



Environmental Impact Assessment Scoping Report

Correen Hills Wind Farm

Force 9 Energy Partners LLP

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Basis of Report

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1.0 Introduction

1.1 Overview

Force 9 Energy Partners LLP (Force 9) and EDF Energy Renewables Limited (herein referred to as EDF Renewables or EDFR), together referred to as 'the Applicant', is planning to seek consent from Scottish Ministers under Section 36 of The Electricity Act 1989 (as amended) to construct and operate a wind farm (the proposed development) at land centred approximately 7km north west of the village of Alford in Aberdeenshire as shown on **Figure 1.1**, hereinafter referred to as 'the Site'. The project will have an export capacity in excess of 50MW. The Applicant will also be seeking a direction that planning permission be deemed to be granted pursuant to s57(2) of the Town and Country Planning (Scotland) Act 1997.

It is anticipated that the proposed development would comprise of up to 14 wind turbines with associated works and infrastructure including: forestry works; crane hardstandings; access tracks; cabling; borrow pits; a temporary construction compound; a single substation including control building; a permanent anemometry mast and energy storage systems. It is proposed that the maximum blade tip height of the turbines would be 200m. An indicative turbine layout is presented on **Figure 2.1**. A project of this scale and nature including Energy Storage could have an installed capacity of up to approximately 151MW. This is a preliminary turbine layout for the purposes of scoping, which considers the currently known ecological, ornithological, topographical, hydrological, hydrogeological and landscape constraints at this early stage in the Environmental Impact Assessment (EIA) process. This indicative layout will be refined further during the EIA process.

The final operating capacity, turbine size and layout will be based on environmental and technical considerations identified and evaluated during the scoping and EIA stage, along with public consultation. The proposed development would generate renewable, carbon-free electricity for supply to the national electrical transmission grid and would eliminate carbon dioxide emissions through the displacement of conventional fossil-fuel electricity generation and contribute to the additional electrical capacity required for the decarbonisation of heating and transport systems.

The proposed development will constitute a Schedule 2 development as provided for by the Electricity Works (Environmental Impact Assessment) (Scotland) Regulations 2017 (as amended) (the EIA Regulations 2017) and the Applicant has committed to undertaking an EIA to investigate the potential for significant environmental effects in the form of an EIA Report which would accompany the Section 36 application. This EIA Scoping Report seeks information from the Energy Consents Unit (ECU) in the form of an EIA Scoping Opinion to inform the preparation of the EIA Report. 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 effects from the development and how and where they are proposed to be mitigated. The results of the EIA will be presented in an Environmental Impact Assessment Report (EIA Report) that will be submitted with the Section 36 application to Scottish Ministers.

1.2 The Applicant

Force 9 is a dedicated wind farm development company with offices in Scotland and England and with a focus on the UK market. To date, and at the time of writing, Force 9 has taken 16 developments through the planning/consenting process, ten of which have been consented. Six of these sites are in operation and three are in pre-construction.



Force 9 has a joint development agreement with EDFR. Through the agreement Force 9 leads on the development process of wind farm proposals up to consent. Should a wind farm be consented, the project will transition to EDFR who will take the lead during construction and subsequently own and operate the wind farm. Force 9 is supported by EDFR both financially and with staff resources requested by Force 9 on issues such as grid, access, engineering design and public relations.

F9 will be lead developer of the wind farm up to application determination. The application will be made in the name of EDF Energy Renewables or an SPV set up for the purpose of holding Correen Hill's wind farm assets. If the project is consented EDFR will take responsibility for contracting, building, and operating the project.

1.3 SLR Consulting

SLR Consulting Limited (SLR) has been appointed to undertake an EIA Scoping study and prepare this EIA Scoping Report to accompany a request to the Scottish Ministers to adopt an EIA Scoping Opinion.

SLR is a Registered Environmental Impact Assessor and Member of the Institute of Environmental Management and Assessment (IEMA) and holder of the EIA Quality Mark (<http://www.iema.net/qmark>). SLR is also a Registered Organisation validated by the Institute for Archaeologists (IfA), a member of the Association of Geotechnical and Geoenvironmental Specialists, and a Landscape Institute (LI) Registered Practice.

The company has significant experience and expertise in the preparation of planning and electricity act applications and undertaking EIA for a wide variety of projects. SLR's environmental specialists along with specialist consultants from MacArthur Green, Aviatca and Bidwells have the skills and relevant competency, expertise and qualifications to undertake EIA for the proposed development.

Further information on SLR can be found on its corporate website at www.slrconsulting.com.

1.4 Purpose of The EIA Scoping Report

1.4.1 Introduction

The EIA will be undertaken in accordance with the Electricity Works (Environmental Impact Assessment) (Scotland) Regulations 2017 ("the EIA Regulations"), Electricity Act 1989 – Sections 36 and 37: Applications Guidance (Scottish Government, 23 February 2022), the best practice guidelines of the Institute of Environmental Management and Assessment (Guidelines for Environmental Impact Assessment) published in 2004; and the Scottish Natural Heritage (SNH) (now NatureScot) handbook on EIA 2018.

The principal purpose of the EIA will be to assess, in a systematic manner, the potential significant environmental effects of the proposed development. Throughout the process of undertaking the EIA, the results obtained will be used in an iterative manner to influence the design of the proposed development, in order that any significant, adverse environmental effects can be designed out (embedded mitigation), minimised or negated completely through the careful design and approach to mitigation.

The proposed development will constitute a Schedule 2 development as provided for by the Electricity Works (Environmental Impact Assessment) (Scotland) Regulations 2017 (as amended) (the EIA Regulations 2017) and the Applicant has committed to undertaking an EIA to investigate the potential for significant environmental effects. Undertaking an EIA Scoping study is regarded as good practice and is considered to be an important step in EIA as it allows all parties involved in the process to agree on key environmental issues



relevant to the proposed development and to agree on the methodology used for their assessment. The Scoping stage helps to engage the Scottish Ministers, local planning authority (in this case Aberdeenshire Council, AC) and other stakeholders, at an early stage in the planning process; and ensures that key opinions, based on local understanding, are identified.

The specific aims of this EIA Scoping Report are to:

- identify the technical subject areas that may be subject to significant environmental effects as a result of the proposed development proceeding and therefore require further study;
- identify the technical subject areas that are unlikely to be subject to significant environmental effects and can be scoped out from further study;
- provide a basis for a consultation process to agree the scope and content of the EIA;
- provide a basis for agreeing methodologies for undertaking required studies, based upon currently available baseline data, site characteristics and best practice in individual technical disciplines; and
- provide all statutory consultees and stakeholders with an opportunity to comment on the proposed development at an early stage.

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

1.4.2 Approach to Scoping

This EIA Scoping Report has been based on a combination of desk based and site survey investigations. This has been complemented by the use of Geographic Information System (GIS) technology to collate and identify potential environmental receptors and environmental designations that may be affected by the proposed development. The GIS datasets comprise details of ecologically important sites, sites of archaeological and/or cultural heritage importance, landscape designations and other important receptors (watercourses etc.). The potential receptors and designated sites that have been identified are shown on **Figures 4.2-10.2**.

The findings of the desk-based work and the GIS work have been augmented by some site reconnaissance and survey work, as well as discussion with consultees. Site work undertaken to date has included ornithological surveys starting in the breeding season of 2020, ecology habitat and protected species surveys and a Phase 1 peat probing exercise. A desk-based landscape and visual feasibility study has also been completed.

1.4.3 Potential Environmental Effects

The EIA Regulations (Regulation 4 (2), (3) and (4)) specify that the EIA must:

“(2)...identify, describe and assess in an appropriate manner, in light of the circumstances relating to the proposed development, the direct and indirect significant effects of the proposed development (including, where the proposed development will have operational effects, such operational effects) on the factors specified in paragraph (3) and the interaction between those factors.

(3) The factors are —

(a) population and human health;



(b) biodiversity, and in particular species and habitats protected under any law that implemented Council Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora and Directive 2009/147/EC of the European Parliament and of the Council on the conservation of wild birds;

(c) land, soil, water, air and climate; and

(d) material assets, cultural heritage and the landscape.

(4) The effects to be identified, described and assessed under paragraph (2) include the expected effects deriving from the vulnerability of the development to risks, so far as relevant to the development, of major accidents and disasters.”

Previous experience of other wind farm development sites, combined with the EIA requirements, the knowledge of the Site and possible effects of the proposed development, has led to the identification of the following topics for consideration in the EIA. A summary of known baseline conditions of relevance, predicted effects, any outline mitigation measures that can be recommended at this stage and the proposed scope for the EIA is provided for each of the following topic areas in **Sections 4.0 to 13.0**:

- Landscape and Visual.
- Ornithology.
- Ecology.
- Cultural Heritage.
- Traffic and Transport.
- Noise.
- Geology, Hydrology, Hydrogeology and Peat.
- Climate and Carbon Balance.
- Socio-economics, Tourism, Recreation and Land Use.
- Other Considerations including Aviation and Radar.

A summary of what is scoped in and out for each technical topic is provided in Appendix 01.

Forestry works including any necessary felling, restocking and restructuring would be considered part of the proposed development. Changes to the forest structure as a result of implementing the proposed development would be set out in the project description with the detail presented in a Technical Appendix to the EIA Report,

Similarly, the consideration of aviation and radar effects will be reported in a Technical Appendix to the EIA Report, summarised in the introductory chapters.

For each topic that is identified as requiring further study, a detailed technical assessment will be carried out in accordance with the scope and methodology agreed with relevant consultees. Each technical assessment will be carried out by an appropriately qualified consultant to prevailing technical and professional standards and reported in a dedicated EIA Report Chapter.

The technical assessments will provide a detailed assessment of potential impacts with a focus on significant effects, identification of mitigation measures and description of the significance of residual effects (those remaining after the mitigation measures have been implemented). The EIA will identify direct and indirect effects, positive (beneficial) and negative (adverse) effects, cumulative effects and seek to identify, as far as possible, the duration of such effects, whether short term, long term, permanent, temporary, periodic, etc. during the construction, operational and decommissioning phases of the proposed



development. The results of each technical assessment will be reported in the EIA Report structured as follows:

- Volume 1 – Non-Technical Summary (NTS).
- Volume 2 – Written Statement.
- Volume 3 – Figures and Visualisations.
- Volume 4 – Technical Appendices.
- Volume 5 – Confidential Information (if required).

1.4.4 Pre-Scoping Consultation

A pre-scoping meeting was held with NatureScot. The purpose of this meeting was to understand NatureScot's early thinking on the ornithology sensitivities of the proposed Correen Hills Wind Farm development, to help inform ongoing survey effort and future design iterations.

A request for pre-application advice was submitted to Aberdeenshire Council (AC) in July 2023 with a subsequent response issued on the 28th of August 2023. The response provides an initial desk-based assessment of the proposed development and provides advice on the proposal under a number of headings. The advice provided by AC is referred to throughout this EIA Scoping Report where relevant.

1.4.5 Scoping Consultation

This EIA Scoping Report is issued to Scottish Ministers via the Energy Consents Unit (ECU). ECU will then consult with key consultees and stakeholders before forming its EIA Scoping Opinion. It is anticipated that the agencies and bodies to be consulted will include those listed in Appendix 02; this list is not exhaustive and other agencies will be consulted during the EIA as and when required.

The purpose of the consultation is to identify:

- key local issues and concerns;
- issues of environmental importance that may be affected by the proposed development and need to be considered in an EIA;
- methodologies for undertaking studies and agreement of these methodologies;
- existing information that will be of assistance in the assessment of the environmental effects; and
- the need for further consultation.

1.4.6 Public Consultation

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

During the development period, a project website will be developed, with at least two rounds of in-person public exhibitions taking place. These events will be advertised locally,



with a phone number, email and postal address established to receive comment and feedback. It is also anticipated that meetings will take place with the neighbouring community councils, local residents and interested parties.

Consideration will be given to ensure that engagement methods reflect varying levels of access to technology.

The Applicant will contact local community councils, detailed on the consultee list in Appendix 02, to introduce them to the project and to request the opportunity to meet with them, should they wish. Following this, it is anticipated that the first round of in-person public exhibitions will be held in the autumn of 2023. This will be an opportunity for the public to learn about the proposed development directly from the project team in attendance and through information panels and visualisations present at the public exhibition venues. Feedback on the proposed development will be encouraged; and where received, will be taken into account in development of the design and EIA.

The second round of public exhibitions which is proposed to be held in advance of the submission of the application will provide the public with an update on progress and provide further details about the proposed conceptual design of the proposed development, an update on the EIA, and further information on community benefits and submission timescales.

1.4.7 Type of Effects

The 2017 EIA Regulations require consideration of a variety of types of effect, namely direct/indirect, secondary, cumulative, transboundary, positive/negative, short/medium/long-term and permanent/temporary. In the EIA Report effects would be considered in terms of how they arise, their nature (i.e. whether they are positive or negative) and their duration.

1.4.8 Assessment of Effects

The methodology for predicting nature and magnitude of any potential environmental effects varies according to the technical subject area. This Section provides an overview of the general approach that will be adopted.

1.4.9 Baseline Conditions

This Section will describe:

- the key receptors that have been identified;
- a brief description of those receptors;
- the sensitivity attributed to each receptor; and
- where further details can be found within the relevant technical appendices.

1.4.10 Sensitivity of Receptors

The sensitivity of receptors will be defined according to the relative sensitivity of existing environmental features on or in the vicinity of the Site, or by the sensitivity of receptors which would potentially be affected by the proposed development, including their capacity to accommodate the kinds of changes the proposed development may bring about.

Criteria for the determination of sensitivity or importance will be established based on prescribed guidance, legislation, statutory designation and/or professional judgement.



1.4.11 Magnitude of Impact

The magnitude of impact (degree of change) relative to environmental baseline conditions will be identified through detailed consideration of the proposed development, taking account of the following factors:

- the degree to which the environment is affected, e.g. whether the quality is enhanced or impaired;
- the scale or degree of change from the baseline situation; and
- whether the effect is temporary or permanent, indirect or direct, short term, medium term or long term.

In some cases the likelihood of effect occurrence may also be relevant, and where this is a determining feature of the assessment this will be clearly stated.

1.4.12 Significance of Effect

The significance of an effect is derived from an analysis of:

- the sensitivity of receptors to change; and
- the amount and type of change, or magnitude of impact which includes the timing, scale, size, likelihood and duration of the change.

Where relative significance is reported, the assessment will identify the threshold for significant effects.

1.4.13 Cumulative Effects

For each technical discipline, an assessment will be made of the likely cumulative effects of the proposed development in combination with any other similar developments in proximity to the Site which are reasonably defined and understood; these would comprise projects that:

- are the subject of valid applications or appeals but not yet determined;
- consented; or
- are under construction.

Projects that are already constructed and operational are considered to form part of the baseline conditions.

Cumulative effects can also arise from the combined impact of effects attributable to the proposed development in respect of a particular receptor, such as the combined effect of noise and visual amenity on a residential dwelling.

If AC, ECU or other stakeholders are aware of any proposals that they consider will need to be assessed in terms of potential cumulative effects, it is requested that they are identified as part of the EIA Scoping Direction.

1.4.14 Assessment of Effects and Mitigation

An assessment of potential environmental effects will be undertaken to identify any predicted significant effects. Where significant adverse environmental effects are predicted in the EIA process, the EIA Report will provide additional measures (bespoke mitigation) to eliminate or reduce the effects to acceptable levels.



Mitigation is considered an integral part of the overall design strategy for the proposed development. Design principles and environmental measures that form an integral part of the project design will be taken into account in the assessment of environmental effects.

A Schedule of Mitigation will be included within the Summary and Conclusions Chapter. The Schedule will summarise the mitigation and enhancement measures proposed in the preceding chapters of the EIA Report to reduce or offset the effects of the proposed development on the environment.

1.4.15 Residual Effects

Any remaining effects of the proposed development, following implementation of any bespoke mitigation measures, are referred to as 'residual effects.' The EIA will assess each residual effect and identify a significance level. Residual effects may be adverse or beneficial, short, medium or long-term, direct or indirect, permanent or temporary, and reversible or irreversible.



2.0 Proposed Development

2.1 Site Description

2.1.1 Site Location

The Site, centred on NGR 352772 820799 is located on the Correen Hills, approximately 7km north west of the village of Alford in Aberdeenshire. The Site is within the administrative boundary of Aberdeenshire Council (AC) (**Figure 1.1**). The Site measures approximately 1,075 hectares (ha) and comprises of approximately 700ha of plantation forestry in the east with approximately 375ha of open moorland to the west of the Site. Elevations on the Site vary between 487m Above Ordnance Datum (AOD) on the summit of Peter's Prop Hill to approximately 200m AOD towards the south and south east of the Site.

The Site is within the Correen Hills, which is an amalgamation of Whitlaugh and Knockespock forests and is under the Correen Hills Management Plan with Forestry and Land Scotland. The predominant land use within the Site is commercial forestry, mainly Sitka spruce, which has been felled and restocked in compartments with further plots of pastureland related to sheep farming.

The southern site boundary, for the most part, follows the forested compartments of Drumbarton Hill and Cot Craigs with the eastern site boundary defined by the Suie Road. Just north of the junction of the Suie Road with the minor road that leads westward to the Hill of Millmedden, the site boundary continues in a north westerly direction toward the northern section of Mar Road. The western site boundary runs between the peaks of Badingair Hill and Mire of Midgates, with the latter within the site boundary. The boundary continues in a south easterly direction towards the Hillock of Terpersie which sits outside of the site boundary.

The north eastern boundary of the Site sits approximately 9km south west of the village of Inch. On the western side of the Correen Hills, the north western boundary of the Site lies approximately 3km east of the junction of the A97 and the B9002 at Auchindoir. At its closest point, the Site boundary runs approximately 3.5km east of the centre of the village of Lumsden. A minor road ('Suie Road') crosses the Correen Hills from Clatt in the north, to Bridge of Alford in the south.

2.1.2 Surrounding Area and Designated Sites

The immediate surrounding area of the Site is rural in nature and there are residential properties and agricultural buildings located throughout the immediate landscape surrounding the proposed development. Alford is the largest local settlement to the proposed development, located approximately 7km south east of the centre of the Site, with a population of approximately 2,500. The town of Huntly (approximate population 4,500) is located approximately 15km north west of the Site whilst Inverurie (approximate population 14,500) is located approximately 18km east of the Site. The transport network in the wider vicinity of the Site is limited to the A97 and the A944.

There are no statutory or non-statutory ecological designations within the Site boundary. Hill of Johnston Site of Special Scientific Interest (SSSI) is located approximately 2km north east of the Site and is designated for Caledonian igneous rock outcrop.

Other nearby natural heritage designations designated for ecological (non-avian) qualifying interests are present within 5km of the Site as set out on **Figure 6.2**. These sites are:

- Hill of Towanreef Special Area of Conservation (SAC) and SSSI, located 4.4km west of the Site; and



- Moss of Kirkhill SSSI, located 4.5km north of the Site.

Further afield, there are three natural heritage designations for ornithological features within 20km of the proposed development as set out on **Figure 5.2**. These sites are:

- Tips of Corsemaul and Tom Mor Special Protection Area (SPA) and SSSI, located approximately 18km north west of the nearest proposed turbine.
- Morven and Mullachdubh SSSI, located approximately 19km south west of the nearest proposed turbine.

A number of designated cultural heritage assets are also in close proximity outwith the Site and in the wider area, including hill forts, stone circles, Gardens and Designed Landscapes and listed buildings. All designated heritage assets within 10km are depicted on **Figure 7.1**.

The Site is not subject to any statutory or local landscape or scenic designations. The Cairngorms National Park (CNP) is located approximately 13km to the south west of the Site (**Figure 4.1**).

The landscape of Correen Hills is characterised under NatureScot's nationwide assessment as Landscape Character Type ('LCT') 28, 'Outlying Hills and Ridges', as shown in **Figure 4.3**. Within the AC's own Landscape Capacity Study, and characterisation, the Correen Hills are categorised as LCT 22(i), being the Grampian Outliers unit of the 'Moorland Plateaux.'

The cumulative wind farm context is shown on **Figure 4.6**. The nearest wind farms that are operational/under construction relative to the proposed development are:

- Cairnmore Wind Farm – approximately 1km north west of the Site, 3 turbines with a maximum height to blade tip of 81m;
- Upper Wheellemont Farm – approximately 4.5km north west of the Site, 2 turbines with a maximum height to blade tip of 81m;
- Kildrummy Wind Farm – approximately 8.5km north west of the Site, 9 turbines with a maximum height to blade tip of 93m;
- Clashindarroch Wind Farm - approximately 10km north west of the Site, 18 turbines with a maximum height to blade tip of 110m;
- Dummuie Wind Farm - approximately 11km north west of the Site, 7 turbines with a maximum height to blade tip of 78m;
- Tillymorgan Wind Farm – approximately 15km north east of the Site, 3 turbines with a maximum height to blade tip of 100m;
- Glens of Foudland – approximately 13km north east of the Site, 20 turbines with a maximum height to blade tip of 78m; and
- Cornabo Wind Farm – approximately 9km south east of the Site, 3 turbines with a maximum height to blade tip of 74m.

An application for Clashindarroch II was submitted to the Energy Consents Unit in January 2020 and consented in June 2023. This proposal consists of 14 turbines with a maximum height to blade tip of 180m located approximately 9km north west of the proposed development and was consented in June 2023.



2.2 Proposed Development Description

The proposed development is being designed to maximise the production of renewable energy generation, whilst balancing the Applicant's desire to minimise environmental effects. This is in the context of the Scottish Government's declaration of a 'climate emergency' in May 2019 and the Climate Change (Emissions Reductions Targets) (Scotland) Act 2019, which commits Scotland to a target of net zero emissions of all greenhouse gases by 2045, with interim targets to reduce emissions by 56% by 2020, 70% by 2030 and 90% by 2040.

Initial feasibility and design work indicates that the Site has the potential to accommodate up to 14 turbines of up to 200m to blade tip height. An indicative layout (**Figure 2.1**) has been prepared to illustrate how this number and scale of turbines could potentially be accommodated onsite.

In addition to the turbines, the associated infrastructure would include the following components:

- forestry works;
- permanent foundations supporting each turbine;
- new onsite access tracks providing access from the public highway and to all turbine locations;
- widening/improvement works to existing tracks onsite;
- crane hardstandings adjacent to each turbine;
- underground cabling linking each turbine with the substation control building;
- a substation compound including a control building and energy storage systems if required;
- temporary borrow pit search areas for the extraction of construction aggregates onsite;
- a permanent anemometer mast; and
- a temporary site construction compound.

At the scale set out in this EIA Scoping Request, the proposed development is expected to contribute up to approximately 151MW (including battery storage) to the Scottish Government's renewable energy targets and would be decided under Section 36 of 'The Electricity Act 1989'.

The EIA Report will provide a chapter detailing the design process followed and the reasonable alternatives considered in developing the wind farm layout and setting the physical parameters of the proposed turbines.

2.2.1 Wind Turbines

A candidate turbine manufacturer and model will be selected for assessment purposes in the technical and environmental disciplines. A competitive procurement process will be undertaken, should consent be forthcoming, to select the final turbine that would be installed onsite. The final turbine selected would have a blade tip height of up to 200m.

The specification of the turbine would be a typical horizontal axis design, comprising of three rotor blades, a hub and a nacelle. The tower would be tubular and tapered in design and finished in a light grey semi-matt colour. The blades will be made from fibre-reinforced epoxy and the tower will be constructed from steel.



An indicative layout of 14 turbines is shown on **Figure 2.1**. Each wind turbine would be served by its own external, electrical transformer. The transformers would be located close to the base of each wind turbine.

Grid co-ordinates of the proposed turbines as set out in the indicative layout on **Figure 2.1** are listed in **Table 2-1** below. It is anticipated that the hub height of each turbine will measure up to 119m, the rotor diameter will measure up to 162m and the tip height will measure up to 200m.

Table 2-1: Turbine Grid Coordinates

Turbine Number	X	Y
1	351461	822848
2	351983	822611
3	352142	822153
4	352516	821810
5	352664	821288
6	352781	823356
7	352791	822721
8	353229	822086
9	353339	821524
10	353494	822806
11	353988	822117
12	353974	821493
13	354119	822791
14	354627	822650

2.2.2 Substation

The proposed development would include a new onsite substation and control building. The substation and control building are anticipated to be a single storey building with a pitched roof. The building would also house switchgear, metering, protection and control equipment.

2.2.3 Electrical Layout

Underground cables would link the transformers to the onsite substation. Detailed construction and trenching specifications would depend on ground conditions at the Site.

2.2.4 Anemometry Masts

At least one permanent anemometry mast would be required to provide key wind climatology statistics including mean wind speed, wind direction, exceedance values, air density, wind shear and turbulence intensity. These masts typically reflect turbine hub height, which on the basis of the Scoping layout would be up to 120m.



2.2.5 Access

The turbine components would be delivered to the Site using the existing public road network. Investigations are ongoing to establish the preferred port of entry of turbine components and the preferred route to the Site.

2.2.6 Site Tracks

Each turbine would require access via a site track for construction and operational purposes. The construction of the track would depend upon local ground conditions: where the ground is firm, or where gradients are steep, the track would be of cut and fill type construction; where the ground is soft, i.e., in areas of deep peat, the track would have a floating construction. The Site tracks would have a crest width of 5m wide, with an additional 0.5m on either side to accommodate drainage and other services. Site tracks would widen at corners and passing places. Stone would be required for various purposes, primarily track construction, and this is likely to be sourced from onsite borrow pit(s).

2.2.7 Borrow Pits

It is anticipated that temporary borrow pit search areas would be included as part of the proposed development.

A review of the 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, estimated borrow pit size and the ability to supply appropriate materials for the construction of the proposed development will be included. Final detailed design of the borrow pits would be provided through planning conditions after geotechnical investigation prior to construction. There are several existing borrow pits onsite which have been used for the purpose of constructing existing forest tracks onsite and these are likely to be the focus of initial investigation.

Material for the construction of onsite access tracks would, where possible, be won onsite either derived from existing borrow pits, as tracks are constructed or from new 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.

2.2.8 Grid Connection

A high-level assessment of the proposed grid connection will be provided in the EIA Report, although the grid connection will be subject to a separate consent under Section 37 of the Electricity Act 1989. The site has the benefit of a grid connection offer with a proposed connection date in 2028 to the Blackhillock substation near Keith.

2.2.9 Battery Storage

Energy storage such as batteries is being considered for inclusion as part of the proposed development. The batteries would store power generated by the proposed development and release the power on to the grid as agreed with National Grid.

Battery storage would comprise a number of units with ancillary equipment such as inverters, which would be located next to the proposed substation. The batteries would store excess power generated by the proposed development and release the power to the grid when the output from the proposed development falls due to decreased wind speed.

The Applicant will consider the prospective long-term use of the energy produced, in order to accommodate the requirements of a decarbonised energy provision. The application will include detail on how the development is likely to contribute to the Scottish Government Energy Efficient Scotland roadmap, including providing clean and secure electricity.



2.2.10 Micrositing

Micrositing refers to the accurate locating of wind farm infrastructure, after the detailed ground investigations that would be carried out prior to construction. It allows the location of infrastructure to be revised within a specified distance to mitigate potential geo-environmental and geotechnical constraints which may only be identified at this stage. For example it would allow reduction of peat extraction; avoidance of sensitive habitats and currently undetected archaeological remains; and potential avoidance of need for foundation piling.

It is proposed that a micrositing allowance of 50m is permitted for the wind turbine and met mast locations and 50m from the extremities of all other infrastructure (access tracks, substation etc). These micrositing distances will be taken into account within the technical assessments.

2.3 Forestry

The Site contains approximately 700ha of plantation forestry. As part of the proposed development, some felling will be required to accommodate turbines and associated infrastructure.

Forestry will form an integral part of the proposed development and a detailed forest design and management plan will be submitted with the application. The forest works will be subject to assessment through the integrated EIA process.

In the UK there is a strong presumption against permanent deforestation unless it addresses other environmental concerns. In Scotland, such deforestation is dealt with under the Scottish Government's Policy on Control of Woodland Removal (Forestry Commission Scotland, 2009). The purpose of the policy is to provide direction for decisions on woodland removal in Scotland. It will be essential that the proposed development addresses and satisfies the requirements of the Policy. The requirements of the Policy will be addressed within a forestry Technical Appendix whilst ensuring that the forestry proposals do not compromise the wind flow and yield of the proposed development. The integration of the proposed development into the forest design plan will be a key part of the development process.

The main forestry consultee is Scottish Forestry who will be consulted throughout the development of the proposals to ensure that the proposed changes to the woodlands are appropriate and address the requirements of the Control of Woodland Removal Policy.

As part of the application, compensatory planting measures will be developed in consultation with the relevant consultees to ensure that any proposed changes to the woodlands are appropriate and address the requirements of the Control of Woodland Removal Policy. In its pre-application advice, AC noted the expectation to explore the possibility of diversifying the woodland to provide ecological benefits and that a plan for compensatory planting be submitted with the application.

2.4 Construction Works

The duration for the construction works is expected to be approximately 18 to 24 months. Typical construction activities and work methods will be set out in the EIA Report in accordance with the 'Good Practice during Wind Farm Construction' guidance (NatureScot, 2019). Information will also be provided on an indicative construction programme, construction traffic generation and construction phasing. The EIA Report will also contain details of appropriate environmental management measures, including pollution prevention measures (in line with Scottish Environment Protection Agency (SEPA)'s Pollution



Prevention Guidelines (PPGs) and Guidance for Pollution Prevention (GPPs)), and waste minimisation and management measures.

2.5 Wind farm Lifecycle and Decommissioning

Once constructed it is anticipated that the proposed development would have an operational life of up to 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. The decommissioning period would take up to one year. Decommissioning effects would likely be similar to or less than those be assessed during construction.

The final decommissioning approach would be agreed with AC 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 Decommission and Restoration Plan (DRP). Should the project gain consent, it is common for the financial provision for decommissioning to be in place before construction commences.

Over the period of operation of the wind farm it is recognised that there are likely to be changes in legislation and guidance, environmental designations, the status/condition of sensitive environmental receptors and stakeholder objectives that may affect decommissioning and restoration methodologies. The detailed DRP would reflect the scientific ideas and best practice current at the time of decommissioning and restoration.

Therefore, 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.



3.0 Planning and Energy Policy Context

This Section presents a summary of the relevant policy and guidance documents that will be taken into consideration to inform the rationale for and design of the proposed development.

The EIA Report will set out the relevant climate change and planning policies that have been considered as part of the assessments undertaken throughout the EIA and it will also set out the contribution of the proposed development to the UK and Scottish Government's climate change goals and targets.

The EIA Report will also reference climate change policy and the contribution of the proposed development to the UK and Scottish Government's climate change goals and policy targets.

A separate Planning Statement will provide a detailed appraisal of the proposed development against the national planning and energy policy, relevant Development Plan policies, and other material considerations.

3.1 Electricity Act 1989

The proposed development will be considered under Section 36 of the Electricity Act 1989. As part of the Section 36 application process, the applicant will request that the Scottish Ministers issue a Direction under s.57(2) of the Town and Country Planning (Scotland) Act 1997 ("the 1997 Act") that deemed planning permission be granted for the proposed development.

Paragraph (3)(1) of Schedule 9 of the Electricity Act 1989 sets out the duties that are relevant to the Applicant in formulating any relevant proposals. Paragraph (3)(2) sets out the duties that are relevant to the Secretary of State in considering any relevant proposal for which consent is required. Sub Paragraph 1 states:

"In formulating any relevant proposals, a licence holder or a person authorised by exemption to generate, transmit, distribute, supply or participate in the transmission of electricity--

(a) shall have regard to the desirability of preserving natural beauty, of conserving flora, fauna and geological or physiographical features of special interest and of protecting sites, buildings and objects of architectural, historic or archaeological interest; and

(b) shall do what he reasonably can to mitigate any effect which the proposals would have on the natural beauty of the countryside or on any such flora, fauna, features, sites, buildings or objects."

Sub-paragraph 2 applies to all applicants and refers to sub paragraph 1. Sub-paragraph 2 states:

"In considering any relevant proposals for which his consent is required under section 36 or 37 of this Act, the Secretary of State shall have regard to —

(a) the desirability of the matters mentioned in paragraph (a) of sub-paragraph (1) above; and

(b) the extent to which the person by whom the proposals were formulated has complied with his duty under paragraph (b) of that sub-paragraph."

Paragraph (3)(3) of Schedule 9 to the Electricity Act sets out the requirement for both the Applicant and Secretary of State to avoid as far as possible, causing injuries to the stock of fish in any waters in exercising any relevant functions referred to in sub paragraphs (1) and (2).



3.2 Project Need and The Renewable Energy Policy Framework

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.

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.

On 28 February 2018 the Scottish Government outlined a target of reducing greenhouse gas emissions by 66% by 2032 with the publication of the Climate Change Plan, third report: proposals and policies 2018-2032. This plan set out the path to a low carbon economy while helping to deliver sustainable economic growth and secure the wider benefits to a greener, fairer and healthier Scotland in 2032. The Plan sits alongside the Scottish Energy Strategy 2017 which put forward the Scottish Government's vision for the future energy system in Scotland, for the period to 2050, setting out domestic and international climate change targets with a 2030 'all-energy' target for the equivalent of 50% of Scotland's heat, transport and electricity consumption to be supplied from renewable sources. It was published alongside the Onshore Wind Policy Statement (December 2017).

In 2019, this was all updated by The Climate Change (Emissions Reduction Targets) (Scotland) Act 2019, which amends the Climate Change (Scotland) Act 2009 and sets targets to reduce Scotland's emissions of all greenhouse gases to net-zero by 2045 at the latest, with interim targets for reductions of at least 75% by 2030, 90% by 2040. To help ensure delivery of the long-term targets, Scotland's climate change legislation also includes annual targets for every year to 2045. These targets require a doubling of effort which will be challenging to meet.

The Scottish Government declared a climate emergency on 14 May 2019. The declaration of an 'emergency' is a reflection of both the seriousness of climate change and its potential effects and the need for urgent action to cut carbon dioxide emissions.

A large increase in the deployment of this renewable energy technology is supported through a number of UK level policy documents including the latest UK Energy White Paper (2020) and Net Zero Strategy (2021). Scottish Government policy commitments are also clear – most recently expressed in the Onshore Wind Policy Statement (OWPS) and in the adopted National Planning Framework 4 (NPF4) which will be material to the energy and national planning policy positions to be considered for the determination of the application.

The key points which can be drawn from the OWPS include:

- The central requirement for a rapid transition to net zero and the crucial role of further onshore wind development in achieving legally binding targets, especially through the 2020s.
- Unequivocal Scottish Government policy support for the future role of onshore wind.
- The urgency of the Climate Emergency and the scale of the necessary ambition – there is express recognition in the OWPS of the need for “decisive and meaningful action”, “further and faster” delivery and that continued deployment of onshore wind will be key to ensuring our 2030 targets are met. The OWPS sets out a new ambition for the deployment of onshore wind in Scotland of “A minimum installed capacity of 20 GW...by 2030.”
- “This ambition will help support the rapid decarbonisation of our energy system, and the sectors which depend upon it, as well as aligning with a just transition to net zero whilst other technologies reach maturity.”



- The OWPS is clear that rapid transformation is required across all sectors of our economy and society in order to meet climate targets. “Meeting the ambition of a minimum installed capacity of 20 GW of onshore wind in Scotland by 2030 will require taller and more efficient turbines. This will change the landscape.”

3.3 National Planning Policy and Guidance

NPF4 was adopted by the Scottish Government on 13 February 2023 and now forms part of the statutory Development Plan. NPF4 replaces Scottish Planning Policy (SPP) and National Planning Framework 3 (NPF3) in their entirety and is a key material decision in the determination of the Section 36 application for the proposed development. In so far as it is relevant to this Section 36 application, Section 13(3) of the Planning (Scotland) Act 2019 means that, as the most recent part of the development plan, that NPF4 will take precedence over the adopted Aberdeenshire Local Development in the event of any incompatibility between the two.

The global climate emergency and the nature crises are the key focus for NPF4. All of the national planning policies within the plan are underpinned by **Policy 1: Tackling the Climate and Nature Crisis**, an overarching policy which states that “*when considering all development proposals significant weight will be given to the global climate and nature crises*”. This represents a fundamental shift in planning policy response to climate change compared to previous planning policy. It provides clarity to decision makers on the amount of weight that should be applied to these crucial topics when determining planning applications and this policy also recognises the inter-related nature of these twin issues.

In order to tackle climate change and achieve net zero emissions by 2045, there is now a clear expectation in NPF4 on the role that planning must play in delivering the expansion of renewable energy. NPF4 now includes ‘Strategic Renewable Energy Generation and Transmission Infrastructure’ as a **National Development 3**. Annex A of NPF4 states that National Development status “*means that the principle of development does not need to be agreed in later consenting processes.*” **Policy 2: Climate mitigation and adaption** also seeks to facilitate developments such as renewable energy developments that minimise greenhouse gas emissions.

Policy 11: Energy part (a) makes clear that all types of renewable energy are supported in principle, with part (b) identifying the only exception to this policy support is wind farm developments in National Parks and National Scenic Areas. Part (c) identifies that renewable energy proposals will only be supported where they maximise net economic impact, including local and community socio-economic benefits. Part (e) sets out the impacts to be addressed through project design and mitigation assessment, with specific consideration to be given to the following criteria:

- Impacts on communities and individual dwellings;
- Significant landscape and visual impacts;
- Public access,
- Aviation and defence interests;
- Impacts on telecommunications and broadcasting installations;
- Impacts on road traffic and trunk roads;
- Impacts on the historic environment;
- Effects on hydrology, the water environment and flood risk;
- Biodiversity;



- Impacts on trees, woods and forests;
- Proposals for decommissioning;
- Site restoration; and
- Cumulative impacts.

In terms of landscape and visual impacts, Policy 11 recognises that significant landscape and visual impacts are to be expected for onshore wind energy developments and states that *“where impacts are localised and/or appropriate design mitigation has been applied, they will generally be considered to be acceptable.”*

In accordance with Policy 1, Policy 11 part (e) provides that when considering impacts upon the above considerations that *“significant weight will be placed on the contribution of the proposal to renewable energy generation targets and on greenhouse gas emissions reduction targets.”* Other relevant policies within NPF4 include:

- Policy 3: Biodiversity;
- Policy 4: Natural places;
- Policy 5: Soils;
- Policy 6: Forestry, woodland and trees;
- Policy 7: Historic assets and places
- Policy 13: Sustainable Transport
- Policy 14: Design, quality and place
- Policy 20: Blue and green infrastructure;
- Policy 22: Flood risk and water management;
- Policy 23: Health and safety;
- Policy 25: Community wealth building; and
- Policy 33: Minerals.

3.4 Local Development Plan

In addition to NPF4, the Development Plan for Aberdeenshire also includes the Aberdeenshire Local Development Plan (LDP) and its associated statutory Supplementary Guidance. The Aberdeen City and Aberdeenshire Strategic Development Plan was replaced by NPF4 and is no longer part of the Development Plan.

