

# ACKRON WIND FARM UPDATED SCOPING REPORT

OCTOBER 2019





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# **EXECUTIVE SUMMARY**

Ackron Wind Farm Ltd (the Applicant) intends to submit a major planning application to the Highland Council (THC) under the Town and Country Planning (Scotland) Act 1997<sup>1</sup> as amended by the Planning etc. (Scotland) Act 2006<sup>2</sup>, for permission to construct and operate Ackron Wind Farm located approximately 18 kilometres (km) west of Thurso and 2 km southeast of Melvich in Sutherland, Highland Council, as shown on Figure 1.1.

A Scoping Report (19/01709/SCOP) was submitted to THC in April 2019 (hereafter referred to as the April 2019 Scoping Report) for the construction and operation of Ackron Wind Farm. A Scoping Opinion was requested under the Town and Country Planning (Environmental Impact Assessment) (Scotland) Regulations 2019 and issued on the 6th June 2019.

Following issuance of the Scoping Opinion, the Applicant extended the Site area to the south and west (the Updated Site), as shown in Figure 1.2. The Updated Site layout is anticipated to comprise of approximately 12 turbines with a maximum height to blade tip of 149.9 metres (m) and associated infrastructure, with a total generating capacity of between 20 – 49.9 megawatts (MW). An Indicative Site Layout is shown in Figure 1.3.

The Development will constitute a Schedule 2 Development as per the Town and Country Planning (Environmental Impact Assessment) (Scotland) Regulations 2017³ (The EIA Regulations), and it is the intention of the Applicant to submit an Environmental Impact Assessment Report (EIA Report) along with the application for consent. As per Regulation 12 of the EIA Regulations, the Applicant is seeking to confirm, with THC and key consultees, the scope of the require assessment to be provided in the EIA Report, i.e. a "Scoping Opinion".

This Updated Scoping Report updates the information provided in the April 2019 Scoping Report for consideration of the Updated Site Boundary, as shown in Figure 1.2. Specifically, this Updated Scoping Report focuses upon the revised Indicative Turbine Area and the addition of the extended site area to the south and west, as shown on Figures 1.2 and 1.3. This Updated Scoping Report should be read in conjunction with the April 2019 Scoping Report (included as Appendix C).

Unless otherwise stated, the elements to be scoped out of the EIA, as detailed in the April 2019 Scoping Report, remain valid. Table A provides an updated summary of these elements that are scoped into and out of the EIA Report.

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<sup>&</sup>lt;sup>1</sup> Town and Country Planning (1997) Town and Country Planning (Scotland) Act 1997 [Online] Available at: <a href="https://www.legislation.gov.uk/ukpga/1997/8/contents">https://www.legislation.gov.uk/ukpga/1997/8/contents</a> (Accessed 18/09/2019)

<sup>&</sup>lt;sup>2</sup> UK Government (2006) Planning etc. (Scotland) Act 2006 [Online] Available at: https://www.legislation.gov.uk/asp/2006/17/contents (Accessed 18/09/2019)

<sup>&</sup>lt;sup>3</sup> Town and Country Planning (2017) Town and Country Planning (Environmental Impact Assessment) (Scotland) Regulations 2017 [Online] Available at: http://www.legislation.gov.uk/ssi/2017/102/pdfs/ssi\_20170102\_en.pdf (Accessed 18/09/2019)



Table A: Technical Aspects and Assessments to be Scoped Out

Technical Area	Elements to be Scoped out of EIA	Elements to be Scoped into EIA
Landscape and Visual (Section 5)	<ul> <li>Landscape Character Areas beyond 15 km radius;</li> <li>Landscape Planning Designations beyond 120 km radius;</li> <li>Assessment of settlements beyond 10 km;</li> <li>Assessment of local paths beyond 5 km;</li> <li>Assessment of residential properties beyond 2 km; and</li> <li>Cumulative assessment of scoping schemes (unless within 5 km and specifically required by consultees) and consideration of turbines below 50 m to blade tip height.</li> </ul>	<ul> <li>Effects upon landscape character within ~15 km;</li> <li>Designated landscapes within ~20 km;</li> <li>Effects upon wild land within ~15 km;</li> <li>Visual receptors at settlements within ~10 km and in ZTV;</li> <li>Visual receptors along the A836/NC500 and A897 within ~20 km;</li> <li>Visual receptors along minor roads and National Cycle Route NCN1 within ~15 km;</li> <li>Visual receptors using local paths within ~5 km;</li> <li>Residential Visual Amenity within 2km; and</li> <li>Cumulative LVIA focused upon 20 km.</li> </ul>
Ecology (Section 6)	<ul> <li>All survey and assessment regarding Strathy Coast SSSI, Red Point Coast SSSI and Sandside Bay SSSI;</li> <li>Due to further consultation with SNH, all assessment on red squirrel.</li> </ul>	<ul> <li>Direct and indirect effects on the integrity of the Caithness and Sutherland SAC/Ramsar;</li> <li>Direct habitat loss and disturbance - temporary or permanent loss of Annex 1 or otherwise high value terrestrial habitats;</li> <li>In-direct habitat disturbance - temporary pollution or degradation of terrestrial or aquatic habitats;</li> <li>Turbine-related bat mortality - death or injury by collision with the turbine blades; and</li> <li>Indirect and direct effects on protected fauna including, but not limited to, otter, pine marten, water vole, and Salmonid fish - death or injury by collision with construction related plant, disturbance or displacement due to Development related noise and vibration and loss of habitats.</li> </ul>



Technical Area	Elements to be Scoped out of EIA	Elements to be Scoped into EIA
Ornithology (Section 7)	<ul> <li>Impacts on the following statutory sites:         <ul> <li>Caithness Lochs SPA and Ramsar site;</li> <li>Red Point Coast SSSI;</li> <li>West Halladale SSSI; and</li> <li>Lochan Buidhe Mires SSSI.</li> </ul> </li> <li>Impacts on non-breeding target species, except where flight activity recorded during Flight Activity Surveys is sufficient to assess collision risk impacts; and</li> <li>Potential impacts on grey heron.</li> </ul>	<ul> <li>Effects upon qualifying ornithological interests associated with Caithness Cliffs SPA and Ramsar site, and East Halladale SSSI;</li> <li>Potential effects on breeding Schedule 1 and/or Annex I species listed in Section 7.3;</li> <li>Potential effects on additional breeding wader species (oystercatcher, lapwing, curlew and snipe);</li> <li>Potential effects on common scoter as requested by RSPB: and</li> <li>Potential collision risk to all target species for which sufficient flights were recorded during Flight Activity Surveys.</li> </ul>
Archaeology and Cultural Heritage (Section 8)	<ul> <li>Indirect effects on undesignated heritage assets;</li> <li>Direct effects on known undesignated archaeological features outwith the Site;</li> <li>Indirect effects on designated heritage assessment within the 10 km Study Area where the assets, or key views towards the asset, do not lie within the ZTV; and</li> <li>Cumulative effects from wind farm developments outwith the 10 km study area.</li> </ul>	<ul> <li>Direct effects on known undesignated archaeological features within the development footprint;</li> <li>Potential for direct effects on the unknown archaeological;</li> <li>Indirect effects on all designated assets within the 5 km Study Area;</li> <li>Indirect effects on designated heritage assets between 5 and 10 km where the assets, or key views towards the asset, lie within the ZTV; and</li> <li>The cumulative effect of the Development in conjunction with other wind farm developments within ~10 km radius.</li> </ul>
Noise (Section 9)	<ul> <li>All assessment regarding construction and decommissioning noise;</li> <li>Amplitude Modulation (AM) assessment;</li> <li>Ground borne vibration assessment; and</li> <li>Low Frequency Noise assessment.</li> </ul>	An operational noise assessment, including cumulative noise, will be conducted in line with the ETSU-R-97.



Technical Area	Elements to be Scoped out of EIA	Elements to be Scoped into EIA
Traffic and Transport (Section 10)	<ul> <li>Formal Transport Assessment as the Development will not give rise to a permanent increase in traffic numbers;</li> <li>Effects of noise or air quality changes to traffic receptors;</li> <li>Assessment of effects upon operational traffic; and</li> <li>Assessment of construction traffic during decommissioning.</li> </ul>	Effects of the Development on traffic and transportation, including:  Traffic generation;  Hazardous Loads;  Accidents and Safety;  Driver Delay;  Pedestrian Amenity; and  Severance.
Hydrology and Hydrogeology (Section 11)	Assessment on the migration of pollutants from contaminated land;     Effects of the Development on the West Halladale SSSI; and     Pollution and sedimentation effects on the water environment at distances greater than 10 km.	Effects of the Development on hydrology and hydrogeology including:  Chemical pollution;  Sedimentation as a result of construction;  Potential effects on PWS within 2 km;  Potential effects on the hydrological function of GWDTEs;  Impediments to watercourse and near-surface water flow;  Acidification of Watercourses;  Increased run-off and flood risk; and  Compaction of superficial deposits.
Geology and Peat (Section 12)	<ul> <li>Solid geology; and</li> <li>Potential effects arising from contaminated land.</li> </ul>	The potential effects that are to be considered are:  • Potential peat slide risk to inform the assessment of effects on peatlands and to inform outline management measures for excavation and re-use of peat and peaty soils; and  • Details of embedded mitigation and restoration relative to Geology and Soils.
Land Use, Socio- Economics and Tourism (Section 13)	All assessment regarding land- use, including forestry.	Effects upon socio-economics, tourism and recreation.
Climate Change and Carbon Balance (Section 14)	All assessment regarding the Development's vulnerability and resilience to climate change.	Effects of climate change on environmental receptors identified in other EIA topics will be considered in a future climate scenario, as predicted by UKCP18; and     Carbon Calculator Tool.



