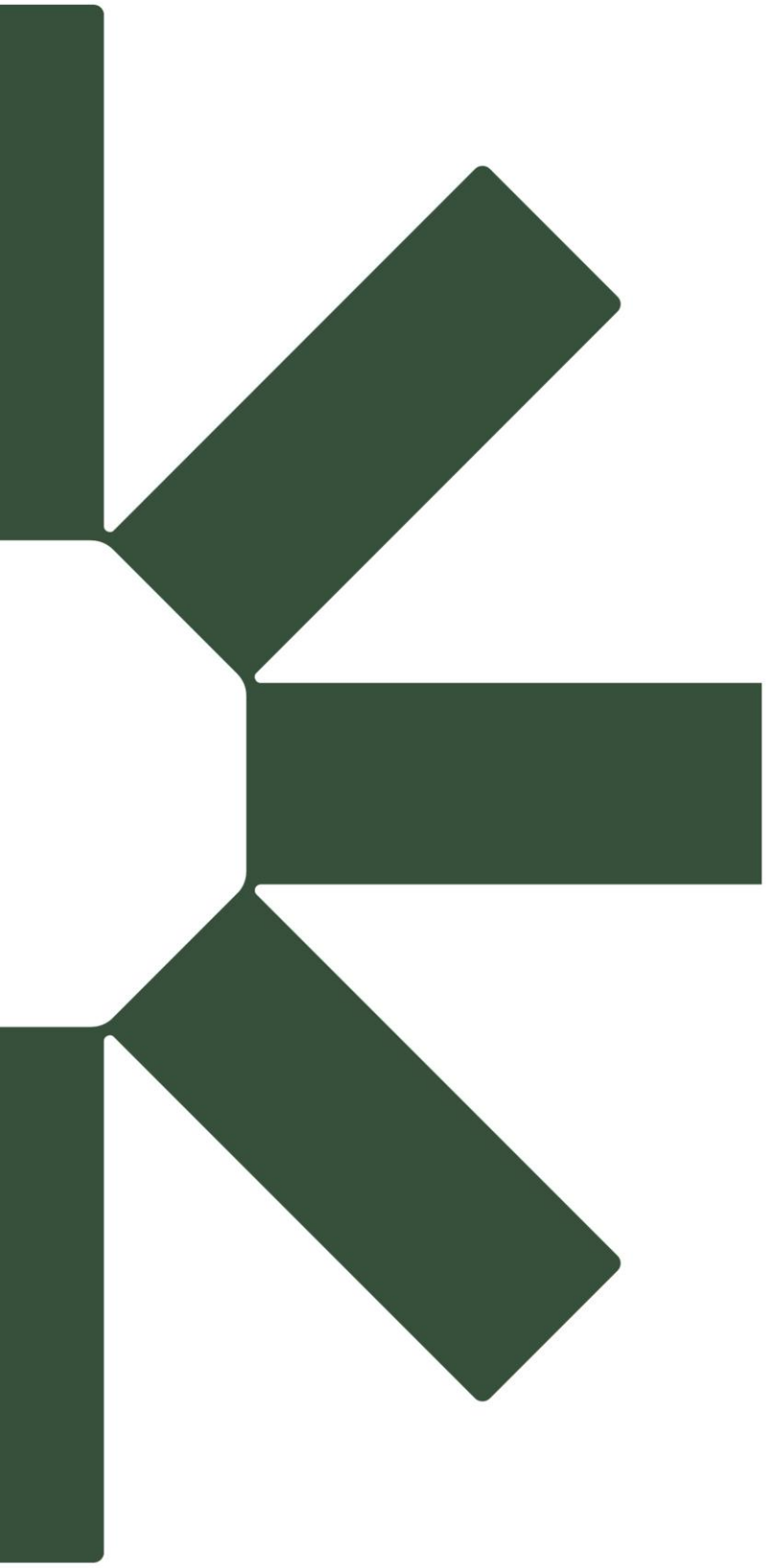
Glenmarkie Wind Farm

Environmental Impact Assessment Scoping Report

Vattenfall Wind Power LtdWind Power Ltd

SLR Project No.: 405.065136.00002

08 September 2025



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