3.4.1 Aberdeenshire Local Development Plan (LDP) 2023

The Aberdeenshire LDP was formally adopted on 13 January 2023 and the site is unallocated within the LDP. The primary policy within the LDP against which the proposed development will be assessed is **Policy C2: Renewable Energy**. This states that AC will support renewable energy developments that are in appropriate sites and of the appropriate design. This support is echoed in AC’s pre-application response to the proposed development. In assessing the acceptability of such developments, it sets out a range of considerations similar to those with NPF4 Policy 11 and provides that this support is not at the expense of other policies regarding Natural Heritage, the Historic Environment and Protecting Resources. In AC’s pre-application response, further commentary is provided on this point including that the acceptability of renewable energy developments will need to



take account of effects on: “*communities, landscape and visual impacts, natural heritage, road traffic, hydrology and social-economic impacts (amongst others).*”

Other policies of the Aberdeenshire LDP 2023 which may have relevance to the consideration of the proposed development include:

- Policy E1 Natural Heritage;
- Policy E2 Landscape;
- Policy E3 Forestry and Woodland;
- Policy HE1 Protecting Listed Buildings, Scheduled Monuments and Archaeological Sites (including other historic buildings);
- Policy HE2 Protecting Historic, Cultural and Conservation Areas;
- Policy PR1 Protecting Important Resources;
- Policy C3 Carbon Sinks and Stores;
- Policy C4 Flooding; and
- Policy RD1 Providing Suitable Services.

3.5 Questions to Consultees

Q3.1 Are there any additional planning and energy documents and policies that consultees believe should be taken into consideration in respect of the proposed development?



4.0 Landscape and Visual

4.1 Introduction

This Section of the EIA Scoping Report sets out the proposed methodology and approach to be applied in the production of the Landscape and Visual Impact Assessment (LVIA) to accompany the application for the proposed development. It presents the suggested scope of the LVIA in terms of those landscape and visual receptors to be scoped in and scoped out of the assessment process based on a preliminary assessment of relevant receptors to the proposed development.

The purpose of the LVIA is to identify and record the potential likely significant effects that the proposed development may have on physical elements of the landscape; landscape character; areas that have been designated for their scenic or landscape-related qualities; and views from various locations such as settlements, routes, hilltops and other sensitive locations. The potential cumulative effects that may arise from the addition of the proposed development to other wind farms are also considered.

The LVIA will consider the potential effects of the proposed development during the following development stages:

- construction and decommissioning of the proposed development; and
- operation of the proposed development.

Receptors may not be affected at all development stages.

4.2 Environmental Baseline

4.2.1 Study Area

In accordance with guidance and with a proposed turbine height of up to 200m, the study area for the LVIA of the proposed development will cover a radius of 45km from the nearest turbine, as shown in **Figure 4.1**. This is considered to be the maximum radius within which a significant landscape and/or visual effect could occur given the height of the turbines that are being considered.

4.2.2 Site Context

The Site is located on the Correen Hills and the centre of the Site lies approximately 7km north west of the village of Alford. The Correen Hills are a crescent shaped ring of hills which enclose a large basin forming the catchment for a number of burns. The hills are detached outliers to the eastern fringes of the Cairngorm Mountain range and are surrounded by settled lowland on all sides. A minor road ('the Suie Road') crosses the hills from Clatt in the north, to Bridge of Alford in the south. Another minor route enters the core of the crescent shaped hills from the south east, to provide access to Dubston and Terpersie from Tullynessle.

The landscape of the Site and immediately surrounding landscape is characterised by the open moorland to the west and south, and commercial plantation forestry to the north east. Aberdeenshire Council have defined the area as a 'Moorland Plateaux' unit of the Grampian Outliers LCT 22(i). The surrounding landscape is settled along the straths and valleys that surround the Correen Hills including small settlements and dispersed properties. In addition to Rhynie and Alford, nearby settlements also include Insch (approximately 6km from the closest Site boundary to the north east) and Huntly (approximately 15km from the closest Site boundary to the north west).



In relation to the proposed development, its position on the Correen Hills, the A97 follows Strath Bogie to the west and north, the A944 follows the River Don and Howe of Alford to the south and the B9002 skirts along the northern edges of the Inch Basin to the north. Other routes in the area include the Aberdeen to Inverness railway line which follows the B9002 before heading north through Strath Bogie and the A941 scenic route to Moray branching off the A97 at Rhynie.

The closest long distance walking route is the Gordon Way which crosses the Bennachie range from the Bennachie Centre to the Suie road scenic viewpoint. In the wider study area, the Deeside Way lies to the south of the proposed development and the Formantine and Buchan Way, Moray Coast Trail and Speyside Way are at the outer edges of the study area. National Cycle Route 1 follows the edges of the study area from Aberdeen to the Moray Coast in the north, National Cycle Route 195 from Aberdeen to Ballatar lies beyond 20-30km to the south of the proposed development.

4.2.3 Zone of Theoretical Visibility (ZTV) Overview

The blade tip ZTV is shown with viewpoints on **Figure 4.2a** and alongside landscape character, designations and visual receptors on **Figures 4.3-4.5**. The landform of the Site and surrounding area has a notable influence on the extent of visibility across the study area and the pattern of theoretical visibility produced by the proposed development responds to the surrounding landform in the following ways.

Blade tip theoretical visibility within 10km is relatively consistent except for the lower lying parts of surrounding straths and valleys. Within 10-20km, areas of theoretical visibility are much more separated and largely consist of patches on elevated hill tops. The exception to this pattern is the area of theoretical visibility that stretches out to the east across the Inch Basin and the Agricultural Heartlands beyond as far as Old Meldrum and the Hill of Easterton.

In the wider landscape of the study area theoretical visibility is relatively limited to the west and south other than the high hilltops of the Grampian Mountains eastern fringes. To the north a band of theoretical visibility stretches across the eastern upland edges of Moray via Strath Bogie and Huntly. To the north east more distant theoretical visibility extends across the Agricultural Heartlands between Turriff and Ellon and to the south east onto the low hills that surround and contain Aberdeen.

4.2.4 Landscape Character

In early 2019, NatureScot published an update to the characterisation of Scotland's landscape as a digital resource. The information builds on the characterisation studies published in the 1990's. NatureScot describe the recent publication as now superseding the 1990s landscape character descriptions and mapping adding that '*Where there are topic-specific landscape capacity or sensitivity studies, they would take precedence for informing that development type, e.g. windfarms.*'

The 'topic specific' characterisation studies relevant to the study area include the following studies:

- Strategic Landscape Capacity Assessment for Wind Energy in Aberdeenshire, 2014.
- The Moray Wind Energy Landscape Sensitivity Study, 2023.
- Cairngorms Landscape Character Assessment, 2009.

These studies therefore form the most up to date 'topic specific' characterisation studies in the study area and as such form the basis of character assessment that will be undertaken



in the LVIA. Parts of the study area with no ‘topic specific’ characterisation study i.e. The Highland Council and Angus Council will use the NatureScot character assessment boundaries.

The Strategic Landscape Capacity Assessment for Wind Energy in Aberdeenshire defines the Site area’s landscape characteristics as lying within the ‘Moorland Plateaux’ unit of the Grampian Outliers LCT 22(i). Landscape Character is shown in **Figure 4.3** with the blade tip ZTV overlaid.

Whilst many of the LCTs shown on **Figure 4.3** within the wider study area may have some theoretical visibility of the proposed development it is considered that LCTs at the outer edges of the study area are not likely to experience significant landscape character effects due to the distance from the proposed development and the limited extent of visibility in much of this wider part of the study area. The LVIA will include a preliminary assessment of which LCTs within the study area will be included in the detailed assessment in order to ensure a proportional approach to identifying the potentially significant landscape character effects.

Taking into account the current theoretical visibility extent shown on **Figure 4.3**, it is considered likely that the potential significant landscape character effects will be located within around 20km of the proposed development. A key area of focus will include the LCT in which the proposed development is located, where the proposed development may result in direct effects on the pattern of elements that comprise the landscape character, together with LCTs in the immediately adjacent area where the proposed development may result in indirect effects on the perception of the landscape character.

4.2.5 Landscape Designations

The Site does not lie within any landscape planning designations as shown on **Figure 4.4**. **Table 4-1** lists the designated areas (and wildland) and provides information about their distance to the proposed development and relationship to the ZTV, as shown in **Figure 4.4**. Thereafter, it is assessed in the final column whether or not, in Optimised Environment Limited’s (OPEN) opinion, these designated areas can be scoped out of the assessment, unless changes to the layout during the detailed design process materially alter the potential for significant effects. The boxes that are shaded grey are proposed to be assessed in more detail within the LVIA.

Table 4-1: Landscape Planning Designations (and wildland) Preliminary Assessment

Designation	Dist. nearest turbine (km)	Theoretical visibility?	Need to assess effects further within LVIA?
Cairngorms National Park	12.6	Yes	Yes. Whilst theoretical visibility is limited across the wider CNP area, north eastern parts of the CNP would have visibility from elevated hills including the Ladder Hills.
The Cairngorm Mountains NSA	36.8	Yes	No. Limited theoretical visibility at the outer edges of the study area.
Deeside and Lochnagar NSA	30.4	Yes	No. Limited theoretical visibility at the outer edges of the study area.
Cairngorms WLA	31.6	Yes	No. Limited theoretical visibility at the outer edges of the study area.



Designation	Dist. nearest turbine (km)	Theoretical visibility?	Need to assess effects further within LVIA?
Lochnagar - Mount Keen WLA	28.0	Yes	No. Limited theoretical visibility at the outer edges of the study area.
Lossiemouth to Portgordon Coast SLA	43.1	No	No. No theoretical visibility
Drynachan, Lochindorb and Dava Moors SLA	42.7	No	No. No theoretical visibility
North Aberdeenshire Coast SLA	42.1	Yes	No. Very limited theoretical visibility at the outer edges of the study area.
North east Aberdeenshire Coast SLA	41.9	Yes	No. No theoretical visibility within the study area.
Portgordon to Cullen Coast SLA	40.4	Yes	No. Very limited theoretical visibility at the outer edges of the study area.
Lower Spey and Gordon Castle Policies SLA	39.1	No	No. No theoretical visibility
The Spey Valley SLA	28.9	Yes	No. Extremely limited theoretical visibility.
Clachnaben & Forest of Birse SLA	23.5	Yes	No. Distant and limited theoretical visibility.
Deveron Valley SLA (Moray)	22.9	Yes	No. Very limited theoretical visibility.
Ben Rinnes SLA	21.4	Yes	No. Extremely limited theoretical visibility.
Dee Valley SLA	19.5	Yes	No. Distant and limited theoretical visibility.
Braes of The Mearns SLA	41.5	Yes	No. Very limited theoretical visibility at the outer edges of the study area.
Deveron Valley SLA (Aberdeenshire)	15.4	Yes	Yes. Theoretical visibility is found in the area surrounding Huntly and east from Huntly on elevated southern parts of the Deveron Valley.
Howe of Cromar SLA	12.6	Yes	No. Very limited theoretical visibility.
Upper Don Valley SLA	0.9	Yes	Yes. Due to close proximity and theoretical visibility across several parts of this compact SLA.
Bennachie SLA	0.2	Yes	Yes. Due to close proximity and extent of theoretical visibility.
Invercauld GDL	43.9	No	No. No theoretical visibility
Duthie Park GDL	42.9	No	No. No theoretical visibility
Blackhills House GDL	42.7	No	No. No theoretical visibility
Cullen House GDL	41.0	No	No. No theoretical visibility
Duff House GDL	40.1	No	No. No theoretical visibility
Gordon Castle (Bog of Gight) GDL	39.1	No	No. No theoretical visibility



Designation	Dist. nearest turbine (km)	Theoretical visibility?	Need to assess effects further within LVIA?
Balmoral Castle GDL	37.3	No	No. No theoretical visibility
Pitmedden GDL	33.9	No	No. No theoretical visibility
Park House GDL	33.4	No	No. No theoretical visibility
Haddo House GDL	32.1	Yes	No. Extremely limited theoretical visibility.
Drum Castle GDL	32.0	Yes	No. Distant and limited actual visibility.
Straloch GDL	30.9	Yes	No. Distant and limited theoretical visibility.
Hatton Castle GDL	30.7	Yes	No. Extremely limited theoretical visibility.
Crathes Castle GDL	30.6	No	No. No theoretical visibility
Forglen GDL	30.5	Yes	No. Distant and limited actual visibility.
Fyvie Castle GDL	25.8	Yes	No. Extremely limited theoretical visibility.
Dunecht House GDL	24.3	Yes	No. Distant and limited theoretical visibility.
Glen Tanar GDL	24.2	Yes	No. Distant and limited theoretical visibility.
Keith Hall GDL	23.3	Yes	No. Distant and limited theoretical visibility.
Candacraig House GDL	20.5	No	No. No theoretical visibility
Castle Fraser GDL	19.6	No	No. No theoretical visibility
Cluny Castle GDL	16.5	No	No. No theoretical visibility
Tillypronie GDL	15.4	No	No. No theoretical visibility
Monymusk GDL	14.8	No	No. No theoretical visibility
Williamston House GDL	13.0	Yes	Yes. Due to theoretical visibility extent.
Newton House (Aberdeenshire) GDL	12.9	Yes	No. Limited actual visibility.
Craigievar Castle GDL	11.5	Yes	No. Limited theoretical visibility.
Kildrummy Castle GDL	8.2	Yes	Yes. Due to theoretical visibility extent.
Castle Forbes GDL	7.6	Yes	Yes. Due to proximity theoretical extent.
Leith Hall GDL	5.8	Yes	Yes. Due to theoretical visibility extent.

4.2.6 Visual Receptors and Visual Amenity

The LVIA will undertake an assessment of the likely visual effects of the proposed development through consideration of the specific visual effects at a selection of representative viewpoints and by considering the wider effects on visual amenity with reference to principal visual receptors (principal visual receptors are shown on **Figure 4.5** with blade tip ZTV and viewpoints shown on **Figure 4.2a**). In relation to residential visual receptors, it is proposed that a Residential Visual Amenity Assessment (RVAA) will be



undertaken. In line with current guidance¹, the RVAA will include properties that lie within 2km of the proposed development turbines.

4.2.7 Visualisations

Visualisations and figures will be produced to NatureScot's standards as set out in 'Visual Representation of Wind farms: Version 2.2' (February 2017). In line with NatureScot guidance, it is proposed that photomontages will be prepared for viewpoints where they are located within a 20km radius of the outermost turbines.

4.2.8 Viewpoint Selection

A preliminary viewpoint list is shown in **Table 4-2** below. The final list will be established in agreement with AC and NatureScot, through further fieldwork and with regard to the scoping responses. The locations of the viewpoints are shown on **Figure 4.2a** and in detail on **Figure 4.2b**.

Table 4-2: Preliminary Representative Viewpoint Locations

ID	Viewpoint name	Grid ref. (Preliminary)		Dist. nearest turbine (km)	Visual receptors represented
1	Suie Rd, scenic viewpoint, Correen Hills	354684	823349	0.7	Road Users
2	Terpersie Castle	354953	820002	1.8	Road Users / residents
3	Alford	357610	816047	6.5	Settlement / Road Users
4	Kennethmont, B9002	353837	829018	5.8	Settlement / Road Users
5	Rhynie, A97	350081	827405	4.9	Settlement / Road Users
6	Lumsden Village	347402	822050	4.7	Settlement / Road Users
7	Tap o' Noth	348487	829268	7.3	Hill Walkers
8	A941 near Elrick	342560	826229	10.2	Road Users
9	The Buck	341240	823394	10.9	Hill Walkers
10	A97 near Kildrummy Castle	345756	816542	8.4	Road Users / Visitors
11	A944, Tonley Wood	362464	813470	11.7	Road Users
12	Oxen Craig, Bennachie	366285	822599	11.7	Hill Walkers
13	Insch, B992	363330	828557	10.5	Settlement
14	A96 / A920 jnct, near Colpy	364285	832691	13.9	Road Users
15	A97, Culdrain	351905	833654	10.3	Road Users
16	B9022, Bin Forest, north of Huntly	352614	842183	18.8	Road Users
17	A97, edge of CNP	341405	809778	16.1	Road Users
18	Carn Mor, Ladder Hills, CNP	326598	818338	25.8	Hill Walkers

¹ Technical Guidance Note 2/19 Residential Visual Amenity Assessment. Landscape Institute (2019)



ID	Viewpoint name	Grid ref. (Preliminary)		Dist. nearest turbine (km)	Visual receptors represented
19	A920, Old Meldrum	379953	827310	25.8	Settlement / Road Users
20	Minor Road, Tifty	378191	841033	29.9	Road Users

4.2.9 Potential Visual Effects of Turbine Lighting

A key factor in the development of turbines greater than 150m in height is the likely requirement for them to have visible red, medium intensity (2,000 candela) lights fitted to the turbine hubs in accordance with CAA guidance. The details of the lighting requirements for the proposed development are currently being defined along with potential mitigation measures.

If turbines in excess of 150m to blade tip form the basis of the final application OPEN will, prepare a night-time visual impact assessment section and visualisations illustrating turbine lighting at night, for inclusion in the LVIA. A hub height ZTV will be used to identify where there would be direct line of sight of the lights from the surrounding area, see hub height ZTV of scoping layout on **Figure 4.7**. OPEN has undertaken night-time lighting assessments and visualisations for several other wind farm projects in the UK which will inform the approach to assessment of turbine lighting and the basis of our professional judgement about the level of effect arising from the proposed lighting.

In order to inform this assessment, OPEN will take photographs from four of the readily accessible viewpoints at dusk (photographs to be taken after the period of civil twilight) and will prepare visualisations to represent the effects of lighting on these views. Night-time visualisations will be in accordance with NatureScot guidance. It is proposed that of the initially proposed viewpoints listed in **Table 4-2** that the following locations be used for night-time visualisations: Viewpoint 1 - Suie Rd, scenic viewpoint, Correen Hills; Viewpoint 3 – Alford; Viewpoint 5 – Rhynie, A97; and Viewpoint 13 – Insch, B992.

4.2.10 Cumulative Wind Farms

A review of the broad wind farm context within a 45km radius has been undertaken. It is considered that any cumulative effects that would occur, would arise as a result of the pattern of development within the 45km study area radius, rather than as a result of changes beyond this. It is proposed therefore that following a detailed review of the cumulative sites within the area, a context plan will be produced showing the locations of wind farms within 45km that are operational, under construction, consented or which are at application stage and where the turbines are greater than 50m to blade tip, and would therefore be included within any cumulative assessment for the proposed development.

Key wind energy developments in the area include – the operational Cairnmore, Upper Wheedlemont Farm and Kildrummy within 10km along with Clashindarroch, Dorenell, Dunmuie, Glens of Foundland, Tillymorgan and Cornabo within 10-20km. Applications at Garbet and Clashindarroch Extension, along with the recently consented Clashindarroch II are also found within this area. Beyond 20km there are a large number of operational single turbines or small-medium turbine groupings to the north east scattered across Aberdeenshire’s Agricultural Heartlands and medium-large scale wind energy found on uplands within eastern Moray (Operational Hill of Towie and Edintore). At the edges of the study area, larger scale developments are found to the north east at Rothes, Berry Burn and Paul’s Hill and in the eastern Grampians with Mid Hill I&II and Meikle Carewe. The pattern of consented development and new applications is following this operational pattern with further consents in the Rothes cluster for Rothes III as well as Berry Burn II, Paul’s Hill II and Clash Gour near the Berry Burn/Paul’s Hill cluster. New applications at Lurg Hill and Aultmore are following previously consented schemes in the same locations.



In accordance with NatureScot and Scottish Government guidance it is not usual practice to assess scoping stage sites unless they are of particular relevance to the proposed development, where sufficient detail is available to inform the assessment and where they are likely to come forward to application. At this stage, it is not proposed to include any developments at scoping stage.

To accompany this EIA Scoping Report, an initial plan of known cumulative wind farms within 45km is set out on **Figure 4.6**. Agreement is sought from AC and NatureScot with regard to the content of the cumulative assessment and in particular if there are further cumulative schemes not shown on **Figure 4.6** that should also be considered. See also **Section 1.4** of this EIA Scoping Report.

4.3 Potential Sources of Impact

4.3.1 Key Sensitivities

- potential effects on landscape character, including cumulative effects, particularly on the host 'Moorland Plateaux' unit of the Grampian Outliers LCT 22(i);
- potential effects on the Cairngorms National Park, Bennachie SLA, Deveron Valley SLA (Aberdeenshire) and Upper Don Valley SLA;
- potential effects on the Leith Hall, Kildrummy Castle, Williamston House and Castle Forbes Gardens and Designed Landscapes;
- potential landscape and visual cumulative effects, in particular with developments within 20km of the proposed development;
- potential visual effects from principal visual receptors within the settled straths and valleys surrounding the proposed development;
- potential visual effects from key hilltops in the area, in particular Tap o' Noth and the Buck to the west and the Bennachie range to the east;
- Residential Visual Amenity effects from properties within 2km;
- sequential effects on users of the A97; and
- visibility of the proposed development at night due to aviation lighting.

4.3.2 Mitigation

The design and layout of the proposed turbines and associated infrastructure is a vital part of the EIA process and is the stage where the biggest contribution can be made to mitigate potential landscape and visual effects. A key design objective will be creating a wind farm which is appropriate for the existing landscape character and visual features of the area. The design of the proposed development will evolve as part of an iterative process which aims to provide an optimal design in environmental, as well as technical and economic terms and the mitigation of landscape and visual effects will be a central consideration in this process.

4.4 Method of Assessment and Reporting

4.4.1 Assessment Methodology

The LVIA will follow OPEN's methodology devised specifically for the assessment of wind farm developments in line with '*Guidelines for Landscape and Visual Impact Assessment: Third Edition*' (Landscape Institute and IEMA, 2013) ('GLVIA3'), the key source of guidance for LVIA.



Other sources of guidance that will be used and referenced in the LVIA include the following:

- Visual Representation of Wind Farms Version 2.2 (NatureScot, 2017).
- Visual Representation of Development Proposals, Technical Guidance Note 06/19. Landscape Institute (2019).
- Assessing the Cumulative Impact of Onshore Wind Energy Proposed Developments. NatureScot (2021).
- Assessing impacts on Wild Land Areas -Technical Guidance. NatureScot (2020).
- Guidance for Assessing the Effects on Special Landscape Qualities. NatureScot (DRAFT 2018-2019 or as updated).
- Technical Guidance Note 2/19 Residential Visual Amenity Assessment. Landscape Institute (2019).
- Landscape Character Assessment Guidance for England and Scotland. NatureScot and TCA (2002).
- Siting and Designing of Windfarms in the Landscape: Version 3a. NatureScot (2017)

The assessment has been initiated through a desk study of the Site and 45km radius study area, combined with a good working knowledge of this area. This study has identified aspects of the landscape and visual resource that will need to be considered in the LVIA, including:

- landscape character typology;
- landscape-related planning designations;
- properties and settlements;
- routes (including roads, National Cycle Routes and long-distance walking routes); and
- potential cumulative wind farms.

The desk study has also utilised Geographic Information System (GIS) software to explore the potential visibility of the proposed development. The resultant ZTV diagrams (**Figures 4.2 to 4.5**) have provided an indication of which landscape and visual receptors are likely to have key sensitivities to the proposed development.

The LVIA is intended to determine the significant effects that the proposed development would have on the landscape and visual resource. For the purpose of assessment, the potential effects on the landscape and visual resource will be grouped into the following categories:

- Physical effects: physical effects are restricted to the area within the Site and are the direct effects on the existing fabric of the Site. This category of effects is made up of landscape elements, which are the components of the landscape such as rough grassland and moorland that may be directly and physically affected by the proposed development.
- Effects on landscape character: landscape character is the distinct and recognisable pattern of elements that occurs consistently in a particular type of landscape and the way that this pattern is perceived. Effects on landscape character arise either through the introduction of new elements that physically alter this pattern of elements or through visibility of the proposed development that may alter the way in which the pattern of elements is perceived. This category of effects is made up of



landscape character receptors, which fall into two groups; landscape character types and landscape-related designated areas.

- Effects on views: the assessment of the effects on views is an assessment of how the introduction of the proposed development would affect views throughout the study area. The assessment of effects on views is carried out in relation to representative viewpoints and principal visual receptors.
- Effects on views from properties: Residential Visual Amenity Assessment (RVAA) is carried out for properties within 2km in line with Landscape Institute (LI) technical guidance.

Cumulative effects: cumulative effects arise where the study areas for two or more wind farms overlap so that both of the wind farms are experienced at a proximity where they may have a greater incremental effect, or where wind farms may combine to have a sequential effect. In accordance with guidance, the LVIA assesses the effect arising from the addition of the proposed development to the cumulative situation.

The objective of the assessment of the proposed development is to predict the likely significant effects on the landscape and visual resource. In line with the EIA regulations, the LVIA effects are assessed to be either significant or not significant. The significance of effects is assessed through a combination of two considerations: the sensitivity of the landscape receptor or view and the magnitude of change that would result from the addition of the proposed development.

The geographic extent over which the landscape and visual effects would be experienced is also assessed, which is distinct from the size or scale of effect. This evaluation is not combined in the assessment of the level of magnitude but instead is used in determining the extent in which a particular magnitude of change is experienced and the extent of the significant and non-significant effects. The extent of the effects would vary depending on the specific nature of the development proposed and is principally assessed through analysis of the geographical extent of visibility of the proposed development across the visual receptor.

The duration and reversibility of effects on views are based on the period over which the proposed development is likely to exist and the extent to which the proposed development will be removed, and its effects reversed at the end of that period. Duration and reversibility are not incorporated into the overall magnitude of change and may be stated separately in relation to the assessed effects.

The 'nature of effects' relates to whether the effects of the proposed development are adverse, neutral or beneficial. Guidance provided in GLVIA3 states that "*thought must be given to whether the likely significant landscape and visual effects are judged to be positive (beneficial) or negative (adverse) in their consequences for landscape or for views and visual amenity*" but does not provide an indication as to how that may be established in practice. The nature of effect is therefore one that requires interpretation and reasoned professional opinion.

OPEN generally adopts a precautionary approach which assumes that significant landscape and visual effects will be weighed on the negative side of the planning balance, although positive or neutral effects may arise in certain situations.

4.5 Consultation

Including through the process of this EIA Scoping Report, consultation will be undertaken with AC and NatureScot in relation to viewpoint agreement and LVIA approach.



4.6 Matters Scoped Out

Table 4-3: Landscape and Visual – Receptors Scoped In and Out of Assessment

Receptor Type	Scoped In	Scoped Out
Landscape Character	Landscape Character Types within 45km of the proposed development including cumulative effects.	Landscape Character Types with limited or no visibility.
Landscape Designations	Landscape Designations with potential for significant effects as described in the preliminary assessment in Table 4-1 and listed below: <ul style="list-style-type: none"> • Cairngorms National Park. • Deveron Valley (Aberdeenshire), Bennachie, and Upper Don Valley SLAs. • Lieth Hall, Kildrummy Castle, Williamston House and Castle Forbes Gardens GDL's. 	All other Landscape Designations. NOTE - the preliminary assessment presented in this EIA Scoping Report will be re-checked against the final design.
Visual	Effects on representative viewpoints including cumulative visual effects. Effects on principal visual receptors in the study area including settlements, key transport routes, hilltops and recreational routes. Sequential effects on the A97. Residential visual amenity effects on properties within 2km of the proposed development.	Principal visual receptors with limited or no visibility.

4.7 Questions to Consultees

Q4.1 Do consultees have any comments on the proposed approach and methodology?

Q4.2 Are consultees in agreement with the proposed Study Area?

Q4.3 Are consultees in agreement with the proposal to scope out the Landscape Planning Designations where no further assessment is proposed in the LVIA as set out in **Table 4-1**?

Q4.4 Do consultees have any comments or suggestions in relation to the Preliminary Representative Viewpoint Locations shown in **Table 4-2** and illustrated on **Figure 4.2a & Figure 4.2b**?

Q4.5 Do you have any comments or suggestions on the approach to cumulative landscape and visual assessment?



5.0 Ornithology

5.1 Introduction

This Section of the EIA Scoping Report describes the baseline conditions, relevant guidance and legislation, proposed scope of assessment and methodology, proposed mitigation, and identified potential impacts of the proposed development in relation to ornithological features.

The assessment of effects on ornithology will be undertaken by MacArthur Green.

5.2 Environmental Baseline

5.2.1 Study Area

The Study Area comprises the area within which the baseline field surveys, and desk-based research are undertaken for the proposed development, which varies depending on the ornithological feature and its search/survey methods and requirements. Details of the extent of each study area are described in the Sections below and are shown in **Figure 5.1**.

5.2.2 Baseline field surveys 2020 to 2022

Baseline ornithology conditions have been established from the results of ornithology field surveys following standard methodologies and guidance (refer to Appendix 03) between 2020 to 2023 as listed below. Study areas are detailed on **Figure 5.1** and baseline surveys were carried out within the study area where access was permitted. It should be noted that survey extents covered a wider area than the Site now encompasses.

- Flight activity surveys covering the proposed turbine locations: two Vantage Points (VPs) from April 2020 to March 2021 and five VPs from March 2021 to August 2022 (refer to Table 5-1 for VP coverage);
- Scarce breeding bird surveys (SBBS): 2km study area around the Site boundary April to August 2020 and March to August 2021 and 2022;
- Golden eagle nest monitoring surveys: within the 2km study area between January to August 2023;
- Upland breeding bird surveys: 500m study area around Site boundary April to July 2020, and April to July 2021;
- Black grouse surveys: 1.5km study area around the Site boundary April and May 2020 and 2021; and
- Winter walkover: 500m study area around the Site boundary November to February 2021 and 2022.

A desk study to confirm the location and qualifying features of designated sites within potential zones of influence of the proposed development has also informed the baseline surveys and assessment.

The baseline conditions, as established from the existing information, are summarised in the following Sections.

5.2.3 Desk Study

The following data sources will be consulted as part of the assessment:



- Pre-application consultation for the proposed development with NatureScot (see Section
- North East of Scotland Raptor Study Group (NERSG): provision of historic golden eagle nest locations;
- Natural Research Group²: provision of satellite Geographic Information System (GIS) spatial distribution data of tagged golden eagles occupying the Correen Hills territory;
- Royal Society for the Protection of Birds (RSPB) Scotland: provision of black grouse and capercaillie records; and
- NatureScot SiteLink³: information on Special Protection Areas (SPAs), SSSIs and Ramsar sites.

5.2.4 Designated Sites

There are no designated sites for ornithological interests within the site. Correen Hills SSSI was historically located within the site, however this SSSI was de-notified under Section 9(1) of the Nature Conservation (Scotland) act 2004 by NatureScot in June 2020⁴ and therefore is no longer classified as a protected site.

There is one statutory SPA and two SSSIs within 20km of the proposed development that contain designations for ornithological features (**Figure 5.2**):

- Tips of Corsemaul and Tom Mor SPA (underpinned by Tips of Corsemaul and Tom Mor SSSI), located approximately 18km from the nearest proposed turbine, designated for breeding common gull.
- Morven and Mullachdubh SSSI, located approximately 19km from the nearest proposed turbine, designated for a breeding bird assemblage⁵.

Ornithological qualifying features designated under the Tips of Corsemaul and Tom Mor SPA will be assessed under the terms of the Habitats Regulations Assessment (HRA) process due to potential connectivity between the proposed development and this protected site on the basis of foraging ranges (50km, Woodward *et al.* 2019⁶). It is proposed that the associated Tips of Corsemaul and Tom Mor SSSI will be considered as part of the EIA process.

It is proposed that the Morven and Mullachdubh SSSI will be scoped out of the assessment due to lack of connectivity due to distance (approximately 19km) between the proposed development and this SSSI.

² Natural Research Group: <https://www.natural-research.org/> (accessed December 2022)

³ NatureScot SiteLink: <https://sitelink.nature.scot/home> (accessed December 2022)

⁴ <https://www.nature.scot/sites/default/files/2020-06/Correen%20Hills%20SSSI%20-%20denotification%20letter%20and%20map.pdf> (accessed December 2022)

⁵ Morvern and Mullachdubh SSSI citation notes that the site is used by many typical upland breeding birds including raptors (golden eagle, buzzard, merlin, peregrine, hen harrier and short-eared owl), waders (snipe, lapwing and curlew) and all three species of upland grouse (black grouse, red grouse and ptarmigan).

⁶ Woodward, I., Thaxter, C.B., Owen, E., and Cook, A.S.C.P. 2019. Desk-based revision of seabird foraging ranges used for HRA screening. BTO research report number 724.



5.2.5 Ornithological activity during baseline field surveys

5.2.5.1 Flight Activity Surveys

Flight activity surveys were undertaken at between two and five vantage points across the survey period (April 2020 to August 2022) and **Table 5-1**: provides a summary of the valid⁷ survey hours at each VP for each season. Due to a change in the proposed turbine layout at the end of the first year of baseline surveys, as of March 2021 onwards, the viewsheds were altered to extend the coverage with VP7 to VP10 added and VP1 discontinued.

The first year (2020 breeding season and 2020/2021 non-breeding season) of flight activity survey data collected from the original two VPs (VP1 and VP5) covered the current proposed turbine locations on the moorland but provided limited coverage of the current proposed turbine locations within the conifer plantation (refer to **Figure 5.1**). Flight activity survey data collected in the second year (2021 breeding season and 2021/2022 non-breeding season) and the third breeding season in 2022 fully covered the proposed turbine layout on the moorland and within the conifer plantation.

Pre-application consultation with NatureScot (email dated 14th July 2021 and meeting minutes dated 15th September 2021) recommended that a third season of flight activity surveys should be undertaken to provide two breeding seasons that covered the complete turbine layout.

It was considered that the non-breeding season data was sufficient for a robust EIA assessment, therefore, it was agreed with NatureScot (pre-application consultation email dated 14th September 2022) that further flight activity surveys during the 2022/2023 non-breeding season were not required, subject to full details being provided in the assessment.

Table 5-1: Summary of total hours of valid survey per VP (April 2020 to August 2022)

Season	VP1	VP5	VP7	VP8	VP9	VP10
2020 breeding season	36	36	N/A	N/A	N/A	N/A
2020/2021 non-breeding season	36	36	N/A	N/A	N/A	N/A
2021 breeding season	N/A	36	36	36	36	36
2021/2022 non-breeding season	N/A	36	36	36	36	36
2022 breeding season	N/A	36	36	36	36	36

Flight activity surveys recorded 16 target⁸ species collectively accounting for 226 flights (**Table 5-2**), which may be included in the collision risk modelling depending on their location in relation to the final turbine layout and the turbine dimensions.

⁷ Valid survey hours are those where the visibility is 1km or greater.

⁸ Target species are those species listed as Annex 1 (EU Birds Directive) and/or Schedule 1 (Wildlife and Countryside Act) and/or are Red Listed non-passerines (BOCC, Stanbury *et al.* 2021).



Table 5-2: Number of flights per season with total bird seconds⁹ in parenthesis

Species	2020 breeding season	2020/2021 non-breeding season	2021 breeding season	2021/2022 non-breeding season	2022 breeding season
Arctic skua (<i>Stercorarius parasiticus</i>)	2 (345)	0	0	0	0
Black grouse (<i>Tetrao tetrix</i>)	0	3 (3094)	3 (920)	1 (110)	2 (1445)
Common gull (<i>Larus canus</i>)	0	0	33 (19724)	12 (18455)	11 (21100)
Curlew (<i>Numenius arquata</i>)	0	0	1 (530)	0	4 (123)
Golden eagle (<i>Aquila chrysaetos</i>)	6 (1647)	3 (894)	5 (2361)	2 (380)	12 (4585)
Golden plover (<i>Pluvialis apricaria</i>)	3 (20225)	3 (6905)	5 (22961)	8 (23847)	4 (1126)
Goshawk (<i>Accipiter gentilis</i>)	4 (1938)	1 (38)	9 (1096)	4 (436)	9 (5135)
Greylag goose (<i>Anser anser</i>)	0	2 (21681)	0	2 (6805)	1 (178)
Hen harrier (<i>Circus cyaneus</i>)	0	0	1 (20)	0	4 (365)
Herring gull (<i>Larus argentatus</i>)	4 (260)	0	4 (2397)	7 (599)	4 (609)
Osprey (<i>Pandion haliaetus</i>)	0	0	1 (385)	0	2 (227)
Peregrine falcon (<i>Falco peregrinus</i>)	0	1 (153)	0	0	1 (355)
Pink-footed goose (<i>Anser brachyrhynchus</i>)	0	0	0	23 (180551)	3 (20250)
Red kite (<i>Milvus milvus</i>)	1 (150)	0	3 (412)	1 (198)	2 (723)

⁹ The bird seconds are calculated for each observation as the product of flight duration and number of individuals. This is then summed per species to give the total bird seconds recorded across the entire surveyed period.



Species	2020 breeding season	2020/2021 non-breeding season	2021 breeding season	2021/2022 non-breeding season	2022 breeding season
White-tailed eagle (<i>Haliaeetus albicilla</i>)	0	0	0	0	1 (270)

5.2.5.2 Raptors, Owls and Divers

Scarce breeding bird surveys during the 2020, 2021 and 2022 breeding seasons identified four breeding target species: golden eagle, goshawk, peregrine falcon and osprey (**Table 5-3:**). It should be noted that the adult male golden eagle attending Nest EA_1 territory (containing three nests numbered EA 1.1. – EA 1.3, **Table 5-3:**) is satellite tagged. The NERSG (contacted in May 2020 as part of the desk-based study) confirmed that there are an additional two golden eagle territories in the wider area surrounding the site, one territory located approximately 11km west from the nearest proposed turbine which was last active in 2019 and a second territory located approximately 15km south east from the nearest proposed turbine which was last active in 2018.

Barn owl were recorded roosting at one location (**Table 5-3:**) with another five suitable breeding/roosting locations identified, however no evidence of use was recorded at any of these other sites.

Hen harrier, red kite, merlin and white-tailed eagle were also recorded occasionally during baseline surveys, but no evidence of breeding was observed within the 2km study area. Divers were not recorded within the 2km study area during baseline surveys.

Table 5-3: Summary Scarce Breeding Birds (2020, 2021 and 2022 breeding seasons)

Species	Nest	Distance to Nearest Proposed Turbine	2020	2021	2022
Golden eagle	EA_1.1	2.6km	One chick fledged (satellite tagged)	Nest no longer present (fell out of tree)	
	EA_1.2	0.6km	Nest not present	New nest built, unsuitable and breeding abandoned before egg laying	Nest not used
	EA_1.3	2.7km	Nest not present	Nest not present	New nest location near EA_1.1, one chick fledged
Goshawk	GI_1	3.7km (south)	Three chicks fledged	Nest not in use	Outwith 2022 survey area
	GI_2	2km (south east)	No evidence	One chick fledged	One chick fledged
	GI_3	1.6km (north east)	No evidence	Unconfirmed	Failed during chick rearing
	GI_4	1.9km (north east)	No evidence	Two chicks fledged	Three chicks fledged



Species	Nest	Distance to Nearest Proposed Turbine	2020	2021	2022
Peregrine falcon	PE_1	4km (south west)	Two fledged chicks	Two fledged chicks	Outwith 2022 survey area
	PE_2	3.7km (north west)	Three fledged chicks	No evidence of breeding	Outwith 2022 survey area
Osprey	OP_1	4km (south)	One chick fledged	Unconfirmed	Outwith 2022 survey area
Barn owl	BO_6	3.3km (south)	Probable breeding, female roosting	No evidence of breeding/roosting	Outwith 2022 survey area

5.2.5.3 Black grouse and capercaillie

Three black grouse leks were recorded within the Site boundary during the baseline surveys. Lek 1 was the largest (and closest, over 1.1km to the south west from the nearest proposed turbine) lek and recorded a maximum of 10 males in 2020. The RSPB (contacted in June 2020 as part of the desk-based study) confirmed that they have not recorded black grouse within 1.5km of the Site for the past five years.

Capercaillie were not recorded within the 1.5km study area during baseline surveys. Capercaillie have historically been known to lek in the wider area surrounding the site, but the RSPB confirmed that capercaillie have not been recorded within 1.5km of the site since at least 2015.

5.2.5.4 Waders and wildfowl

Upland breeding bird surveys during the 2020 and 2021 breeding seasons recorded four breeding target species (curlew, golden plover, lapwing and woodcock) on moorland within the 500m study area. A maximum of four pairs of curlew, one pair of golden plover, one pair of lapwing and one pair of woodcock were recorded between 2021 and 2020 within the 500m study area.