Technical Area	Elements to be Scoped out of EIA	Elements to be Scoped into EIA
Other Issues (Section 15)	<ul> <li>Human Health and Safety assessment;</li> <li>Major Accidents and Disasters assessment;</li> </ul>	Shadow Flicker
	Waste assessment; and	
	Television Reception and Utilities.	

Table B summarises the key terms (unless otherwise refined in a Technical Section) used throughout this document.

Table B: Key Terms and Definitions

Term	Definition
April 2019 Scoping Report	Refers to the Scoping Report (19/01709/SCOP) submitted to the Highland Council in April 2019.
The Updated Scoping Report	Refers to the Updated Scoping Report covering the Updated Site and should be read in conjunction with the April 2019 Scoping Report.
The Updated Site	Refers to the land that falls within the red line identified in Figure 1.2.
The Updated Site Boundary	Refers to the red line boundary which includes the extended area to the south and west of the April 2019 Scoping Report, as identified in Figure 1.2.
April 2019 Scoping Report Site Boundary	Refers to the red line boundary identified in the April 2019 Scoping Report.
The Development	Refers to the application for Ackron Wind Farm, details of which are set out in Section 2: The Site and Development.
THC	Refers to the Highland Council.
EIA Report	The Environmental Impact Assessment Report, which documents the findings of the EIA process and would accompany the application for consent for the Development.



#### 1 INTRODUCTION

#### 1.1 Overview

A Scoping Report (19/01709/SCOP) was submitted to the Highland Council (THC) in April 2019 (hereafter referred to as the April 2019 Scoping Report) for the construction and operation of Ackron Wind Farm. A Scoping Opinion was requested under the Town and Country Planning (Environmental Impact Assessment) (Scotland) Regulations 2017 and issued on 6<sup>th</sup> June 2019.

Following refusal of the Drum Hollistan Wind Farm by Scottish Ministers on 21<sup>st</sup> June 2019 (Case Reference: WIN-270-9), which lies adjacent to the north of the Site, Ackron Wind Farm Ltd (the Applicant, with further information provided in Section 1.1 of the April 2019 Scoping Report) undertook a detailed review of the decision, and in turn carried out an early stage design review of the proposed Ackron development. The design review sought to address a number of the siting and design issues raised in the Drum Hollistan decision. As a result, the proposed Ackron Site area has been extended to the south and west.

The Updated Site is located approximately 18 kilometres (km) west of Thurso and 2 km southeast of Melvich in Sutherland, Highland Council, as shown on Figure 1.1. Figure 1.2 shows:

- the April 2019 Scoping Report site boundary; and
- The Updated Site Boundary which includes the extended area to the south and west.

This Updated Scoping Report updates the information provided in the April 2019 Scoping Report for consideration of the Updated Site Boundary, as shown in Figure 1.1. Specifically, this Updated Scoping Report focuses upon the revised Indicative Developable Area and the addition of the extended site area to the south and west, as shown on Figure 1.2 and 1.3. This Updated Scoping Report should be read in conjunction with the April 2019 Scoping Report (included as Appendix C).

The Updated Scoping Report is supported by the following appendices:

- Appendix A: Figure List;
- Appendix B: List of Suggested Consultees;
- Appendix C: April 2019 Scoping Report; and
- Appendix D: Scoping Opinion 6<sup>th</sup> June 2019.

#### 1.2 The Updated Development

The Development would involve the construction and operation of a wind farm on land located 1,100 m east of Ackron Farm and Golval Farm (the Updated Site). The Updated Site is located approximately 18 kilometres (km) west of Thurso and 2 km southeast of Melvich in Sutherland, Highland Council. It is approximately 652 hectares (ha) in total and is centred on National Grid Reference (NGR) 291200, 962150. The location of the Updated Site is shown on Figure 1.1 and is described in Section 2 of this Updated Scoping Report.



# 1.3 Consultation

Section 1.4.2 of the April 2019 Scoping Report details consultation undertaken through April 2019. Table 1.1 provides a summary of consultee responses received in the Scoping Opinion issued on 6<sup>th</sup> June 2019.



Table 1.1 Scoping Opinion Responses 6th June 2019

Consultee	Discipline	Consultee Comment to April 2019 Scoping Report	Where Addressed in this Report
The Highland Council (THC)	General	The EIAR should describe the likely significant effects of the development on the environment, which covers both direct and indirect effects, as a result of:  the existence of the development;  the use of natural resources;  the emission of pollutants, the creation of nuisances and the elimination of waste.  The EIAR should include a detailed description of any mitigation measures proposed including a clear summary table entitled <a href="Schedule of Mitigation">Schedule of Mitigation</a>	Will be addressed throughout the EIAR which will include a Schedule of Mitigation.
THC	General	Options should be explored for sharing facilities such as laydown areas and borrow pits with other local developments.	Noted. Will be explored during the design process.
THC	Planning	The EIAR should recognise the existing land uses affected by the development having particular regard for The Highland Council's Development Plan and other supplementary planning policies. This is not instead of but in addition to the expectation of receiving a Planning Statement in support of the application itself which, in addition to exploring compliance with the Development Plan, should look at Scottish Planning Policy and Planning Advice Notes which identify the issues that should be taken into account when considering significant development. It is not considered necessary to cover the matter of energy policy within the EIAR or helpful to cover planning policy within each Chapter of the EIAR.	Chapter 4: Planning and Legislative Context



Consultee	Discipline	Consultee Comment to April 2019 Scoping Report	Where Addressed in this Report
THC	Landscape	The EIAR should consider the landscape and visual impact of the development in separate assessments. It is the Council's position that it is not possible to use panoramic images for the purposes of visual impact assessment. The Council, while not precluding the use of panoramic images, require single frame images with different focal lengths taken with a 35mm format full frame sensor camera – not an 'equivalent.' The preferred focal lengths are 50mm and 75mm.	Chapter 5: Landscape and Visual
		This assessment should include the impact of all ancillary infrastructure.	
		Viewpoints (VP) should be agreed in advance with THC and should be informed by site survey, mapping and predicted Zones of Theoretical Visibility. The purpose of each VP should be clearly stated and identified on an OS map. Those within 5 km should be identified on maps OS at 1:25,000 scale, with those beyond 5 km at 1:50,000 scale.	
THC	Landscape	Photomontages should follow the Council's Visualisation Standards	Chapter 5: Landscape and Visual
Scottish Natural Heritage (SNH)	Landscape	Requirement for assessment of effects on Wild Land (East Halladale WLA).	Chapter 5: Landscape and Visual
Northern District Salmon Fisheries Board	Ecology	Our scientific advisor has had a look at the scoping study and we have no comments to make at this stage however we would be very grateful if the Northern District Salmon Fishery Board could be included in the list of Non statutory consultees as the Ackron burn feeds into the Halladale system which is within the Northern DSFB region.  I am not sure what stage the scoping study is at currently however we would welcome the opportunity to review the EIA report when it becomes available.	Chapter 6: Ecology
THC	Ecology	The EIAR should provide a baseline survey of the plants (and fungi) and trees present on the site to determine the presence of any rare or threatened species.	Chapter 6: Ecology
THC	Ecology	The EIAR should identify rare and threatened habitats, and those protected by European or UK legislation, or identified in national or local Biodiversity Action Plans. Habitat enhancement and mitigation measures should be detailed, particularly in respect to blanket bog, in the contexts of both biodiversity conservation and the inherent risk of peat slide. Details of any habitat enhancement programme (such as native- tree planting, stock exclusion, etc) for the proposed site should be provided. It is expected that the EIAR will address whether or not the development could assist or impede delivery of elements of relevant Biodiversity Action Plans.	Chapter 6: Ecology



Consultee	Discipline	Consultee Comment to April 2019 Scoping Report	Where Addressed in this Report
THC	Ecology	The EIAR needs to address the aquatic interests within local watercourses, including downstream interests that may be affected by the development; pollution risk / incidents during construction; obstruction to upstream and downstream migration both during and after construction; disturbance of spawning beds / timing of works; and other drainage issues. The EIAR should evidence consultation input from the local fishery board(s) where relevant.	Chapter 6: Ecology
Scottish Environment Protection Agency (SEPA)	Ecology	SEPA note that the revised layout avoids the area of M25b mire. Impacts on M15b should be minimised as much as possible, taking into consideration other issues such as impacts on deep peat, quality of habitat present and other Annex 1 habitats. it will not be possible to complete avoid M15b, as outlined in the scoping report, and as such, further assessment is required.  Due to exceptionally dry ground conditions when the habitat survey was undertaken, there may be flushed GWDTE habitats (M6 and M10) on site which were not easily visible. SEPA are content for this to be considered further, if necessary, at the post-consent stage  SEPA remind the developer that within the EIA Report the habitat plans should be overlain	Chapter 6: Ecology
		will all infrastructure.	
SNH	Ecology	SNH advise that any Otter surveys undertaken should be assessed and presented in the context of Caithness and Sutherland Peatlands SAC	Chapter 6: Ecology
SNH	Ecology	SNH advise that the mammal species being considered for additional survey work appears to be generally satisfactory and that reptiles should be fully considered, as the habitat is likely to be suitable for common lizard and adder. SNH advise that it would be appropriate to drop red squirrel from the survey list.	Chapter 6: Ecology
SNH	Ecology	Noted that the Development abuts the boundary of the Caithness & Sutherland Peatlands Special Protection Area (SPA) and Ramsar site, which is protected for upland breeding birds.  Stated that the detailed assessment will be required to gauge if the Development is likely to have adverse impacts on the SPA qualifying species and advised that the development could potentially affect birds within the SPA, therefore assessments should be carried out using the SPA Conservation Objectives.	Chapter 6: Ecology