Non-breeding golden plover were recorded flying (flock sizes of one to 80 birds) over the Site (likely migratory birds) between September 2020 to February 2021 and September to October 2021. Golden plover occasionally landed on the moorland, with a flock of 32 birds roosting on the moorland in February 2021, however all records of stationary birds were recorded over 500m from the nearest proposed turbine during baseline surveys.

Very low numbers of wildfowl were recorded during baseline surveys. Migratory pink-footed geese (flock sizes of three to 185 birds) were recorded flying over the site in April 2020 and between January to March 2021 and September 2021 to March 2022, but birds did not forage within 2km of the site. Migratory greylag geese (flock sizes of 14 to 200 birds) were recorded flying over the site between September to December 2020 and March 2022. Two small flocks of six and two birds were recorded flying closer to the site in June 2021 and May 2022 respectively, suggesting that this species may be breeding in the wider area.

5.2.5.5 Gulls

Common gulls were frequently recorded flying (flock sizes of one to 74 birds) over the site during the 2020, 2021 and 2022 breeding seasons as well as the 2021/2022 non-breeding season. Herring gulls were also frequently recorded flying (flock sizes of one to 32 birds) over the site across the baseline survey period.



5.3 Key Sensitivities

At this stage, based on existing information, it is anticipated that the following Important Ornithological Features (IOFs, CIEEM 2018) will be scoped into the assessment:

- Golden eagle, goshawk and golden plover;
- Common gull within the context of the Tiers of Corsemaul and Tom Mor SPA;
- Any other Schedule 1 species that may be found breeding or regularly foraging onsite;
- Any other species that may be of importance at a Natural Heritage Zone (NHZ) population level; and
- Cumulative (and in the context of the HRA process, in-combination) effects will also be considered where relevant.

5.4 Method of Assessment and Reporting

The assessment will consider the potential direct, indirect, and cumulative impacts that the construction, and operation and decommissioning of the proposed development could have on IOFs. The assessment will be supported by a technical appendix that will include details of survey methodologies, all survey data and outputs from any collision risk modelling.

Effects on IOFs will be assessed in relation to the species' reference population, conservation status, range, and distribution. The assessment of potential effects will be informed by guidelines published by CIEEM (2018) and NatureScot (SNH 2000, 2016a, 2016b, 2017, 2018a, 2018b, 2018c, 2019; NatureScot 2020a, 2020b).

The assessment will be informed by the information currently available, as outlined in **Section 5.2** and will include the following elements:

- Identifying potential impacts of the proposed development;
- Considering the likelihood of occurrence of potential impacts;
- Defining the nature conservation importance and conservation status of relevant populations for each IOF to determine overall sensitivity;
- Establishing the magnitude of the likely impact (both spatial and temporal) on each IOF;
- Based on the above information, making a judgement as to whether or not the consequent effect is significant with respect to the EIA Regulations;
- If a potential effect is determined to be significant, suggesting measures to mitigate or compensate the effect where required;
- Considering opportunities for enhancement where appropriate; and
- Concluding residual effects after mitigation, compensation, or enhancement.

Where appropriate, the assessment will take into consideration specific measures of analysis, most likely collision risk modelling using the Band *et al.* (2007) model.

Consideration of SPAs will be undertaken within an HRA context, with information to inform an appropriate assessment being included, should any likely significant effects to any qualifying features be identified.



5.5 Consultation

The following pre-application consultation with NatureScot has been carried out for the proposed development:

- Correen Hills Wind Farm golden eagle Technical Note 2021, NatureScot response email dated 14th July 2021;
- Correen Hills golden eagle artificial nest proposal, letter sent to NatureScot 1st September 2021;
- Online meeting between NatureScot, Force 9 and MacArthur Green, minutes dated 15th September 2021; and
- MacArthur Green email regarding 2022/23 non-breeding season vantage point surveys, NatureScot response email dated 23rd September 2022.

5.6 Approach to Mitigation

Significant effects on birds will be avoided/minimised where possible during the design layout process, based on the locations of known nest, roost and lek sites, key foraging areas, and likely sensitivities of IOFs. Good practice during construction (SNH 2019) and operation of the proposed development will also be implemented. This would include the following:

- A Bird Disturbance Management Plan (BDMP) would be implemented as part of a Construction Environmental Management Plan (CEMP) or similar during the construction phase, to ensure that all reasonable precautions are taken to adhere to the relevant wildlife legislation;
- Pre- and during-construction surveys carried out by an Environmental Clerk of Works (ECoW) or suitably qualified ornithologist would take place as part of the BDMP; and
- An Outline Habitat Management Plan (OHMP) which would form part of an Outline Biodiversity Enhancement Management Plan (OBEMP) would be developed and agreed with consultees, to identify opportunities to mitigate or enhance habitat for IOFs and to provide wider biodiversity net gain and improvements.

Where unmitigated significant effects on IOFs are identified, additional measures to prevent, reduce and where possible offset these adverse effects will be proposed, in order to conclude a non-significant residual effect.

5.7 Matters Scoped Out

On the basis of baseline data, experience from other relevant projects and policy guidance or standards (e.g., SNH 2018a), the following species will be 'scoped out' since significant effects are unlikely:

- Common and/or low conservation species not recognised in statute as requiring special conservation measures (i.e., not listed as Annex 1/Schedule 1 species);
- Common and/or low conservation species not included in non-statutory lists (i.e., not listed as Amber or Red-listed BoCC species, Stanbury et al. 2021), showing birds whose populations are at some risk either generally or in parts of their range; and
- Passerine species, not generally considered to be at risk from wind farm developments (SNH 2017), unless being particularly rare or vulnerable at a national level.



Subject to the results of the collision risk modelling, effects relating to any species not identified to be breeding or roosting within the relevant study area will be scoped out of the assessment.

5.8 Questions to Consultees

Q5.1 Do consultees agree that flight activity survey and viewshed coverage of the current proposed turbine layout is sufficient to conduct a robust EIA Report assessment?

Q5.2 Do consultees agree that the baseline surveys carried out and available historic data is sufficient and appropriate to conduct a robust impact assessment?

Q5.3 Do consultees agree that the scope of IOFs to be included in the assessment is appropriate?

Q5.4 Do consultees agree that the methodology and scope of the assessment is appropriate?

Q5.5 Do consultees agree that with a Bird Disturbance Management Plan in place, turbines can be located in the proposed locations?

Q5.6 Do consultees believe that there are any further species, or any designated sites which need to be considered in the assessment?

Q5.7 Are there any other relevant consultees who should be contacted, or other sources of information that should be referenced with respect to the ornithology assessment?



6.0 Ecology

6.1 Introduction

This Section of the EIA Scoping Report describes the baseline conditions, relevant guidance and legislation, proposed scope of assessment and methodology, proposed mitigation, and identified potential impacts of the proposed development in relation to ecological features.

6.2 Environmental Baseline

Baseline ecological conditions have been established from the following sources:

- Results of ecology field surveys carried out in 2021;
- A desk study using information from the National Biodiversity Network (NBN) Atlas Scotland and other resources on ecological records within 5km of the site; and
- A desk study to confirm the location and qualifying features of designated sites within potential zones of influence of the proposed development.

6.2.1 Desk Study

6.2.1.1 Designated Sites

The site does not overlap with any statutory ecologically designated sites. However, three statutory sites designated for ecological (non-avian) qualifying interests are present within 5km of the site boundary and could therefore have potential connectivity with the site (**Figure 6.2**). The sites are:

- Hill of Towanreef Special Area of Conservation (4.4km), designated for alpine and subalpine heaths, blanket bog, dry heaths, grasslands on soils rich in heavy metals, juniper on heaths or calcareous grasslands, marsh saxifrage (*Saxifraga hirculus*);
- Hill of Towanreef Site of Special Scientific Interest (4.4km), designated for calaminarian grassland and serpentine heath, marsh saxifrage, upland assemblage, vascular plant assemblage; and
- Moss of Kirkhill Site of Special Scientific Interest (4.5km), designated for basin fen.

6.2.1.2 Ancient Woodland

There are three areas of designated Ancient Woodland within the site boundary. These are within and around the forested area to the north, with areas to the west, north and east of T6 (closest area approximately 230m from T6) (**Figure 6.2**). All designated Ancient Woodland areas are of semi-natural origin.

6.2.1.3 NBN Atlas

A search of the NBN Atlas Scotland returned records of the following protected or notable species within 5km of the site boundary in the past 15 years (i.e., since 2008):

- Badger (*Meles meles*);
- Brown hare (*Lepus europaeus*);
- Common pipistrelle (*Pipistrellus pipistrellus*);
- Otter (*Lutra lutra*);



- Pine marten (*Martes martes*);
- Red squirrel (*Sciurus vulgaris*);
- Roe deer (*Capreolus capreolus*); and
- Wildcat (*Felis silvestris*).

The above search also returned records of the following invasive non-native species:

- American skunk-cabbage (*Lysichiton americanus*);
- Giant hogweed (*Heracleum mantegazzianum*);
- Grey squirrel (*Sciurus carolinensis*); and
- Japanese knotweed (*Fallopia japonica*).

6.2.1.4 Deer Distribution Survey

Every five years the British Deer Society undertakes a survey plotting the current distribution of all six species of wild deer in Great Britain and Northern Ireland and uses it to monitor and record changes from the previous survey to see if the range has changed or expanded. The results of the 2016 Deer Distribution Survey indicate the following deer species in the general area where the site is located:

- Red deer (confirmed in 2016, also recorded in 2007 and/or 2011); and
- Roe deer (confirmed in 2016, also recorded in 2007 and/or 2011)).

6.2.1.5 Scottish Soils Carbon Peatland Map 2016

The Carbon Peatland Map 2016 shows that the area within the site boundary does not contain areas identified as being Class 1 or Class 2 nationally important peatlands. The site is largely composed of Class 4¹⁰ and Class 5¹¹ peatlands.

6.2.2 Baseline Field Surveys

6.2.2.1 NVC & Phase 1 Habitat Surveys

Habitat surveys were undertaken during October 2021 and encompassed the developable area (**Figure 6.1**). The proposed development is located on two distinct habitat groups; a more homogenous plantation woodland to the east, and more typical upland open mosaic to the west.

The eastern part of the proposed development is dominated by coniferous plantation, with small pockets of the following Phase 1 habitat types: acid dry dwarf shrub heath, continuous bracken, blanket bog, acid neutral flush and broad-leaved semi-natural woodland.

Outwith the plantation in the west, acid dry dwarf shrub heath dominates, with areas of acid neutral flush and blanket bog for the most part following watercourses. Some areas of continuous bracken were also noted along the watercourses, with a larger extent to the

¹⁰ Class 4 – Area unlikely to be associated with peatland habitats or wet and acidic type. Area unlikely to include carbon-rich soils.

¹¹ Class 5 – Soil information takes precedence over vegetation data. No peatland habitat recorded. May also include areas of bare soil. Soils are carbon-rich and deep peat.



south of T5 of the scoping layout. An area of semi-natural coniferous woodland was noted in this area.

A number of the habitat types and NVC communities within the site correspond to Habitats Directive (92/43/EEC) Annex I habitats, Scottish Biodiversity List (SBL) priority habitats, and/or potential Ground Water Dependent Terrestrial Ecosystems (GWDTEs).

6.2.2.2 Protected Species Surveys

Protected species surveys were carried out in September 2021, within the area identified on **Figure 6.1**. These surveys recorded signs of badger, with four setts recorded within the forested part of the site, and one in the open portion of the site. Common lizard sightings were recorded close to the plantation edge and on the open ground, with several features with potential suitability for use as reptile hibernacula also noted. A red squirrel was sighted within the forestry, and squirrel feeding signs were noted in the form of stripped cones.

The developable area was surveyed for structures and trees with features that could offer roosting potential to bats. One tree offering moderate roosting potential for bats was identified in the north of the site.

6.2.2.3 Static Bat Detector Surveys

Static bat detectors (Anabats) were deployed between May and September 2021 at 11 locations on the site, in locations close to where proposed turbines were situated at the early design stages (see **Figure 6.1**). The following bat species were recorded:

- Daubenton's bat;
- Common pipistrelle;
- Brown long-eared bat;
- *Myotis* spp¹²;
- Soprano pipistrelle;
- Nathusius' pipistrelle (*Pipistrellus nathusii*); and
- Natterer's bat (*Myotis nattereri*).

Of the species recorded, common, Nathusius' and soprano pipistrelles are considered to be high risk for collision with wind turbines (NatureScot *et al.* 2021).

There has been little, if any, land use change within the area surveyed for bats since the 2021 surveys, and as such it is considered that the data available is appropriate for use in the Ecological Impact Assessment for this site.

6.2.2.4 Fisheries Surveys

Fisheries surveys were carried out by The River Dee Trust in October 2021, with eight sampling points within the site surveyed using electrofishing techniques. Brown trout (*Salmo trutta*) were caught at three of the locations. No Atlantic salmon (*Salmo salar*) were recorded at any location.

The fisheries surveys noted marginal habitat in the watercourses associated with the Gadie system (Casaiche, Knochespoch and Leaffoot burns), with some barriers to migration also

¹² There can be some uncertainty when identifying *Myotis* spp. from calls alone, and as such some registrations were only identified to genus level; such registrations are likely to comprise Natterer's bat *Myotis nattereri* and Daubenton's bat *Myotis daubentonii*.



present. More suitable habitat was noted within the Esset system (Suie, Suie minor, Cort and Clystie burns) but the system had a number of barriers in the form of potentially impassable pond systems and steep segments. Within the Esset Burn, although no Atlantic salmon were caught, it was stated that the habitat and conditions would be suitable for the species, with historic surveys recording juvenile salmon upstream of the location.

6.3 Key Sensitivities

The assessment will concentrate on the effects of construction, operation and decommissioning of the proposed development upon those Important Ecological Features (IEFs, as per CIEEM (2018) guidance) identified during the baseline period. In general, key sensitivities and potential effects are likely to be:

- Sensitive terrestrial habitats such as Habitats Directive Annex I habitats– effects include direct (i.e., derived from land-take) and indirect (i.e., changes caused by impacts to supporting systems such as groundwater or overland flow), including habitats such as blanket bog;
- Aquatic habitats – effects are limited to the ecological impacts of changes in water conditions through potential pollution effects (hydrological effects and GWDTEs are considered in **Section 10 – Geology, Hydrology, Hydrogeology and Peat**);
- Protected species – impacts considered include direct (i.e., loss of life as a result of the proposed development; loss of key habitat; displacement from key habitat; barrier effects preventing movement to/from key habitats; and general disturbance) and indirect (i.e., loss/changes of/to food resources; population fragmentation; degradation of key habitat e.g. as a result of pollution); and
- Cumulative effects – ecological effects arising from the addition of the proposed development in combination with other relevant wind farm projects.

6.4 Method of Assessment and Reporting

The EIA Report will include an Ecological Impact Assessment (EclA). This will consider the potential direct, indirect, and cumulative impacts that the construction, operation and decommissioning of the proposed development could have on any IEFs scoped-in to the assessment. The EclA will be supported by technical appendices covering habitats, protected species, bats, fisheries, and an OHMP (if required). These will include details of survey methodologies, all survey data and outputs of any analysis.

The assessment method will follow the principles within the CIEEM (2018) guidance.

The assessment will be informed by the information currently available, as outlined in **Section 6.2**. The evaluation for wider countryside interests (i.e., unrelated to any Natura 2000 sites) involves the following process:

- Identification of the potential ecological effects of the proposed development, including both positive and negative;
- Considering the likelihood of occurrence of potential effects where appropriate;
- Defining the nature conservation value of the ecological features present;
- Establishing the feature's conservation status where appropriate;
- Establishing the magnitude of change associated with the likely effect (both spatial and temporal);
- Based on the above information, making a judgement as to whether or not the resultant effect is significant in terms of the EIA Regulations;



- If a potential effect is determined to be significant, measures to avoid, reduce, mitigate or compensate for the effect are suggested where required;
- Considering opportunities for enhancement where appropriate; and
- Confirming residual effects after mitigation, compensation or enhancement are considered.

Determination of the level of sensitivity of an IEF is based on a combination of the feature's nature conservation value, defined on the basis of the geographic scale and conservation status, based on its distribution and/or population trend.

The magnitude of potential effects will be identified by considering the degree of change to baseline conditions predicted as a result of the proposed development, how IEFs are likely to respond to the proposed development, the duration and reversibility of an effect, best practice guidance and legislation, and professional judgement. Effects are judged in terms of magnitude in space and time, and effects can be positive, neutral or negative.

The significance of potential effects is determined by integrating the assessments of IEF sensitivity and magnitude of effect in a reasoned way, based on the available evidence and professional judgement.

A set of pre-defined significance criteria will be used in assessing the potential effects of the proposed development to establish whether there will be any effects which will be sufficient to adversely affect the IEF to the extent that its conservation status deteriorates above and beyond that which would be expected should baseline conditions remain (i.e., the 'do nothing' scenario).

6.5 Approach to Mitigation

Significant effects on ecological features will be avoided or minimised where possible within the design process. Good practice during construction and operation of the proposed development will be implemented as standard, including the provision of a suitable Species Protection Plan (SPP) and Construction Environmental Management Plan (CEMP) or similar, as well as the presence of an Environmental Clerk of Works (ECoW) during the construction period. The assessment will be undertaken on the basis that these measures will be in place.

Where likely significant effects on IEFs are identified, measures to prevent, reduce and where possible offset these adverse effects will be proposed, for instance through the development of an OBEMP including an OHMP for peatland habitats which would be developed and agreed with relevant consultees.

6.6 Matters Scoped Out

On the basis of baseline data, the professional judgement of the EIA team, experience from other relevant projects and policy guidance or standards, generally common and widely distributed habitats or species which do not fall within the following categories will be scoped out of the assessment:

- Habitats on Annex I to the Habitats Directive, and species on Annex II to the Habitats Directive; and
- Habitats or species protected by other legislation such as The Wildlife and Countryside Act 1981 (as amended), the Nature Conservation (Scotland) Act 2004 (as amended), or The Protection of Badgers Act 1992.

In addition, it is considered that there is no connectivity between the site and any ecologically statutory designated site i.e., SAC or SSSI). All statutory designated sites listed



in **Section 6.2** are designated for habitat or botanical features. Given the distance from these designations to the site, there is considered to be no connectivity, and it is proposed that potential effects on Hill of Towanreef SAC and SSSI, and Moss of Kirkhill SSSI can be scoped out of the EclA.

6.7 Questions to Consultees

Q6.1 Do consultees agree that the range of surveys that has been carried out is sufficient and appropriate to inform the assessment??

Q6.2 Are there any other relevant consultees who should be contacted, or other sources of information that should be referenced with respect to the ecology assessment?

Q6.3 Do consultees believe that there are any particular habitats or protected species which need to be considered in the assessment?

Q6.4 Do consultees agree that there is no potential for connectivity between the proposed development and the Hill of Towanreef SAC and SSSI, and Moss of Kirkhill SSSI?

Q6.5 Are you aware of any relevant policies or guidance documents not specifically mentioned in this Section of the report, or in the amalgamated References Section?



7.0 Cultural Heritage

7.1 Introduction

This Section will consider the effects of the proposed development on the Cultural Heritage resource. 'Cultural Heritage' comprises archaeological sites, historic buildings, historic gardens and designed landscapes, historic battlefields and other historic environment features, which are referred to as cultural heritage 'assets.'

This Section will set out the methodology and legislative background for the assessment and present the baseline conditions within the site and surrounding area. Known and potential cultural heritage receptors both within the site and within a 10km radius of the site boundary, will be identified, and their significance clearly articulated. Alongside its inherent values, the 'setting' of an asset may contribute to its cultural heritage significance. The nature and extent of any anticipated impacts upon the significance of susceptible receptors will then be determined, suitable mitigation measures defined, where possible, and any residual impacts described. Finally, a clear statement will be made as to whether or not identified impacts would be considered 'significant' for the purposes of EIA.

7.2 Method of Assessment and Reporting

7.2.1.1 Study Area

There is no guidance from Historic Environment Scotland (HES) which defines a required study area for the archaeological and cultural heritage assessment of wind farms.

For the purposes of the cultural heritage assessment, a proposed study area has been defined extending 10km from the proposed turbines. All nationally significant designated assets within this study area will be subject to setting appraisal in order to determine any indirect impacts. This setting appraisal can be found in Appendix 04.

Any assets identified through the appraisal as having the potential for a significant effect as a result of the proposed development will be subject to a detailed settings assessment within the EIA Report Chapter.

Non-designated cultural heritage assets within the site boundary will be assessed for the potential for direct impacts. Should Aberdeenshire Council Archaeology Service (ACAS) identify any non-designated cultural heritage assets that they consider to be of national/regional significance, and which they consider derive significance from their setting, then ACAS should make this known.

7.2.1.2 Consultation

Constraint mapping will be generated, using GIS software, to show mapped heritage assets in relation to the Zone of Theoretical Visibility (ZTV) for the finalised site layout. This will be used to scope out those assets that do not require further assessment. It will be used to identify, and gain consultees' agreement on, those assets that are likely to be most susceptible to impact, and which may therefore require photomontages/computer-generated visualisations (e.g. wirelines) as part of their assessment.

Consultation will be undertaken with HES in relation to those heritage assets within their remit – Scheduled Monuments, Category A Listed Buildings, Inventoried Gardens and Designed Landscapes (GDLs), and Inventoried Battlefields – and the necessary method of assessment for those assets.

ACAS will be consulted in relation to designated heritage assets of regional and local significance, and any non-designated assets that they consider to be of such significance



as to warrant further consideration. As part of the pre-application response received from AC, dated 28th August 2023, it was stated that the cultural heritage assessment should include a desk based assessment of the proposed transportation route. This shall be assessed upon the results of the swept path analysis to determine any potential impact on assets. If required, this desk based assessment will be undertaken in line with ClfA guidance (2017).

7.2.1.3 Field Surveys

A targeted site inspection will be carried out in order to:

- confirm the presence, extent, location and condition of any identified cultural heritage assets within the site;
- identify any currently unrecorded cultural heritage assets within the site; and
- allow for targeted field inspection of any designated cultural heritage assets identified as potentially susceptible to indirect impact as a result of change to setting.

7.2.1.4 Assessment of Impact

The proposed development has the potential to affect the significance of cultural heritage assets where it changes their baseline condition and/or their setting.

In accordance with the EIA Regulations, the assessment will identify any development impacts as either direct or indirect, adverse or beneficial, and short-term, long-term or permanent.

Assessment will be undertaken separately for direct impacts and indirect impacts.

Direct impacts upon the significance of heritage assets will take into account the level of their cultural heritage significance (where known) and the magnitude (extent) of the identified impacts.

Indirect impacts on the significance of cultural heritage assets will be identified and assessed using professional judgment, and with due reference to *Managing Change in the Historic Environment: Setting* (HES 2020) and the guidance set out in NatureScot (2019) and HES (2019). Assessment will be carried out in the following stages:

- initial consideration of intervisibility and other factors leading to the identification of potentially affected assets;
- assessment of the cultural heritage significance of potentially affected assets;
- assessment of the contribution of setting to the cultural heritage significance of those assets;
- assessment of the extent to which change to any contributing aspects of the settings of those assets, as a result of the proposed development, would affect their significance (magnitude of impact); and
- determination of the significance of any identified impacts.

The settings assessment will be assisted by a ZTV calculation, prepared principally for the Landscape and Visual Impact Assessment and presented in **Figure 7.1**. The ZTV calculation will map the predicted degree of visibility of the proposed development from all points within a proportionate, defined study area around the proposed development, relative to an observer's eye level (two metres above ground level). The ZTV model presented in **Figure 7.1** is based on the maximum height of the blade tips of the proposed development.



7.2.1.5 Cultural Heritage Significance

The categories of cultural heritage significance to be referred to are presented in **Table 7-1**. These will act as an aid to consistency in the exercise of professional judgement and provide a degree of transparency for others in evaluating the conclusions drawn.

The significance categories have been defined with regard to factors such as: designation, status and grading. For non-designated assets, consideration will be given to their inherent heritage interests, intrinsic, contextual, and associative characteristics as defined in HEPS (2019). In relation to these assets, this assessment will focus upon an assessment of the assets' inherent capability to contribute to our understanding of the past; the character of their structural, decorative and field characteristics as determined from the HER and Canmore records and/or site visits; their contribution to their class of monument, or the diminution of that class should an asset be lost; and how they relate to people, practices, events, and/or historical or social movements. Assessments of the significance of specific assets, where recorded within the HER, will be taken into account.

Table 7-1: Cultural Heritage Significance

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

7.2.1.6 Magnitude of Impact

Determining the magnitude of any likely impacts will involve consideration of the nature of the activities proposed during the construction, operational and decommissioning phases of the proposed development.

Changes could potentially include direct change (e.g., ground disturbance), and indirect change (e.g., change to setting); this latter might include visual change for example. Impacts may be beneficial or adverse, and may be short term, long term or permanent. The magnitude of any impacts will be assessed using professional judgment, with reference to the criteria set out in **Table 7-2**.



Table 7-2: Cultural Heritage – Magnitude of Impact

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

7.2.1.7 Level of Impact

The categories of impact are defined in **Table 7-3** while **Table 7-4** provides a matrix that relates the cultural heritage significance of the asset to the magnitude of impact on its significance, to identify the overall level of impact. This assessment will be undertaken separately for direct impacts and indirect impacts, the latter being principally concerned with impacts resulting from change to the setting of heritage assets.

Table 7-3: Cultural Heritage Impact

Impact	Criteria
Substantial	Severe harm or notable enhancement, such as total loss of significance of the asset or of the integrity of its setting, or exceptional improvement of the cultural heritage significance of the asset and/or the ability to understand, appreciate and experience it.



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

Table 7-4: Cultural Heritage Impact Matrix

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

7.2.1.8 Mitigation

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

Suitable measures for mitigating direct impacts might include:

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



Suitable measures for mitigating any indirect impacts might include:

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

7.2.1.9 Residual Impacts

Residual impacts are those that remain even after the implementation of suitable mitigation measures. Residual impacts will be identified, and the level of those residual impact defined with reference to **Tables 7-4** and **7-5**.

7.2.1.10 Significance of Impact

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

With reference to the matrix presented in **Table 7-4**, any impacts identified as 'Substantial' within the matrix would almost certainly be considered 'Significant', while determining whether any impacts identified as 'Moderate' (or below) within the matrix would be 'Significant' or 'Not Significant' would require the exercise of professional judgement.

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

7.2.1.11 Cumulative Impact

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

- an impact on an asset or group of assets due to changes resulting from the development subject of assessment; and
- an impact on the same asset or group of assets resulting from another development (consented or proposed) within the surrounding landscape.

Consideration of other developments will be limited to:

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

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

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

7.3 Matters Scoped Out

On the basis of the work undertaken to date, the professional judgement of the cultural heritage team, and experience of other comparable projects, it is considered that indirect and cumulative impacts of the proposed development on Category C Listed Buildings can be scoped out of the EIA in relation to cultural heritage. As per best practice guidance



within SNH EIA Handbook (2019), Category C Listed Buildings are of local rather than national or regional importance, unless in the opinion of an assessor the designation should be higher.

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

7.4 Environmental Baseline

7.4.1 Assets within the Site Boundary

There are no designated cultural heritage assets within the site boundary. An online review of Pastmap and the Aberdeenshire Council Archaeology Service online Historic Environment Record (HER) data has indicated that there sixteen non-designated cultural heritage assets within the site boundary. All of these non-designated cultural heritage assets are of local importance and are of a low cultural heritage significance.

Non-designated cultural heritage assets within the proposed site Boundary are presented in **Table 7-5**. A full commercial HER data search will be undertaken ahead of the baseline survey and used to inform our understanding of any key constraints.

Table 7-5: Non-designated Cultural Heritage Assets within the Proposed Site Boundary

HER Reference	National Monument Record Name	Details
NJ52SW0041	Correen Quarry	Buildings
NJ52SW0027	Mire Of Midgates	Boundary Stones
NJ52SW0021	Drumbarton Hill	Quarrying and Shooting Butts
NJ52SW0019	Clatterin Kist	Cairn
NJ52SW0056	Drumbarton	Lades
NJ52SW0046	Casaiche How	Structures
NJ52SW0016	Hill of Midmedden	Artefact
NJ52SW0045	Casaiche How	Dams – Destroyed
NJ52SW0023	Holy Well	Holy Well (Chalybeate)
NJ52SW0051	Casaiche How	Dams
NJ52SW0015	Mar Lodge	Clearance Heaps
NJ52SW0055	Casaiche How	Lades
NJ52SW0028	Currach Well	Spring
NJ52SW22	Knockespock	Remains of Designed Landscape
NJ52SW0030	Thief's Well	Spring
NJ52SW19	Hillock of Terpersie	Clearance Heaps

7.4.2 Assets outwith the Site Boundary

Within 10km of the proposed turbine locations there are a total of 196 designated cultural heritage assets. These comprise 138 Listed Buildings (with eight being Category A), 54 Scheduled Monuments, three Inventoried Gardens and Designed Landscapes, and one



Inventoried Battlefield. There are no World Heritage Sites within 10km of the proposed turbine locations.

7.5 Potential Sources of Impact

7.5.1 Within the Site Boundary

As stated, there are a sixteen recorded cultural heritage assets within the site boundary. Those known cultural heritage assets that may be susceptible to a significant level of direct impact as a result of the construction of the turbines and associated infrastructure (e.g., access tracks, substations) have been identified in **Table 7-5**. In addition, there is the potential for direct impact on any unrecorded cultural heritage assets within the site as a result of the construction process. Relevant mitigation measures will be embedded within the design of the proposed development as design progresses.

7.5.2 Outwith the Site Boundary

A number of designated cultural heritage assets within 10km of the proposed turbine locations will be subject to detailed settings assessment as there is the potential for the proposed development to have a significant effect upon them.

To provide a preliminary list of assets that will be subject to a detailed assessment, all designated cultural heritage assets within 10km of the site have been preliminarily assessed in Appendix 04. This Appendix has aimed to create a proportionate scope for the assessment and will be an evolving document throughout the EIA process. 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 as a result of consultee comments.

Several of these assets have been grouped according to similarities in their nature, significance and setting. The assets are as follows:

- Hill Forts:
 - The Barmkyn, fort and cairn (SM11514)
 - Hill of Christ's Kirk, fort (SM11394)
 - Tap o' Noth Fort (SM63)
 - Hill of Dunnideer, fort, platform settlement and tower (SM95)
 - Cnoc Cailliche, fort 360m WSW of Upper Wheedlemont (SM11681)
 - Hill of Newleslie, hillfort, 400m N of Cotetown (SM11510)
- Stone Circles:
 - Ardlair, stone circle 450m SW of (SM3)
 - Dunnideer stone circle, 450m NW of Dunnideer Tower (SM21)
 - Stonehead, stone circle (SM47)
 - Candle Stane, stone circle 380m E of Coldhome (SM12)
- Ringing Stone, standing stone, 275m NNW of Johnston (SM11509)
- Leith Hall (LB9183) and its associated Inventoried Garden and Designed Landscape (GDL00258) and Listed Buildings:
 - LB12949



- LB12950
- LB9181
- LB9182
- LB9185
- LB9186
- LB9187
- Terpersie Castle (LB13879)

All designated cultural heritage assets within 10km, along with the ZTV indicating their visibility of the proposed turbines, are depicted on **Figure 7.1**.

Category B Listed Buildings located outwith 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. The assets that have been scoped in for detailed settings assessment can be found in Appendix 04.

There are no Conservation Areas within 5km of the turbine locations. 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.

There are no World Heritage Sites within 10km of the site.

7.6 Questions to Consultees

Q7.1 Do consultees agree with the methodology set out?

Q7.2 Do consultees agree with assets and matters scoped out?

Q7.3 Are there any other assets that consultees believe warrant consideration and why?

Q7.4 Do consultees have any specifications on visualisations and their locations?



8.0 Traffic and Transport

8.1 Introduction

This Section considers the scope of work required to assess the potential significant effects associated with access, traffic and transport during the construction and decommissioning phase of the proposed development.

8.2 Environmental Baseline and Potential Sources of Impact

At this stage there is no definitive access route confirmed for access to the site, however the study area for assessment is anticipated to include the A97 the B9002 and the unclassified roads to the north and in the vicinity of the site. The route for the transport of wind turbine components (WTC) is expected to include the strategic road network from the port of delivery which would be Aberdeen, Dundee or Peterhead. Traffic data will be obtained so that existing traffic flows and vehicle classification for the key roads are identified, informing the baseline situation. Injury accident data for the roads within the study area will be obtained to ensure that road safety issues are identified. An automatic traffic count (ATC) will be placed on the main road closest to the proposed site access.

It is anticipated that construction deliveries to site during the construction phase would travel along the A96 from both directions to the A97. The suitability of this route for construction HGVs will be determined as part of the assessment. The route for abnormal loads will be determined by an abnormal load route assessment (ALRA), which will be prepared during the EIA process and will be submitted as a Technical Appendix to the EIA Report, with the findings from the ALRA considered within the Access, Traffic and Transport Chapter of the EIA Report.

8.2.1 Scope of Study and Study Area

The assessment is required to evaluate the effects of the proposed development and to determine the scale of the impacts on the identified sensitive receptors. From a desktop study of the site access and the proposed delivery route, the main receptors, sensitive to increased traffic levels, are anticipated to be located along the A97, along the B9002 and any other roads leading to the site access. Sensitive receptors will be identified in communities that include residential properties and non-residential properties such as public houses, businesses (café, shops) and churches; the villages of Kennethmont and Clatt are likely to be included. Individually placed dwellings, away from the villages, as well as farms along the delivery route will also be included as sensitive receptors.

It is anticipated that the largest items to be delivered to site would be the wind turbine components (WTC), along with any substation elements. As such, the ALRA will focus on ensuring that these elements can be transported to site, while the EIA Report will consider the impacts associated with the transport of all construction materials, structures and plant required during construction of each element of the proposed development. The ALRA will identify the route to site for the abnormal loads, with all constraints taken into consideration.

8.2.2 Baseline Conditions including Field Studies

The Access, Traffic and Transport Chapter of the EIA Report will include a detailed evaluation of the baseline conditions and will focus on assessing the potential impacts to arise during the construction and decommissioning phases and for each element of the proposed development.



8.2.2.1 Desk Study

The following data collection and analysis will be undertaken:

- a review of valid applications for identified cumulative assessment sites;
- analysis of traffic count data and accident data;
- Identification of likely sensitive receptors within the study area;
- assessment of traffic impacts of previous and committed local developments to understand identified effects;
- compilation of data on the number of construction vehicles and staff numbers related to each phase of the construction likely to be present on the local road network during the construction phase; and
- a review of height and weight restrictions along the proposed construction transport routes.

8.2.2.2 Field Surveys

A high level review of the key abnormal load routes has been completed. A more detailed review and further consultation is expected to be undertaken to refine access proposals. A site visit will include a visual inspection of the preferred route to identify any likely constraints or issues. In addition, the site access location will be considered as part of the site visit.

It is common practice for traffic surveys to be commissioned in order to provide a baseline situation for traffic flows, movements and speeds. An Automatic Traffic Counter (ATC) on the A97 will be commissioned to collect data for 24 hours a day across a seven-day continuous period. The traffic data collected will provide classified and directional traffic flow data. Speeds will also be recorded in order to determine the 85th percentile speeds. Should a traffic count be unable/unacceptable for commissioning, AC will be further consulted for existing traffic data along the delivery route. As access proposals crystallise, ATC points will be considered in consultation with AC.

8.2.3 Potential Sources of Impact

The potential sources of impact have been identified to occur predominantly during the construction of the development; the decommissioning of the wind farm is expected to generate lower levels of traffic; however the assessment will confirm the scale of impact compared to the construction phase. The operational phase will be scoped out of the assessment as any traffic generated during this phase will be far lower than that generated during construction. In summary, the main potential sources of impact are likely to relate to the impact of construction traffic on the residential areas along the network route.

8.2.3.1 Construction Phase

The construction phase is likely to create the greatest environmental impacts. This is due to the number of Heavy Goods Vehicles (HGVs) and Light Goods Vehicles (LGVs) required to transport all the materials and deliveries to site. It has been confirmed that a proportion of aggregate material required for construction will be sourced from the onsite borrow pits, however, to ensure that the possible maximum traffic generation is assessed, it will be assumed that all aggregate material is imported from off-site locations. There would be traffic impacts associated with the communities and roads along the delivery routes.



8.2.3.2 Operational Phase

Once the site is operational, the development would have traffic/transport related impacts caused by occasional staff movements required for maintenance purposes; these numbers would be very low and so traffic generation associated with the operation of the wind farm will not be described within the EIA Report as this element will be scoped out.

8.2.3.3 Decommissioning Phase

As described above, once the proposed development is decommissioned, the development would have similar impacts as those during construction phase.

8.3 Method of Assessment and Reporting

The assessment will first calculate the traffic generation associated with the construction phase. This will include an abridged construction works programme, details of vehicle types and sizes to be used during the construction phase, and an estimate of the number of trips anticipated to be generated by HGVs, LGVs and light vehicles. Specifically, the assessment will include the following:

- A review of the construction programme to confirm the key traffic generating activities;
- Compilation of data on the number of daily vehicle trips to be present on the roads within the study area, and identification of the likely maximum or worst case scenario;
- A review of the ALRA and an assessment of the possible impacts associated with the transport of abnormal loads;
- A comparison between likely traffic flows on potentially affected roads against the baseline situation for a future year scenario with and without the proposed development, reported as percentage increases; and
- Identification of the impacts.

Mitigation measures to alleviate the known local traffic issues arising from the construction traffic will be identified, with the aim of reducing the effect of the vehicle movements identified.

The Institute of Environmental Management and Assessment (IEMA) guidance (2023) would form the basis for which the effects of traffic during the construction phase would be assessed. The guidelines are intended for the assessment of environmental effects of road traffic associated with major new developments, as opposed to short-term construction. However, in the absence of alternative guidance, and as the traffic generation during the operation and maintenance phase is very low, these guidelines have been applied to assess the short-term construction phase of the proposed development.

Based on the IEMA guidance, the factors identified as being the most discernible potential environmental effects likely to arise from changes in traffic movements have been set out below and would be considered in the assessment as potential effects which may arise from changes in traffic flows from the proposed development:

- **noise and vibration on transport receptors along the route** – the potential effect caused by additional traffic on sensitive receptors, which in this case would relate to residential areas on the routes to site;
- **driver severance and delay** – the potential delays to existing drivers and their potential severance from other areas;



- **community severance and delay** – the potential severance to communities and the delays to movements between communities;
- **vulnerable road users and road safety** – the potential effect on vulnerable users of the road (i.e. pedestrians and cyclists);
- **hazardous and dangerous loads** – the potential effect on road users and local residents caused by the movement of abnormal loads; and
- **dust and dirt** – the potential effect on dust, dirt and other detritus being brought onto the road.

The IEMA guidelines provide two thresholds when considering predicted increase in traffic, whereby a full assessment is required:

- where the total traffic would increase by 30% or more (or where the number of heavy goods vehicles is predicted to increase by more than 30%); and/or
- where traffic flows are predicted to increase by 10% or more in areas identified specifically as high sensitivity.

Where the predicted increase in traffic flow from the proposed development is lower than the thresholds, the significance of the effects can be considered to be low or not significant, and no further assessments are required. Where the traffic associated with the proposed development will result in the above thresholds being exceeded, further assessment will be completed to identify the magnitude and significance of any resulting effects.