Consultee	Discipline	Consultee Comment to April 2019 Scoping Report	Where Addressed in this Report
THC	Ecology	The EIAR should provide a baseline survey of the bird and animals (mammals, reptiles, amphibians, etc) interest on site. It needs to be established which species are present on site and where. The presence of protected species such as Schedule 1 Birds or European Protected Species must be included and considered as part of the planning application process.	Chapter 6: Ecology
THC	Ecology	The EIAR should address the likely impacts on the nature conservation interests of all the designated sites in the vicinity of the proposed development. It should provide proposals for any mitigation that is required to avoid these impacts or to reduce them to a level where they are not significant.	Chapter 6: Ecology
SNH	Ecology	SNH note that there is no reference to the National Importance afforded to Carbon-rich Soils, Deep Peat and Priority Peatland Habitat (identified within the SPP). This is a significant omission which needs to be rectified within the EIA Report. SNH advise that a Habitat Management Plan should be developed to reflect the importance of peat and peatland habitats.	Chapter 6: Ecology
Royal Society for the Protection of Birds (RSBP)	Ornithology	RSPB are generally content with the sites and species scoped into assessment although suggest that the potential for impacts on common scoter also be scoped in and well as the North Caithness Cliffs SPA.	Chapter 7: Ornithology
RSBP	Ornithology	RSPB Noted that a Habitats Regulation Appraisal (HRA) will be required and stressed the importance of gathering sufficient information to inform an Appropriate Assessment (AA).	Chapter 7: Ornithology
RSBP	Ornithology	Mirrored comments received from SNH relating to the proximity of the Development to the Caithness & Sutherland Peatlands SPA and Ramsar site, and East Halladale SSSI.	Chapter 7: Ornithology
RSBP	Ornithology	baseline survey work had progressed further than the RSPB would generally expect at the scoping stage and commented that consequently the scoping exercise was of less use than it would have been if carried out prior to commencement of surveys.	Chapter 7: Ornithology
RSBP	Ornithology	Expressed their opinion that, due to the age of the initial survey work completed in 2014/15 and the planned submission date of 2020, the limited information provided in the April 2019 Scoping Report was insufficient to demonstrate that the additional survey effort in 2018 was adequate, and therefore reserved judgement on this.	Chapter 7: Ornithology
RSBP	Ornithology	Further advised that more detailed information is provided within the EIAR to demonstrate that the survey data are adequate, robust and accurate.	Chapter 7: Ornithology



Consultee	Discipline	Consultee Comment to April 2019 Scoping Report	Where Addressed in this Report
RSBP	Ornithology	Noted that cumulative impacts on species sensitive to wind energy developments should be assessed across the relevant NHZ and in relation to "the Peatlands SPA [1]" and should include all existing and proposed wind farms in the NHZ.	Chapter 7: Ornithology
SNH	Ornithology	Noted that the Development abuts the boundary of the Caithness & Sutherland Peatlands Special Protection Area (SPA) and Ramsar site, which is protected for upland breeding birds.  Stated that the detailed assessment will be required to gauge if the Development is likely to have adverse impacts on the SPA qualifying species and advised that the development could potentially affect birds within the SPA, therefore assessments should be carried out using the SPA Conservation Objectives.	Chapter 7: Ornithology
SNH	Ornithology	Commented that the Development also lies directly adjacent to the north end of East Halladale Site of Special Scientific Interest (SSSI), which is protected for its blanket bog, breeding bird assemblage, dunlin (Calidris alpina) and golden plover (Pluvialis apricaria), but that the April 2019 Scoping Report only identifies this site for bog habitat. Advised that any potential impacts on designated features of the SSSI should be assessed and presented within the Environmental Impact Assessment Report (EIAR) and that the breeding bird assemblage list to be considered is "Upland moorland with water bodies."	Chapter 7: Ornithology
SNH	Ornithology	Advised that most of the Caithness & Sutherland Peatlands Ramsar site interests are covered by the SSSI comments above, but noted SNH believe the general area is well used by summer/early autumn greylag geese (Anser anser), which could be attributed to this Ramsar Site. Noted that Vantage Point (VP) survey results should indicate whether greylag geese are considered to be at risk from Development. Further noted that late evening VP watches in early autumn may help to identify any roosting behaviour and flight lines.	Chapter 7: Ornithology
SNH	Ornithology	Advised that birds not connected to a protected area should be assessed against the Natural Heritage Zone (NHZ) populations and recommended that bird survey work should follow SNH best practice guidelines.	Chapter 7: Ornithology
SNH	Ornithology	SNH notes that many bird species are linked to Caithness and Sunderland Peatlands SPA. As the development abuts this SPA it has the potential to affect birds within the SPA and a detailed assessment to gauge if the wind farm is likely to have adverse impacts on the SPA qualifying species is required.	Chapter 7: Ornithology



Consultee	Discipline	Consultee Comment to April 2019 Scoping Report	Where Addressed in this Report
SNH	Ornithology	SNH note that any potential impacts to the East Halladale SSSI bog habitat, breeding bird assemblage, densities of breeding dunlin and golden plover, should be assessed and presented within the EIAR.  SNH also note that Caithness and Sutherland Peatlands Ramsar Site is used by summer/early autumn greylag geese and that vantage point survey work should be able to indicate whether greylags are considered to be at risk from the development.	Chapter 7: Ornithology
SNH	Ornithology	SNH advise that birds not connected to a protected area should be assessed against the relative Natural Heritage Zone population and follow best practice guidance.	Chapter 7: Ornithology
THC	Ornithology	The EIAR should provide a baseline survey of the bird and animals (mammals, reptiles, amphibians, etc) interest on site. It needs to be established which species are present on site and where. The presence of protected species such as Schedule 1 Birds or European Protected Species must be included and considered as part of the planning application process.	Chapter 7: Ornithology
THC	Ornithology	The EIAR should address the likely impacts on the nature conservation interests of all the designated sites in the vicinity of the proposed development. It should provide proposals for any mitigation that is required to avoid these impacts or to reduce them to a level where they are not significant.	Chapter 7: Ornithology
THC	Ornithology	Stated that the EIAR should provide "a baseline survey of the bird interest on Site" and should categorically establish which species are present on the Site, and where, before. Further noted that the presence of protected species such as birds listed on Schedule 1 of the Wildlife and Countryside Act 1981 (as amended) must be included and considered as part of the planning application process and that any consent given without due consideration to these species may breach European Directives with the possibility of consequential delays or the project being halted by the EC.	Chapter 7: Ornithology
Historic Environment Scotland (HEIAR)	Cultural Heritage	HEIAR note that recent changes to their policy documents for the historic environment should be taken into account during the assessment process.	Chapter 8: Archaeology and Cultural Heritage



Consultee	Discipline	Consultee Comment to April 2019 Scoping Report	Where Addressed in this Report
HEIAR	Cultural Heritage	HEIAR recommend that particular attention be given to the effects on the below heritage assets:  ·Halladale Bridge, hut circles 670m NE of, on banks of Giligill Burn (SM 3304);  ·Knock Stanger, cairn 730m E of Sandside House (SM 458);  ·Reay, burial ground, old church and cross slab, 175m E of Parish Church (SM 615);  ·Bighouse, garden pavilion and walled garden (LB 7160);  ·Sandside House, kiln barn and single storey range of former byres, cottage and dairy and implement shed (LB 14986);  ·Reay Parish Church and enclosure wall (LB 14992); and  ·Sandside Harbour 1 and 2, Sandside and Fishing Store (LB 14988).	Chapter 8: Archaeology and Cultural Heritage
HEIAR	Cultural Heritage	HEIAR are content that if the assets and key views of the assets fall outwith the ZTV and will not have turbines in the backdrop of key views of the assets, then these can be scoped out of the assessment. They suggest that a Very brief summary of why these assets have been scoped out be included to avoid any confusion at the EIAR stage.	Chapter 8: Archaeology and Cultural Heritage
HEIAR	Cultural Heritage	HEIAR are content to use the LVIA viewpoints but note that additional visualisations from Halladale Bridge hut circles (SM 3304) will be required.	Chapter 8: Archaeology and Cultural Heritage
THC	Cultural Heritage	The assessment should identify all designated sites which have the potential to be directly or indirectly affected by the development.  Historic Environment Scotland note that any assessment should contain a full appreciation of the setting of these historic environment assets and the likely impact on their settings. Where significant impacts are likely, visualisations would be helpful.	Chapter 8: Archaeology and Cultural Heritage
THC	Noise	A noise assessment should be submitted which assessed the operation phase of the development. This should be carried out in accordance with ETSU-R-97 "The Assessment and Rating of Noise from Wind Farms" and best practice. The target noise levels are either a simplified standard of 35dB LA90 at wind speeds up to 10m/s or a composite standard of 35dB LA90 (daytime) and 38dB LA90 (night time) or up to 5dB above background noise levels at up to 12m/s. The night time lower limit of 43dB LA90 as suggested in ETSU is not considered acceptable in many areas of the highlands due to very low background levels.	Chapter 9: Noise
THC	Noise	Qualities of the local environment should be addressed alongside any impacts of the development. Issues such as noise should also be considered.	Chapter 9: Noise
THC	Noise	A noise assessment should be submitted which assessed the operation phase of the development. This should be carried out in accordance with ETSU-R-97 "The Assessment and Rating of Noise from Wind Farms" and best practice.	Chapter 9: Noise