The potential sensitivity of the receptors to changes in traffic levels would be determined by considering the study area and presence of receptors in relation to each potential impact. The receptors would be assessed individually to determine its sensitivity and the assessment criteria is set out in **Table 8-1: Transport and Access Receptor Sensitivity**.

Table 8-1: Transport and Access Receptor Sensitivity

Receptor Sensitivity	Definition
Very high	Receptor with no capacity to accommodate a particular effect and no ability to recover or adapt.
High	Receptor with very low capacity to accommodate a particular effect with low ability to recover or adapt.
Moderate	Receptor with low capacity to accommodate a particular effect with low ability to recover or adapt.
Low	Receptor has some tolerance to accommodate a particular effect or will be able to recover or adapt.
Negligible	Receptor is generally tolerant and can accommodate a particular effect without the need to recover or adapt.

Table 8-2: Transport and Access Magnitude Criteria

Magnitude	Criteria
Large	Impact occurs over a large spatial extent resulting in widespread, long term or permanent changes in baseline conditions, or affecting a large proportion of receptor population. The impact is very likely to occur and /or will occur at a high frequency or intensity.
Medium	Impact occurs over a local to medium extent, with short to medium term change to baseline conditions, or affecting a moderate proportion of receptor



Magnitude	Criteria
	population. The impact is likely to occur and/ or will occur at a moderate frequency or intensity.
Small	Impact is localised and temporary or short term, leading to detectable change in baseline conditions, or noticeable effect on small proportion of receptor population. The impact is unlikely to occur or may occur but at low frequency or intensity.
Negligible	Impact is highly localised and short term with full rapid recovery expected to result in very slight or imperceptible changes to baseline conditions, or receptor population. The impact is very unlikely to occur and if it does will occur at very low frequency or intensity.
No Change	No change from baseline conditions.
Positive	Where the proposals result in an improvement to baseline conditions.

The magnitude of an impact is based on a variety of parameters. The definitions provided in Table 8-2 are for guidance only and may not be appropriate for all impacts. For example, an impact may occur in a very localised area but at very high frequency / intensity for a long period of time. In such cases expert judgement is used to determine the most appropriate magnitude ranking and this is explained through the narrative of the assessment.

Sensitivity and magnitude of change as assessed under the criteria detailed above would then be considered collectively to determine the significance of effect, as described in **Table 8-3: Transport and Access Significance of Effects**. The collective assessment is a considered assessment by the assessor, based on the likely sensitivity of the receptor to the change (e.g. is a receptor present which would be affected by the change), and then the magnitude of that change. Effects of ‘major’ and ‘moderate’ significance are considered to be ‘significant’ in terms of the EIA Regulations.

Table 8-3: Transport and Access Significance of Effects

Significance	Conditions of Significance
Major	Where the magnitude of the impact is Large and the receptor has no ability to accommodate the change. Permanent mitigation measures may be required.
Moderate	Where the magnitude of the impact is Medium or for higher magnitudes the receptor has a limited ability to accommodate the change. Short term mitigation may be required.
Slight	Where the magnitude of the impact is Medium or for higher magnitudes the receptor has a limited ability to accommodate the change. Short term mitigation may be required.
Negligible	Where the magnitude of the impact is Negligible. No mitigation measures are required.

8.3.1 Cumulative Impacts

The cumulative impacts from any other local permitted developments will be a key consideration for the assessment, particularly in relation to the control of construction traffic in the local area. The cumulative assessment will focus on the construction phase as this would be the most likely period to create significant effects should construction phases overlap or occur sequentially amongst permitted developments.



The traffic assessment and draft traffic management plans will be reviewed for the other major developments identified to be of direct relevance and on a similar construction timeline to the proposed development. The proposed construction timescales for these developments would be carefully considered those identified to have no impacts within the study area removed from the cumulative assessment. Such sites will be identified and discussed with AC.

8.4 Proposed Mitigation

Mitigation measures will be proposed following the completion of the impact assessments, as informed by the baseline. The purpose of these measures is to aim to remove, minimise, or compensate any significant effects. These mitigation measures will be agreed with Aberdeenshire Council and Transport Scotland.

8.5 Consultation

The scope of the study and assessment for the proposed development in relation to access, traffic and transport will seek to identify potential impacts which may result from the construction and decommissioning of the proposed development. Consultation with stakeholders will be completed through the scoping process.

The proposed development will continue to be discussed with the following prescribed bodies and key stakeholders/organisations:

- Aberdeenshire Council – consultation to discuss the potential impacts of the proposed development on the local road network and cumulative traffic effects;
- Transport Scotland as the strategic roads authority; and
- The relevant docks authority.

8.6 Matters Scoped Out

ALLs would be considered in more detail within a separately submitted ALRA; the findings and recommendations from the report will be discussed within the Access, Traffic and Transport Chapter of the EIA Report with any impacts identified and assessed as required.

8.7 Questions to Consultees

Q8.1 Confirmation that traffic surveys as discussed above would be appropriate; and

Q8.2 Confirmation of any committed developments to be taken into account within the cumulative assessment.



9.0 Noise

9.1 Introduction

This Section considers the scope of work required to assess potential significant effects associated with noise and vibration during the construction, operational and decommissioning phases of the proposed development.

9.2 Environmental Baseline

The centre of the site is located approximately 7km north west of Alford, Aberdeenshire, on forestry and grazing land within the Grampian Mountains.

There are few noise sensitive receptors in the area. Those that are there are primarily located to the north, east and south of the proposed development, with the closest noted to be just over 1.1km from the nearest turbine.

The noise climate will be measured during the assessment at a number of dwellings around the proposed development to establish the existing environmental baseline.

9.3 Potential Sources of Impact.

The construction of the proposed development would introduce temporary noise sources in the form of plant and construction activities, including blasting of borrow pits, along with the movement of vehicles.

With respect to operational noise, wind turbines generate noise by two mechanisms; mechanical noise from the gearbox and generator in the nacelle; and aerodynamic noise caused by the noise of wind passing over the turbine blades. Wind turbines are designed to minimise mechanical noise, for example noise sources in the nacelle are contained within insulated enclosures. Aerodynamic noise is minimised by the design of the turbine blades; however, some aerodynamic noise is unavoidable. Aerodynamic noise increases in proportion with the speed of the turbine blade; therefore, noise levels generally increase with wind speed.

Potential cumulative operational noise impacts may occur when a wind farm is proposed near to an existing wind farm. The noise assessment will consider potential cumulative noise impacts from wind turbine planning applications within 5km of the proposed development.

9.4 Method of Assessment and Reporting

9.4.1 Guidance

Planning Advice Note PAN1/2011 provides general advice on preventing and limiting the adverse effects of noise without prejudicing economic development. It makes reference to noise associated with both construction activities and operational wind farms.

The web-based planning advice note on 'Onshore wind turbines' provides further advice on noise and confirms that the recommendations of ETSU-R-97 'The Assessment and Rating of Noise from Wind Farms', "should be followed by applicants and consultees, and used by planning authorities to assess and rate noise from wind energy developments".

Good practice in the application of the ETSU-R-97 methodology will be referenced, as set out in the Institute of Acoustics Good Practice Guide to the Application of ETSU-R-97 (IOA GPG).



AC has issued a guidance note SGN1 1/2021 that sets out the information required for an assessment of the noise impact of a proposed wind farm development. The guidance note advises on the appropriate noise limits and confirms that the assessment should accord to methods set out in ESTU-R-97 and the IOA GPG.

PAN1/2011 and the Technical Advice Note accompanying PAN1/2011 provide further advice on construction noise and make reference in particular to British Standard BS 5228. Furthermore, the Control of Pollution Act 1974 provides different means for local authorities of controlling construction noise and vibration.

9.4.2 Proposed Study Area

The assessment will consider noise sensitive receptor (NSR) locations in the vicinity of the proposed development. Specifically, ESTU-R-97 states that noise levels will be considered acceptable, even in the absence of measured baseline data, if predicted noise levels (including cumulative contributions from all wind farms) do not exceed 35 dB L_{A90} .

Furthermore, the IOA GPG provides guidance on study area and cumulative noise. If the proposed wind farm produces noise levels within 10 dB of any other wind farm at the same receptor and the total noise is greater than 35 dB L_{A90} , then a cumulative assessment is necessary. Therefore, the study area comprises the area where noise levels from the proposed development are predicted to be within 10 dB of those from other relevant wind energy developments, and the predicted cumulative wind farm noise level is greater than 35dB, L_{A90} . This is illustrated on **Figure 9.1**. NSRs within or just outside this area will be considered in the assessment.

This will tend to include most NSRs potentially affected by noise effects from the construction of the proposed development infrastructure. In addition, NSRs located along the site access track or route will also be considered.

9.4.3 Field Survey

ESTU-R-97 requires the baseline environment within the study area to be characterised by measuring background noise levels as a function of site wind speed at the nearest NSRs, or at a representative sample of the nearest NSRs. ESTU-R-97 also requires that any such measurements are not significantly influenced by existing operational turbines, to prevent unreasonable cumulative increases.

Consideration will be given to the NSRs near to, or within, the 35 dB L_{A90} wind turbine noise contour and a representative sample will be selected for baseline noise measurements. The baseline noise monitoring would be undertaken in accordance with ESTU-R-97 and the IOA GPG and in consultation with the Environmental Health Department of AC.

9.4.4 Assessment of Construction Noise

The assessment of temporary construction noise effects will include the calculation of noise levels from the anticipated plant and activities at the identified NSRs. Predictions of construction noise levels will be undertaken in accordance with BS5228-1:2009+A1:2014, Code of Practice for Noise and Vibration Control on Construction and Open Sites – Part 1: Noise, (BS5228) using published source noise level data.

The predictions of construction noise levels will be assessed against criteria developed from the BS5228 threshold values to identify the significance of temporary construction noise effects.

Rock extraction from borrow pits by means of blasting operations could be required in some instances. The analysis of the related potential impacts will be made in accordance with PAN50, BS6472-2: 2008 and BS5228.



The impact of traffic associated with the construction phase will be based on the result of the assessment of Access, Traffic and Transport, where consideration will be given to the increase in traffic flows generated on the proposed transport route(s). This will be based on the baseline and predicted flows and assessed following the guidance detailed within the 'Design Manual for Roads and Bridges' (DMRB).

The residual effects of construction noise and construction traffic will be undertaken in accordance with relevant good practice, policy and guidance.

9.4.5 Assessment of Operational Noise

It is proposed that the assessment of operational noise will be undertaken in accordance with ETSU-R-97, whilst also following the recommendations detailed within the IOA GPG, as endorsed by national planning guidance and specifically within AC's SGN 1/2021.

ETSU-R-97 states that the assessment should take account of the effect of noise from all existing consented or, in some cases, proposed wind turbines that may affect a particular noise sensitive receptor. In addition, AC's specific requirements for wind farm operational noise assessments are clear that cumulative noise impacts must be considered.

In this respect, cumulative noise will be the primary focus of the assessment and other turbines in the area will be included. Potential cumulative noise effects are typically restricted to turbines within 5km for large-scale wind farms, and much less for smaller or individual wind turbines. Therefore, a 5km search has been applied to identify all potential developments for further consideration in the assessment as necessary. As set out in the IOA GPG, the assessment method is appropriate for wind turbines with a capacity above 50kW, so smaller wind turbines are scoped out of cumulative consideration. **Table 9-1** lists the wind turbines within 5km of the proposed development that are rated above 50kW. The source of this data is the wind turbine map published on the Aberdeenshire Council Website and was last updated on 27th September 2022. In addition, the Energy Consents Unit website was reviewed for Section 36 applications and there were no wind farms within 5km of the site.

Table 9-1: Cumulative Wind Turbines >50kW within 5km of the proposed development

Name	Planning Reference	Approximate distance to proposed development turbine	Comments
Cairnmore	2015/2263 & 2008/1486	1,800m	3 x 80m hub height Vestas V52 850kW located north west of proposed development. Planning condition limits noise to 35 dB LA90 for all wind speeds at nearest receptors
South west of Wheedlemont Farm, Rhynie AB54 4LL	2009/3583	4,980m	2 x 80m hub height Vestas V52 850kW located north west of proposed development. Planning condition limits noise to 35 dB LA90 for all wind speeds at nearest receptors

Given the scale of the two turbines south west of Wheedlemont Farm, their distance from the proposed development and that several dwellings are noted to be approximately 600m from these turbines (which will limit the level of noise permitted under its planning consent), it is considered unlikely that any cumulative noise contributions would be experienced at NSRs around the proposed development. Therefore, it is proposed that they are scoped out of the assessment.



The three turbines located at Cairnmore are situated much closer to the proposed development and therefore are to be included in the cumulative assessment.

During consultation with AC, any other wind farms which have been submitted into planning after those listed on their wind turbine map, 27th September, will be determined. A screening criterion will be applied to all turbine developments that have been identified for consideration, whereby if the proposed development produces noise levels within 10dB of the noise levels of that turbine at the same receptor location, the turbine development be included in the assessment, and where it does not, it will not be included in the assessment. The assessment will be undertaken with reference to current best practice, noise predictions contained within the noise assessments of the individual applications and consented limits presented in the planning permissions.

As per the guidance of ETSU-R-97 and the IOA GPG, daytime and night-time noise limits will be applicable to all wind turbines operating cumulatively. Noise limits will be determined following ETSU-R-97, the IOA GPG and AC SGN1 1/2021. At this stage it is considered likely that the noise limit for the proposed development will be the greater of: a lower fixed limit of 35 dB $L_{A90, 10min}$ during day time hours (0700 to 2300) and 38 dB $L_{A90, 10min}$ during night-time hours; and ETSU-R-97 derived limits of background noise level plus 5 dB. The only exception to these lower fixed limits would be any properties that are financially involved with the proposed development, or a neighbouring wind farm/turbine, in which case the lower fixed limit would be 40 dB $L_{A90, 10min}$, or 45 dB $L_{A90, 10min}$ in the case of cumulative noise. In the case of a property that is financially involved with a neighbouring wind farm, but not the proposed development, the increased fixed portion of the limit would only apply in the cumulative assessment. If, during the design process, a higher noise limit is considered to be more appropriate, then further consultation with AC would be carried out.

The above noise limits will be reliant on measured background noise levels, which are proposed to be carried out at representative locations in accordance with ETSU-R-97 and the IOA GPG and in consultation with AC. Given the separation distances of approximately 3km to any NSR to the west of the development, it is considered likely that survey locations will be concentrated to the north, east and south of the proposed development.

The operational noise assessment will also consider the impact of the proposed development in isolation of other wind energy developments in the area. Noise limits for the proposed development will be derived based on the ETSU-R-97 noise limits less the portion of which are already utilised by other developments.

The noise assessment differs from other assessments undertaken in the EIA, as it will not seek to quantify the significance of effect. The acceptable limits for wind turbine operational noise are clearly defined in the ETSU-R-97 and these limits should not be breached. Consequently, the test applied to operational noise is whether or not the calculated wind farm noise immission levels at nearby NSRs lie below the noise limits derived in accordance with ETSU-R-97. The noise assessment will ensure the proposed development includes mitigation either by design or operation to meet these noise limits. On the assumption that this is achieved, there will be no significant effects from the proposed development in respect of noise.

9.4.6 Assessment of Decommissioning Noise

Noise associated with decommissioning the turbines at the end of their lifespan is likely to be equal to or less than noise generated during the construction phase. Therefore, decommissioning noise and vibration impacts will be assessed with similar references to the construction noise and vibration assessment.



9.5 Consultation

Consultation with the designated Environmental Health Officer at AC will be undertaken at the start of, and throughout, the assessment process with respect to their specific requirements for the noise assessment. This process will aim to agree the approach to the assessment of construction, operational and cumulative noise effects, along with the survey locations, assessment methodologies and limit criteria for both operational and cumulative noise.

9.6 Matters Scoped Out

It is recognised that vibration resulting from the operation of wind farms is imperceptible at typical separation distances. It is therefore proposed to scope out the assessment of vibration produced during the operation of the proposed development.

With regard to infrasound and low frequency noise, the above-referenced online planning advice note, 'Onshore Wind Turbines', refers to a report for the UK Government which concluded that *"there is no evidence of health effects arising from infrasound or low frequency noise generated by the wind turbines that were tested"*. It is therefore proposed to scope out specific assessments of infrasound and low frequency noise.

The noise associated with traffic during the operation of the proposed development is likely to be low and not significant in the context of the existing road network. Therefore, operational traffic noise is proposed to be scoped out.

Vibration effects as a result of construction activities and associated traffic will also be minimal considering the distances to the closest NSRs. Therefore, construction vibration impacts, including that from construction vehicles are proposed to be scoped out.

9.7 Questions to Consultees

Q9.1 Are there any other specific wind energy developments beyond those already identified within this chapter that are to be included in the assessment?

Q9.2 Can consultees confirm that the proposed methodology for assessment set out above is appropriate for this proposed development?



10.0 Geology, Hydrology, Hydrogeology and Peat

10.1 Introduction

This Section outlines the proposed scope of the EIA Report to assess the likely significant effects from the proposed development on geology (including peat), hydrology and hydrogeology.

10.2 Environmental Baseline

The centre of the site is located approximately 7km north west of Alford in Aberdeenshire within the Correen Hills. Elevations on the site vary between 487m Above Ordnance Datum (AOD) on the summit of Peter's Prop Hill to approximately 200m AOD towards the south and south east of the site. The site and its surrounds receive an annual rainfall of c. 730mm per annum(mm/a).

10.2.1 Geology and Hydrogeology

The proposed development is shown by the British Geological Survey (BGS) to be underlain by the Suie Hill Formation comprising gritty psammite and semipelites. The south eastern extent of the site is underlain by the Syllavethy Pluton (granodiorite). Inferred faults are noted within the south western extent of the site and along the northern boundary.

BGS mapping indicate that the majority of the site is absent of any superficial deposits. Where present, the superficial deposits mainly comprise of till with small areas of alluvium located adjacent to the banks of the larger watercourses. Two small, localised areas of peat are located within the site adjacent to the western and eastern site boundaries in the northern area of the site. On the south western boundary of the site glaciofluvial deposits are recorded which consist of gravel, sand, silt and clay.

The superficial deposits and bedrock beneath the site have little potential to contain groundwater. The bedrock has been classified by the BGS as a low productivity aquifer with small amounts of groundwater in near surface weathered zones and secondary fractures. Limited quantities of groundwater are likely to be present in the alluvium and sand and gravel horizons associated with the till.

10.2.2 Soils and Peat

Soil mapping indicates that the soils at the site comprise mineral and peaty podzols with small areas of mineral gleys and brown soils.

Published priority peatland mapping by NatureScot indicates that the majority of the site is not located in an area designated as priority peatland (Class 1 and 2). Within the site areas of Class 4 and 5 are recorded which are designated as areas unlikely to be associated with peatland habitats but may include peaty soils.

10.2.3 Phase 1 Peat Probing

An initial whole site peat survey on a 100mm x 100m grid has been undertaken within the areas likely to contain infrastructure within the site boundary and the peat depth plans provided in **Figure 10.1** (Peat Depth) and **Figure 10.2** (Peat Depth >0.5m). The results of the survey indicate the presence of peaty soils at depths of up to 0.5m over the majority of the site with limited areas of localised peat and deep peat recorded.

The areas of peat and deep peat are typically located within areas of gentle slope and localised topographic depressions, with a maximum depth of 1.96m recorded in the northern area of the site.



10.2.4 Hydrology and Designated Sites

Much of the site lies within the surface water catchment of the River Don, in particular the Esset Burn sub catchment which drains the centre of the site and the Gadie Burn sub catchment (which is part of the larger River Uire sub catchment) which drains the north eastern extent of the site.

The north western corner of the site is located within the River Deveron surface water catchment, specifically the River Bogie sub catchment.

None of the catchments that drain the site are designated as a Drinking Water Protected Area (DWPA). The River Deveron is classified as a DWPA downstream of the confluence with the River Bogie, however this is noted approximately 17km north of the site.

Watercourses and groundwater may support local private and public water supplies.

SEPA flood mapping confirms fluvial flood extents within the site are typically confined to the watercourse corridors. Small areas of surface water flood risk are shown across the site however these are shown to be localised areas and never form connected or continuous flow paths.

Review of NatureScot SiteLink website confirms that one geological designated site is noted within 2km of the site. The Hill of Johnston SSSI and Geological Conservation Review (GCR) is located approximately 2km north east of the site and is designated for Caledonian igneous rock outcrop. No water dependent statutory designated sites are located within 1km of the site.

10.3 Potential Sources of Impact

Without mitigation or adherence to best practice, impacts on soils (including peat), geology, hydrology and hydrogeology could occur during the construction, operational and decommissioning phases of the proposed development. A summary of the potential effects on ground conditions and the water environment resulting from construction, operation and decommissioning of a wind farm is provided below. These will be considered in the EIA Report.

10.3.1 Potential Impacts During Construction

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



10.3.2 Potential Impacts During Operation

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

10.4 Method of Assessment and Reporting

The potential effects from the proposed development on ground conditions and the water environment will be assessed by completing a desk study and field investigation followed by an impact assessment, the processes of which are detailed below.

10.4.1 Study Area

The study area for peat and soils will be within the site boundary. Based on experience and professional judgement the geological, hydrological and hydrogeological study area will extend to 1km from the site boundary. The cumulative effects study area will extend to 5km from the site boundary.

10.4.2 Desk Study

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 investigation data, geological and hydrogeological reports, digital terrain models (slope plans) and geological literature.

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.

10.4.3 Field Surveys

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.

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

- verify the information collected during the desk and baseline study;
- undertake a visual assessment of the main surface waters and identify private water supplies;



- identify drainage patterns, areas vulnerable to erosion or sediment deposition, and any pollution risks;
- visit any identified GWDTEs (in consultation with the project ecologists);
- visit Private Water Supply 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 as required; and
- inspect rock exposures, established by probing an estimate overburden thicknesses (a probe is pushed vertically into the ground to refusal and the depth is recorded).

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

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 and the water environment as a result of the construction, operation and decommissioning of the proposed development.

10.4.4 Assessment of Effects

The purpose of this assessment will be to:

- identify any areas susceptible to peat slide, using peat thickness and DTM data to analyse slopes;
- assist in the micro-siting 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;
- allow an assessment of potential effects on identified licensed and private water supplies;
- 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 site that will adopt best practice procedures, effective management and control of onsite activities to reduce or offset any detrimental effects on the geological, hydrogeological and hydrological environment.

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

- if required by best practice guidance peat landside hazard and risk assessment (PLHRA);
- peat and carbon rich soils management plan;
- schedule of watercourse crossings;



- private water supply risk assessment; and
- GWDTE risk assessment.

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.

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.

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.

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.

A review of other existing and proposed developments near the proposed development will be undertaken and potential impacts on hydrology, hydrogeology and geology 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.

10.4.5 Peat Management Plan & Peat Landslide Hazard and Risk Assessment

A Phase I peat depth survey has been undertaken at the site and will be used to undertake a preliminary PLHRA.

If required, further low-resolution probing may be undertaken and used within the preliminary PLHRA. If significant peat depths are proven a preliminary PLHRA will be completed using the site survey data and slope analysis (using DTM data), highlighting areas that may be impacted by a peat slide so that appropriate mitigation measures can be identified and included in the site design.

If required, following the results of the preliminary PLHRA more detailed Phase II peat depth probing may be undertaken as part of the site design in accordance with best practice¹³.

10.4.6 Borrow Pit Assessment

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 wind farm will be included.

¹³ Energy Consents Unit Scottish Government., (April 2017) Peat Landslide Hazard and Risk Assessments: Best Practice Guide for Proposed Electricity Generation Developments. Second Edition



10.5 Consultation

As part of the consultation phase of the project, environmental data and views of the proposed development will be sought from:

- Aberdeenshire Council;
- SEPA;
- NatureScot;
- Scottish Water;
- Don District Salmon Fishery Board and The River Don Trust; and
- Deveron, Bogie and Isla Rivers Charitable Trust and Deveron District Salmon Fishery Board.

10.6 Matters Scoped Out

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

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

- **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 do not extend beyond the immediate development footprint. No particularly sensitive geological features have been identified within the site.
- **Detailed Flood Risk Assessment:** published mapping confirms that the site is not located in an area of fluvial or coastal flood risk. 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.
- **Water Quality Monitoring:** classification data is available from SEPA for the watercourses at the site and there are no known sources of potential water pollution at site that might give rise for the need for water quality monitoring.

10.7 Questions to Consultees

Q10.1 Published mapping confirms that most of the site area is not identified as being at flood risk. It is proposed, therefore, that a simple screening of potential flooding sources (fluvial, coastal, pluvial, groundwater etc.) is presented in the EIA Report. Is this approach acceptable?

Q10.2 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 and it is proposed that these would be used at the detailed design stage of the project to prepare a site drainage plan for consultee approval. Again, is this acceptable?

Q10.3 site investigations, including detailed peat probing and private water survey, will be undertaken as part of the proposed assessment. Should any additional investigation or data sources be considered when assessing baseline conditions?

Q10.4 It is not proposed to undertake any water quality sampling, establish groundwater monitoring points, surface water monitoring points or undertake leachability trials of any rock as there is published data that can be used to characterise baseline conditions and complete the impact assessment. Is this acceptable?



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

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



11.0 Climate and Carbon Balance

11.1 Introduction

Carbon dioxide emissions (carbon emissions) are considered greenhouse gases (GHG) and the increasing atmospheric concentrations of these GHGs are contributing to climate change. A major contributor to this increase in GHG emissions has been and continues to be the burning of fossil fuels. With ongoing and growing concerns over climate change, reducing and indeed reversing the effects of climate change are of utmost importance.

As set out in **Section 3.2** of this EIA Scoping Report, the Scottish Government declared a climate emergency on 14 May 2019. The declaration of an 'emergency' is a reflection of both the seriousness of climate change and its potential effects and the need for urgent action to cut carbon dioxide emissions.

In 2019, The Climate Change (Emissions Reduction Targets) (Scotland) Act 2019, which amended the Climate Change (Scotland) Act 2009 and set targets to reduce Scotland's emissions of all greenhouse gases to net-zero by 2045 at the latest, with interim targets for reductions of at least 75% by 2030, 90% by 2040.

The replacement of traditional fossil fuel power generation with renewable energy sources provides high potential for the reduction of GHG emissions. This is reflected in UK and Scottish Governments climate change and renewable energy policy including the latest UK Energy White Paper (2020) and Net Zero Strategy (2021).

11.2 Environmental Baseline and Potential Sources of Impact

No form of electricity generation is completely carbon free; for onshore wind farms, there will be emissions resulting from the manufacture of turbines, as well as from both construction and decommissioning activities and transport of materials and labour.

In addition to the lifecycle emissions from the turbines and associated wind farm infrastructure, where a wind farm is located on carbon rich soils such as peat, there are potential emissions resulting from the direct action of excavating peat for construction and the indirect changes to hydrology that can result in losses of soil carbon. The footprint of a wind farm's infrastructure will also decrease the area covered by carbon-fixing vegetation. Conversely, restoration activities undertaken post-construction or post-decommissioning could have a beneficial effect on carbon uptake through the restoration of modified bog habitat. The carbon losses and gains during the construction and lifetime of the Correen Hills Wind Farm and the long-term impacts on the peatlands on which they are sited will be evaluated to understand the carbon balance of the development.

11.3 Method of Assessment and Reporting

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' (Scottish Government, 2008).

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'.

The calculations will be set out in the EIA Report

11.4 Consultation

Consultation would be undertaken through this EIA Scoping Report. No additional consultation is anticipated.

11.5 Questions to Consultees

Q11.1 Can consultees confirm they are happy with the proposed scope of the carbon balance assessment?



12.0 Socio-Economics, Tourism, Recreation and Land Use

12.1 Introduction

This Section considers the scope of work required to assess potential significant effects associated with socio-economics, tourism, recreation and land use during the construction and operational phases of the proposed development.

12.2 Environmental Baseline

12.2.1 Socio-economics

According to ONS population estimates (2022a), the population of Aberdeenshire in 2022 was approximately 262,700; 132,200 females (50.3%) and 130,500 males (49.7%). Of this population, the number of those who are considered to be of 'working age' (16-64) is 160,500, which is approximately 61.1%; 50.2% males and 49.8% females, a similar split to the overall population. The working age rate is lower than Scotland (63.8%) and Great Britain (62.9%). Generally, Aberdeenshire has a slightly older population than average, with 20.4% over the age of 64, compared with 18.7% in Scotland and 19.6% in Great Britain.

Despite a lower working age within the population, Aberdeenshire has a higher than average economic activity rate of 82.3% (144,100 economically active residents), compared to Scotland (77.1%) and Great Britain (78.5%), in 2022 (ONS, 2023). This high economic activity rate appears to be reflected in higher than average monthly earnings in Aberdeenshire, estimated to have a Gross Weekly Pay of £709.40, compared with £640.30 in Scotland and £642.20 in the wider Great Britain, in 2022 (ONS, 2022b).

In terms of what people do in Aberdeenshire, there is a higher than average number of people involved in 'Manufacturing' (ONS, 2022c), 13.0% of the population, compared to Scotland (7.1%) and Great Britain (7.6%), as well as a higher number of people working in 'Professional, Scientific And Technical Activities', with 10.0% of the population compared to 6.5% in Scotland and 8.9% in Great Britain.

Where Aberdeenshire is less represented than its comparators are in the 'Human Health and Social Work Activities' industry, with 10.0% of the population compared with 15.9% and 13.7% in Scotland and Great Britain, respectively. This is also the case for 'Information and Communication', where 1.5% of the Aberdeenshire population work, compared with 3.1% of Scotland and 4.5% of Great Britain.

Of relevance to the construction stage of the proposed development is the number of residents working in the construction industry; in Aberdeenshire there are 9,000 people involved within this industry, equating to 9.0% of the population. This is higher than the average for Scotland (6.1%) and Great Britain (4.9%), alluding to a potentially high level of available workers to construct the proposed development.

12.2.2 Tourism

The tourism industry in Aberdeen and Aberdeenshire is estimated to be adding £421 million to the economy on average between 2015 and 2016, according to the last Visitor Survey Factsheet (VisitScotland, 2017).

The same study found that in 2015, approximately 1,339,000 visitors came to stay overnight in Aberdeen and Aberdeenshire, with 78% of these domestic visitors and 22% coming from overseas. Visitors were more likely to stay in Hotels in Aberdeen and



Aberdeenshire (49%) than in the rest of Scotland (41%) and less likely to stay in B&B's or Guest Houses (13%) than the rest of Scotland (20%).

In terms of activities, visitors to Aberdeen and Aberdeenshire cited Sightseeing by car, coach or foot (78%), visiting a historic house or castle (66%) and Short Walk or Stroll (55%) as the top activities, indicating that recreational activities are an important source of revenue.

Locally, particular tourism receptors are St Mary's Kirk, Old Keig Stone Circle and the Scottish Sculpture Workshop.

12.2.3 Recreation

The area within and around the site is predominately used for recreational walking, particularly the forestry tracks associated with the Correen Hills area (Forestry and Land Scotland, 2016), which borders the western edge of the Gordon Way long-distance route. Haughton Country Park also lies to the south east of the site, which includes a network of paths which can be used for walking and cycling.

Birchwood Farm, which borders the south east of the site, is used for clay pigeon shooting events. Further recreational activities in the vicinity of the site include fishing, bird watching and camping.

12.2.4 Land Use

The site is within the Correen Hills area, which is an amalgamation of Whitlaugh and Knockspock forests and is under the Correen Hills Management Plan with Forestry and Land Scotland. The predominant land use within the site is commercial forestry, mainly Sitka spruce, which has been felled and restocked in plots, with further plots of pastureland related to sheep farming.

The wider area of the site is also interspersed with pathways and access tracks related to the workings of the commercial forestry. The site is situated entirely on the slopes of Suie Hill, with various waterbodies intersecting throughout, and is bordered by several public roads.

12.3 Potential Sources of Impact

12.3.1 Study Area

12.3.1.1 Wider Study Area

The Wider Study Area (WSA) is intended to encompass the area within which significant effects on employment and the local economy, including the tourism economy, could occur. The WSA is required for certain receptor groups because the majority of the business and labour market effects that could occur would be experienced by population and business centres located across a wide area. It is proposed that the WSA will be set at the area of the AC administrative area, but effects will also be considered within the rest of Scotland and the UK where relevant.

12.3.1.2 Local Area of Impact

The Local Area of Impact (LAI) forms the focus for assessment of both direct and indirect effects on those land use and tourism receptors that are likely to experience effects at a more local level. The LAI for Correen Hills Wind Farm is proposed to be defined by the site boundary together with an area extending up to 5km. This would encompass a number of



settlements along the A97 and A944 roads, including Lumsden, Rhynie and Bridge of Alford.

12.3.2 Potential Sources of Impact

The socio-economic impacts may come as a result of direct or indirect interaction between the proposed development and the socio-economics and land use of the area/region and may be beneficial or adverse.

During construction there are likely to be beneficial effects on the regional and Scottish economy, including employment opportunities for construction businesses in the region, and increased spend on local services and accommodation for workers. The proposed development would lead to investment within the Aberdeenshire region and Scotland and the assessment would identify the potential benefit to the regional supply chain and seek to quantify the potential effect on the WSA. From prior experience of similar developments, it is likely that any benefits to the economy, labour market or supply chain would not be significant.

Construction activities may also have a temporary adverse impact on certain local receptors including walkers, bird watchers and other users of recreational sites, within or adjacent to the site. Effects on local accommodation businesses could be adverse (for example if there is any disruption caused by construction traffic) or beneficial (if used by construction workers). Should adverse impacts to these receptors be identified, mitigation measures would be proposed to lessen and/or avoid the impact, resulting in a not significant effect.

Once operational, impacts on the local labour market arising from employment associated with operation and maintenance would be more limited. However, there is potential for further long-term socio-economic benefits to the community such as those arising from access roads created for wind farm developments, which can often be utilised by recreational walkers.

A number of studies have examined whether there is a link between the development of wind farms and changes in patterns of tourism spend and behaviour, and generally the conclusion is that there is little effect. The assessment will draw upon the findings of these studies when examining whether the presence of the operational proposed development may have an adverse effect on the local visitor economy or the utilisation of individual tourism and recreational receptors.

12.4 Method of Assessment and Reporting

There is no industry standard guidance for this assessment. The proposed method for the assessment, based on experience from similar projects, is detailed below and will take into consideration any matters raised in this scoping exercise. The assessment will:

- consider the social and economic policy context at the local, regional and national level;
- review socio-economic and recreation baseline conditions within the relevant study areas;
- assess the likely scale, scope, permanence and significance of identified effects, taking account of any embedded environmental or social measures proposed within the application;
- recommend mitigation measures, where appropriate; and
- consider the likely cumulative effects of the proposed development in combination with any other relevant similar developments within proximity of the site, including those that:



- are the subject of valid applications or appeals but not yet determined;
- consented; or
- are under construction.

The assessment will follow current best practice guidance as set out in the following documents:

- The Scottish Energy Strategy (December 2017);
- The Onshore Wind Policy Statement (December 2022);
- NPF4 (2023), in particular Policy 11;
- SNH (2013) A handbook on environmental impact assessment;
- Scottish Government (2019) Good Practice Principles for Shared Ownership of Onshore Renewable Energy Developments;
- Scottish Government (2019) Good Practice Principles for Community Benefits from Onshore Renewable Energy Developments;
- Scottish Government (2016) Draft Advice on Net Economic Benefit and Planning;
- SNH (2019) Good Practice During Wind Farm Construction, in particular Part 8; and
- Tourism Scotland (2020).

12.4.1 Baseline Data Collection

The assessment would use desk-based information sources to assess the likely effects, supplemented by consultation with relevant stakeholders where necessary, and professional judgement based on previous experience.

12.4.2 Assessment Methodology

Receptor sensitivity will be based on its importance or scale and the ability of the baseline to absorb or be influenced by the identified effects. For example, a receptor (such as the local construction supply chain or a right of way) is considered less sensitive if there are alternatives with capacity within the relevant study area. In assigning receptor sensitivity, consideration has been given to the following:

- the capacity of the receptor to absorb or tolerate change;
- importance of the receptor e.g. local, regional, national, international;
- the availability of comparable alternatives;
- the ease at which the resource could be replaced; and
- the level of usage and nature of users (e.g. sensitive groups such as people with disabilities).

In order to aid clear and robust identification of significant effects, specific and targeted criteria for defining the magnitude of impacts have been developed for this assessment based on experience on other similar projects. The following four levels of magnitude will be adopted using professional judgement: high; medium; low and negligible. These reflect the level of change relative to baseline conditions and/or whether the change would affect a large proportion of the existing resident population or would result in a major change to existing patterns of use.

These impacts can be beneficial, adverse or neutral.



The level of effect of an impact on socio-economic receptors is initially assessed by combining the magnitude of the impact and the sensitivity of the receptor. Where an effect is classified as major, this is considered to represent a 'significant effect' in terms of the EIA Regulations. Where an effect is classified as moderate, this may be considered to represent a 'significant effect' but would be subject to professional judgement and interpretation, particularly where the sensitivity or impact magnitude levels are not clear or are borderline between categories or the impact is intermittent.

Effects can be beneficial, neutral or adverse and these would be specified where applicable. It should be noted that significant effects need not be unacceptable or irreversible.

A statement of residual effects, following consideration of any specific mitigation measures, will be provided.

12.4.3 Mitigation

The assessment will take account of any environmental principles that are incorporated into the design of the proposed development. These could include good practice measures with regard to traffic management, control of noise and dust, signage and provisions for maintaining access for walkers, details of which would be set out in a Construction and Environmental Management Plan (CEMP) and/or Construction Traffic Management Plan (CTMP). Any additional mitigation measures that would reduce the level of any significant effects would be considered prior to assessing residual effects.

12.4.4 Reporting

To identify and assess the impact of the proposed development, the assessment will:

- consider the social and economic policy context at the local, regional and national level;
- review baseline conditions within the relevant study areas;
- assess the likely scale, scope, permanence and significance of identified effects, taking account of any embedded environmental or social measures proposed within the application;
- recommend mitigation measures, where appropriate; and
- assess cumulative effects of the proposed development with other proposed schemes.

12.4.5 Cumulative Assessment

In relation to economic effects, cumulative effects depend on the extent to which the supply chain and labour market within the WSA have the capacity to meet demand for construction services from a number of similar developments. An assessment would be made as to whether it is considered likely that the cumulative effect indicates a loss of benefit as a result of cumulative developments, or an enhancement of opportunity which would help to develop expertise and capacity in the market. The cumulative effects assessment would make a quantitative judgement on potential loss of benefit due to cumulative developments. Enhancement of opportunity is identified only in qualitative terms.

Other cumulative effects may arise if the construction and/or operation of a number of wind farms were to affect receptors in the LAI, potentially impacting the usage and/or value of a recreational and/or tourism receptor.



Cumulative developments are considered to be similar developments within proximity to the site which are reasonably defined and understood; these would comprise projects that:

- are the subject of valid applications or appeals but not yet determined;
- consented; or
- are under construction.

Projects that are already constructed and operational are considered to form part of the baseline conditions.

12.5 Consultation

The assessment will use desk-based information sources to assess the likely effects, supplemented by consultation with stakeholders if relevant. Information to inform the baseline will be sought from various sources, including:

- Aberdeenshire Council;
- Local Community Councils;
- British Horse Society Scotland;
- Cycling Scotland;
- Forestry and Land Scotland;
- Opportunity North East;
- Scottish Association for Country Sports;
- Scottish Rights of Way and Access Society;
- Sustrans Scotland;
- VisitAberdeenshire; and
- VisitScotland.

Any consultation would have three key objectives:

- to verify published information;
- to identify potential effects; and
- to help assess significance of potential impacts.

12.6 Matters Scoped Out

Based on experience of onshore wind farm projects of this scale, it is not expected that there would be a large influx of workers' families to the area during the construction phase and those who would be working in the area, would be there temporarily, for up to 24 months; consequently, it is not expected that there would be a significant effect on the demand for permanent housing, health or educational services.

Regarding permanent employees for the operation of the proposed development, these numbers are expected to be low and, as such, the demand for permanent housing, health or educational services is expected to be low.

Recreational activities outwith the site are scoped out unless they are promoted regionally/nationally and are therefore likely to draw in visitors from outside the area, as they would be considered to be of low sensitivity. Such receptors beyond the site



boundaries would not have any direct impacts, whilst indirect impacts would be assessed in relevant chapter, such as Landscape and Visual.

12.7 Questions to Consultees

Q12.1 Do consultees agree with the extent of the baseline description?

Q12.2 Do consultees agree that the number and extent of the study areas are appropriate?

Q12.3 Do consultees agree with the proposed methodology?

Q12.4 Do consultees agree with the potential impacts that have been highlighted and those which have been scoped out of the assessment?



13.0 Other Considerations

13.1 Introduction

A number of other environmental and technical issues will be considered in relation to the proposed development, including:

- aviation and radar;
- infrastructure;
- shadow flicker;
- telecommunications;
- television reception;
- ice throw;
- air quality;
- population and human health;
- risks of major accidents and/or disasters; and
- environmental management.

13.2 Aviation and Radar

The operation of wind turbines has the potential to cause a variety of adverse effects on aviation during turbine operation. These include but are not limited to:

- Physical obstructions;
- Generation of unwanted returns on Primary Surveillance Radar (PSR); and
- Adverse effects on overall performance of Communications, Navigation and Surveillance (CNS) equipment.

The site is located approximately 9km south west of the village of Inch. The airspace over the site is Class G (uncontrolled) from ground level up to Flight Level 195 (approximately 19,500ft above sea level). Above FL195 is Class C controlled airspace under the control of the NATS Prestwick Centre.

Primary surveillance radars with the potential to detect turbines on the site are as follows:

- NATS En Route Perwinnes Hill (38km east south east of the site);
- NATS En Route Allanshill (53km north east of the site); and
- MoD Buchan air defence Remote Radar Head (RRH) (56km east north east of the site).

The uncontrolled airspace over the site may be used by civil Instrument Flight Rules (IFR) air traffic. There is also some use by military aircraft at all levels, and by light aircraft operating under the Visual Flight Rules (VFR).

The controlled airspace over the site, at and above FL195, is also part of the Temporary Reserved Area (Gliding) Scottish Area (North). The south western corner of the site is also under the Aboyne Gliding Area.

The site is well beyond the 20km radius consultation zone from the nearest Meteorological Office rainfall radar (Hill of Dudwick, 42km east-north east of the site). The site is in an area classified by the Ministry of Defence (MoD) as a “*low priority military low flying area less*



likely to raise concerns". Low flying is not anticipated to be a concern and no MoD objection is expected on that basis.

There are no licensed, certificated or Government aerodromes within 30km of the site; however, Aberdeen Airport is located 35km to the east of the site.

The nearest unlicensed airfield is Inch, located 6.5km from the closest turbine in the scoping layout. The CAA (CAP 764) recommended consultation zone for wind farms around airfields of Inch's size is 3km. There is no specified circuit direction for Inch airstrip. Turbine blade tip heights (assuming maximum 200m agl) would be up to 2,200ft above mean sea level (amsl).

13.2.1 Potential Sources of Impact and Mitigation Options

Any turbines of 150m or greater tip height are likely to be within line of sight of the NATS Perwinnes and Allanshill primary surveillance radars. If this is confirmed, it is expected that the effects will require technical mitigation agreements with NATS and Aberdeen Airport.

The turbines may also be within line of sight of the MoD Buchan air defence primary surveillance radar. If this is confirmed, it is expected that the effects will require a technical mitigation agreement with the Ministry of Defence (MoD).

The scoping layout is sufficiently distant from the Inch airstrip to avoid any direct obstacle hazard or downwind turbulence effects on aircraft in the visual circuit at the airfield. The operators of Inch airstrip will be consulted on the proposed development.

As the proposed turbines would exceed 150m to tip height, they will be subject to the mandatory lighting requirements of the Air Navigation Order Article 222. However, there is potential for a reduced lighting scheme which may be used in combination with a transponder-activated lighting system.

13.2.2 Method of Assessment and Reporting

Assessment of the effects of the proposed development on military and civil aviation will be undertaken through consultation with NATS, MoD, Aberdeen Airport, Inch airfield and other relevant authorities and a detailed assessment and consultation study will be undertaken with the aim of agreeing mitigation measures if required. The assessment, consultation and mitigation will be reported in the EIA Report and provided as a Technical Appendix to the EIA Report.

13.3 Infrastructure

Details and locations of infrastructure including overhead power lines, gas pipelines and underground cables will be checked and taken into account during the design of the proposed development.

13.4 Shadow Flicker

Shadow flicker occurs when a combination of conditions prevail at a location, time of day and year. It typically requires the sun to be at a low level in the sky. The sun then shines onto a window of a building 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 an amenity effect on residents in affected properties.

If shadow flicker cannot be avoided through design, technical mitigation solutions are available, such as shutting down turbines during the short period when the potential for shadow flicker effects may occur.



In the UK, significant shadow flicker is only likely to occur within a distance of ten times the rotor diameter (of a wind turbine), from an existing residential dwelling and within 130 degrees either side of north¹⁴.

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 10 rotor diameters from the proposed candidate turbine locations, a shadow flicker model will be run to predict potential levels of effect.

The location of all residential dwellings, including confirmation that no new dwellings have been built, or gained planning permission, in proximity to the site will be verified during the EIA.

13.5 Telecommunications

Tall structures such as buildings and turbines can adversely affect the performance of fixed telecommunications links, if positioned close enough to those links.

Ofcom data will be used in order to identify all fixed microwave telecommunications links within 3km of the site boundary; mapping the proximity of any such links to the proposed development; and, if required, calculating, using the Ofcom-recommended 'Bacon Formula', whether the proposed development has the potential to adversely affect the performance of the link(s).

Consultation will also be undertaken with key stakeholders to identify relevant microwave links and Ultra High Frequency (UHF) telemetry links.

Potential means of mitigation of effects on fixed telecommunications links include micro-siting of turbines, installation of higher performance antennae, or re-routing of links.

13.6 Television Reception

Turbines have the potential to affect the quality of terrestrial television reception if the turbines are located between domestic properties and the television transmitters from which they receive their TV signals.

The potential for adverse effects on television reception will be assessed by identifying the main and local terrestrial TV transmitters serving the area; mapping the areas around the proposed development where TV reception may be affected; and identifying any domestic properties in those areas.

Potential means of mitigation of effects on television reception include switching subscribers' aerials to receive from a different transmitter; installation of satellite TV; or provision of a local repeater station.

13.7 Ice Throw

Ice build-up on blade surfaces can occur in cold weather conditions. Turbines can continue to operate with a very thin accumulation of snow or ice but will shut down automatically as soon as there is a sufficient build up to cause aerodynamic or physical imbalance of the

¹⁴ Parsons Brinckerhoff Consultants on behalf of DECC (2010) Update of UK Shadow Flicker Evidence Base. Available at: http://www.decc.gov.uk/en/content/cms/meeting_energy/renewable_ener/ored_news/ored_news/uk_shad_flick/uk_shad_flick.aspx
(Accessed on 22/04/2021)



rotor assembly. Potential icing conditions affecting turbines can be expected two to seven days per year (light icing) in Scotland (WECO, 1999).

The potential for ice throw to occur after start up following a turbine shut down during conditions suitable for ice formation is high. There are monitoring systems and protocols in place to ensure that turbines that have been stationary during icing conditions are restarted in a controlled manner to ensure public safety. The risk to public safety is considered to be very low due to the few likely occurrences of these conditions along with the particular circumstances that can cause ice throw. Due to the very low risk, it is proposed that ice throw is scoped out of the EIA Report.

13.8 Air Quality

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 would be controlled by means of best practice to be described in the EIA Report.

Consideration will be given within the Ecology and Geology, Peat, Hydrology & Hydrogeology 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. Otherwise it is proposed that air quality is scoped out of the EIA Report.

13.9 Population and Human Health

The EIA Regulations 2017 include a requirement to assess as part of the EIA process, the potential significant effects on population and human health resulting from the proposed development. These requirements will be addressed in the EIA Report, as appropriate, under each of the other topic headings e.g. noise or socio-economic effects. Where no significant effects are likely these will be scoped out of the EIA.

13.10 Risk of Major Accidents and/or Disasters

The proposed development would be constructed in accordance with relevant health and safety legislation and would be subject to routine inspections during operation. Braking mechanisms installed on turbines allow them to be operated only under specific wind speeds and should severe windstorms be experienced, then the turbines would be shut down. In addition, given the elevated location of the site, flooding will not pose a significant risk to the operation of the proposed development nor will the construction of the proposed development contribute to flooding elsewhere. Therefore, it is considered unlikely that significant effects will arise as a result of the proposed development, and this topic is proposed to be scoped out of the EIA.

13.11 Environmental Management

The Applicant is committed to pollution prevention and environmental protection. As such an environmental management strategy to minimise environmental effects of the proposed development during construction will be developed. The principles of this strategy will be presented in an Outline Construction Environmental Management Plan (OCEMP) appended to the EIA Report. Should consent be granted, the OCEMP would be revised and updated to a CEMP, the content of which would be agreed with AC through consultation and enforced via a deemed planning permission condition. The CEMP would be used by the Contractor to ensure appropriate environmental management is implemented throughout the construction phase of the proposed development.



14.0 Invitation to Comment

You are invited to provide comment on this EIA Scoping Report. Please send all Scoping responses to ECU at:

Energy Consents Unit
5 Atlantic Quay
150 Broomielaw
Glasgow
G2 8LU

Email: Econsents_Admin@gov.scot





Appendix 01. Items Proposed to be Scoped into and out of Assessment

Environmental Impact Assessment Scoping Report

Correen Hills Wind Farm

Force 9 Energy Partners LLP

SLR Project No.: 402.V62600.00001

16 October 2023

Table A-1: Style “Caption” and Select Table Option 1 to Create

Topic	Scope of Assessment
Development subject to Assessment	<ul style="list-style-type: none"> • Up to 14 wind turbines each up to 200m to blade tip. • forestry works; • permanent foundations supporting each turbine; • new onsite access tracks providing access from the public highway and to all turbine locations; • widening/improvement works to existing tracks onsite; • crane hardstandings adjacent to each turbine; • underground cabling linking each turbine with the substation control building; • a substation compound including a control building and energy storage systems if required; • temporary borrow pit search areas for the extraction of construction aggregates onsite; • a permanent anemometer mast; and • a temporary site construction compound. • 50m micro-siting allowance • Aviation warning light on turbines (if required). <p>It is intended that changes to the forestry structure as a result of implementing the proposed development would be set out in the project description with the detail presented in a Technical Appendix to the EIA Report.</p> <p>Effects of the forest works on the environment will be subject to assessment through the integrated EIA process.</p>
Topic	Items proposed to be scoped into Assessment
All EIA Technical Assessment topics (with the exception of the topic of Traffic & Transport)	<p>Assessment of potential effects during the construction, operation and decommissioning phases of the proposed development.</p> <p>Traffic and Transport Assessment will assess potential effects during the construction and decommissioning phases of the proposed development.</p>
Topic	Items proposed to be scoped into Assessment
Landscape & Visual	<p>Study area of 45km for LVIA to include landscape character typology, landscape-related planning designations, properties and settlements, routes (including roads, National Cycle Routes and long-distance walking routes) and potential cumulative wind farms.</p> <p>Assessment of potential effects on the following landscape designations as having theoretical visibility of the proposed development (shaded grey in Table 4-1 and summarised in Table 4-3)</p> <ul style="list-style-type: none"> • Cairngorms National Park • Deveron Valley SLA (Aberdeenshire) • Upper Don Valley SLA • Bennachie SLA • Williamston House GDL • Kildrummy Castle GDL • Castle Forbes GDL • Leith Hall GDL



Topic	Scope of Assessment
	<p>Residential Visual Amenity Assessment to include properties within 2km of the proposed turbine locations.</p> <p>Photomontages for representative viewpoints within a 20km radius of the outermost turbines. Preliminary viewpoint locations are set out in Table 4-2 and Figure 4.2a and in detail on Figure 4.2b.</p> <p>If required, a night-time visual impact assessment and visualisations illustrating turbine lighting at night. Viewpoints 1, 3, 5 and 13 from Table 4-2 are proposed for night-time visualisations.</p> <p>Wind farms within 45km (and greater than 50m to blade tip) that are operational, under construction, consented or which are at application stage to be included within a cumulative assessment.</p>
Topic	Items proposed to be scoped out of Assessment
Landscape & Visual	<p>Landscape Character Types with limited or no visibility of the proposed development.</p> <p>Assessment of potential effects on all landscape designations (and wildland) assessed as having limited/no theoretical visibility of the proposed development (un-shaded in Table 4-1).</p> <p>Principal visual receptors with limited or no visibility of the proposed development.</p> <p>Cumulative assessment of potential wind farm sites at scoping stage.</p>
Ornithology	Items proposed to be scoped into Assessment
	<p>Ornithological study areas are set out on Figure 5.1.</p> <p>Baseline field surveys undertaken between 2020 and 2022, informed by desk-based studies encompass:</p> <ul style="list-style-type: none"> • Flight activity surveys; • Scarce breeding bird surveys; • Golden eagle nest monitoring surveys; • Upland breeding bird surveys; • Black grouse surveys; and • Winter walkover. <p>Ornithological qualifying features designated under the Tips of Corsemaul and Tom Mor SPA will be assessed under the terms of the Habitats Regulations Assessment (HRA) process with information to inform an appropriate assessment being included, should any likely significant effects to any qualifying feature be identified.</p> <p>Based on existing information, it is anticipated that the following Important Ornithological Features (IOFs, CIEEM 2018) will be scoped into the assessment:</p> <ul style="list-style-type: none"> • Golden eagle, goshawk and golden plover; • Common gull within the context of the Tips of Corsemaul and Tom Mor SPA; • Any other Schedule 1 species that may be found breeding or regularly foraging onsite; • Any other species that may be of importance at a Natural Heritage Zone (NHZ) population level; and • Cumulative (and in the context of the HRA process, in-combination) effects will also be considered where relevant. <p>Effects on IOFs will be assessed in relation to the species' reference population, conservation status, range, and distribution.</p>



Topic	Scope of Assessment
	Items proposed to be scoped out of Assessment
Ornithology	<p>As significant effects are considered unlikely, the following species are proposed to be scoped out of assessment:</p> <ul style="list-style-type: none"> • Common and/or low conservation species not recognised in statute as requiring special conservation measures (i.e., not listed as Annex 1/Schedule 1 species); • Common and/or low conservation species not included in non-statutory lists (i.e., not listed as Amber or Red-listed BoCC species, Stanbury et al. 2021), showing birds whose populations are at some risk either generally or in parts of their range; and • Passerine species, not generally considered to be at risk from wind farm developments (SNH 2017), unless being particularly rare or vulnerable at a national level. <p>Subject to the results of the collision risk modelling, effects relating to any species not identified to be breeding or roosting within the relevant study area will be scoped out of the assessment.</p> <p>The Morven and Mullachdubh SSSI, due to lack of connectivity to the proposed site due to distance (19km).</p>
Ecology	Items proposed to be scoped into Assessment
	<p>Ecological study areas are set out on Figure 6.1.</p> <p>Baseline field surveys undertaken in 2021, informed by desk-based studies encompass:</p> <ul style="list-style-type: none"> • NVC & Phase 1 Habitat Surveys; • Protected Species Surveys; • Static bat detector surveys; and • Fisheries survey data (provided by The River Dee Trust from surveys carried out in 2021). <p>Based on existing information, it is anticipated that the following Important Ecological Features (IEFs, CIEEM 2018) will be scoped into the assessment:</p> <ul style="list-style-type: none"> • Sensitive terrestrial habitats such as Habitats Directive Annex I habitats; • Aquatic habitats – effects are limited to the ecological impacts of changes in water conditions through potential pollution effects; • Protected species; and • Cumulative effects
Ecology	Items proposed to be scoped out of Assessment
	<p>Generally common and widely distributed habitats or species which do not fall within the following categories will be scoped out of the assessment:</p> <ul style="list-style-type: none"> • Habitats on Annex I of the Habitats Directive, and species on Annex II of the Habitats Directive; and • Habitats or species protected by other legislation such as The Wildlife and Countryside Act 1981 (as amended), the Nature Conservation (Scotland) Act 2004 (as amended), or The Protection of Badgers Act 1992. <p>Due to lack of connectivity, it is proposed that potential effects on Hill of Towanreef SAC and SSSI, and Moss of Kirkhill SSSI can be scoped out of assessment.</p>



Topic	Scope of Assessment
Cultural Heritage	Items proposed to be scoped into Assessment
	<p>Study area to extend 10km from proposed turbine locations.</p> <p>All nationally significant designated assets within the study area have been subject to a setting appraisal in order to determine any indirect impacts (as set out in Appendix 04). This appraisal provides detail on those assets which have been scoped in and scoped out of further assessment. Assets scoped into assessment include:</p> <ul style="list-style-type: none"> • The Barmkyn, fort and cairn • Ringing Stone, standing stone, 275m NNW of Johnston • Newseat, hut circles and platforms 240m NNE of • Ardlair, symbol stone and adjacent standing stone, SSW of • Hill of Christ's Kirk, fort • Tap o' Noth, fort • Ardlair, stone circle 450m SW of • Dunnideer stone circle, 450m NW of Dunnideer Tower • Stonehead, stone circle • Hill of Dunnideer, fort, platform settlement and tower • Candle Stane, stone circle 380m E of Coldhome • Hill of Newleslie, hillfort, 400m N of Cotetown • Cnoc Cailliche, fort 360m WSW of Upper Wheedlemont • Leith Hall and GDL • Terpersie Castle • Knockespock House and Lodge • Kildrummy Castle including GDL <p>Assessment of direct impacts on non-designated cultural heritage assets within the Site boundary.</p> <p>Assessment of the effects of physical works associated with the widening of roads and creation of passing places on the proposed delivery route for abnormal loads.</p> <p>Categories of cultural heritage significance to be referred to are set out in Table 7-1: Cultural Heritage Significance.</p>
Cultural Heritage	Items proposed to be scoped out of Assessment
	<p>Indirect and cumulative impacts of the proposed development on Category C Listed Buildings.</p> <p>Category B Listed Buildings located outwith the Site, 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.</p> <p>Conservation Areas outwith 5km from the proposed turbine locations</p> <p>Any assets that fall outwith the ZTV (and where those assets' approaches also fall outwith the ZTV).</p> <p>Consideration of other wind farm developments that have not yet been submitted to the relevant determining authority.</p>
Traffic & Transport	Items proposed to be scoped into Assessment
	<p>Study area to include the A97 and the B9002 and the unclassified roads to the north and in the vicinity of the Site. The route for the transport of wind turbine components (WTC) is expected to include the strategic road</p>



Topic	Scope of Assessment
	<p>network from the port of delivery which would be Aberdeen, Dundee or Peterhead.</p> <p>While it has been confirmed that a proportion of aggregate material required for construction will be sourced from the onsite borrow pits, to ensure that the possible maximum traffic generation is assessed, it will be assumed that all aggregate material is imported from off-site locations.</p> <p>The Traffic & Transport assessment will include the following:</p> <ul style="list-style-type: none"> • A review of the construction programme to confirm the key traffic generating activities; • Compilation of data on the number of daily vehicle trips to be present on the roads within the study area, and identification of the likely maximum or worst case scenario; • A review of the ALRA and an assessment of the possible impacts associated with the transport of abnormal loads; • A comparison between likely traffic flows on potentially affected roads against the baseline situation for a future year scenario with and without the proposed development, reported as percentage increases; and • Identification of the impacts. <p>Potential effects which may arise from changes in traffic flows from the proposed development are considered to be:</p> <ul style="list-style-type: none"> • noise and vibration on transport receptors along the route; • driver severance and delay; • community severance and delay; • vulnerable road users and road safety; • hazardous and dangerous loads; and • dust and dirt. <p>The potential for cumulative impacts with other permitted developments will be assessed in relation to other major developments identified to be of direct relevance and on a similar construction timescale to the proposed development.</p>
Traffic & Transport	Items proposed to be scoped out of Assessment
	<p>Assessment of the impact of operational traffic owing to the low volumes of traffic at this stage in comparison to the construction/decommissioning stages.</p>
Noise	Items proposed to be scoped into Assessment
	<p>The study area comprises the area where noise levels from the proposed development are predicted to be within 10 dB of those from other relevant wind energy developments, and the predicted cumulative wind farm noise level is greater than 35dB, LA90 as illustrated on Figure 9.1. NSRs within or just outside this area will be considered in the assessment.</p> <p>NSRs located along the Site access track or route will also be considered within the study area.</p> <p>Potential cumulative noise to be considered for wind turbine planning applications within 5km of the proposed development as set out in Table 10-1.</p> <p>A screening criterion will be applied to all turbine developments that have been identified for consideration, whereby if the proposed development</p>



Topic	Scope of Assessment
	<p>produces noise levels within 10dB of the noise levels of that turbine at the same receptor location, the turbine development be included in the assessment, and where it does not, it will not be included in the assessment</p> <p>The impact of traffic associated with the construction phase will be based on the result of the assessment of Access, Traffic and Transport, where consideration will be given to the increase in traffic flows generated on the proposed transport route(s).</p> <p>Assessment of operational noise will be undertaken in accordance with ETSU-R-97, whilst also following the recommendations detailed within the IOA GPG, as endorsed by national planning guidance and specifically within AC's SGN 1/2021.</p> <p>It is considered likely that the noise limit for the proposed development will be the greater of: a lower fixed limit of 35 dB LA90, 10min during day time hours (0700 to 2300) and 38 dB LA90, 10min during night-time hours; and ETSU-R-97 derived limits of background noise level plus 5dB (with the exception of financially involved properties).</p> <p>Given the separation distances of approximately 3km to any NSR to the west of the development, it is considered likely that survey locations will be concentrated to the north, east and south of the proposed development.</p> <p>The operational noise assessment will also consider the impact of the proposed development in isolation of other wind energy developments in the area. Noise limits for the proposed development will be derived based on the ETSU-R-97 noise limits less the portion of which are already utilised by other developments.</p>
Noise	Items proposed to be scoped out of Assessment
	<p>Assessment of vibration produced during the operation of the proposed development.</p> <p>Specific assessments of infrasound and low frequency noise.</p> <p>Operational traffic noise.</p> <p>Construction vibration impacts, including that from construction vehicles.</p>
Geology, Hydrology, Hydrogeology and Peat	Items proposed to be scoped into Assessment
	<p>Study area for peat and soils will be within the site boundary.</p> <p>Study area for the geological, hydrological and hydrogeological study area will extend to 1km from the Site boundary.</p> <p>Cumulative effects study area will extend to 5km from the Site boundary.</p> <p>Field surveys will be undertaken in order to:</p> <ul style="list-style-type: none"> • undertake a visual assessment of the main surface waters and identify private water supplies; • identify drainage patterns, areas vulnerable to erosion or sediment deposition, and any pollution risks; • visit any identified GWDTEs (in consultation with the project ecologists); • visit Private Water Supply 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;



Topic	Scope of Assessment
	<ul style="list-style-type: none"> • assess the Site geomorphology and conduct additional (Phase II) peat depth probing as required; and • inspect rock exposures, established by probing an estimate overburden thicknesses. <p>If significant peat depths are proven a preliminary PLHRA will be completed using the Site survey data and slope analysis (using DTM data), highlighting areas that may be impacted by a peat slide</p>
Geology, Hydrology, Hydrogeology and Peat	Items proposed to be scoped out of Assessment
	<p>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 do not extend beyond the immediate development footprint. No particularly sensitive geological features have been identified within the Site.</p> <p>Due to the Site's location in an area not at risk from fluvial or coastal flood risk it is proposed 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.</p> <p>Water Quality Monitoring: There are no known potential sources of water pollution at the site that might give rise to the need for water quality monitoring.</p>
Climate & Carbon Balance	Items proposed to be scoped into Assessment
	<p>A carbon balance assessment will be undertaken for the proposed development in order to:</p> <ul style="list-style-type: none"> • 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); • quantify the carbon emissions which will be saved by constructing the proposed development; and • 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'.
Socio-Economics, Tourism, Recreation and Land Use	Items proposed to be scoped into Assessment
	<p>The Wider Study Area (WSA) will be set at the area of the AC administrative area but effects will also be considered within the rest of Scotland and the UK where relevant.</p> <p>The Local Area of Impact (LAI) is proposed to be defined by the Site boundary together with an area extending up to 5km.</p> <p>The potential cumulative effects will be assessed in combination with any other relevant similar developments within proximity of the Site, including those which are submitted to the relevant determining authority, those that are consented and those that are under construction.</p>
Socio-Economics, Tourism, Recreation and Land Use	Items proposed to be scoped out of Assessment



Topic	Scope of Assessment
	<p>Impact on the demand for permanent housing, health or educational services arising during the construction phase of the proposed development.</p> <p>Recreational activities outside of the Site unless they are promoted regionally/nationally and thereby likely to draw in visitors from outside the area.</p>
Other Considerations	Items proposed to be scoped into Assessment
	<p>A High Level desk based assessment of the proposed grid connection for the proposed development will be undertaken. The grid line will be subject to its own detailed assessment and application process in due course.</p> <p>Assessment of the potential environmental effects of the proposed development on aviation and radar will be undertaken. It is intended that the consideration of aviation and radar effects will be reported in a Technical Appendix to the EIA Report, summarised in the introductory chapters.</p> <p>Details and locations of infrastructure including overhead power lines, gas pipelines and underground cables will be checked and taken into account during the design of the proposed development.</p> <p>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 10 rotor diameters from the proposed candidate turbine locations, a shadow flicker model will be run to predict potential levels of effect.</p> <p>Ofcom data will be used in order to identify all fixed microwave telecommunications links within 3km of the Site boundary; mapping the proximity of any such links to the proposed development; and, if required, calculating, using the Ofcom-recommended 'Bacon Formula', whether the proposed development has the potential to adversely affect the performance of the link(s).</p> <p>Consultation will also be undertaken with key stakeholders to identify relevant microwave links and Ultra High Frequency (UHF) telemetry links.</p> <p>The potential for adverse effects on television reception will be assessed by identifying the main and local terrestrial TV transmitters serving the area; mapping the areas around the proposed development where TV reception may be affected; and identifying any domestic properties in those areas.</p>
Other Considerations	Items proposed to be scoped out of Assessment
	<p>Due to the very low risk, it is proposed that ice throw is scoped out of the EIA Report.</p> <p>Consideration will be given within the Ecology and Geology, Peat, Hydrology & Hydrogeology 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. Otherwise it is proposed that air quality is scoped out of the EIA Report.</p> <p>The site is noted to be at a low risk of flooding. This, along with the proposed development being constructed in accordance with relevant health and safety legislation, safety mechanisms being installed in turbines with them being subject to routine inspections during operation</p>



Topic	Scope of Assessment
	means that the risk of Major Accidents and/or Disasters is proposed to be scoped out of the EIA.





Appendix 02. Consultees

Environmental Impact Assessment Scoping Report

Correen Hills Wind Farm

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Statutory Consultees	
Aberdeenshire Council	
Historic Environment Scotland	
NatureScot	
SEPA	

Non Statutory Consultees	
Aberdeen International Airport	Met Office
Association of Salmon Fishery Boards	NATS Safeguarding
British Horse Society Scotland	RSPB Scotland
British Telecom Plc	Scottish Association for Country Sports
Civil Aviation Authority	Scottish Forestry
Crown Estate Scotland	Scottish Rights of Way and Access Society
Cycling Scotland	Scottish Water
Defence Infrastructure Organisation	ScotWays
Deveron, Bogie and Isla Rivers Charitable Trust	Scottish Wildlife Trust
Don District Salmon Fishery Board & The River Don Trust	Transport Scotland
Fisheries Management Scotland	Sustrans Scotland
Fisheries Trust Scotland	The Crown Estate
Grampian Microlight & Flying Club	The River Deveron District Salmon Fishery Board
Highlands & Islands Airport Limited (HIAL)	Visit Scotland
John Muir Trust	Forestry and Land Scotland
Joint Radio Company	Opportunity North East
Insch Airstrip	Visit Aberdeenshire
Mountaineering Scotland	

Community Councils	
Donside Community Council	
Tap O' Noth Community Council	
Bennachie Community Council	
Donside Community Council	





Appendix 03. References and Standard Guidance

Environmental Impact Assessment Scoping Report

Correen Hills Wind Farm

Force 9 Energy Partners LLP

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Appendix 04. Cultural Heritage Assets Scoped in for Detailed Settings Assessment

Environmental Impact Assessment Scoping Report

Correen Hills Wind Farm

Force 9 Energy Partners LLP

SLR Project No.: 402.V62600.00001

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Designation Reference	Designation Title	Turbines Visible	Distance to closest turbine	Direction to Wind farm	Appraisal Comments
SM11514	The Barmkyn, fort and cairn	14	5.9	Northwest	Scoped in for further assessment given the potential for an effect on the setting of the cultural heritage asset.
SM11720	Innesbrae, buildings 320m SW of	2	8.1	Southeast	The assets comprise a group of medieval or post-medieval turf-built structures located along a low ridge approximately 300m south of the B9002 road. The assets are covered in heather and are located west of the Stripe of Clashandail Burn. The Innesbrae Farmhouse (SM11721) lies adjacent to the north of the asset by approximately 0.67km. The assets do not feature on the earliest Ordnance Survey map which likely suggests they had fallen out of usage by the late 19 th century. The asset derives some significance from the surviving upstanding remains, which inform on medieval and post-medieval building methods. The assets setting also forms part of its significance including its proximity to the potentially associated farmstead to the north, although visibility between the assets is restricted by the B9002 and intervening woodland. Intervisibility of the asset and the buildings will not include the proposed development. Views towards the asset from the west may include two turbines although they are anticipated to be a minor distraction and not feature in any key views. Overall, the proposed development is not predicted to impact the ability to appreciate, understand and experience the asset and it is excluded from the assessment.
SM11721	Innesbrae, farmhouse, farmsteading and township 450m NE of	14	7.9	Southeast	The asset comprises the remains of a late 18 th to 19 th -century farmhouse. The remains are situated in rough pastures on a wide shelf on the south side of Bairns Hill, in the locality of some stone outcroppings. Ordnance Survey mapping from 1870 suggests the multiple structures were roofed and included a horse-engine platform, and therefore were potentially still in occupancy. The Ordnance Survey



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					mapping suggests a further 13 structures north of the farm which may have formed part of an earlier township, pre-dating the farmstead. The asset, therefore, has potential archaeological significance regarding the remains of the potential former township located upon the site. As a farm steading, however, the asset derives archaeological significance from the associated ancillary farm buildings and machinery including potential remains of enclosures, and a horse-engine platform. The asset is located in proximity to the Innesbrae Buildings (SM11720) which lies approximately 0.67m south of the asset. Views from third points between the assets are limited by the B9002 road and intervening woodland, although intervisibility with the asset will not include the proposed development. Several turbines will be included in views towards the Farmhouse although they are not thought to be key or to impact an appreciation or understanding of the farmstead and potential township. Therefore, the proposed development is not predicted to impact the ability to appreciate, understand and experience the asset and it is excluded from the assessment.
SM4533	Wardhouse, settlements and field systems 500m SE of Home Farm	14	8.1	Southwest	<p>The asset comprises two large prehistoric roundhouses measuring up to 12m in diameter and an overlying medieval fermtoun and agricultural remains. The asset primarily derives archaeological significance from the buried remains of the prehistoric and medieval phases of the site, allowing a direct comparison between the farming practices of both periods.</p> <p>The assets are located on a south-facing slope, approximately 0.8km from The Shevock watercourse to the east. The asset's setting contributes to its significance, with the topography providing views along The Shevock and allowing command of the associated valley. The proposed</p>



Designation Reference	Designation Title	Turbines Visible	Distance to closest turbine	Direction to Wind farm	Appraisal Comments
					development will not impact the views between the river and the asset and is anticipated to be a minor distraction within the landscape when approaching from the north. As such, the proposed development is not predicted to impact the ability to understand, appreciate, and experience the asset. It is excluded from further assessment.
SM11011	Forbes Church and burial ground	0	4.4	North	Due to the asset falling outwith the ZTV, it is currently scoped out of further assessment. Furthermore, there are no additional assets or third viewpoints from which shared visibility is important to the significance of the asset.
SM8444	Leith Hall, two symbol stones	14	6.7	South	The monument comprises two Pictish symbol-bearing stones dating from the 7 th -century known as the Salmon and Wolf Stones. They are located in the grounds and gardens of Leith Hall. Whilst the stones maintain some archaeological interest, as both are rare examples of symbol stones, the asset's original setting has been lost due to their movement. The asset's current setting is the designed landscape and grounds surrounding the hall and does not include the wider landscape. As such, the proposed development does not form part of the asset's setting which contributes to its significance. Whilst the proposed development affords visibility of the proposed turbines, it is not anticipated to impact the ability to appreciate, understand and experience the asset and as such, it is scoped out of further assessment.
SM90239	Picardy Stone, symbol stone	5	9.9	Southwest	The asset comprises a Pictish symbol stone. The south face of the slab is incised with Pictish symbols, including a serpent flanked by double disc and Z-rods. The stone has archaeological significance as one of a small amount of Pictish symbol stones, with the potential for any surviving below-ground remains in proximity to the stone.



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					<p>The assets setting comprises a natural amphitheatre, situated in the lowland in the centre of a ring of hills, including Candle Hill to the southwest and the Hill of Dunnideer to the south. The Candle Stane Stone Circle (SM12) is located approximately 1.1km southwest of the asset. The asset's setting contributes to its significance, with both its lowland location and proximity to the stone circle likely informing its placement. Due to the land surrounding the asset being higher, views towards the asset are likely to be of significant importance, rather than views from the asset. Views of the proposed turbines would be extremely limited when approaching from all directions and would form a minor distraction to the ability to understand the asset within its setting. Furthermore, the proposed turbines would be peripheral to views between the stone circle and the asset, again forming a minor distraction in the ability to appreciate and understand the asset in its setting.</p> <p>As such, the proposed development is not predicted to impact the ability to understand, appreciate, and experience the asset. It is excluded from further assessment.</p>
SM90267	Auchindoir, St Mary's Church, Mote Hill and Dovecot	6	4.0	Southeast	<p>The asset is situated on the eastern slope of the Hill of Towanreef and comprises a medieval church, a motte and a 16th-century dovecot. The church is first mentioned in 1239 and remained in use until c.1809 when it came into disrepair. The motte is located 80m southeast of the church and The dovecot is located 50m south of the church. The church may be contemporaneous with the motte to the south and had a later association with the dovecot.</p> <p>The assets setting comprises the east-facing slope of the Hill of Towan Reef, overlooking the River Bogie and its associated valley to the east. The asset derives part of its significance from this setting, with the motte likely</p>



Designation Reference	Designation Title	Turbines Visible	Distance to closest turbine	Direction to Wind farm	Appraisal Comments
					<p>commanding the valley to the east and utilising this natural defensive position. The proximity of the church also contributes to this significance, further informing our understanding of the prominence of religion in medieval society.</p> <p>The proposed development is anticipated to be peripheral to views from the asset along the River Bogie to the east and would not be visible when approaching the asset from the valley. Views from the asset towards the internal features may include part of the proposed development however these are not anticipated to be key views or views which affect an appreciation or understanding of the asset. Therefore, the proposed development is not predicted to impact the ability to understand, appreciate, and experience the asset. It is excluded from further assessment.</p>
SM90181	Kildrummy Castle	11	8.7	Northeast	<p>The monument comprises the remains of the medieval Kildrummy Castle. The remains are part of the Kildrummy Castle Garden and Designed Landscape (GDL) (GDL00237), which was constructed after the castle had been dismantled in 1715. The remains lie at the crest of a steep natural scarp located at around 240m AOD and the River Don is located 1.3km east of the asset.</p> <p>The significance of the castle partially derives from its setting, with the castle using the ravine for defensive positioning above the River Don to the east, Due to the topography of the landscape, long-distance views are restricted and focussed on the River Don valley, rather than long-distance views of the region.</p> <p>Views of 11 of the proposed turbines are expected, however, these do not feature within the views towards the River Don and would not be regarded as key views. Any views of the</p>



Designation Reference	Designation Title	Turbines Visible	Distance to closest turbine	Direction to Wind farm	Appraisal Comments
					proposed turbines would be considered peripheral and a minor distraction to the ability to understand, appreciate, and experience the asset. The asset is excluded from further assessment.
SM10729	St Bride's Chapel (Kildrummy Old Parish Church)	0	6.6	Northeast	Due to the asset falling outwith the ZTV, it is currently scoped out of further assessment. In addition, the proposed development is not anticipated to impact on the ability to understand or appreciate the shared intervisibility between contemporary assets (e.g., LB9093) in the factors which contribute to their significance.
SM11611	Brawland, cup-marked boulder 270m WSW of	10	5.8	Southeast	<p>The asset comprises a large cup-marked boulder, possibly Bronze Age in date. 21 cup marks are visible on its surface, three impacted by modern drilling. The asset therefore may hold archaeological significance relating to its erection and artistic interest from its carvings.</p> <p>The assets setting is within an improved pasture field on a hilltop plateau overlooking the burn of Templand, approximately 0.2km north. Cup-marked boulders are often found along or overlooking watercourses, following natural pathways through the landscape, indicating that the focus of the boulder is associated with movement along the Burn of Templand. The proposed development is not anticipated to be visible in views from the asset towards the burn, nor approaches along the burn towards the asset.</p> <p>Other setting elements include the later prehistoric period Cnoc Cailiche Hillfort (SM11681) and Hut Circles (SM11658) located over approximately 0.5km south on two prominent summits. Whilst the assets have no proven physical or chronological connection, they have a spatial connection as part of a wider prehistoric landscape. There is intervisibility</p>



Designation Reference	Designation Title	Turbines Visible	Distance to closest turbine	Direction to Wind farm	Appraisal Comments
					<p>between these assets, however, the proposed development does not feature within these views.</p> <p>As such, whilst the connection to the local landscape is important in understanding the asset, the proposed development site does not contribute to the assets significance. The proposed development is not predicted to impact the ability to understand, appreciate, and experience the asset. It is excluded from further assessment.</p>
SM11869	Rhynie Parish Church, two symbol stones 25m ESE of	10	4.6	Southeast	<p>The monument comprises two Pictish symbol-bearing stones, located on the village green at Rhynie. The incisions on the stone depict a figure holding a staff with a shield and cloak. A double-disc z-rod and V-rod carving have since flaked off in areas leaving little trace of the carvings. The asset has archaeological significance as one of a small number of Pictish symbol stones, providing the opportunity for further understanding of Pictish culture and society.</p> <p>The asset's current location within the green is not its original location, but records indicate it is still within the same wider landscape setting in which it was found. This original setting would have comprised the flat plateau of the hilltop and the east bank of the River Bogie. The asset is now located on the west bank of the River, within the small village of Rhynie. Knowledge of this original location of the symbol stones provides an opportunity for spatial analysis to further understand the asset and its connection to its original setting, however, the movement of the asset to within the village has removed the ability to appreciate, understand, and experience this original setting when viewing the asset itself. As such, any views of the proposed development would not impact the ability to appreciate, understand or experience the asset. It is scoped out of further assessment.</p>



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SM11575	Bell Knowe, cairn, Rhynie	9	4.1	Southeast	<p>The asset is a prehistoric cairn comprising a mound of rounded boulders and pebbles. The asset would hold archaeological significance, with further research having the potential to further our understanding of prehistoric construction methods and funerary practices. It lies on the crest of an east-facing slope in pasture, overlooking the River Bogie with approaches from the north and south. The asset's setting contributes to its significance, as cairns are theorised to have also been used as markers or waypoints of reference along waterways or natural pathways through a landscape.</p> <p>However, modern development between the asset and the river has obscured views of the river, providing a major distraction in the ability to understand and experience the asset and its setting. Whilst the proposed development is anticipated to be visible from the asset, it would not be visible from the asset when looking towards the river, nor when approaching the asset along the river from the south. Any views towards the asset from the north may include the proposed development, however, as previously stated, the surrounding built environment provides a major distraction and the proposed development would be a minor distraction in long-distance views.</p> <p>As such, the addition of the proposed turbines to the southeast would not impact the ability to appreciate, understand or experience the asset. It is scoped out of further assessment.</p>
SM11509	Ringing Stone, standing stone, 275m NNW of Johnston	8	4.1	Southwest	<p>Scoped in for further assessment given the potential for an effect on the setting of the cultural heritage asset.</p>



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SM11523	Johnston, unenclosed settlement 400m E of	10	4.4	Southwest	<p>The monument comprises an unenclosed settlement of prehistoric date. The asset is located in a gently sloping cultivated field, which forms part of a south-facing ridge, within a valley south of the Hill of New Leslie. The Gardie Burn runs through this valley, approximately 0.3km south of the asset. The asset is situated approximately 0.45km south of the Hill of Newleslie hill fort (SM11510), which occupies the summit of the aforementioned hill.</p> <p>The assets setting forms part of its significance. Whilst the settlement is unenclosed and does not have any obvious defensive structures, the settlement likely utilised the ridge as a viewpoint along the valley, which runs east to west. The asset likely would have utilised both the south-facing slopes and the proximity to water to benefit agricultural production. In addition, the asset likely utilised its placement near the hill fort to the north as an additional defence.</p> <p>Whilst 10 turbines are anticipated to be visible from the asset, they are anticipated to be peripheral in views to the north towards the hill fort and to the south towards the burn. As such, the proposed development would be a minor distraction to the ability to appreciate, understand and experience the asset and its connection to its setting. It is excluded from further assessment.</p>
SM11576	Gallows Hill Cairn, 460m SSE of Mains of Lesmoir	12	6.5	Southeast	<p>The monument comprises a Bronze Age burial cairn, located on the northern slopes of the Peirk and Garrach Knowe summits. The asset derives part of its significance from its archaeological potential, with the potential to further our understanding of Bronze Age funerary practices and society.</p> <p>Furthermore, the asset draws significance from its setting. The asset is located above the Burn of Essie (0.3km to the east) and its parent burn, the Burn of Easaiche. Cairns often</p>



Designation Reference	Designation Title	Turbines Visible	Distance to closest turbine	Direction to Wind farm	Appraisal Comments
					acted as markers within the landscape and along natural routeways, such as watercourses. As such, the visibility of the cairn when approaching the asset along the watercourses contributes to the significance of the asset. Whilst the asset itself is anticipated to have views of the proposed turbines, the proposed development is not anticipated to feature in these key views along the burns when approaching the asset, instead only visible in peripheral views to the southeast. Therefore, the proposed development does not contribute to its setting and the addition of the proposed turbines to the north would not impact the ability to appreciate, understand or experience the asset. It is scoped out of further assessment.
SM11651	Newseat, hut circles and platforms 240m NNE of	13	6.1	Southeast	Scoped in for further assessment given the potential for an effect on the setting of the cultural heritage asset.
SM51	Ord, stone circle 635m WSW of	10	5.2	Southeast	Both assets comprise the remains of stone circles, both with only two remaining upstanding monoliths. Both assets are located on a low ridge of land, to the southwest of the base of Tap O' Noth and the northeast of the base of Cnoc Cailliche. Ord Burn and Den Burn run to the southeast of the assets by approximately 0.2km. The assets share the same setting and are located approximately 0.4km apart, with Ord being located to the northeast of Nether Wheedlemont. Currently, they are screened from view from each other due



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SM36	Nether Wheedlemont, stone circle 80m NNE of	8	5.1	Southeast	to forestry plantation, however, this would not have been the case during their original use and construction. These assets derive significance from their setting, which comprises their proximity to each other, their relationship with the two burns, and the lower land to the east of the monuments. Views to the west are restricted by local topography and do not significantly impact the way that the assets are understood and appreciated. Whilst some proposed turbines are anticipated to be visible from the assets, they are anticipated to be peripheral to views between the two stone circles. The proposed turbines are also anticipated to be peripheral to key views from the assets towards the burns and lowland, as well as when approaching the assets along the burns from the north. These views are not anticipated to impact the ability to appreciate, understand and experience the assets and their connection to their setting. Thus, they are scoped out of further assessment.
SM81	Lulach's Stone, standing stone and enclosure, Drumnahive Wood	2	5.8	Northeast	The asset comprises a Bronze Age standing stone located at the north end of a north-facing ridge, overlooking the Mossat Burn which runs to the north, east and west of the asset. The asset sits within an area of lowland, which is surrounded by steep hills on all sides. The asset may have acted as a marker along the Mossat Burn, or within the area of lowland, this setting provides significance for the asset. The proposed development may be peripheral to views when approaching the asset along the Mossat Burn. However, due to only two proposed turbines being visible from the asset, and limited visibility of the turbines throughout the lowland area, they are not anticipated to impact the ability to experience, appreciate or understand the asset and its connection to its setting. It is therefore scoped out of further assessment.