Consultee	Discipline	Consultee Comment to April 2019 Scoping Report	Where Addressed in this Report	
THC	Noise	The noise passement should consider the potential cumulative effect from other existing, consented or proposed wind turbine developments, and must take into account predicted and consented levels from such developments. The assessment should include a map showing all wind farm developments which may have a cumulative impact and all noise sensitive properties including any for which a financial involvement relaxation is being claimed. The assessment should include a table of figures which includes the following: -  • The predicted levels from this development based at each noise sensitive location (NSL) at wind speeds up to 12m/s  • The maximum levels based on consented limits from each existing or consented wind farm development at each NSL. If any reduction is made for controlling property or another reason, this should be made clear.  • The predicted levels from each existing or consented wind farm development at each NSL.  • The cumulative levels based on consented and predicted levels at each NSL.  The assessment should include an outline for a mitigation scheme to be implemented should noise levels substantially exceed consented levels	Chapter 9: Noise	
THC	Noise	If background noise surveys are required, these should be undertaken in accordance with ETSU-R-97 and the Good Practice Guide. It is recommended that monitoring locations be agreed with the Council's Environmental Health Officer.	Chapter 9: Noise	
THC	Noise	A noise construction assessment will be required:  • Where it is proposed to undertake work which is audible at the curtilage of any noise sensitive receptor, out with the hours Mon-Fri 8am to 7pm; Sat 8am to 1pm or;  • Where noise levels during the above periods are likely to exceed 75dB(A) for short term works or 55dB(A) for long term works. Both measurements to be taken as a 1hr LAeq at the curtilage of any noise sensitive receptor. (Generally, long term work is taken to be more than 6 months)	Chapter 9: Noise	
THC	Traffic and Transport	The traffic assessment should identify all council-maintained roads likely to be affected by the development and consider in detail the impact of development traffic, including abnormal load movements, on these roads and any necessary mitigation measured required. Prior to preparation of the TA the developer should first carry out a detailed scoping exercise in consultation with the Council, as local roads authority and, as required, Transport Scotland as trunk roads authority.	Chapter: 10 Traffic and Transport	
THC	Traffic and Transport	Refers applicant to their pre application advice	Chapter: 10 Traffic and Transport	



Consultee	Discipline	Consultee Comment to April 2019 Scoping Report	Where Addressed in this Report
SEPA	Hydrology	If battery storage is included then the EIA Report should include information on how the facilities will be bunded and drained.	Chapter 11: Hydrology and Hydrogeology
Scottish Water	Hydrology	A review of our records indicates that there are no Scottish Water drinking water catchments or water abstraction sources, which are designated as Drinking Water Protected Areas under the Water Framework Directive, in the area that may be affected by the proposed activity.  For reasons of sustainability and to protect our customers from potential future sewer flooding, Scottish Water will not accept any surface water connections into our combined sewer system.	Chapter 11: Hydrology and Hydrogeology
SEPA	Hydrology	SEPA are pleased to note that the revised turbine layout includes a significant buffer to the water environment. Two of the turbines are located on the east of Giligill Burn. If Drum Hollistan windfarm gains planning permission then these turbines should be accessed from the east via that windfarm, unless it is clearly demonstrated that this is not the best environmental options	Chapter 11: Hydrology and Hydrogeology
SNH	Hydrology	SNH advise that the hydrological effects on the peatlands habitats of Caithness and Sutherland Peatlands SAC should be scoped in. SNH note that due to the apparent continuity of blanket bog habitat between Turbines 13 & 14, it is likely there is also hydrological continuity with this SAC.	Chapter 11: Hydrology and Hydrogeology
THC	Hydrology	The hydrology assessment should include potential impacts on water courses, water supplies including private supplies, water quality, water quantity, groundwater and on aquatic flora and fauna. The need for, and information on, abstractions of water supplies for concrete works or other operations should also be identified. Assessment will need to recognise periods of high rainfall which will impact on any calculations of run-off, high flow in watercourses and hydrogeological matters. Measures to prevent erosion, sedimentation or discolouration will be required, along with monitoring proposals and contingency plans. If culverting should be proposed, then it should be noted that SEPA has a general presumption against modification, diversion or culverting of watercourses. Schemes should be designed to avoid crossing watercourses, and to bridge watercourses where this cannot be avoided. Early Stage consultation with SEPA is highly recommended.	Chapter 11: Hydrology and Hydrogeology



Consultee	Discipline	Consultee Comment to April 2019 Scoping Report	Where Addressed in this Report
SEPA	Geology and Peat	SEPA advise that the following information should be submitted with the planning application to avoid delay:  ·Map and assessment of all engineering activities in or impacting on the water environment including proposed buffers, details of any flood risk assessment and details of any related CAR applications;  ·Map and assessment of impacts upon Groundwater Dependent Terrestrial Ecosystems and buffers;  ·Map and assessment of impacts upon groundwater abstractions and buffers;  ·Peat depth survey and table detailing re-use proposals;  ·Map and site layout of borrow pits;  ·Schedule of mitigation including pollution prevention measures;  ·Quarry or Borrow Pit Site Management Plan of pollution prevention measures; and  · Decommissioning Statement	Chapter 12: Geology and Peat
SEPA	Geology and Peat	Further Peat probing will be needed to support the application. This should generally meet the requirements of the recognised best practice guidance however in this case, where the initial probing suggests much of the site is on shallow peat, SEPA would be happy to agree a more proportionate approach.  Proposals should be outlined in a draft Habitat Management Plan.	Chapter 12: Geology and Peat
SNH	Geology and Peat	SNH note that there is no reference to the National Importance afforded to Carbon-rich Soils, Deep Peat and Priority Peatland Habitat (identified within the SPP). This is a significant omission which needs to be rectified within the EIA Report. SNH advise that a Habitat Management Plan should be developed to reflect the importance of peat and peatland habitats.	Chapter 12: Geology and Peat
THC	Geology and Peat	We advise that a peat depth survey should be carried out.	Chapter 12: Geology and Peat
THC	Geology and Peat	The EIAR should fully describe the likely significant effects of the development on the local geology including aspects such as borrow pits, earthworks, site restoration and the soil generally including direct effects and any indirect. Proposals should demonstrate construction practices that help to minimise the use of raw materials and maximise the use of secondary aggregates and recycled or renewable materials. Where borrow pits are proposed the EIAR should include information regarding the location, size and nature of these borrow pits including information on the depth of the borrow pit floor and the borrow pit final reinstated profile.	Chapter 12: Geology and Peat



Consultee	Discipline	Consultee Comment to April 2019 Scoping Report	Where Addressed in this Report
THC	Geology and Peat	A comprehensive peat slide risk assessment in accordance with the Scottish Government Best Practice Guide for Developers will be expected. Assessment should also address pollution risk and environmental sensitivities of the water environment and include a detailed map of peat depth and evidence that the scheme minimises impact on areas of deep peat. The EIAR should include site-specific principles on which construction method statements would be developed for engineering works in peat land areas, including access roads, turbine bases and hard standing areas, and these should include particular reference to drainage impacts, dewatering and disposal of excavated peat.  Consideration should be given to the disturbance and re-use of peat generally as highlighted by SEPA. Carbon balance calculations should also be undertaken.	Chapter 12: Geology and Peat
SEPA	Geology and Peat (Design)	If borrow pits or quarries are proposed then they should be assessed as part of the EIA process.	Chapter 12: Geology and Peat
THC	Land Use, Socio- Economics and Tourism and Recreation	The EIAR should indicate all the areas of woodland / forestry plantation that will felled to accommodate the development, including any off site works / mitigation. Compensatory woodland is a clear expectation of any proposals for felling, and thereby such mitigation needs to be considered within any assessment. If so minded, permission is only likely to be granted on the basis that compensatory planting proposals are identified in advance. Compensatory planting should be within the Highland area and not form part of an already approved forestry plan/proposal that has gained FC funding. Areas of retained forestry or tree groups should be clearly indicated and methods for their protection during construction and beyond clearly described. If timber is to be disposed of, details of the methodology for this should be submitted	Chapter 13: Land Use, Socio- Economics and Tourism
THC	Land Use, Socio- Economics and Tourism and Recreation	The EIAR should recognise the existing land uses affected by the development having particular regard for The Highland Council's Development Plan and other supplementary planning policies.	Chapter 13: Land Use, Socio- Economics and Tourism
THC	Land Use, Socio- Economics and Tourism and Recreation	The EIAR should estimate who may be affected by the development, in all or in part, which may require individual households to be identified, local communities or a wider socioeconomic grouping such as tourists & tourist related businesses, recreational groups, economically active, etc. The application should include relevant economic information connected with the project, including the potential number of jobs, and economic activity associated with the procurement, construction, operation and decommissioning of the development. This should include a statement on local content required under The Highland Renewable Energy Strategy and Planning Guidelines (HREIAR).	Chapter 13: Land Use, Socio- Economics and Tourism



Consultee	Discipline	Consultee Comment to April 2019 Scoping Report	Where Addressed in this Report
SEPA	Climate Change	SEPA do not validate carbon balance assessments.	Chapter 14: Climate Change and Carbon Balance
THC	Climate Change	The EIAR needs to address all relevant climatic factors which can greatly influence the impact range of many of the preceding factors on account of seasonal changes affecting, rainfall, sunlight, prevailing wind direction, etc.	Chapter 14: Climate Change and Carbon Balance
THC	Other Issues (Health and Safety) and	Depending on the proximity of the working area to houses etc. the applicant may require to submit a scheme for the suppression of dust during construction. Particular attention should be paid to construction traffic movements.	Chapter 15: Other Issues
THC	Other Issues (Aviation, Telecoms, Shadow Flicker, Waste, Health and Safety)	The EIAR needs to recognise community assets that are currently in operation for example TV, radio, tele-communications links, radar, MOD safeguards, etc.	Chapter 15: Other Issues
Scottish Water	Other Issues (Shadow Flicker and Health and Safety)	A review of our records indicates that there are no Scottish Water drinking water catchments or water abstraction sources, which are designated as Drinking Water Protected Areas under the Water Framework Directive, in the area that may be affected by the proposed activity.  For reasons of sustainability and to protect our customers from potential future sewer flooding, Scottish Water will not accept any surface water connections into our combined sewer system.	Chapter 15: Other Issues
THC	Other Issues (Shadow Flicker and Health and Safety)  Existing air quality and qualities of the local environment should be addressed alongside any impacts of the development. Issues such as dust, air borne pollution and / or vapours, noise, light, shadow-flicker should also be considered.		Chapter 15: Other Issues



# 2 THE SITE AND DEVELOPMENT

# 2.1 The Updated Site and Surrounding Area

Section 2.1 describes the April 2019 Scoping Report Site Boundary, as shown in Figure 1.2. This description remains valid with the information below describing the extended area to the south and west within the Updated Site that was not included in the April 2019 Scoping Report Site, as shown in Figure 1.2.