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SM65	Ardlair, symbol stone and adjacent standing stone, SSW of	14	5.2	Southwest	Scoped in for further assessment given the potential for an effect on the setting of the cultural heritage asset.
SM6	Auld Kirk, ring cairn 150m E of Ardgathen	14	5.8	Northwest	The monument comprises remains of a prehistoric cairn located in a pasture field to the east of Ardugathen Croft near Alford. The overlooks the River Don to the north, at approximately 680m. This setting contributes to the significance of the asset, with cairns thought to have acted as markers or points of reference when moving through a landscape. In addition to being funerary monuments. Modern urban development has greatly altered its setting to the east and south, through the construction of the village of Alford. Whilst the proposed development may be visible from the asset, or whilst approaching the asset along the river, the asset's current setting means that the proposed development will be a minor distraction within an already impacted setting. As such, the proposed development is not predicted to impact the ability to understand, appreciate, and experience the asset. It is excluded from further assessment.
SM11719	Chapel of Towie, chapel and graveyard 80m NNW of	5	9.8	Northeast	The asset comprises an irregularly shaped enclosure containing a rectangular stone building now visible as an earthen bank and stone wall. The asset is likely to date to the medieval or post-medieval periods. The asset is located in a remote setting in proximity to the river Don and surrounded by farmsteads and agriculture in the wider setting. The asset derives archaeological significance from its unexcavated remains, with the potential to further our



Designation Reference	Designation Title	Turbines Visible	Distance to closest turbine	Direction to Wind farm	Appraisal Comments
					<p>understanding of the religion and the communities of the medieval or post-medieval periods.</p> <p>The asset does have spatial associations with nearby chapels and churches, forming part of an ecclesiastical organisation centred at Towie to the west. Intervisibility between these chapels and churches does not form part of the significance of the asset and as such, the wider landscape that the asset is located within does not form part of its setting. Views of the turbines would be peripheral to the asset and would not impact its significance or an appreciation of the asset. It is excluded from further assessment.</p>
SM11378	Christ's Kirk, Kennethmont	14	7.2	Southwest	<p>The asset consists of the partly exposed but mainly grass-covered remains of the parish church of Rathmuriel. The church is dated from the late 12th century and continued in usage to the 16th century. Most of the masonry has been robbed and the remaining graveyard features have been lost to vegetation. The asset's significance primarily derives from its archaeological potential, with the potential to further our understanding of medieval religion and society through excavation. The aspect of the assets setting from which it derives some significance is the parish of Rathmuriel, for which it was the parish church. The proposed development does not form part of this local setting and as such is not anticipated to impact the ability to understand, appreciate, and experience the asset. It is excluded from further assessment.</p>
SM11394	Hill of Christ's Kirk, fort	14	7.3	Southwest	Scope in
SM11392	Asloun Castle	4	6.6	North	<p>The asset comprises a round tower formerly part of the larger building of the now ruinous Asloun Castle.</p>



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					<p>Whilst the scheduled monument primarily derives its significance from its archaeological and architectural value, the setting of the asset also contributes to its significance. The assets setting comprises its position near the base of Craig Hill, on an east-facing slope, overlooking Leochel Burn and its associated valley. The castle would have utilised its position to the west of the burn, commanding the associated valley and using the surrounding topography as a natural defence.</p> <p>Four of the proposed turbines are anticipated to be visible from the asset itself, however, these turbines are not anticipated to be visible when viewing the burn from the asset. The proposed turbines may be visible when approaching the asset from the south along the burn, however, due to the intervening modern built environment, the turbines are anticipated to be a minor distraction to the ability to appreciate the asset's defensive setting. Thus, the proposed development is not anticipated to impact the ability to appreciate, understand, or experience the asset. It is scoped out of further assessment.</p>
SM11353	Mains of Cults, pill box 600m NW of	13	8.0	South	<p>The monument is a pill box located on the corner of a public road covering a road bridge crossing the main Aberdeen-Inverness railway. Important setting elements comprise the River Bogie, its road bridge and the Old Military road which would have been its function to guard and protect. Views therefore would not be impacted by the proposed development as they are restricted to this immediate setting. The proposed development would therefore not affect the ability to appreciate or understand the assets setting. As such, the proposed development is not predicted to impact the ability to understand, appreciate, and experience the asset. It is excluded from further assessment.</p>



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SM20	Druidstone, stone circle 50m WNW of	0	6.9	West	Due to the asset falling outwith the ZTV, it is currently scoped out of further assessment. In addition, the proposed development is not anticipated to impact on the ability to understand or appreciate the shared intervisibility between contemporary assets (e.g., SM27, SM40) in the factors which contribute to their significance.
SM27	Loanend, stone circle, 200m N of	7	6.1	West	<p>The asset is a partially ruinous recumbent stone circle, with the recumbent stone lying at the southwest. The asset is located at the summit of Hawk Hill, which overlooks Gadie Burn to the north. Recumbent stone circles are unique in Scotland to Aberdeenshire, forming a network of stone circles throughout the surrounding landscape. However, these connections are intangible and spatial rather than visual, and as such the proposed development is not anticipated to impact the ability to understand the connection between these stone circles.</p> <p>The asset's setting forms part of its significance, with recumbent stone circles often framing a specific hill above the recumbent stone. In this case, it is likely framing Knock Saul, approximately 2.7km to the southwest. Whilst the proposed development is anticipated to be visible from the asset, it would not intrude within the framed view by the recumbent and as such is not anticipated to impact the ability to understand, appreciate, and experience the asset and its setting. It is excluded from further assessment.</p>
SM17	Cothiemuir Hill, stone circle	5	7.6	Northwest	The asset is a partially ruinous recumbent stone circle, with the recumbent stone lying at the south-southwest. The asset is located on a flat unnamed hilltop, which overlooks the valley of the River Don which runs to the south. Recumbent stone circles are unique in Scotland to Aberdeenshire, forming a network of stone circles throughout the



Designation Reference	Designation Title	Turbines Visible	Distance to closest turbine	Direction to Wind farm	Appraisal Comments
					<p>surrounding landscape. However, these connections are intangible and spatial rather than visual, and as such the proposed development is not anticipated to impact the ability to understand the connection between these stone circles.</p> <p>The asset's setting forms part of its significance, with recumbent stone circles often framing a specific landscape feature above the recumbent stone. Whilst this landscape feature is not discernible for the Cothiemuir Hill stone circle, the proposed development does not feature in this key view. Furthermore, the proposed development is not anticipated to feature within views towards the River Don from the asset, nor would they be visible when approaching the asset along the River Don Valley. As such, the proposed development is not anticipated to impact the ability to understand, appreciate, and experience the asset and its setting. It is excluded from further assessment.</p>
SM63	Tap o' Noth, fort	14	7.2	Southeast	Scoped in for further assessment given the potential for an effect on the setting of the cultural heritage asset.
SM84	Rhynie, three symbol stones 60m SE of Manse	1	4.0	Southeast	The asset comprises three inscribed symbol stones located within a stone and timber shelter along a rural road terminating at a church. The stones have been placed within the shelter, after being found in other places, two as foundations for the old church and one at nearby Craw Stane. The assets therefore have lost their original setting and the proposed development would therefore have no impact on setting elements. As such, the proposed development is not predicted to impact the ability to understand, appreciate, and experience the asset. It is excluded from further assessment.
SM9 and SM10	Cairn Fichlie, cairn, Glaschul	13, 12	9.4	Northeast	The monument comprises the remains of two cairns located close to each other on the northeast of Glaschul Hill.



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	Hill and Cairn Ley, cairn, Glaschul Hill				<p>The assets' settings comprise the topography of Glaschul Hill including south-eastern views over the River Don Valley. The asset's significance derives in part from its setting, as cairns are believed to have acted as way markers or boundary markers along watercourses as well as funerary monuments. Whilst the majority of the proposed turbines are anticipated to be visible from the cairns, they are not anticipated to be present within views from the cairns to the River Don and views of the proposed turbines are extremely limited when approaching the cairns from along the River Don Valley.</p> <p>Intervisibility between the assets would also be unaffected by the proposed development. Therefore, the proposed development would not impact the setting of the asset and as such, it is not predicted to impact the ability to understand, appreciate, and experience the asset. It is excluded from further assessment.</p>
SM3	Ardlair, stone circle 450m SW of	14	5.2	South	Scoped in for further assessment given the potential for an effect on the setting of the cultural heritage asset.
SM21	Dunnideer stone circle, 450m NW of Dunnideer Tower	14	8.5	Southwest	Scoped in for further assessment given the potential for an effect on the setting of the cultural heritage asset.
SM47	Stonehead, stone circle	14	8.2	Southwest	Scoped in for further assessment given the potential for an effect on the setting of the cultural heritage asset.
SM95	Hill of Dunnideer, fort, platform settlement and tower	11	8.6	Southwest	Scoped in for further assessment given the potential for an effect on the setting of the cultural heritage asset.



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SM19	Druidsfield stone circle, Montgarrie	14	5.4	Northwest	<p>The asset comprises the remains of a stone circle currently visible as two monoliths. They are located on a slight ridge, to the north of the River Don, which is located approximately 0.28km south of the asset and runs east to west. The stone circle is surrounded on the south and west by agricultural buildings and domestic buildings in the village of Montgarrie. The asset draws part of its significance from its setting, as it would have been originally visible to those passing along the River Don and its associated valley. Currently, views to the south from the asset and views from the river towards the asset in the north are obscured by large agricultural buildings, which act as a distraction to the ability to understand the asset and its connection to the setting.</p> <p>The proposed development would not be visible in views from the asset towards the river to the south, nor when approaching the asset along the valley from the southwest. The proposed development may be visible when approaching the asset from the southeast or when viewing the asset from the valley to the south. However, views of the proposed turbines are anticipated to be a minor distraction to the ability to understand, appreciate and experience the asset and its setting due to the intervening presence of the modern built environment. As such, the asset is scoped out of further assessment.</p>
SM39	North Strone, stone circle 200m SSW of	14	8.8	Northwest	<p>The asset is a partially ruinous recumbent stone circle, with the recumbent stone lying at the south of the circle. The asset is located at the top of a long slope, located at the east end of Strone Hill, which overlooks the valley of the River Don which runs to the north. Recumbent stone circles are unique in Scotland to Aberdeenshire, forming a network of stone circles throughout the surrounding landscape. However, these connections are intangible and spatial rather</p>



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					<p>than visual, and as such the proposed development is not anticipated to impact the ability to understand the connection between these stone circles.</p> <p>The asset's setting forms part of its significance, with recumbent stone circles often framing a specific landscape feature above the recumbent stone. Welfare¹⁵ notes that multiple researchers believe that for North Strone this landscape feature is Mill Maud, located approximately 7.25km to the south-southwest. The proposed development is not anticipated to feature in this key view. Furthermore, the proposed development is anticipated to be peripheral within views towards the River Don from the asset and any proposed turbines would not be visible when approaching the asset along the River Don valley. As such, the proposed development is not anticipated to impact the ability to understand, appreciate, and experience the asset and its setting. It is excluded from further assessment.</p>
SM40	Old Keig, stone circle 250m NW of	14	6.0	Northwest	<p>The asset is a partially ruinous recumbent stone circle, with the recumbent stone lying at the southwest. The asset is located on spur to the southwest of the Hill of Airlie, which overlooks the valley of the River Don which runs to the south. Recumbent stone circles are unique in Scotland to Aberdeenshire, forming a network of stone circles throughout the surrounding landscape. However, these connections are intangible and spatial rather than visual, and as such the proposed development is not anticipated to impact the ability to understand the connection between these stone circles.</p>

¹⁵ Welfare, A. (2011) Great Crowns of Stone.



Designation Reference	Designation Title	Turbines Visible	Distance to closest turbine	Direction to Wind farm	Appraisal Comments
					The asset's setting forms part of its significance, with recumbent stone circles often framing a specific landscape feature above the recumbent stone. Whilst this landscape feature is not discernible for Old Keig, the proposed development does not feature in this key view. Furthermore, the proposed development is not anticipated to feature within views towards the River Don from the asset. The proposed development may be visible when approaching the asset from along the River Don Valley, but these views are likely to be peripheral and would be a minor distraction. As such, the proposed development is not anticipated to impact the ability to understand, appreciate, and experience the asset and its setting. It is excluded from further assessment.
SM69	Craw Stane, symbol stone and enclosure 575m E of Mains of Rhynie	9	3.9	Southeast	<p>The asset is a class 1 Pictish symbol stone located on a northeast facing slopes of quarry hill, overlooking the River Bogie to the east. The asset is thought to still be in its original location, however, it is now set within a concrete base.</p> <p>The asset derives part of its significance from its setting. The asset is visible along the path of the river, from both the north and south, possibly acting as a marker within the landscape. Furthermore, the asset sits within a wider landscape of Pictish symbol stones, all within the vicinity of the village of Rhynie. Whilst some of these stones are in their original location (SM11869), some have been moved to new locations and do not retain their original setting. The proposed development is not anticipated to be present within views between any of the symbol stones surrounding Rhynie that are still in their original setting.</p> <p>Whilst nine proposed turbines are anticipated to be visible from the proposed asset, these turbines are anticipated to be peripheral to views from the asset towards the river. The</p>



Designation Reference	Designation Title	Turbines Visible	Distance to closest turbine	Direction to Wind farm	Appraisal Comments
					<p>ZTV indicates that there would be limited to no visibility of the proposed turbines when approaching the symbol stone along the path of the river, from both the northeast and southwest.</p> <p>Thus, the proposed development is not anticipated to impact the ability to appreciate, understand and experience the asset and its setting. It is scoped out of further assessment.</p>
SM33	Mill of Noth, standing stones 150m ENE of	11	5.1	Southeast	<p>The stones are located on a fairly flat plateau atop the summit of the Mill of Noth and overlook the River Bogie to the immediate east. It also shares an intangible relationship with a number of standing stone and recumbent stone circles within the landscape, such as Corrstone Wood Stone Circle 1km to the southeast, Ord Stone Circle (SM51) and Nether Wheedlemont Stone circle (SM36), located upstream from the tributary passing the Mill of Noth standing stones.</p> <p>The proposed development would introduce up to 11 visible turbines within the views southeast of the asset; the views of these turbines would cause no effects upon the ability to discern the asset's setting with the River Bogie, along its approach within the valley or with its intangible relationships with other monuments which may be contemporary. The ability to understand, appreciate and experience the asset's setting would remain intact and therefore has been scoped out of further assessment.</p>
SM15	Corrstone Wood, stone circle	13	4.2	South	<p>The asset is a partially ruinous recumbent stone circle, with the recumbent stone lying at the southwest. The asset is located at the summit of Corrstone Wood, measuring 230m aOD. The asset overlooks the surrounding landscape, particularly the River Bogie to the north and west.</p> <p>The asset's setting forms part of its significance, with recumbent stone circles often framing a specific landscape</p>



Designation Reference	Designation Title	Turbines Visible	Distance to closest turbine	Direction to Wind farm	Appraisal Comments
					<p>feature above the recumbent stone, in this case it likely frames Quarry Hill, c.2.6km to the southwest. The asset may have had a tangible or intangible relationship with the Mill of Noth standing stones, less than 1km to the northwest and located next to the River Bogie and a tributary.</p> <p>The proposed development does not feature in views over the recumbent. Furthermore, the proposed development is not anticipated to feature within views towards the River Bogie or the Mill of Noth (SM33) from the asset, nor would they be visible when approaching the asset along the River Bogie valley. As such, the proposed development is not anticipated to impact the ability to understand, appreciate, and experience the asset and its setting. It is excluded from further assessment.</p>
SM12	Candle Stane, stone circle 380m E of Coldhome	14	9.0	Southwest	Scoped in for further assessment given the potential for an effect on the setting of the cultural heritage asset.
SM11522	Foggieburn, palisaded enclosure 325m NNE of	14	8.3	Southwest	<p>The asset comprises a prehistoric palisaded enclosure. A sub-circular narrow trench and encloses an area of 30m by 26m The assets contributing aspects of its setting is its location on the western slopes of Gallow's Hill overlooking the valley to the southwest containing The Shevock watercourse, and proximity to Foggie Burn shortly west. The location would have provided access to a water source, and a defensible position within the valley with wide views and Gallows Hill to the east as a natural defence.</p> <p>The ZTV indicates that 14 of the proposed turbines would be visible from the asset. Any views of the turbines to the south would not affect the contributing aspects of setting; the relationship of the asset and its defensive position in the</p>



Designation Reference	Designation Title	Turbines Visible	Distance to closest turbine	Direction to Wind farm	Appraisal Comments
					landscape would remain unaffected. The ability to understand, experience and appreciate the asset's setting would remain intact, and therefore it is scoped out of further assessment.
SM11510	Hill of Newleslie, hillfort, 400m N of Cotetown	14	4.6	Southwest	Scoped in for further assessment given the potential for an effect on the setting of the cultural heritage asset.
SM11621	Cairn Head, cairn	0	8.2	Northeast	Due to the asset falling outwith the ZTV, it is currently scoped out of further assessment. In addition, the proposed development is not anticipated to impact on the ability to understand or appreciate the shared intervisibility between contemporary assets (e.g., SM10, SM9) in the factors which contribute to their significance.
SM11626	Pitprone, two hut circles 240m NNW of	0	8.6	Northeast	Due to the asset falling outwith the ZTV, it is currently scoped out of further assessment. In addition, the proposed development is not anticipated to impact on the ability to understand or appreciate the shared intervisibility between contemporary assets (e.g., SM11621) in the factors which contribute to their significance.
SM11574	Tofthills, cupmarked and cross-incised stone	14	3.9	Southwest	<p>The monument comprises the upper fragment of a block of granite stone bearing prehistoric cup marks and an early medieval incised cross. The stone has been moved from its original setting part of the foundation of the Tofthills barn and subsequently incorporated into the dyke. The stone now stands on a grass verge of the farmstead. A 19th century report suggests the stone came from the Airdlair stone circle to the north (SM3).</p> <p>The monument's significance derives from its archaeological interests; however, its setting no longer contributes to its</p>



Designation Reference	Designation Title	Turbines Visible	Distance to closest turbine	Direction to Wind farm	Appraisal Comments
					significance as it is no longer in its contemporary place. Therefore, the proposed turbines to the north would not impact the ability to appreciate, understand or experience the asset. It is scoped out of further assessment.
SM11681	Cnoc Cailliche, fort 360m WSW of Upper Wheedlemont	13	5.3	Southeast	Scoped in for further assessment given the potential for an effect on the setting of the cultural heritage asset.
SM11658	Currach Cottage, hut circles 330m NE of	10	5.6	Southeast	<p>The asset comprises the remains of two potentially late prehistoric hut circles visible as upstanding earthworks. The huts measure approximately 12m in diameter and are partially overlying each other suggesting a potential phased settlement.</p> <p>The asset contributing setting is its elevated position upon a low-lying ridge stretching northwest from Wheedlemont Hill, the Burn of Templand to the north, and could hold contemporaneous archaeological and setting interests with the Cnoc Cailliche, a fort located (SM11681) atop Wheedlemont Hill. The main approach to the asset is likely from the south where the slopes are less steep.</p> <p>The ZTV analysis indicates that up to 10 turbines may be visible from the asset. Visibility of the proposed turbines would cause no effect to the asset's setting; its approach from the south would have no visibility of the turbines, and views of the turbines within the Site would not affect the ability to understand, appreciate and experience the asset's setting in an advantageous position, proximate to a water source, and potentially the fort to the southeast. Therefore, it has been scoped out of further assessment.</p>
SM11724	Limekiln Braes, kiln, quarries and	6	4.6	North	The monument comprises a limekiln, associated trackway and quarry face dating from the late 18 th to early 19 th



Designation Reference	Designation Title	Turbines Visible	Distance to closest turbine	Direction to Wind farm	Appraisal Comments
	platforms 650m NW of Bar na Beinn				<p>century. The asset is located on a steep east facing slope of the hill of Towanreef. The asset has archaeological interest as a well-preserved example of a limekiln with associated immersion pit and structures located upon a platform. It has the potential to contribute further to our understanding of the Improvement Period in Scotland. The asset's contributing aspect of setting is its intangible relationship with the natural geography and the residual remains of quarried landscape, as it is the reason for the asset's location.</p> <p>Whilst there is visibility of up to six turbines from the proposed development, this would not impede the ability to appreciate, understand or experience the monument or its setting. Therefore, it is scoped out of further assessment.</p>
SM60	Muir of Kildrummy, souterrains 230m W of and 350m SSW of	3	6.3	East	<p>The monument comprises two designated areas of souterrain of prehistoric date situated within copses west of Muir of Kildrummy. Both souterrains have cup marked stones within. The asset's designated areas have a high level of archaeological interest which contribute primarily to their significance.</p> <p>The asset's contributing aspects of setting are within a low-lying valley containing Mossat Burn, which passes to the east and west of the assets, with its course now somewhat altered by later developments. It demonstrates the use of low-lying wet soils for prehistoric agricultural development. The views in which the turbines would be located do not contribute to the assets setting.</p> <p>The ZTV indicates that three turbines would be visible from the assets. Visibility of the proposed turbines would not cause any effects to the asset's setting; it would not prevent the ability to understand, appreciate or experience the asset</p>



Designation Reference	Designation Title	Turbines Visible	Distance to closest turbine	Direction to Wind farm	Appraisal Comments
					within the valley and its chosen location. Therefore it has been scoped out of further assessment.





Appendix 05. Figures

Figure 1.1 Site Location

Figure 2.1 Indicative Turbine Layout

Figure 4.1 LVIA Study Area

Figure 4.2a Blade Tip ZTV with Proposed Viewpoints

Figure 4.2b Blade Tip ZTV with Proposed Viewpoints (detailed area)

Figure 4.3a Landscape Character and Blade Tip ZTV

Figure 4.3b Blade Tip ZTV with Landscape Character Key

Figure 4.4 Landscape Designations & Wildland with Blade Tip ZTV

Figure 4.5 Visual Receptors and Blade Tip ZTV

Figure 4.6 Cumulative Wind Farms

Figure 4.7 Hub Height ZTV with Proposed Viewpoints

Figure 5.1 Ornithological Study Areas, Vantage Points and Viewsheds

Figure 5.2 Ornithological Designated Sites Within 20km

Figure 6.1 Ecological Survey Areas

Figure 6.2 Ecological Designated Sites & Ancient Woodland Within 5km

Figure 7.1 Archaeology and Cultural Heritage Designated Assets

Figure 9.1 Noise Impact Assessment Study Area

Figure 10.1 Peat Depth

Figure 10.2 Peat Depth Over 0.5m

Environmental Impact Assessment Scoping Report

Correen Hills Wind Farm

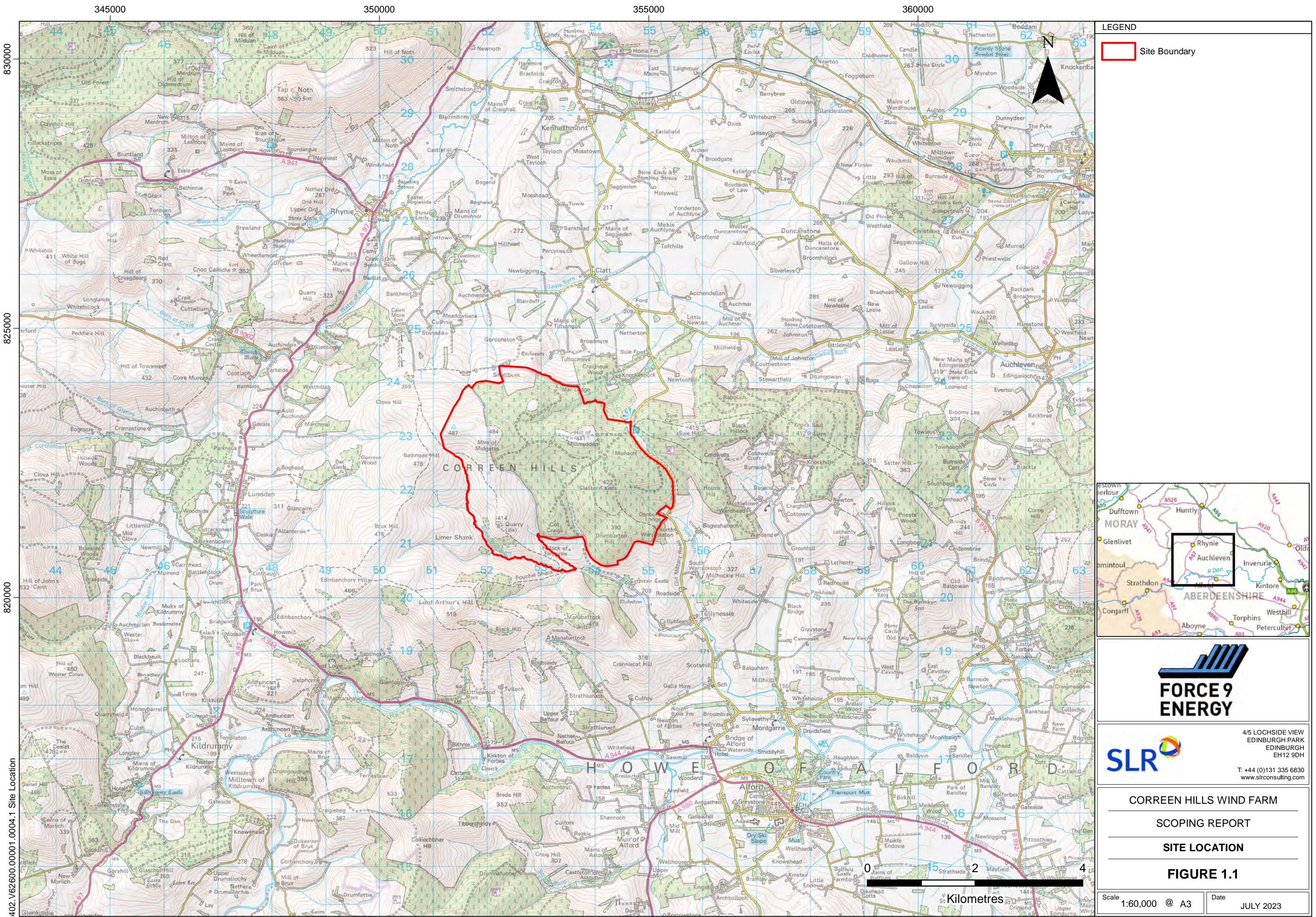
Force 9 Energy Partners LLP

SLR Project No.: 402.V62600.00001

16 October 2023



Making Sustainability Happen



LEGEND

Site Boundary



FORCE 9 ENERGY

SLR

4/5 LOCHSIDE VIEW
EDINBURGH PARK
EDINBURGH
EH12 9DH

T: +44 (0)131 335 6830
www.slrconsulting.com

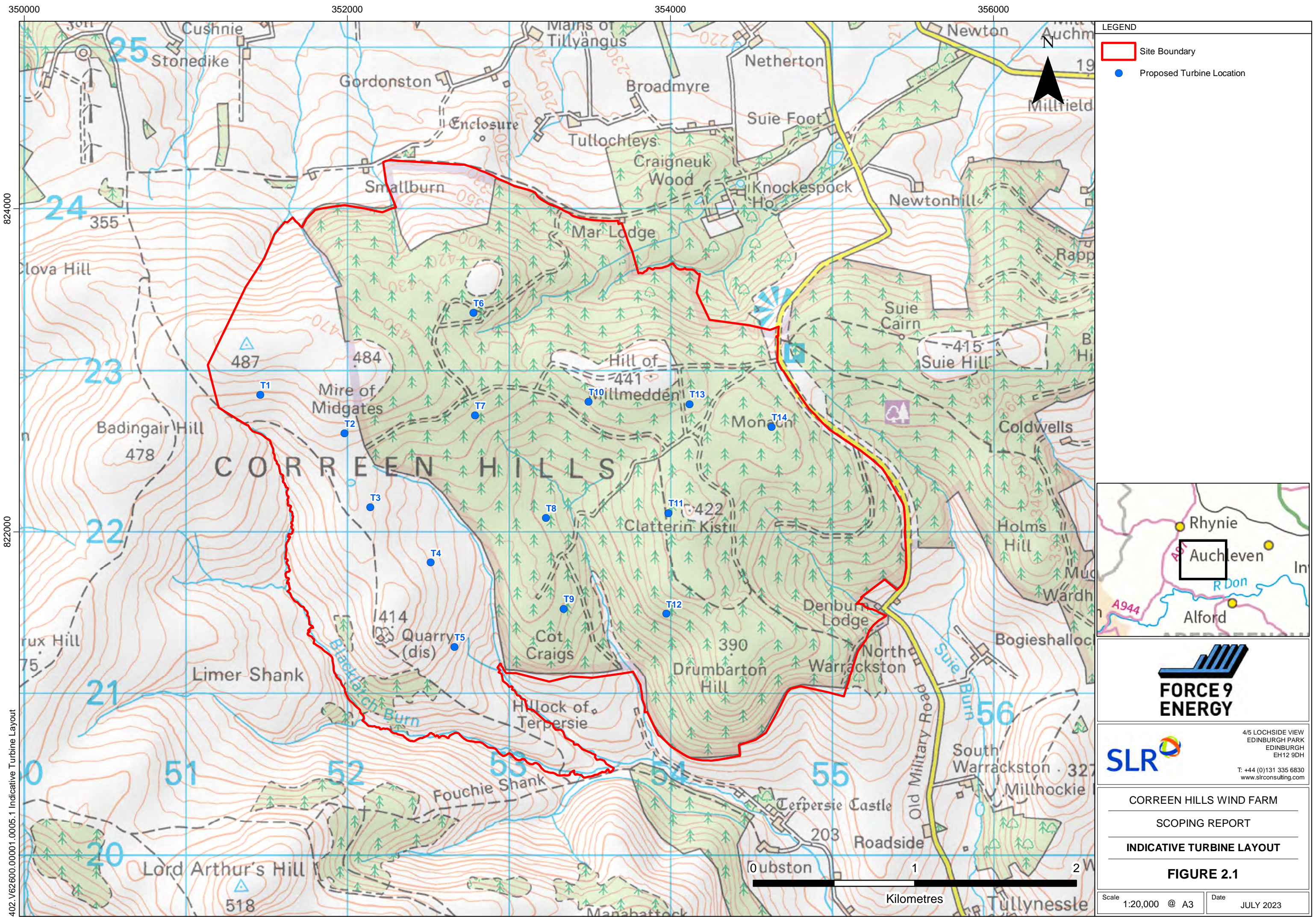
CORREEN HILLS WIND FARM

SCOPING REPORT

SITE LOCATION

FIGURE 1.1


Scale 1:60,000 @ A3 Date JULY 2023




LEGEND

- Site Boundary
- Proposed Turbine Location





FORCE 9 ENERGY



4/5 LOCHSIDE VIEW
EDINBURGH PARK
EDINBURGH
EH12 9DH
T: +44 (0)131 335 6830
www.slrconsulting.com

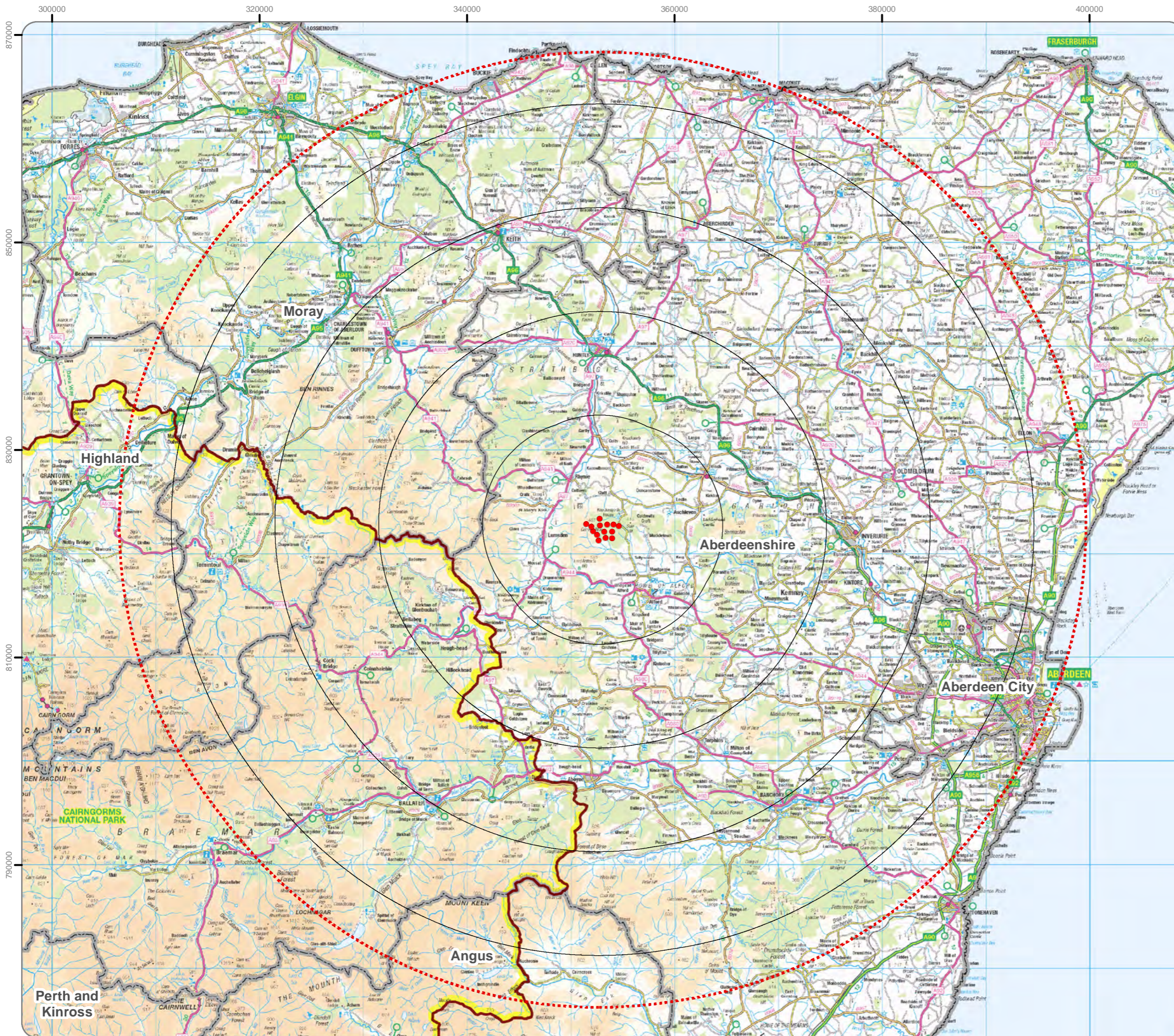
CORREEN HILLS WIND FARM

SCOPING REPORT

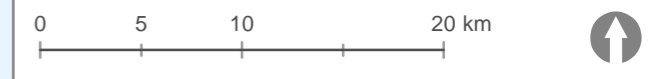
INDICATIVE TURBINE LAYOUT

FIGURE 2.1

Scale 1:20,000 @ A3	Date JULY 2023
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- Legend**
- Proposed Turbine Location
 - 10km Radii
 - 45km Study Area
 - ▭ Cairngorms National Park
 - ▭ Local Authority Boundary



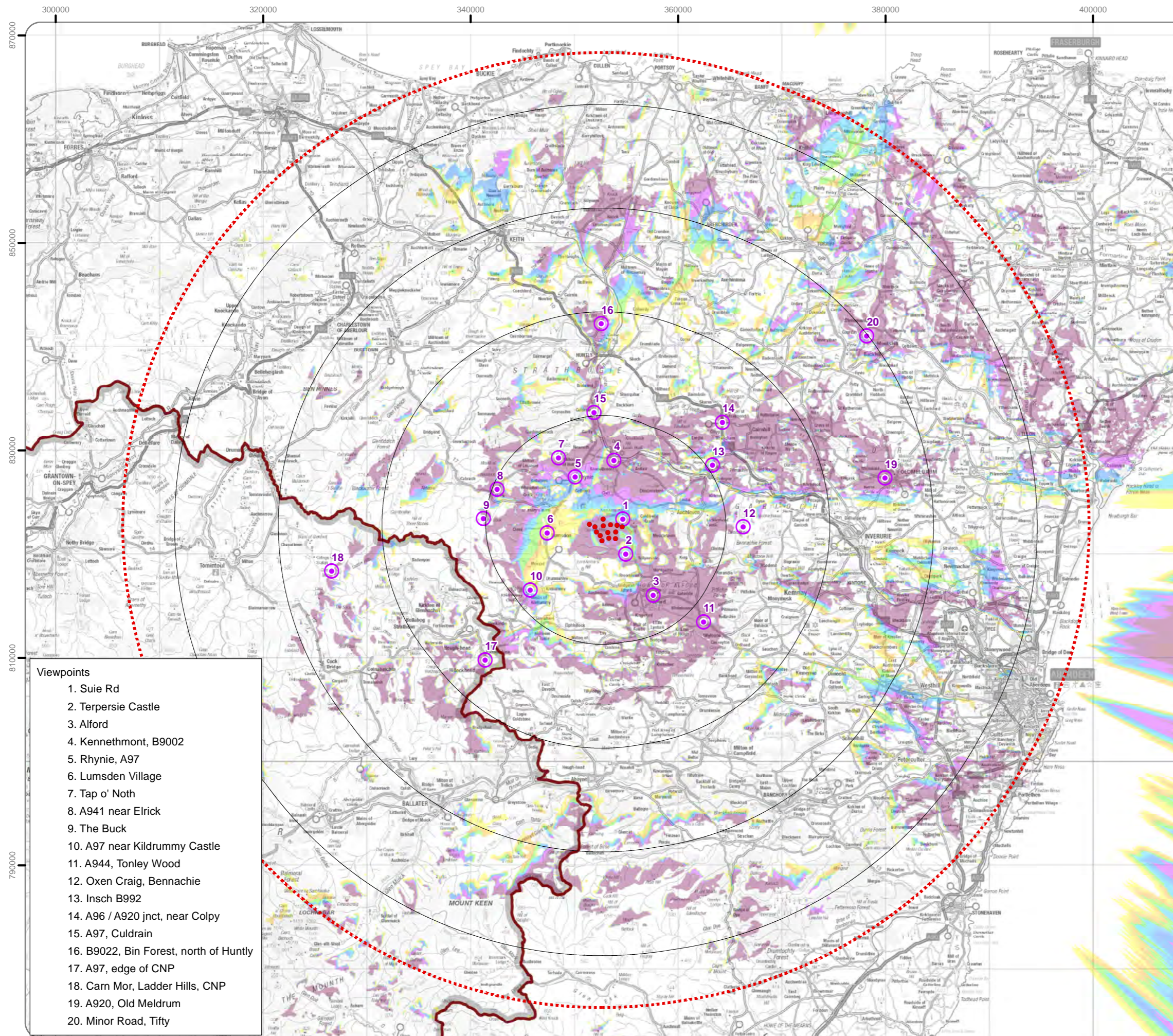
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Figure 4.1
LVIA Study Area

Ref No: 211662	Created By: NL	Rev No: 1
Scale: 1:375,000	Drawing Size: A3	Date: 12/10/2023
Coordinate System: BNG OS GB 1936 Datum		



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Legend

- Proposed Turbine Location
- ⋯ 45km Study Area
- 10km Radii
- ▭ Cairngorms National Park
- ⊙ Viewpoints

Blade Tip ZTV

No. of Blade Tips Theoretically Visible

- 1 - 2
- 3 - 4
- 5 - 6
- 7 - 8
- 9 - 10
- 11 - 12
- 13 - 14

- Viewpoints**
1. Suie Rd
 2. Terspersie Castle
 3. Alford
 4. Kennethmont, B9002
 5. Rhyrie, A97
 6. Lumsden Village
 7. Tap o' Noth
 8. A941 near Elrick
 9. The Buck
 10. A97 near Kildrummy Castle
 11. A944, Tonley Wood
 12. Oxen Craig, Bennachie
 13. Insch B992
 14. A96 / A920 jnct, near Colpy
 15. A97, Culdrain
 16. B9022, Bin Forest, north of Huntly
 17. A97, edge of CNP
 18. Carn Mor, Ladder Hills, CNP
 19. A920, Old Meldrum
 20. Minor Road, Tifty

Blade tip:	200m	Observer height:	2m
DTM:	OS Terrain 50 DTM	Surface features:	Excluded
DTM resolution:	50m	Earth curvature:	Included



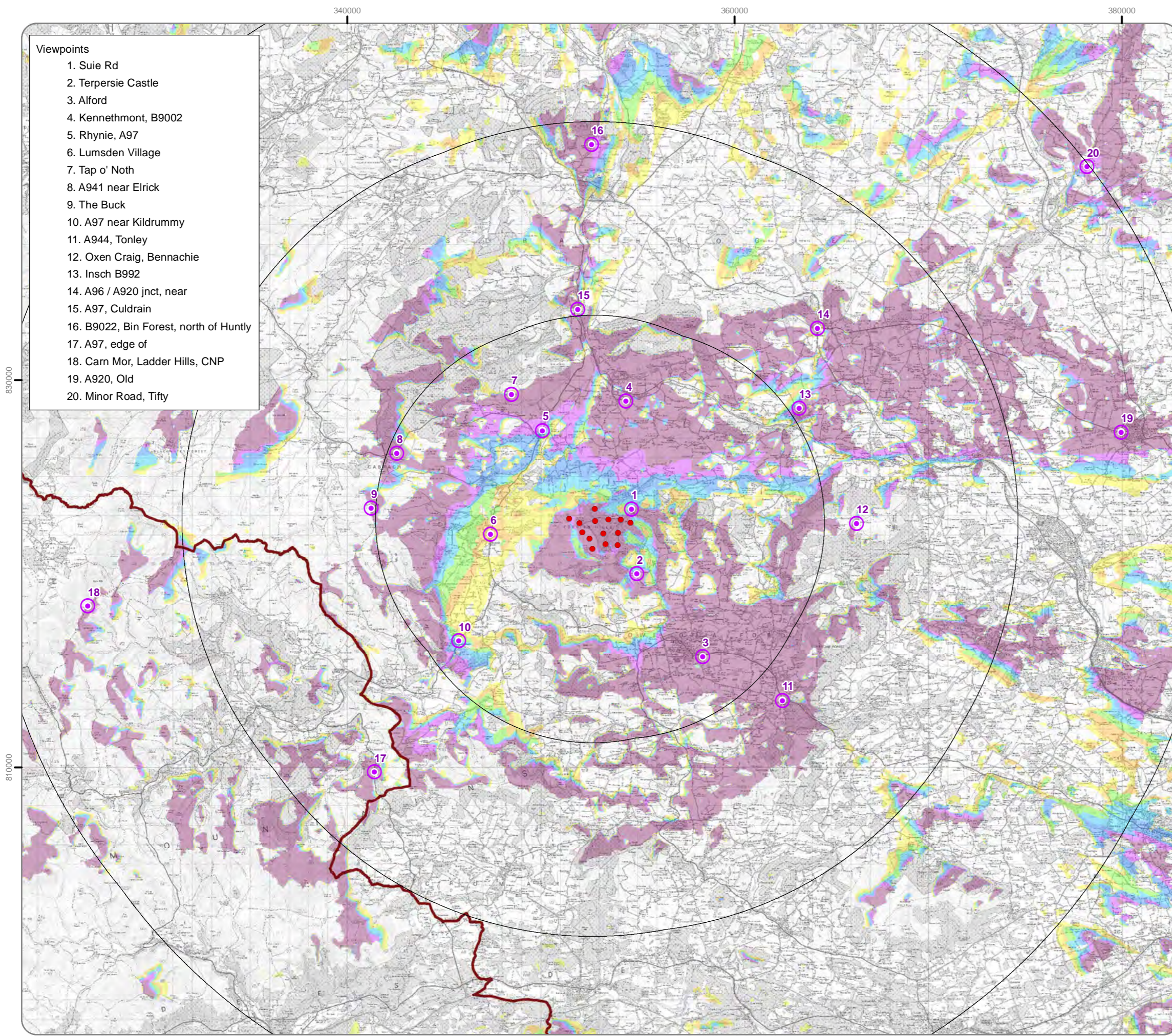
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Figure 4.2a
Blade tip ZTV with Proposed Viewpoints

Ref No:	211662	Created By:	RA	Rev No:	2
Scale:	1:375,000	Drawing Size:	A3	Date:	24/08/2023
Coordinate System:	BNG OS GB 1936 Datum				



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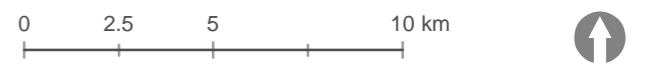


- Viewpoints**
1. Suie Rd
 2. Terpersie Castle
 3. Alford
 4. Kennethmont, B9002
 5. Rhyrie, A97
 6. Lumsden Village
 7. Tap o' Noth
 8. A941 near Elrick
 9. The Buck
 10. A97 near Kildrummy
 11. A944, Tonley
 12. Oxen Craig, Bennachie
 13. Insch B992
 14. A96 / A920 jnct, near
 15. A97, Culdrain
 16. B9022, Bin Forest, north of Huntly
 17. A97, edge of
 18. Carn Mor, Ladder Hills, CNP
 19. A920, Old
 20. Minor Road, Tifty

- Legend**
- Proposed Turbine Location
 - 45km Study Area
 - 10km Radii
 - ▭ Cairngorms National Park
 - Viewpoints

- Blade Tip ZTV**
- No. of Blade Tips Theoretically Visible**
- 1 - 2
 - 3 - 4
 - 5 - 6
 - 7 - 8
 - 9 - 10
 - 11 - 12
 - 13 - 14

Blade tip:	200m	Observer height:	2m
DTM:	OS Terrain 50 DTM	Surface features:	Excluded
DTM resolution:	50m	Earth curvature:	Included



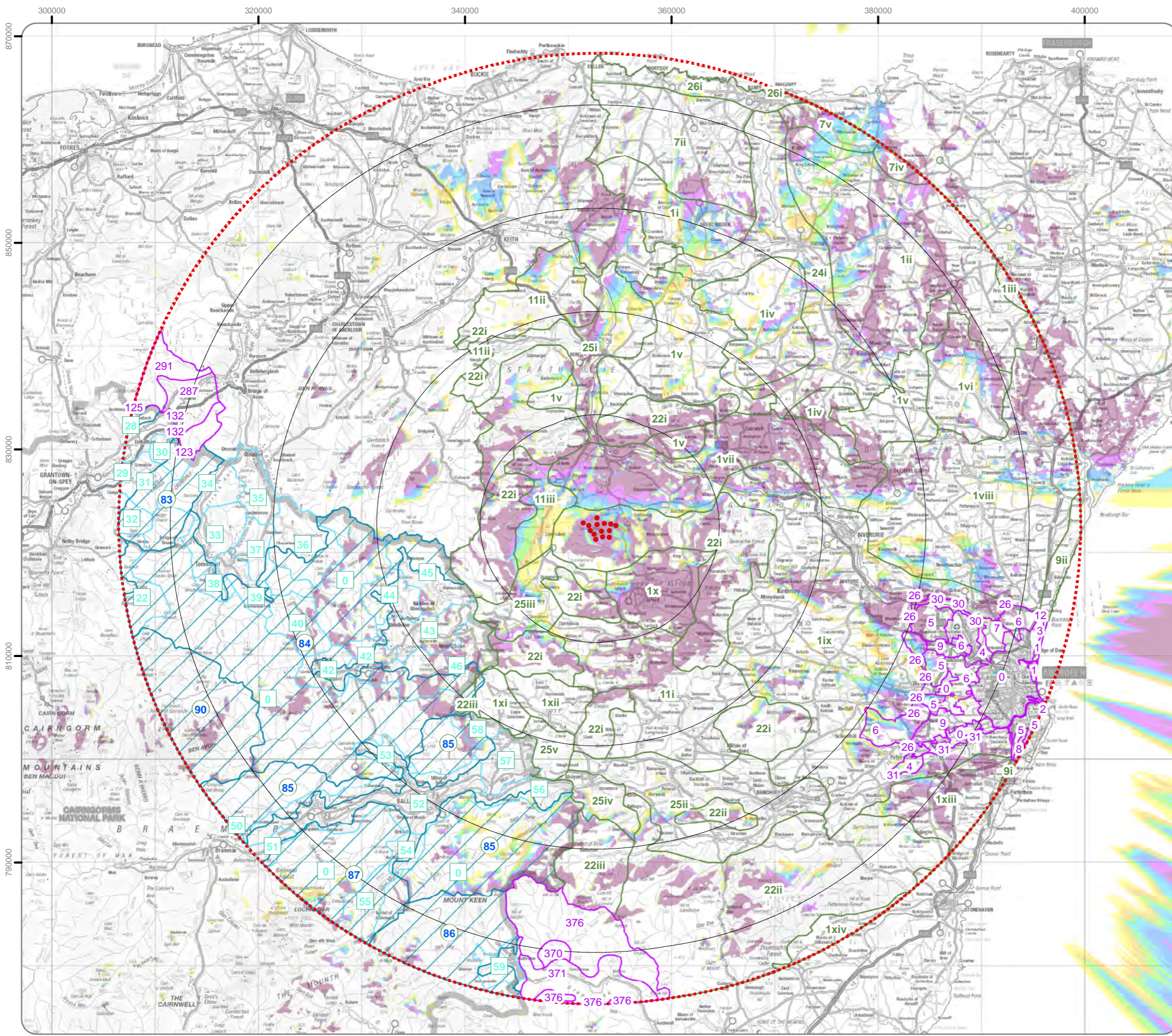
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Figure 4.2b
Blade tip ZTV with Proposed Viewpoints (detailed area)

Ref No:	211662	Created By:	RA	Rev No:	2
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Coordinate System:	BNG OS GB 1936 Datum				



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Legend

- Proposed Turbine Location
- 10km Radii
- ⊙ 45km Study
- ▭ Aberdeenshire Landscape Character
- ▭ Cairngorms Landscape Character Assessment 2009 - Straths and Glens
- ▭ Cairngorms Landscape Character Assessment 2009 - Uplands
- ▭ Moray Landscape Character
- ▭ NatureScot Landscape Character

Blade tip:	200m	Observer height:	2m
DTM:	OS Terrain 50 DTM	Surface features:	Excluded
DTM resolution:	50m	Earth curvature:	Included



CORREEN HILLS

Figure 4.3a
Landscape Character and Blade Tip ZTV

Ref No:	211662	Created By:	RA	Rev No:	2
Scale:	1:375,000	Drawing Size:	A3	Date:	24/08/2023
Coordinate System:	BNG OS GB 1936 Datum				



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Cairngorms Landscape Character Assessment 2009 - Straths and Glens

- 0.Unassessed
- 22.Abernethy Forest
- 28.Lower Strathspey: Auchnagallin and Blar Mòr
- 29.Lower Strathspey: Strathspey
- 30.Lower Strathspey: Burn of Dalvey Glen
- 31.Lower Strathspey: Haughs of Cromdale
- 32.Lower Strathspey: Tomintoul Road
- 33.Strath Avon: Mid Strath Avon
- 34.Strath Avon: Lower Strath Avon
- 35.Glen Livet
- 36.Glen Livet: Braes of Glen Livet
- 37.Glen Livet: Inchnacape
- 38.Glen Livet: Delnabo
- 39.Glen Livet: Conglass Water
- 40.The Lecht
- 42.Strathdon: Corgarff and Cockbridge
- 42.Strathdon: Upper Strathdon
- 43.Strathdon: Mid Strathdon
- 44.Strathdon: Glen Nocht
- 45.Strathdon: Glen Buchat
- 46.Strathdon: Waters of Deskry, Carvie and Conrie
- 50.Upper Deeside: Invercauld
- 51.Upper Deeside: Invercauld Bridge to Inver
- 52.Upper Deeside: Inver to Cambus o' May
- 53.Upper Deeside: Glen Gairn
- 54.Upper Deeside: Lower Glen Muick
- 55.The White Mounth: Upper Glen Muick
- 56.Upper Deeside: Glen Tanar
- 57.Muir of Dinnet
- 58.Cromar Farmlands
- 59.Angus Glens: Upper Glen Esk

Cairngorms Landscape Character Assessment 2009 - Uplands

- 82.The Strathdearn Hills
- 83.Hills of Cromdale
- 84.The North Eastern Hills
- 85.The North Eastern Hills: Deeside Hills
- 86.The Angus Glens Uplands
- 87.The White Mounth
- 90.Cairngorms Central Massif

Moray Wind Energy Landscape Sensitivity Study 2023

- 1.Coastal Margin
- 2.Coastal Farmland
- 3.Rolling Coastal Farmland
- 4.Rolling Farmlands and Forest
- 6.Broad Farmed Valley
- 7.Narrow Farmed Valley
- 8.Upland Farmland
- 9.Low Forested Hills
- 10.Upland Moorland and Forestry
- 11.Open Rolling Uplands
- 12.Rolling Forested Hills
- 13.Open Upland with Steep Slopes
- 14.Open Uplands with Settled Glens

NatureScot Landscape Character

- 0.Urban
- 1.Beaches, Dunes and Links - Aberdeen
- 2.Cliffs and Rocky Coast - Aberdeen
- 3.Coastal Farmed Plain
- 4.River Valley - Aberdeen
- 5.Low Hills - Aberdeen
- 6.Undulating Open Farmland
- 7.Undulating Wooded Farmland - Aberdeen
- 8.Urban and Farmland
- 9.Wooded Estates - Aberdeen
- 12.Beaches, Dunes and Links - Aberdeenshire
- 17.Coastal Agricultural Plain - Aberdeenshire
- 26.Wooded Estates - Aberdeenshire
- 30.Narrow Winding Farmed Valley
- 31.Broad Wooded and Farmed Valley
- 123.Smooth Rounded Hills - Cairngorms
- 125.Rolling Uplands - Cairngorms
- 132.Undulating Wooded Farmland - Cairngorms
- 287.Broad Farmed Valley
- 291.Open Rolling Upland
- 292.Open Upland
- 370.Upper Upland Glens
- 371.Mid Upland Glens
- 376.Summits and Plateaux

Aberdeenshire Landscape Character - Aberdeenshire Council

Agricultural Heartland

- 1i.Knockhill and Aberchirder
- 1ii.Agricultural Heartland
- 1iii.Wooded Estate around Old Deer
- 1iv.Upland Ridges South of the Deveron
- 1ix.Central Wooded Estates
- 1v.Northern Rolling Lowlands
- 1vi.Ythan Strath Farmland
- 1vii.Insch Basin
- 1viii.Formantine Lowlands
- 1x.Howe of Alford
- 1xi.Cromar Farmlands
- 1xii.Howe of Cromar
- 1xiii.Kincardine Plateau
- 1xiv.Garvock and Glenbervie

Coastal Farmland

- 7ii.Western Coastal Farmland
- 7iv.Sandstone Ridges and Valleys South of Troup
- 7v.Coastal Farmland East of Macduff

Moorland

- 11i.The Cromar Uplands
- 11ii.Daugh of Cairnborrow
- 11iii.Lumsden Valley
- 22i.Grampian Outliers
- 22ii.The Mounth
- 22iii.The North Eastern Ridges

Coast

- 26i.Cliffs of the North and South East Coasts
- 9i.Kincardine Cliffs
- 9ii.Formantine Links and Dunes

Straths & River Valleys

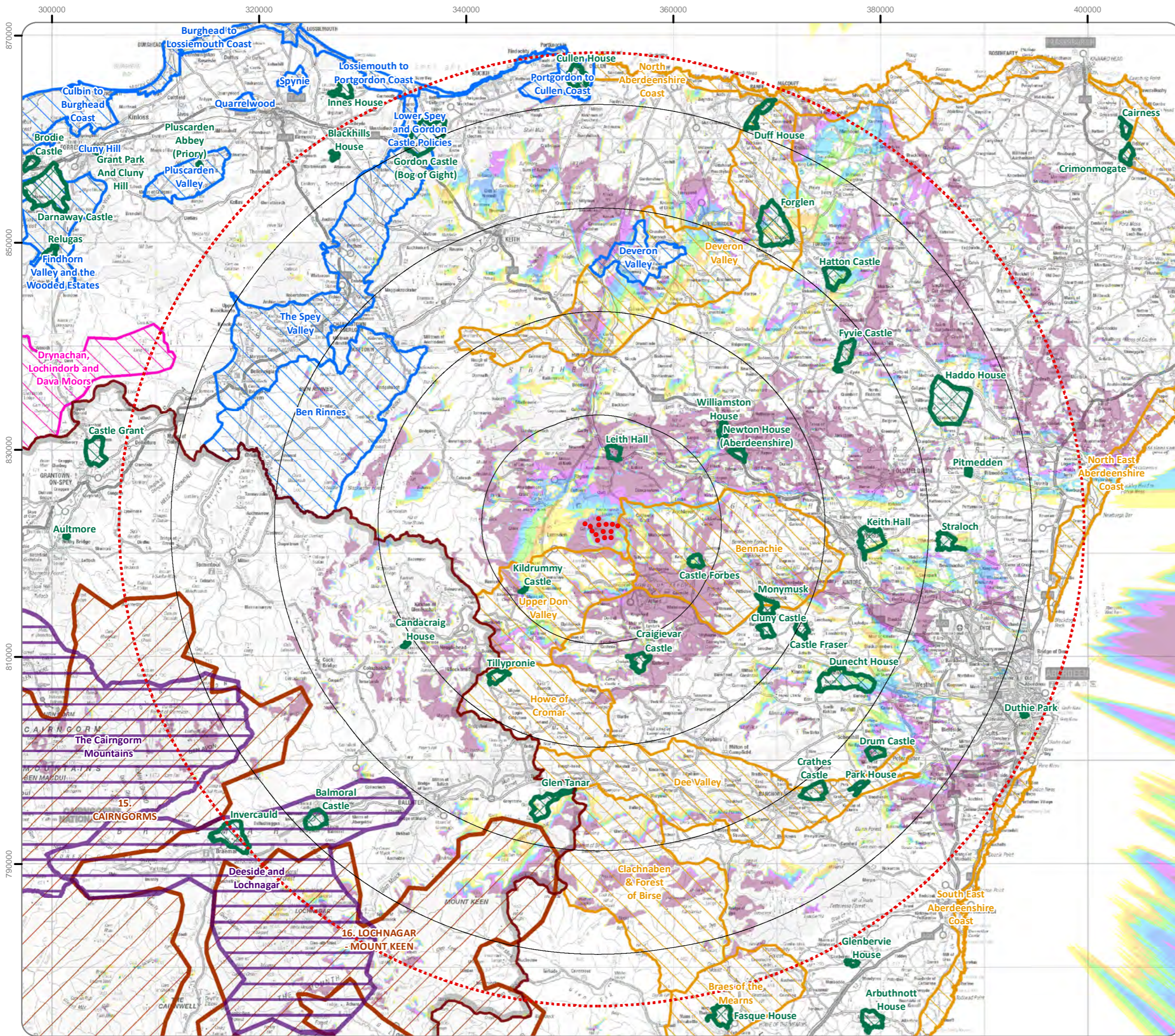
- 24i.Deveron & Upper Ythan Valleys
- 25i.Deveron and Bogie Straths
- 25ii.Deeside
- 25iii.Donside
- 25iv.Upper Deeside Estates
- 25v.Upper Deeside Estates

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Figure 4.3b
Blade Tip ZTV with Landscape Character Key

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Coordinate System: BNG OS GB 1936 Datum		

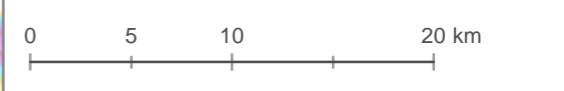




- Legend**
- Proposed Turbine Location
 - 10km Radii
 - ⊙ 45km Study Area
 - ▭ Cairngorms National Park
 - ▭ Garden and Designed Landscape
 - ▭ Moray Special Landscape Area
 - ▭ National Scenic Area
 - ▭ Wild Land Area (2014)
 - ▭ Moray Special Landscape Area
 - ▭ Aberdeen Special Landscape Area
 - ▭ Highland Special Landscape Area

- Blade Tip ZTV**
- No. of Blade Tips Theoretically Visible
- 1 - 2
 - 3 - 4
 - 5 - 6
 - 7 - 8
 - 9 - 10
 - 11 - 12
 - 13 - 14

Blade tip:	200m	Observer height:	2m
DTM:	OS Terrain 50 DTM	Surface features:	Excluded
DTM resolution:	50m	Earth curvature:	Included



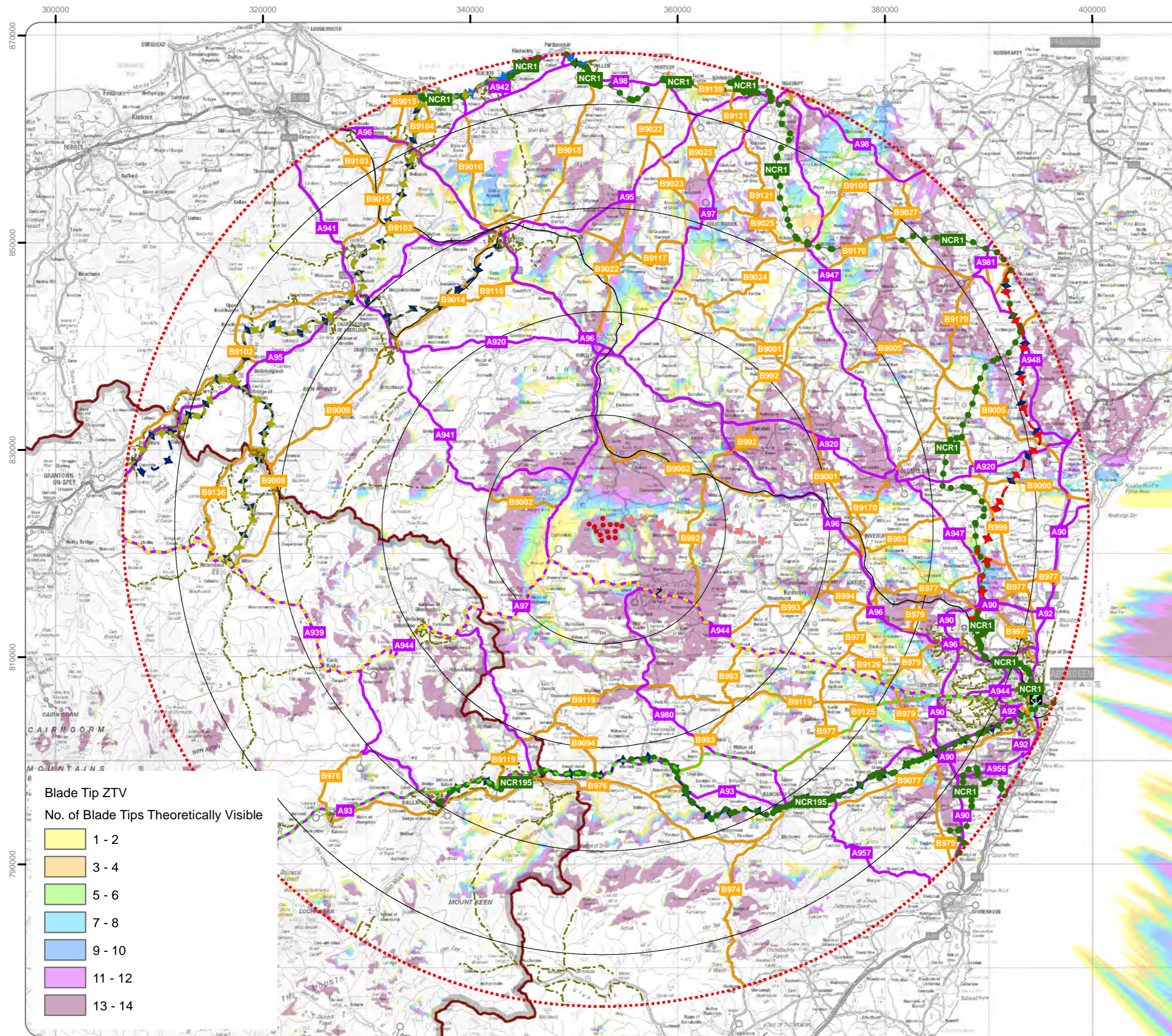
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Figure 4.4
Landscape Designations and Wildland with Blade Tip ZTV

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Scale:	1:375,000	Drawing Size:	A3	Date:	12/10/2023
Coordinate System:	BNG OS GB 1936 Datum				



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Legend

- Proposed Turbine Location
- 10km Radii
- 45km Study Area
- Cairngorms National Park
- Formartine and Buchan Way
- Moray Coast Trail
- Speyside Way
- Gordon Way
- Deeside Way
- Ferry Port
- Ferry Route
- National Cycle Network
- National Cycle Network Link
- Core Path
- Railway
- Railway Tunnel
- Primary and A Road
- B Road
- Highland Tourist Route
- Deeside Tourist Route
- Angus Coastal Route

Blade tip:	200m	Observer height:	2m
DTM:	OS Terrain 50 DTM	Surface features:	Excluded
DTM resolution:	50m	Earth curvature:	Included

0 5 10 20 km

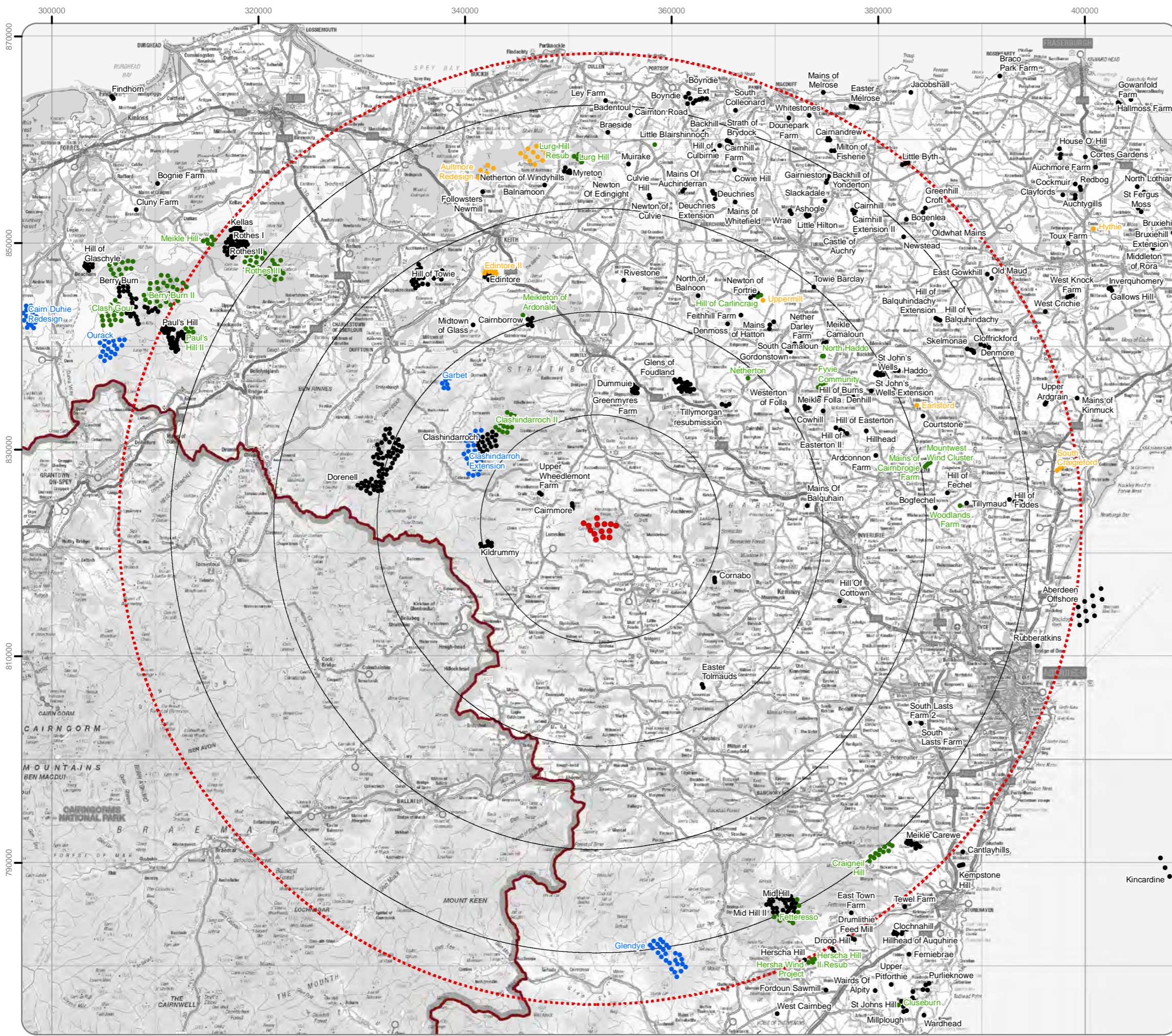
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Figure 4.5
Visual Receptors and Blade Tip ZTV

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Scale: 1:375,000	Drawing Size: A3	Date: 12/10/2023
Coordinate System: BNG OS GB 1936 Datum		



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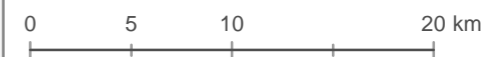


- Legend**
- Proposed Turbine Location
 - 45km Study Area
 - 10km Radii
 - ▭ Cairngorms National Park

Cumulative Wind Farms

Status

- Operational & Under Construction
- Consented
- Appeal; Application
- Scoping

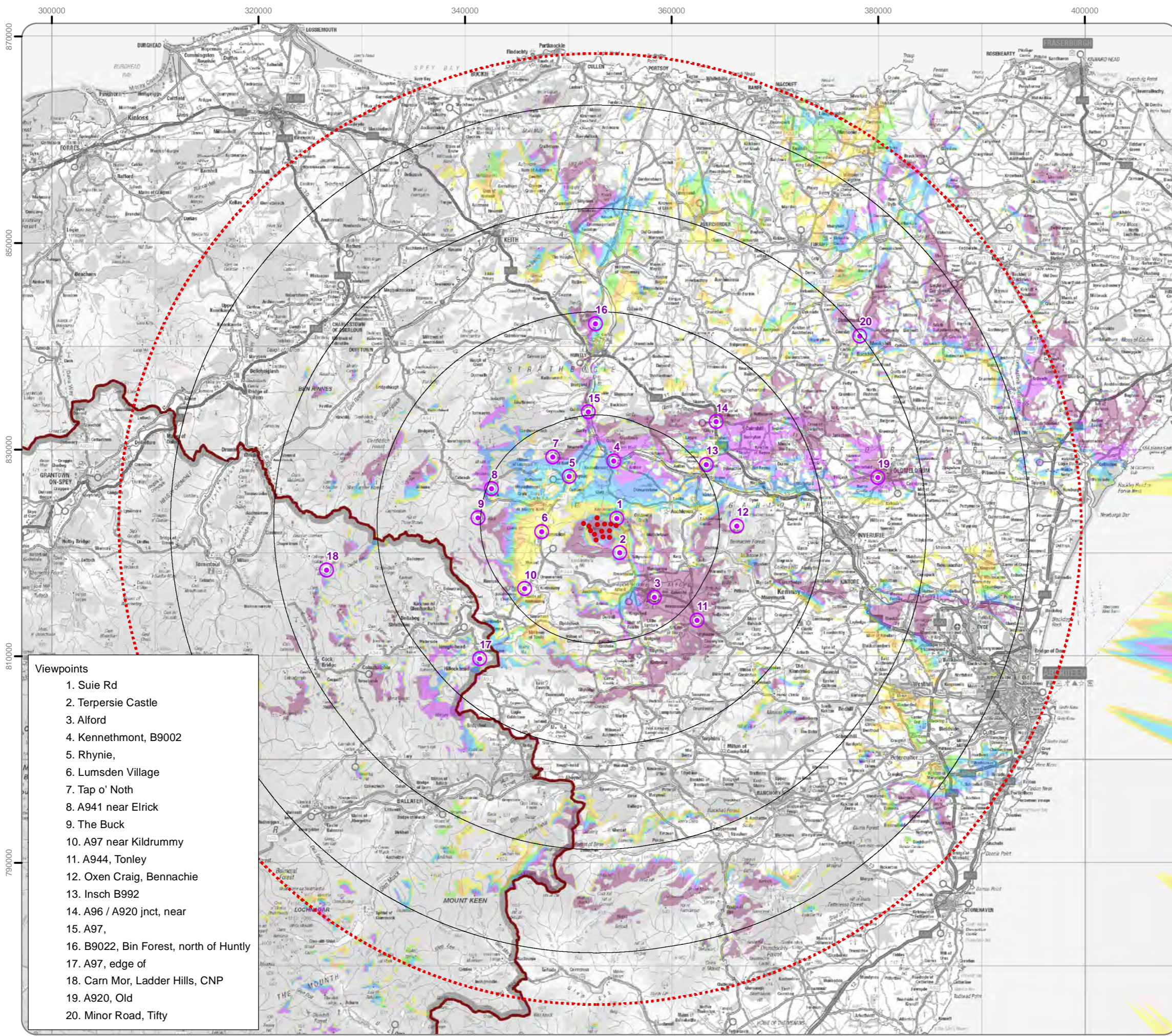


CORREEN HILLS

Figure 4.6
Cumulative Wind Farms

Ref No: 211662	Created By: RA	Rev No: 2
Scale: 1:375,000	Drawing Size: A3	Date: 12/10/2023
Coordinate System: BNG OS GB 1936 Datum		





- Legend**
- Proposed Turbine Location
 - ⬢ 45km Study Area
 - 10km Radii
 - ▭ Cairngorms National Park
 - ⊙ Viewpoints

- Hub Height ZTV**
- No. of Hubs Theoretically Visible**
- 1 - 2
 - 3 - 4
 - 5 - 6
 - 7 - 8
 - 9 - 10
 - 11 - 12
 - 13 - 14