The Updated Site is located approximately 18 kilometres (km) west of Thurso and 2 km southeast of Melvich in Sutherland, Highland Council. It is approximately 652 hectares (ha) in total and is centred on National Grid Reference (NGR) 291200, 962150.

The extended area to the south and west within the Updated Site comprises open moorland and semi-improved grassland/quarry, respectively. Elevations range from approximately 163 m Above Ordnance Datum (AOD) in the northeast near Caol-Loch, generally sloping westward to 30 m AOD along the A897. There are two named knolls: Golval Hill (127 m AOD) and Cnoc an Achadh (123 m AOD).

The Updated Site in its entirety lies within the Halladale River catchment with Akran Burn running from Loch Akran to the southeast to the northeast across the Updated Site, and an unnamed watercourse flowing from southeast to northwest towards Golval Farm. Loch Akran and Loch Earacha lie outwith the Updated Site at its southeast and southwest corners corner, respectively. The Caithness & Sutherland Peatlands Special Area of Conservation (SAC) and Ramsar site lies adjacent to the east of the Updated Site. No public roads are located within the Updated Site. The A897 lies to the west of the Updated Site and an overhead transmission line transects the southeast corner of the Updated Site connecting Connagill Substation in the southwest to Dounreay in the northeast.

#### 2.2 The Updated Development

The Updated Site includes an extended area to the south and west of the April 2019 Scoping Report site boundary. This extended area has been added to the Updated Site Boundary in order to move the turbines further from the A836 which is a main tourist route and part of the North Coast 500 (NC500) and to set the Development back further from the coast. Whilst this will potentially mean that turbines are closer to receptors to the south, effects upon the views along the coast and effects on the A836 may be reduced. These were the key considerations in the refusal of Drum Holliston and were matters raised by The Highland Council (THC) in their response to the April 2019 Scoping Report.

The Development is being scoped on an updated turbine layout and represents the likely geographical spread of turbines based upon the turbine developable area as defined by the coverage area for ornithology surveys. The preliminary site layout and Indicative Developable Area is shown in Figure 1.3. It is expected that the Development will consist of up to 12 turbines with a maximum height to blade tip of 149.9 m and a total generating capacity of between 20 – 49.9 megawatts (MW). Ancillary infrastructure will also be required as part of the Development and may include a substation, external transformers, new access tracks and site entrance, temporary construction compound, crane hardstandings and a permanent meteorological mast as well as the option for battery storage.

Sections 2.2.2 to 2.2.6 in the April 2019 Scoping Report provide an overview of the elements considered likely to be included in the final design of the Development and remain valid and are not repeated here. Section 2.2.1 is updated below.

Since submittal of the April 2019 Scoping Report, the Applicant has investigated the potential of the Updated Site to provide broadband as part of its infrastructure. Further details are provided in Section 2.2.2 below.



The connection to the National Grid is not covered within this consenting process and will be subject to a separate consent application.

#### 2.2.1 Turbines

The updated turbine details are as follows:

- Approximate number of turbines: up to 12
- Height to blade tip: Up to 149.9 m
- Generating capacity (per turbine): approximately 3-4 MW
- Total generation capacity: between 20-49.9 MW

Rotor diameters have yet to be confirmed as a candidate turbine has not been selected. Dependent on the final turbine model, transformers may be internal or external.

The indicative Updated Site Layout is shown in Figure 1.3.

#### 2.2.2 Broadband and Infrastructure

The Applicant commissioned an early stage Fixed Wireless Broadband Feasibility Study to explore the potential for the using the infrastructure of the Development to deliver superfast broadband. Whilst further technological and in-depth engineering studies are required, the initial finding show that fixed wireless broadband could be established to provide a service to large areas of the local community. Further details would be included in the EIA Report.



# 3 EIA METHODOLOGY

Chapter 3 of the April 2019 Scoping Report provides details of the Environmental Impact Assessment (EIA) methodology. There are no changes to this section and it remains valid for the Updated Scoping Report.



# 4 POLICY AND LEGISLATIVE CONTEXT

Chapter 4 of the April 2019 Scoping Report identified the key policy documents of relevance to the Development which would be considered throughout the preparation of the EIA Report, including key planning guidance and other material planning considerations. There are no changes to this chapters and it remains valid for the Updated Scoping Report.

Consultation responses were received after submission of the April 2019 Scoping Report. A summary of their responses with respect to the planning and legislative context and how these responses have been dealt with are summarised in Table 6.1 below.

Table 4.1: June 2019 Scoping Opinion Responses

Consultee	Summary of Consultation Response	Response to Consultee	
THC	The EIAR should recognise the existing land uses affected by the development having particular regard for The Highland Council's Development Plan and other supplementary planning policies. This is not instead of but in addition to the expectation of receiving a Planning Statement in support of the application itself which, in addition to exploring compliance with the Development Plan, should look at Scottish Planning Policy and Planning Advice Notes which identify the issues that should be taken into account when considering significant development. It is not considered necessary to cover the matter of energy policy within the EIAR or helpful to cover planning policy within each Chapter of the EIAR.	Land Use is considered in Section 13. A planning context chapter will be included in the EIAR and a Planning Statement will accompany the application.	



# 5 LANDSCAPE AND VISUAL

#### 5.1 Introduction

This chapter provides Updated Scoping Information, as necessary, to assess the potential effects of the updated layout on landscape and visual amenity. It supplements *Chapter 5: Landscape and Visual* of the April 2019 Scoping Report and should be read in conjunction with it.

#### 5.2 Study Areas

The study area parameters remain as described in Section 5.2 of the April 2019 Scoping Report. An updated Zone of Theoretical Visibility (ZTV) to 40 km from the Updated Site is shown in Figure 5.1. Figure 5.2 shows the ZTV to a 20 km radius and includes the list of suggested viewpoints.

# 5.3 Updated Assessment Methodology

There are no changes to the proposed methodology or approach to the landscape and visual impact assessment since the April 2019 Scoping Report (see Section 5.3 of the April 2019 Scoping Report). This includes assessment of landscape, visual and cumulative effects, and effects on residential visual amenity and wild land.

#### 5.4 Updated Consultation

Consultation responses were received after submission of the April 2019 Scoping Report. A summary of the responses regarding landscape and visual matters, and how these responses have been dealt with are summarised in Table 5.1 below.

Table 5.1: June 2019 Scoping Opinion Responses

Consultee	Summary of Consultation Response	Response to Consultee
THC	Advice regarding methodology, visualisations, agreement of viewpoints, and the need to include effects of tracks and infrastructure.	As stated in the April 2019 Scoping Report, the LVIA will be carried out accordance with GLVIA3 <sup>4</sup> , and visualisations will be produced in accordance with SNH <sup>5</sup> and THC <sup>6</sup> visualisation requirements.  Viewpoints will be agreed with the Council, infrastructure will be included in the assessment of effects.
SNH	Requirement for assessment of effects on Wild Land (East Halladale WLA).	An assessment of effects on wild land will be included in the EIA Report.

# 5.5 Updated Baseline Conditions

As set out in Section 5.3.5 of the April 2019 Scoping Report, the cumulative baseline will be identified during the assessment process so that the assessment of potential cumulative effects can be as up-to-date as possible. It is noted that the Drum Hollistan Wind Farm proposal was refused and Limekiln Windfarm consented.

<sup>&</sup>lt;sup>4</sup> Landscape Institute and the Institute of Environmental Management & Assessment (2013) *Guidelines for Landscape and Visual Impact Assessment* (Third Edition)

<sup>&</sup>lt;sup>5</sup> SNH (2017) Visual Representation of Wind Farms, Version 2.2.

<sup>&</sup>lt;sup>6</sup> The Highland Council (2016) Visualisation Standards for Wind Energy Developments



It is noted that the April 2019 Scoping Report referred to baseline information on landscape character types (LCTs) published in 1998<sup>7</sup>, with a reference to SNH data published in March 2019<sup>8</sup>. Given that more time has elapsed since the publication of the new data, the LVIA will be based upon the 2019 SNH landscape character assessment. This data is shown on Figure 5.3. The Southern Site lies within the same landscape character type as the Northern Site: Sweeping Moorland and Flows.