- Viewpoints**
1. Suie Rd
 2. Terpersie Castle
 3. Alford
 4. Kennethmont, B9002
 5. Rhynie,
 6. Lumsden Village
 7. Tap o' Noth
 8. A941 near Elrick
 9. The Buck
 10. A97 near Kildrummy
 11. A944, Tonley
 12. Oxen Craig, Bennachie
 13. Inch B992
 14. A96 / A920 jnct, near
 15. A97,
 16. B9022, Bin Forest, north of Huntly
 17. A97, edge of
 18. Carn Mor, Ladder Hills, CNP
 19. A920, Old
 20. Minor Road, Tifty

Hub height:	119m	Observer height:	2m
DTM:	OS Terrain 50 DTM	Surface features:	Excluded
DTM resolution:	50m	Earth curvature:	Included

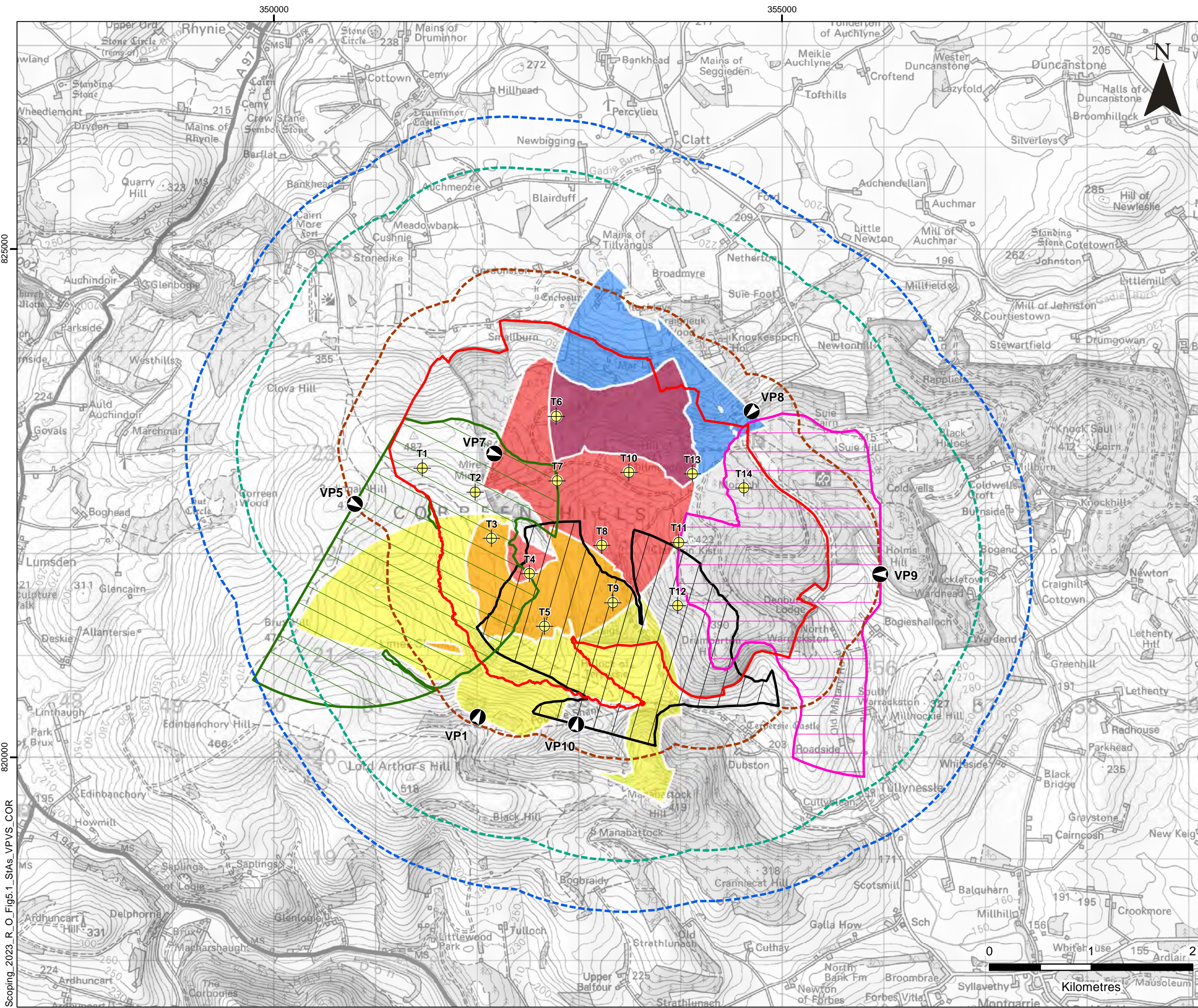


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Figure 4.7
Hub height ZTV with Proposed Viewpoints

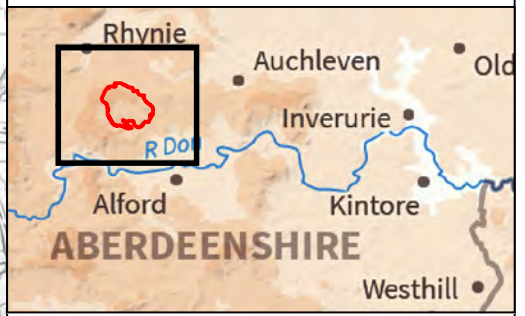
Ref No:	211662	Created By:	RA	Rev No:	2
Scale:	1:375,000	Drawing Size:	A3	Date:	12/10/2023
Coordinate System:	BNG OS GB 1936 Datum				





LEGEND

- TURBINE
- APPLICATION BOUNDARY
- ORNITHOLOGICAL STUDY AREAS**
- BREEDING BIRD SURVEY (BBS)
- BLACK GROUSE (BK)
- SCARCE BREEDING BIRD SURVEY (SBBS)
- VANTAGE POINTS AND VIEWSHEDS**
- VANTAGE POINT (VP)
- VISIBLE AREA FROM VP 1
- VISIBLE AREA FROM VP5
- VISIBLE AREA FROM VP7
- VISIBLE AREA FROM VP8
- VISIBLE AREA FROM VP9
- VISIBLE AREA FROM VP10



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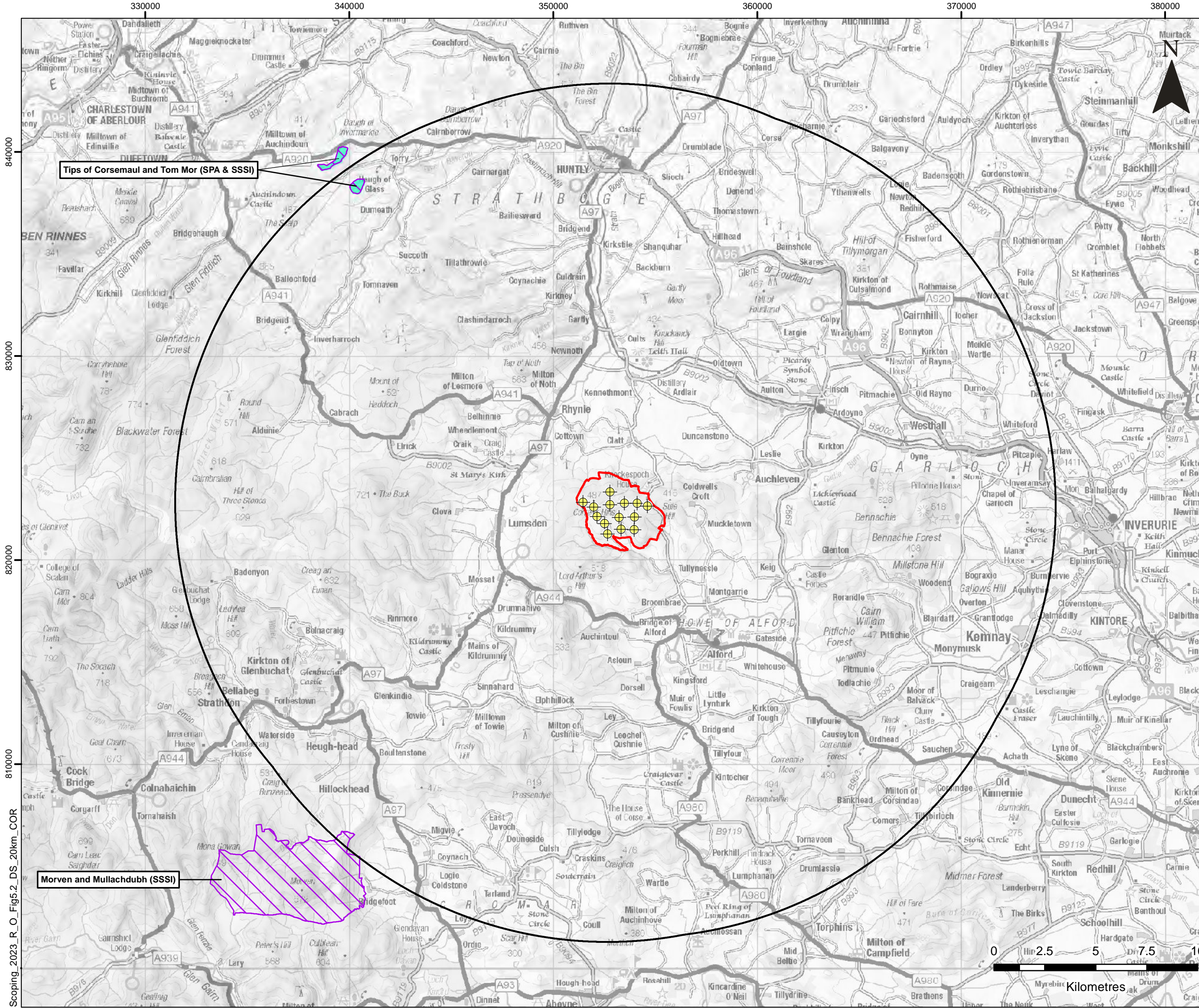
SCOPING REPORT

**ORNITHOLOGICAL STUDY AREAS,
VANTAGE POINTS AND VIEWSHEDS**




Figure 5.1

Scale 1:35,000 @ A3 Date JULY 2023

Scoping_2023_R_O_Fig5.1_StAs_VPs_VS_COR





LEGEND

-  TURBINE
-  APPLICATION BOUNDARY
-  20KM DISTANCE BAND

DESIGNATED SITES

SOURCE: NATURESCOT

-  SPECIAL PROTECTION AREA (SPA)
-  SITE OF SPECIAL SCIENTIFIC INTEREST (SSSI)





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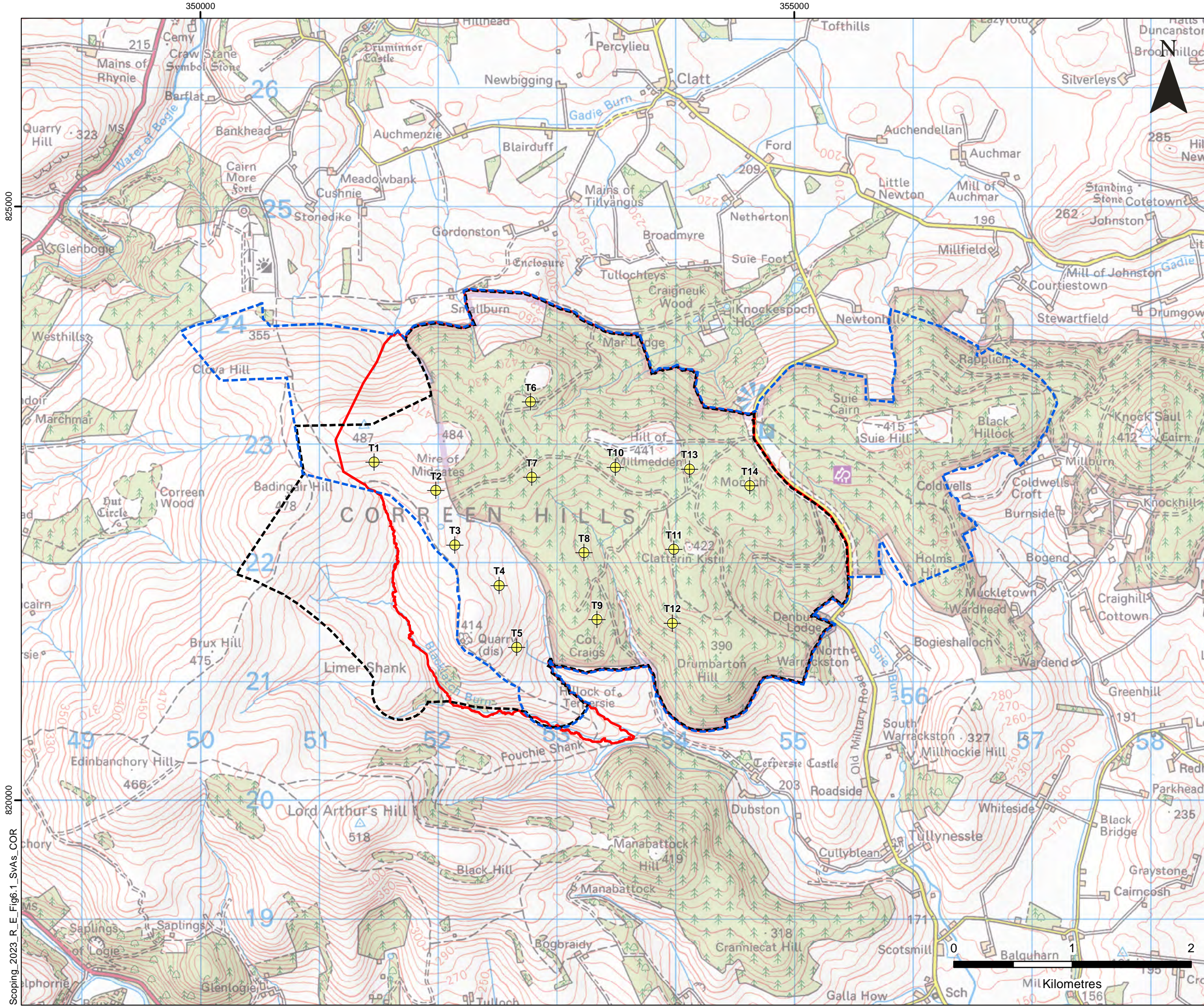
SCOPING REPORT

ORNITHOLOGICAL DESIGNATED SITES WITHIN 20 KM



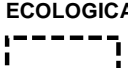

Figure 5.2

Scale: 1:175,000 @ A3 Date: JULY 2023

Scoping_2023_R_O_Fig.2_DS_20km_COR



LEGEND

-  TURBINE
-  APPLICATION BOUNDARY
- ECOLOGICAL SURVEY AREAS**
-  NATIONAL VEGETATION CLASSIFICATION (NVC)
-  PROTECTED SPECIES (PS)



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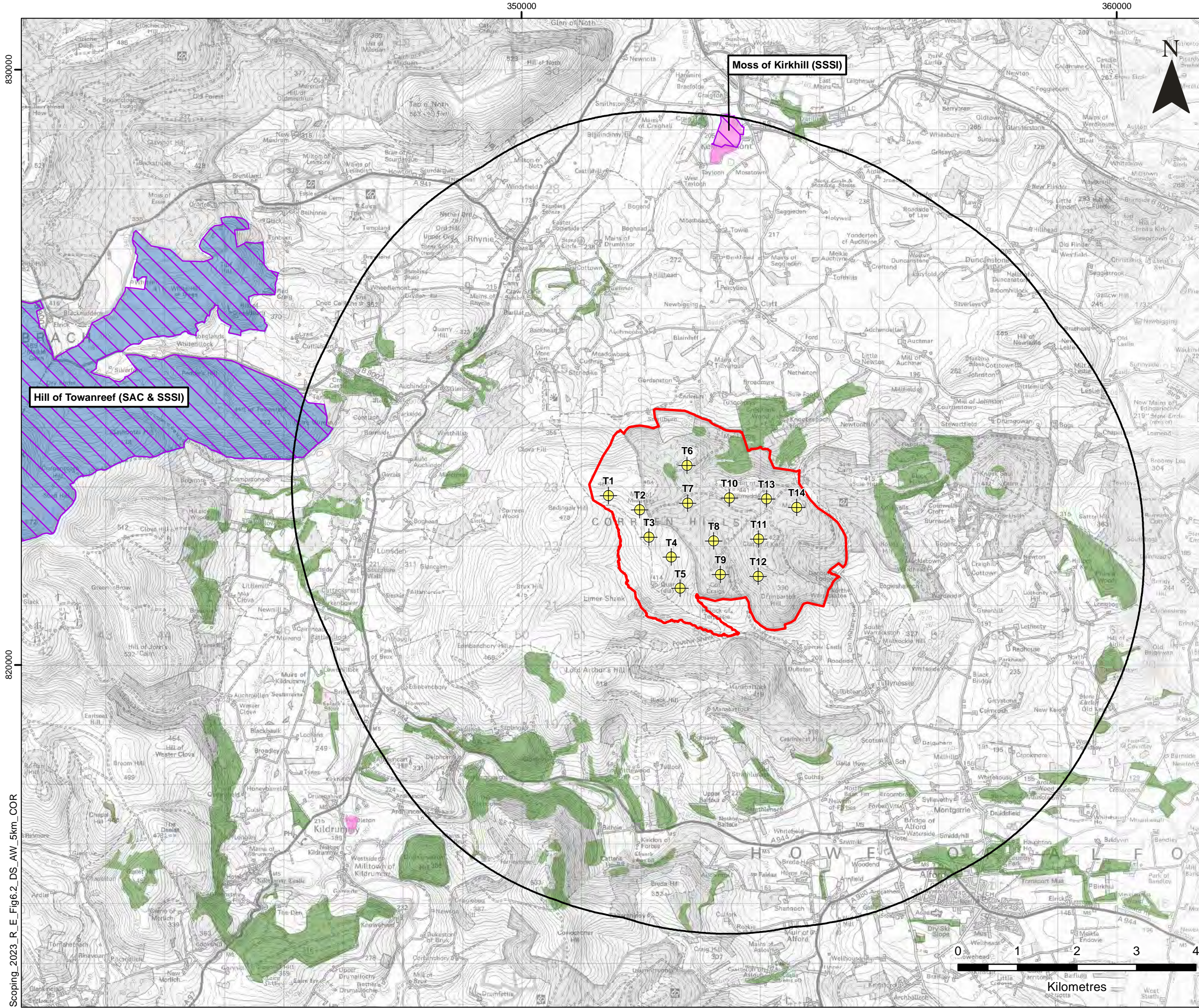
SCOPING REPORT

ECOLOGICAL SURVEY AREAS




Figure 6.1

Scale 1:30,000 @ A3 Date JULY 2023

Scoping_2023_R_E_Fig6.1_SvAs_COR






LEGEND

-  TURBINE
-  APPLICATION BOUNDARY
-  5KM DISTANCE BAND


DESIGNATED SITES

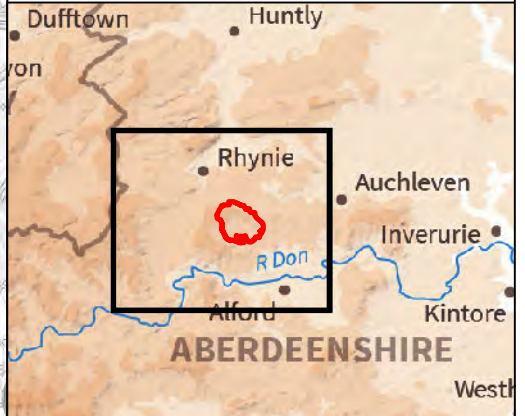
SOURCE: NATURESCOT

-  SPECIAL AREA OF CONSERVATION (SAC)
-  SITE OF SPECIAL SCIENTIFIC INTEREST (SSSI)
-  ANCIENT WOODLAND (AW)

CARBON AND PEATLAND (2016)

SOURCE: NATURESCOT

-  CLASS 1 - NATIONALLY IMPORTANT CARBON-RICH SOILS, DEEP PEAT AND PRIORITY PEATLAND HABITAT. AREAS LIKELY TO BE OF HIGH CONSERVATION VALUE



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SCOPING REPORT

ECOLOGICAL DESIGNATED SITES AND ANCIENT WOODLAND WITHIN 5KM

Figure 6.2

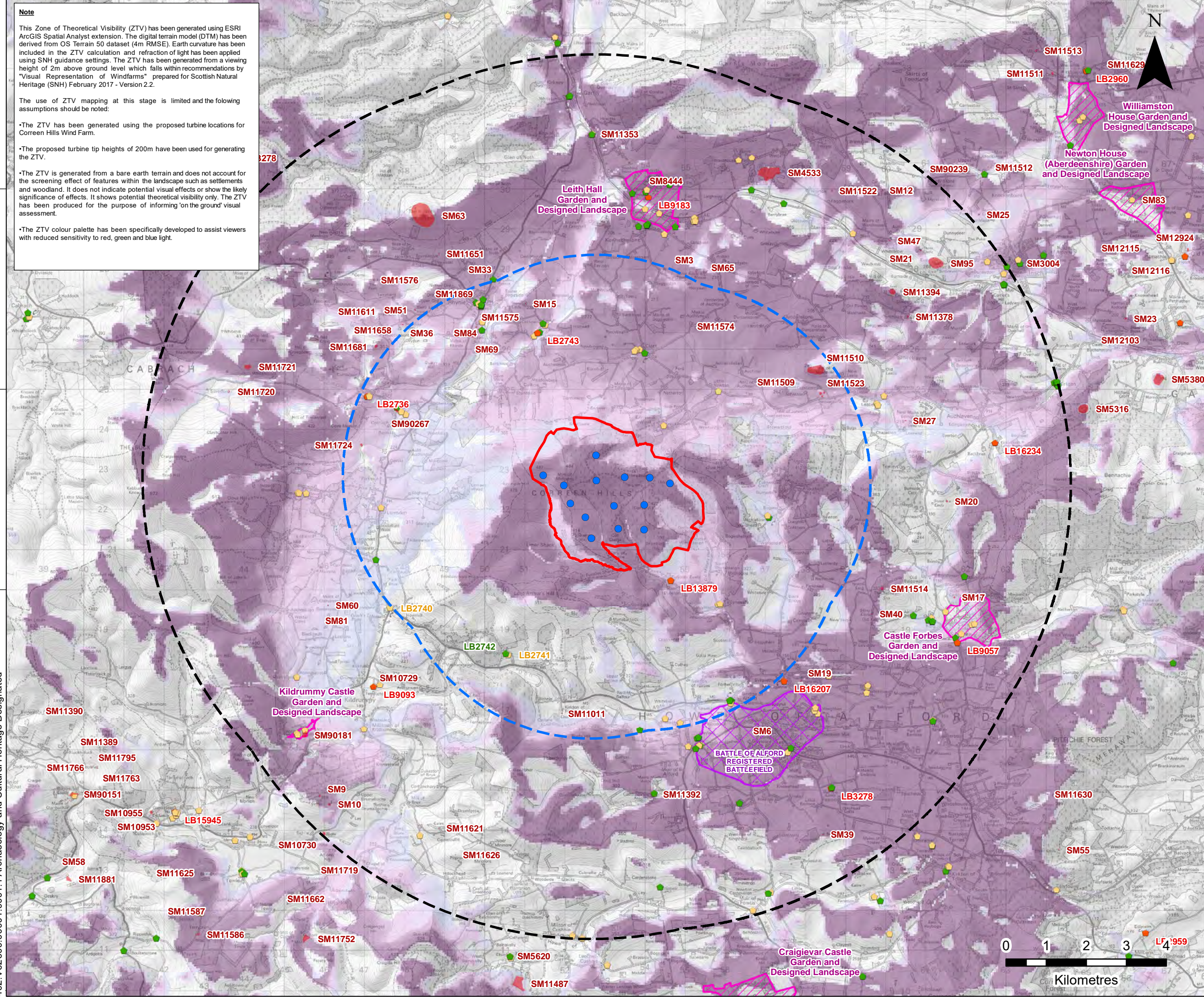
Scale 1:60,000 @ A3 Date JULY 2023

Scoping_2023_R_E_Fig6.2_DS_AW_5km_COR

Note
 This Zone of Theoretical Visibility (ZTV) has been generated using ESRI ArcGIS Spatial Analyst extension. The digital terrain model (DTM) has been derived from OS Terrain 50 dataset (4m RMSE). Earth curvature has been included in the ZTV calculation and refraction of light has been applied using SNH guidance settings. The ZTV has been generated from a viewing height of 2m above ground level which falls within recommendations by "Visual Representation of Windfarms" prepared for Scottish Natural Heritage (SNH) February 2017 - Version 2.2.

The use of ZTV mapping at this stage is limited and the following assumptions should be noted:

- The ZTV has been generated using the proposed turbine locations for Correen Hills Wind Farm.
- The proposed turbine tip heights of 200m have been used for generating the ZTV.
- The ZTV is generated from a bare earth terrain and does not account for the screening effect of features within the landscape such as settlements and woodland. It does not indicate potential visual effects or show the likely significance of effects. It shows potential theoretical visibility only. The ZTV has been produced for the purpose of informing on the ground visual assessment.
- The ZTV colour palette has been specifically developed to assist viewers with reduced sensitivity to red, green and blue light.



LEGEND

- Site Boundary
- Proposed Turbine Location
- Proposed Turbine Location 5km Buffer
- Proposed Turbine Location 10km Buffer

Listed Building (Category)

- A
- B
- C

- Scheduled Monument
- Inventory Garden and Designed Landscape
- Inventory Battlefield

Zone of Theoretical Visibility (ZTV) - Bare Earth Scenario

- High : 14 Turbines Visible
- Low : 0 Turbine Visible



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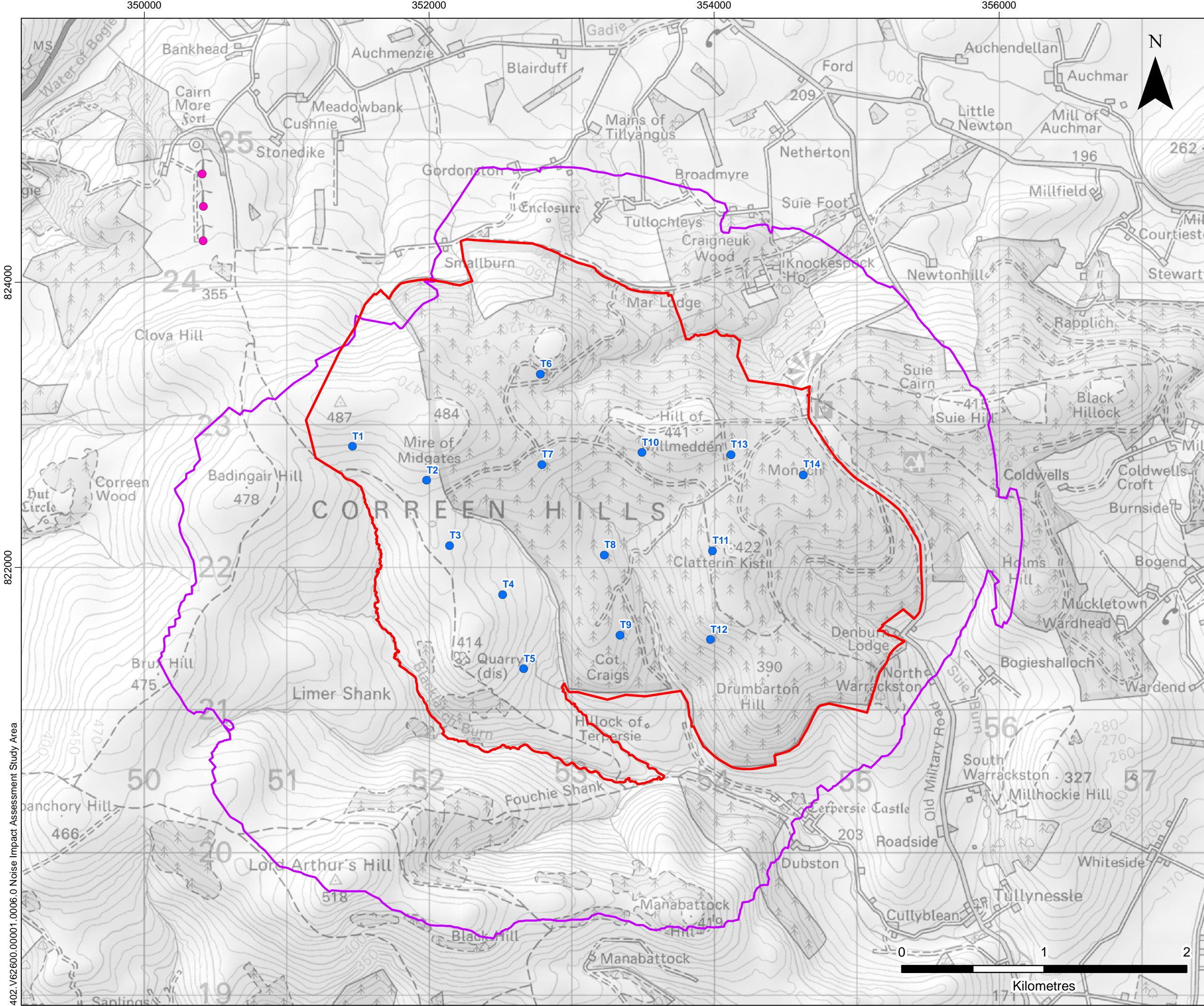
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CORREEN HILLS WIND FARM

ARCHAEOLOGY AND CULTURAL HERITAGE DESIGNATED ASSETS

FIGURE 7.1

Scale 1:90,000 @ A3 Date JULY 2023



LEGEND

- Site Boundary
- Proposed Turbine Location
- Noise Impact Assessment Study Area
- Cairnmore Turbine Location



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SCOPING REPORT

**NOISE IMPACT ASSESSMENT
STUDY AREA**

FIGURE 9.1

Scale 1:25,000 @ A3 Date AUGUST 2023

824000

822000

402_V62600.00001_0006.0 Noise Impact Assessment Study Area

350000

352000

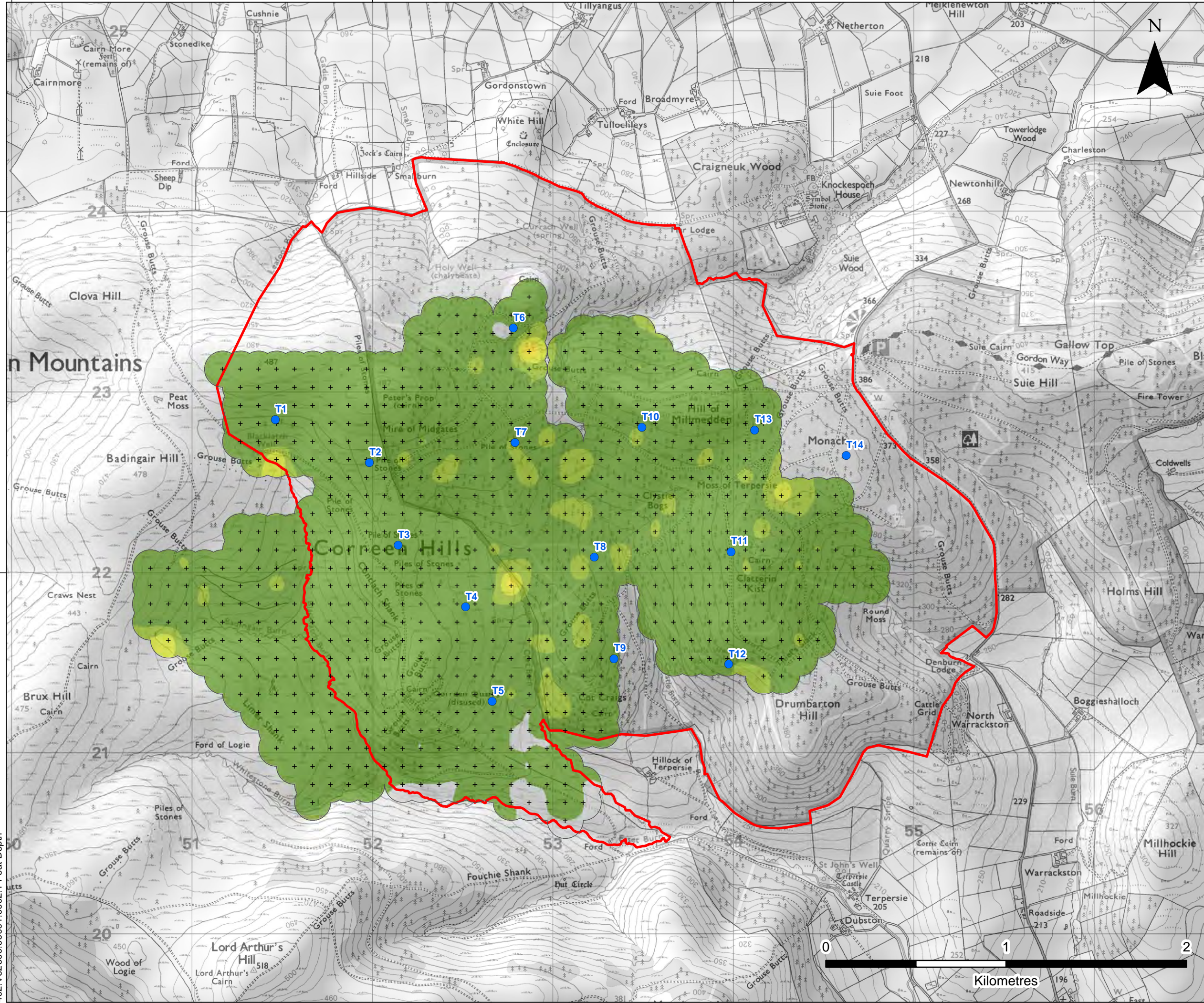
354000

356000

824000

822000

402.V62600.00001.0002.1 Peat Depth

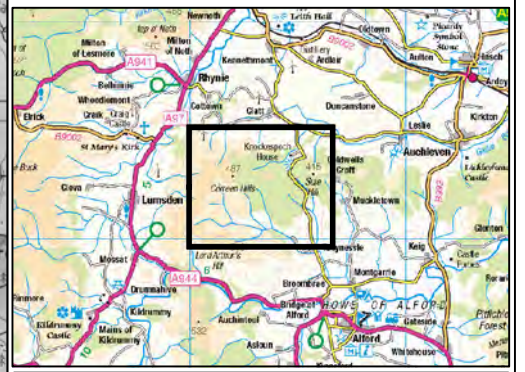



LEGEND

- Site Boundary
- Proposed Turbine Location
- + Peat Probe Location


Peat Depth (m)

- 0
- 0 - 0.5
- 0.5 - 1
- 1 - 1.5
- 1.5 - 2





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SCOPING REPORT

PEAT DEPTH

FIGURE 10.1

Scale 1:20,000 @ A3 Date JULY 2023

350000

352000

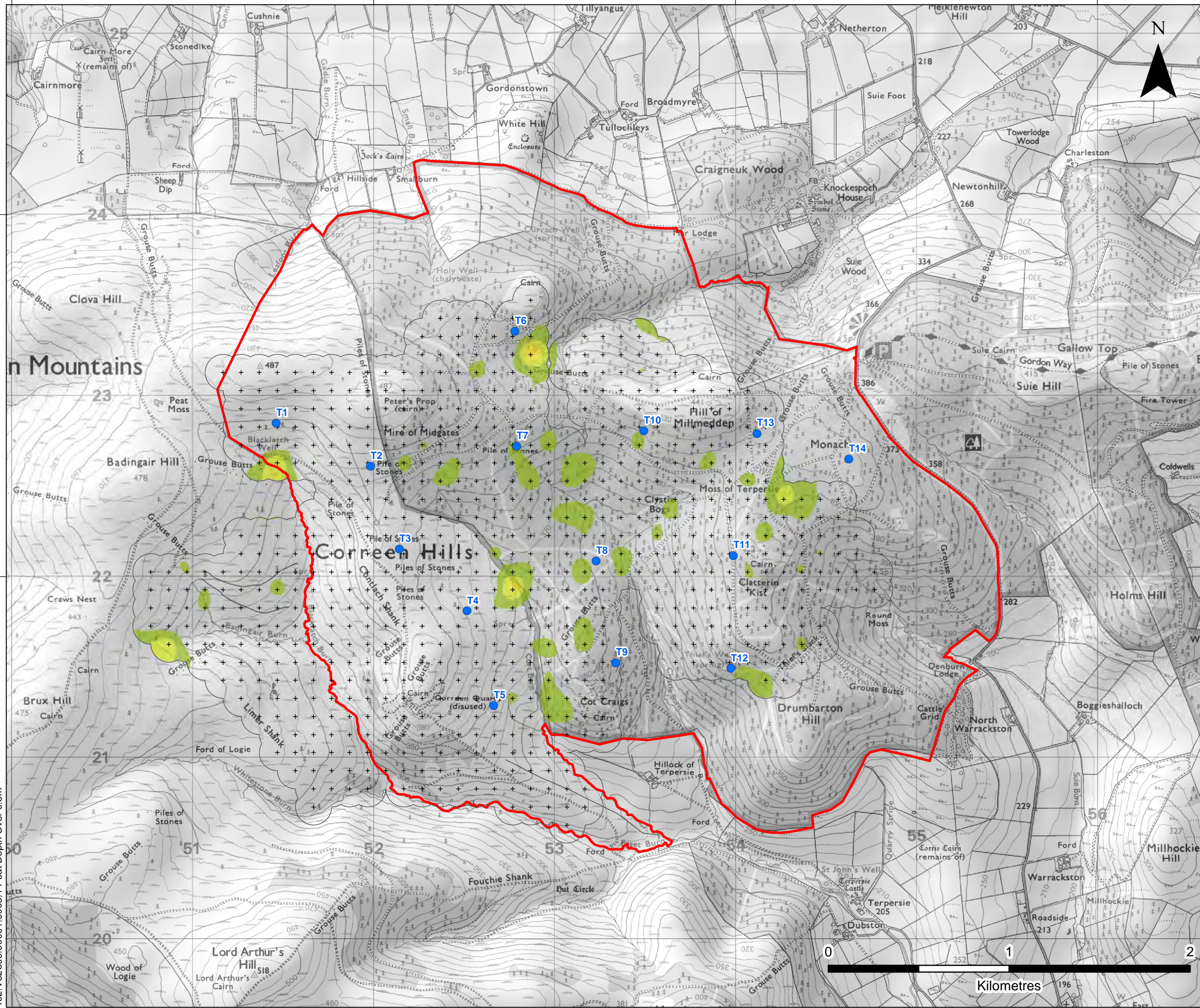
354000

356000

824000

822000

402.V62600.00001.0003.1 Peat Depth Over 0.5m

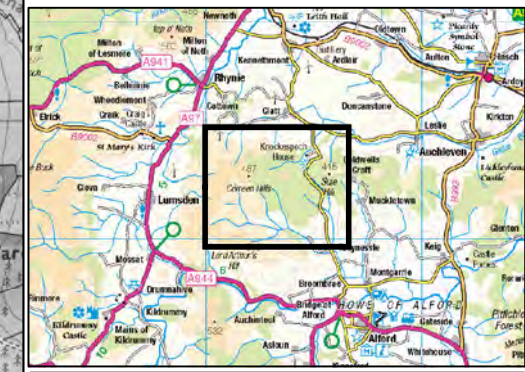


LEGEND

- Site Boundary
- Proposed Turbine Location
- + Peat Probe Location

Peat Depth (m)

- 0.5 - 1
- 1 - 1.5
- 1.5 - 2



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SCOPING REPORT
PEAT DEPTH OVER 0.5M

FIGURE 10.2

Scale: 1:20,000 @ A3 Date: JULY 2023