Visual receptors have not changed since the April 2019 Scoping Report, and although the ZTV has changed slightly (updated ZTVs are shown on Figures 5.1 and 5.2), the proposed viewpoints set out in the April 2019 Scoping Report are considered to represent the range of likely views of the Development. The proposed list of viewpoints is set out in Table 5.2 below:

Table 5.2: Potential Viewpoint Locations

VP No.	Viewpoint Name	Easting	Northing	Reasons for selection
1	A836 Forss	305650	969400	Representing one of the first views when leaving Thurso, part of a sequence along the A836, and cumulative effects.
2	A836 Dounreay	299680	966930	Part of a sequence along the A836, and for the assessment of cumulative effects.
3	A836 Reay	296600	964830	Representing views from Reay settlement, views from the Golf Course and Church, and part of the sequence along the A836.
4	A836 Layby	290270	964090	Part of a sequence along the A836, and representing close-up views from the closest stretch of road to the site.
5	A836 Melvich	288870	963930	Part of a sequence along the A836, and representing views from the settlement of Reay as well as landscape character transition from Strath to Sweeping Moorland.
6	Portskerra	287630	965640	A location within the settlement, selected for the assessment of views from the settlement, as well as representing views from the A836 (part of a sequence), and from the coastal core path (albeit this is elevated above the coast path).
7	Strathy Point	282825	968590	Representing views from Strathy Point (visitor location) as well as views from properties along the road from the A836. May be referred to as part of the assessment of effects on the sequential experience of the A836.
8	Strath Halladale, Calgarry	290000	959250	Representing views from along the A897 as well as properties and the core path within Strath Halladale. To be used for the assessment of effects on the landscape character of the strath.
9	Beinn Ratha	294950	960940	Isolated hill inland of the coast and within the Wild Land Area. To be used for landscape, wild land, and cumulative assessments as well as representing elevated views seen by walkers on this hill top.

<sup>&</sup>lt;sup>7</sup> Scottish Natural Heritage (1998) Caithness and Sutherland Landscape Character Assessment

<sup>&</sup>lt;sup>8</sup> Scottish Natural Heritage (March 2019) Scottish Landscape Character Types map and descriptions [Online] Available at: <a href="https://www.nature.scot/professional-advice/landscape/landscape-character-assessment/scottish-landscape-character-types-map-and-descriptions">https://www.nature.scot/professional-advice/landscape/landscape-character-assessment/scottish-landscape-character-types-map-and-descriptions</a>



VP No.	Viewpoint Name	Easting	Northing	Reasons for selection
10	Hill of Shebster	301190	964425	Low hill inland of the coast in a more settled area. To be used for landscape, and cumulative assessments as well as representing views from local residences (albeit elevated).
11	Dunnet Head	320285	976500	Representing views from Dunnet Head as a key visitor location. Also representing longer distance views along the coast for cumulative assessment.
12	A9 Georgemas station	315565	959315	At a transport network junction inland of the coast within the settled lowlands of Caithness. Representing views from the A9 and A882, the railway and from Hallkirk and scattered residences.
13	Ben Dorrery	306290	955040	Isolated inland hill close to the Wild Land Area. To be used for landscape, wild land, and cumulative assessments as well as representing elevated views seen by walkers on this hill top.
14	A897 Forsinard	289150	945920	Representing views from within Strath Halladale and on the A897 (sequential views), as well as long distance views from the south.
15	Ben Griam Beg	283180	941165	Isolated inland hill. To be used for landscape assessment as well as representing elevated views seen by walkers on this hill top.
16	A836 Cnoc Craggie	261095	953085	Representing distant views from the west, as well as views from the A836.

#### 5.6 Updated Key Sensitivities and Potential Effects

The key sensitivities remain largely unchanged from those identified in Section 5.5 of the April 2019 Scoping Report, but the alterations to the layout moving the turbine area further south-westwards may mean that there are additional sensitivities with respect to views from within Strath Halladale which would be assessed within the EIA Report.

The purpose of the design changes was to increase the setback from the coast and from the A836. The sensitivities with respect to the sequential views from this route and views along the coast will be considered in detail in the EIA Report.

#### 5.7 Scoped In/Out Effects

The effects to be included or scoped out of the LVIA remain as set out in Section 5.6 of the April 2019 Scoping Report.

#### 5.8 Further Questions for the Council / Consultees

• Can it be confirmed that the proposed visual receptors including viewpoints are appropriate and sufficient to inform the visual assessment?



# 6 ECOLOGY

#### 6.1 Introduction

This chapter provides Updated Scoping Information, as necessary, to assess the potential effects of the updated layout on Ecology. It supplements *Chapter 6: Ecology* of the April 2019 Scoping Report and should be read in conjunction with it. Ecological designations are shown in Figure 6.1.

#### 6.2 Changes to Legislation, Policy and Guidance

There have been no changes to the relevant legislation and policy since the April 2019 Scoping Report; however, in April 2019, Chartered Institute of Ecology and Environmental Management (CIEEM) published advice on the lifespan of Ecology Surveys Reports and surveys<sup>9</sup>. CIEEM guidance recommends that all ecology data (including habitats data) is unlikely to remain valid after 3 years, and that the validity of data over 12 months old should be assessed on a site by site basis, especially when changes in baseline are likely to have occurred.

# 6.3 Updated Assessment Methodology

No changes to the Assessment Methods outlined in Section 6.3 of the April 2019 Scoping Report are proposed and this section remains valid for the Updated Site.

#### 6.4 Updated Survey Methodology

The scope of ecology surveys both previously carried out and recommended, as detailed in Section 6.5.3 the April 2019 Scoping Report, are being updated to ensure they provide sufficient surveys coverage for the extended area to the south and west within the Updated Site Boundary (Figure 1.2). The methodologies used for all surveys will be carried out in accordance with the same methodologies detailed in Section 6.5.3 of the April 2019 Scoping Report, with the minor exception of Bat Surveys.

#### 6.4.1 Bat Survey Methods

Bat Surveys have been carried out in accordance with the appropriate survey guidance as detailed within Section 6.5.3.1 of the April 2019 Scoping Report, with the exception of the following aspects;

- Due to a technical error, bat data recorded in April 2019 Remote Monitoring Activity Surveys was lost, and surveys were required to be repeated. These surveys were carried out 4<sup>th</sup> and 14<sup>th</sup> of June, just outwith the time period defined as 'spring' within guidance; and
- Following the development of the updated layout in July, the scope of the summer Remote Monitoring Activity Surveys (carried out in early August) and autumn surveys (to be carried out in early-mid September) had to be amended to ensure sufficient coverage of the Updated Site, and to adherence to survey guidance.

In light of the above, it is acknowledged that surveys carried out in early June 2019 were limited by seasonality and spatial coverage, with regards to adherence to guidance.

Due to the exposed and open nature of both portions of the Updated Site and its location outwith the range of the majority of UK bat species, including all high-risk species, the Development is considered of low risk to bats. Furthermore, preliminary analysis of baseline datasets recorded in July and August suggests that bat activity recorded to date has been very low and is predicted to continue to be very low in the final surveys. For these reasons,

<sup>&</sup>lt;sup>9</sup> CIEEM (2019) Advice Note: On the Lifespan of Ecological Reporting & Surveys. Available at: https://cieem.net/wp-content/uploads/2019/04/Advice-Note.pdf



it is considered that the timing and coverage of the June 2019 survey represents a minor deviation from guidance that is unlikely to have any notable detrimental impact on the robustness of the data required to inform the assessment of the effects of the Development of local bat populations.

# 6.5 Updated Consultation

Consultation responses were received after submission of the April 2019 Scoping Report. A summary of their responses with respect to Ecology and how these responses have been dealt with are summarised in Table 6.1 below.

Table 6.1: June 2019 Scoping Opinion Responses

Consultee	Summary of Consultation Response	Response to Consultee
SNH	Noted that the Development abuts the boundary of the Caithness & Sutherland Peatlands Special Area of Conservation (SAC) and Ramsar site, which is protected for peatland habitat, otter and marsh saxifrage.	The Caithness & Sutherland Peatlands SAC and Ramsar site lies adjacent to the east of the Updated Sites. As noted in Section 6.7.1 of the April 2019 Scoping Report, potential impacts on qualifying ecological interests of the Caithness & Sutherland Peatlands SAC and Ramsar site will be scoped in to the assessment. As advised, the assessment will be completed with reference to the Conservation Objectives of the SPA, which will include a Habitat Regulation Appraisal (HRA) Screening, presented within the
		Ecology EIAR Chapter.
SNH	Advised that Otter Surveys should be undertaken, assessed and presented in context to this SAC.	As noted in Section 6.5.3.2 of the April 2019 Scoping Report, otter surveys will be carried out in accordance with SNH guidance.
SNH	Advised that the proposal lies directly adjacent to the north end of East Halladale SSSI, protected for its blanket bog.	The East Halladale SSSI lies within the boundary of the Caithness & Sutherland Peatlands SAC and is also designated for bog habitats.  Therefore, the potential impacts on qualifying interests of this SSSI are scoped into the assessment via the inclusion of the SAC assessment.
SNH	SNH note that there is no reference to the National Importance afforded to Carbon-rich Soils, Deep Peat and Priority Peatland Habitat (identified within the SPP).	This would be included as part of the baseline compilation associated with the NVC and Phase 1 surveys.
SNH	Advised that a Habitat Management Plan (HMP) should be developed to reflect the importance of peatland habitats.	Should the assessment conclude that peatlands habits are likely to be lost or damaged, details of appropriate measures to mitigate and compensate for these effects, such as an Outline HMP, will be included within the EIAR.
SNH	Advise that there should be a 50m buffer zone from turbine tip to the	Measures to ensure the maintenance of a 50 m offset buffer



Consultee	Summary of Consultation Response	Response to Consultee
	nearest features that may be attractive to bats, such as woodland, forest edge and water courses.	between blade tip to bat features throughout the life time of the Development will be detailed within the EIAR.
SNH	SNH advise that the mammal species being considered for additional survey work appears to be generally satisfactory and that reptiles should be fully considered, as the habitat is likely to be suitable for common lizard and adder.	EIAR will consider reptiles with recommendations for mitigation.
SNH	Advise that red squirrel surveys can be dropped from the survey scope.	Red squirrel surveys have been dropped from the Updated Baseline Survey methods.
SEPA	Advise that map and assessment of impacts upon Groundwater Dependent Terrestrial Ecosystems (GWDTEIAR) and Buffers must be in support of the application.  Advices that impacts on M15b (wet heath) should be minimised as much as possible.	National Vegetation Classification Surveys have been carried out to record the presence of potential GWDTEs. The EIAR will include a map of GWDTEIAR and an assessment of the likely effects on these features from the Development.  An assessment of GWDTEs will be included within Chapter 6: Ecology chapter and will be informed by both NVC data and the hydrogeological assessment presented in Chapter 11: Hydrology and Hydrogeology.  Measure to safeguard groundwater will be compliant with SEPA guidance.
SEPA	Habitat plans should be shown with all the infrastructure, including temporary infrastructure such as borrow pits and laydown areas.	The EIAR will be supported by habitat and vegetation figures (including GWDTE mapping), which for clarity will be overlain with the Development Layout including associated infrastructure.
SEPA	SEPA are supportive of peatland restoration of degraded bog as mitigation for impacts on bog habitats, as long the design is still avoidance of best quality habitat and deep peat in the first instance.	The EIA process will ensure a mitigation hierarchy that places mitigation by design above restoration and compensation.  Details of the relevant aspects of mitigation by design will be detailed in EIAR Chapter 6: Ecology.
THC	The EIAR should provide a baseline survey of the plants (and fungi) and trees present on the site to determine the presence of any rare or threatened species.	Phase 1 Habitat, National Vegetation Classification and protected Species Surveys and have been carried out to record the presence of any rare or threatened species.



Consultee	Summary of Consultation Response	Response to Consultee
THC	The EIAR should address the likely impacts on the nature conservation interests of all the designated sites in the vicinity with proposals for mitigation to avoid these impacts or to reduce them to a level where they are not significant.	A comprehensive desk study will be carried out to identify the nature conservation interests of all the designated sites in the vicinity of the Development.  Any mitigation necessary to avoid potential impacts or to reduce them to a level where they are not significant will be addressed in EIAR Chapter 6: Ecology.
THC	The EIAR should identify rare and threatened habitats, and those protected by European or UK legislation, or identified in national or local Biodiversity Action Plans. Habitat enhancement and mitigation measures should be detailed. Details of any habitat enhancement programme (such as native- tree planting, stock exclusion, etc) for the proposed site should be provided. It is expected that the EIAR will address whether or not the development could assist or impede delivery of elements of relevant Biodiversity Action Plans.	Phase 1 and National Vegetation Classification Surveys have been carried out to record the presence of any rare or threatened habitats. Any recommended mitigation and/or enhancement regarding potential protected habitats will be addressed in the survey report. Details of the relevant aspects of mitigation by design will be detailed in EIAR Chapter 6: Ecology.
THC	The EIAR needs to address the aquatic interests within local watercourses, including downstream interests that may be affected by the development. The EIAR should evidence consultation input from the local fishery board(s) where relevant.	Fisheries Habitat Surveys have been carried out to record any downstream interests that may be affected by the development.
Northern District Salmon Fisheries Board	No comments to make at this stage however please included us in the list of Non statutory consultees.  We would welcome the opportunity to review the EIA report when it becomes available.	Added to consultee list in Appendix B.

#### 6.6 Updated Baseline Conditions

Updated Baseline Surveys are ongoing and yet to be completed; therefore, baseline conditions presented in Section 6.4 of the April 2019 Scoping Report have not changed. A full baseline will be included within the EIA Report.

The Phase 1 Habitat Survey and NVC Surveys have already been completed to incorporate the Updated Site. The key habitats and areas of high and moderate groundwater dependency observed during these surveys are shown in Figure 6.2.

# 6.7 Updated Key Sensitivities and Potential Effects

Key sensitivities and potential effects of the Development on ecological features are described in Sections 6.6 and 6.7 respectively of the April 2019 Scoping Report. No



additional key ecological sensitivities or potential effects on these features have been identified. All ecological designations within the identified survey area stated in the April 2019 Scoping Report are highlighted in Figure 6.1.

# 6.8 Scoped In/Out Effects

The Scoped in/out effects on ecological interests proposed in Section 6.8 of the April 2019 Scoping Report are still considered relevant and no further effects are predicted, with the **exception of effect on red squirrel, which has been scoped out following SNH's consultation** response (see Table 6.1).

#### 6.9 Further Questions for the Council / Consultees

Could consultees please confirm acceptance, or otherwise, that the extent of ecology datasets and completed surveys obtained to date are sufficient for the Updated Site, particularly in regards to Bat surveys?



#### 7 ORNITHOLOGY

#### 7.1 Introduction

This chapter provides Updated Scoping Information, as necessary, to assess the potential effects of the updated layout on ornithological interests. It supplements *Chapter 7: Ornithology* of the April 2019 Scoping Report (provided in Appendix C) and should be read in conjunction with it. Ornithological designations are shown in Figure 6.1.

#### 7.2 Updated Assessment Methodology

No changes to the Assessment Methods outlined in the April 2019 Scoping Report are proposed. As such, Section 7.2 of the April 2019 Scoping Report remains valid.

#### 7.3 Updated Consultation

Consultation prior to April 2019 is summarised in Section 7.4 of the April 2019 Scoping Report. Consultation responses received after submission of the April 2019 Scoping Report in respect to ornithology are summarised in Table 7.1, along with how these responses have been or will be addressed.

In addition, a Consultation Letter (Reference 3138/ORN/LC) detailing the changes to the Site Boundary and turbine layout, and seeking confirmation that the ornithology data obtained during baseline surveys completed between 2014 and 2018 (and summarised in the April 2019 Scoping Report) will be sufficient to inform a robust ornithological impact assessment, was submitted to SNH on 6<sup>th</sup> September 2019.

Table 7.1: June 2019 Scoping Opinion Responses

Consultee	Summary of Consultation Response	Response to Consultee
SNH	Noted that the Development abuts the boundary of the Caithness & Sutherland Peatlands Special Protection Area (SPA) and Ramsar site, which is protected for upland breeding birds.  Stated that the detailed assessment will be required to gauge if the Development is likely to have adverse impacts on the SPA qualifying species and advised that the development could potentially affect birds within the SPA, therefore assessments should be carried out using the SPA Conservation Objectives.	The Caithness & Sutherland Peatlands SAC and Ramsar site lies adjacent to the east of the Updated Sites As noted in Section 7.6.1 of the April 2019 Scoping Report, potential impacts on qualifying ornithological interests of the Caithness & Sutherland Peatlands SPA and Ramsar site will be scoped in to the assessment. As advised, the assessment will be completed with reference to the Conservation Objectives of the SPA.



Consultee	Summary of Consultation Response	Response to Consultee
SNH	Commented that the Development also lies directly adjacent to the north end of East Halladale Site of Special Scientific Interest (SSSI), which is protected for its blanket bog, breeding bird assemblage, dunlin ( <i>Calidris alpina</i> ) and golden plover ( <i>Pluvialis apricaria</i> ), but that the April 2019 Scoping Report only identifies this site for bog habitat.  Advised that any potential impacts on designated features of the SSSI should be assessed and presented within the Environmental Impact Assessment Report (EIAR) and that the breeding bird assemblage list to be considered is "Upland moorland with water bodies"."	The ornithological designations of East Halladale SSSI are specified in Table 7.2 of the April 2019 Scoping Report, and Section 7.6.1 states that potential impacts on qualifying ornithological interests of this SSSI will be scoped in to the assessment.  When completing the assessment, reference will be made to the cited breeding bird assemblage list as advised.
SNH	Advised that most of the Caithness & Sutherland Peatlands Ramsar site interests are covered by the SSSI comments above, but noted SNH believe the general area is well used by summer/early autumn greylag geese (Anser anser), which could be attributed to this Ramsar Site. Noted that Vantage Point (VP) survey results should indicate whether greylag geese are considered to be at risk from Development. Further noted that late evening VP watches in early autumn may help to identify any roosting behaviour and flight lines.	As noted above, Section 7.6.1 of the April 2019 Scoping Report, states that potential impacts on qualifying ornithological interests of the Caithness & Sutherland Peatlands SPA and Ramsar site will be scoped in to the assessment.  As summarised in Section 7.3 of the April 2019 Scoping Report, VP surveys were completed in 2014-16 as well as the 2018 breeding season, which totalled 240 hours survey effort per VP and included dawn and dusk surveys. Greylag goose flight activity was relatively low, with respective totals of 58 and 29 flights during the 2014-16 and 2018 VP Surveys, and small flock sizes (up to 49 birds). Furthermore, there was no evidence of breeding greylag geese in the vicinity of the Site. As such, the flight data obtained to date is considered to be sufficient to allow a robust assessment of potential impacts on this species.
SNH	Advised that birds not connected to a protected area should be assessed against the Natural Heritage Zone (NHZ) populations <sup>11</sup> and recommended that bird survey work should follow SNH best practice guidelines <sup>12</sup> .	As noted in Section 7.3 of the April 2019 Scoping Report, surveys followed SNH guidance current at the time, namely SNH (2017) <sup>12</sup> and precious versions of this guidance. As advised, and in line with the cited SNH (2018) <sup>11</sup> , birds not connected to a protected area will be assessed against the relevant NHZ populations.
RSPB	Mirrored comments received from SNH relating to the proximity of the Development to the Caithness & Sutherland Peatlands SPA and Ramsar site, and East Halladale SSSI (summarised above).	See responses to similar SNH comments above.

<sup>&</sup>lt;sup>10</sup> Drewitt, A.L., Whitehead, S. and Cohen, S. 2015. *Guidelines for the Selection of Biological SSSIs. Part 2: Detailed Guidelines for Habitats and Species Groups. Chapter 17 Birds.* Joint Nature Conservation Committee, Peterborough.

<sup>11</sup> SNH (2018). *Assessing Significance of Impacts from Onshore Wind Farms Outwith Designated Areas.* 

<sup>&</sup>lt;sup>12</sup> SNH (2017) Recommended bird survey methods to inform impact assessment of onshore wind farms.



Consultee	Summary of Consultation Response	Response to Consultee
RSPB	Noted that a Habitats Regulation Appraisal (HRA) will be required and stressed the importance of gathering sufficient information to inform an Appropriate Assessment (AA).	A HRA Screening will be carried out and presented within the Ornithology EIAR Chapter, and will inform the requirement for an AA.  Should an AA be required, it should be carried out by a competent authority, however, information sufficient to inform an AA will be presented in an Appendix to the EIAR, and will be submitted with the Application.
RSPB	Confirmed that, in general, RSPB is content with the species and sites scoped into the assessment, but noted that Section 7.6.1 of the April 2019 Scoping Report incorrectly refers to the Caithness and Sutherlands SPA and Ramsar site as the "Caithness Cliffs SPA and Ramsar site".	It is acknowledged that, due to a typographical error, Section 7.6.1 of the April 2019 Scoping Report incorrectly refers to the Caithness and Sutherlands SPA and Ramsar site as the "Caithness Cliffs SPA and Ramsar site". To clarify, potential effects on qualifying ornithological interests of the Caithness and Sutherlands SPA and Ramsar site will be scoped in to the assessment.
RSPB	Further advised that the potential for impacts on common scoter ( <i>Melanitta nigra</i> ) are scoped into the assessment as there are breeding records of this species within 2 km of the Development, and that the North Caithness Cliffs SPA should be scoped into the assessment as it is located within 2 km of the Development and peregrine is a qualifying feature.	No common scoters were recorded during the baseline surveys completed in 2014-16 or 2018. Historical records of this species were obtained from the RSPB in 2018, the most recent of which was from 23/02/2012. The dataset included two records, both from 2007, of possible/probable breeding on a loch more than 4 km from the Site. All other records returned by the RSPB were of wintering/non-breeding birds. However, if the RSPB hold records of breeding common scoter within 2 km of the Site, the Applicant would be pleased to receive these so that this information can be included in the assessment.  Although there were occasional observations of peregrine in 2014, 2015 and 2018, levels of flight activity were low in all years and no evidence of breeding within 2 km of the Development was observed. The dataset obtained from the RSPB did not include any records of peregrine.  As such it is considered unlikely that there will be any significant effects on either species.  Furthermore, as detailed in Section 7.4.2 of the April 2019 Scoping Report, SNH stated (via telephone) on 17/04/2018 that their current position was that potential impacts on the North Caithness Cliffs SPA were unlikely and could be scoped out. Nonetheless potential effects on common scoter and the North Caithness Cliffs SPA will be scoped into the assessment as requested.



Consultee	Summary of Consultation Response	Response to Consultee
RSPB	Criticised the fact that baseline survey work had progressed further than the RSPB would generally expect at the scoping stage and commented that consequently the scoping exercise was of less use than it would have been if carried out prior to commencement of surveys.	As noted in their response, RSPB is content with the species and sites scoped into the assessment. Section 7.4 of the April 2019 Scoping Report details that a Scoping Report was previously submitted in 2015. Subsequent consultation with SNH also took place in April and November/ December 2018, during which SNH confirmed that the approach to the 2018 ornithological survey work was reasonable and proportionate.
RSPB	Expressed their opinion that, due to the age of the initial survey work completed in 2014/15 and the planned submission date of 2020, the limited information provided in the April 2019 Scoping Report was insufficient to demonstrate that the additional survey effort in 2018 was adequate, and therefore reserved judgement on this.  Further advised that more detailed information is provided within the EIAR to demonstrate that the survey data are adequate, robust and accurate.	Rather than presenting detailed ornithological baseline information, the aim of the April 2019 Scoping Report was to determine the ecological issues to be addressed in the Ecological Impact Assessment (EcIA) and confirm the assessment approach. This is in line with current Chartered Institute of Ecology and Environmental Management (CIEEM) guidance <sup>13</sup> . As such, the baseline information presented in the April 2019 Scoping Report was a summary only. Detailed baseline survey methods and results, including full details of VP Surveys and the results of collision risk modelling (which has yet to be completed) will be included in the EIAR. Furthermore, as noted in Section 7.4.2 of the April 2019 Scoping Report, SNH confirmed that the approach to the 2018 ornithological survey work was reasonable and proportionate. They further advised that submission of an application in early 2020 would allow inclusion of two years of breeding bird survey data collected within the previous five years, and that while this approach would only allow inclusion of one year of non-breeding bird survey data collected within the previous five years, this was not critical because the SPA/SSSI bird interest is for breeding birds.
RSPB	Noted that cumulative impacts on species sensitive to wind energy developments should be assessed across the relevant NHZ and in relation to "the Peatlands SPA <sup>14</sup> " and should include all existing and proposed wind farms in the NHZ. Further advised that cumulative impacts should be considered in relation to other types of development such as overhead power lines and new woodland planting.	As noted in Section 7.2 of the April 2019 Scoping Report, potential cumulative impacts on ornithological features will be considered as part of the EcIA.  As advised, this will be completed at the NHZ level and will consider other types of development where information is available.

<sup>&</sup>lt;sup>13</sup> CIEEM (2018) *Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater, Coastal and Marine.* Chartered Institute of Ecology and Environmental Management, Winchester.

 $<sup>^{14}</sup>$  It is assumed this is a reference to the Caithness and Sutherland Peatlands SPA



Consultee	Summary of Consultation Response	Response to Consultee
RSPB	Noted that the EIAR should include "a full survey, impact assessment and proposals for mitigation/ enhancement in relation	As noted above, detailed baseline survey methods and results will be included in the EIAR.
	to important species and habitats at the <b>Site" and</b> requested a detailed Habitat Management Plan (HMP).	In addition, as noted in Section 7.2 of the April 2019 Scoping Report, an assessment of potential impacts on ornithological interests will be completed (with the methods and results fully detailed in the EIAR), i.e. an EcIA, and this will incorporate appropriate mitigation measures as required. The requirement for a HMP is addressed in Section 6: Ecology.
THC	Reiterated advice the response from SNH and RSPB that the EIAR should address the likely impacts on nature conservation interests of all designated sites in the vicinity of the Development, specifically the Caithness & Sutherland Peatlands and East Halladale SSSI.	As noted above, Section 7.6.1 of the April 2019 Scoping Report states that potential impacts on qualifying ornithological interests of the Caithness & Sutherland Peatlands SPA and Ramsar site and the East Halladale SSSI will be scoped in to the assessment.
	Further noted that the EIAR should include proposals for any mitigation required to avoid potential impacts or reduce them to a non-significant level.	As noted in Section 7.2 of the April 2019 Scoping Report, assessment of potential impacts on ornithological interests will incorporate mitigation measures as required.
THC	Stated that the EIAR should provide "a baseline survey of the bird interest on Site" and should categorically establish which species are present on the Site, and where, before.	The ornithological baseline is summarised in Section 7.3 of the April 2019 Scoping Report and will form the basis of the ornithological impact assessment presented in the EIAR.
	Further noted that the presence of protected species such as birds listed on Schedule 1 of the Wildlife and Countryside Act 1981 (as amended) <sup>15</sup> must be included and considered as part of the planning application process and that any consent given without due consideration to these species may breach European Directives with the possibility of consequential delays or the project being halted by the EC.	Except where they have been scoped out (see Section 7.6.2 of the April 2019 Scoping Report) potential impacts on all ornithological sensitivities recorded during baseline surveys will be assessed. As specified in Section 7.6.1 of the April 2019 Scoping Report, this will include species listed on Schedule 1 <sup>15</sup> as well as those listed on Annex I of the Birds Directive <sup>16</sup> .

#### 7.4 Updated Baseline Conditions

The baseline ornithology is summarised in Section 7.3 of the April 2019 Scoping Report and remains valid. As the turbine developable area of the Updated Site has already been covered during baseline surveys completed between 2014 and 2018, the data collected will be sufficient to inform a robust ornithological impact assessment, and no further updates to ornithology baseline conditions are proposed. Figure 7.1 highlights the vantage point locations and viewsheds from the completed baseline surveys. Similarly, Figure 6.1 highlights the ornithological designations in the vicinity of the Updated Site.

<sup>15</sup> http://www.legislation.gov.uk/ukpga/1981/69

<sup>&</sup>lt;sup>16</sup> Directive 2009/147/EC on the conservation of wild birds: <a href="https://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=00.ll:2010:020:0007:0025:EN:PDF">https://eur-lex.europa.eu/LexUriServ.do?uri=00.ll:2010:020:0007:0025:EN:PDF</a>



#### 7.5 Updated Key Sensitivities and Potential Effects

Key ornithological sensitivities and potential effects of the Development on these sensitivities are described in Sections 7.5 and 7.6 respectively of the April 2019 Scoping Report. No additional key ornithological sensitivities or potential effects on these sensitivities have been identified and Section 7.5 and 7.6 of the April 2019 Scoping Report remain valid.

### 7.6 Scoped In/Out Effects

Scoped in/out effects on ornithological interests are proposed in Section 7.6 of the April 2019 Scoping Report. Note, however, that Section 7.6.1 incorrectly refers to the Caithness and Sutherlands SPA and Ramsar site as the "Caithness Cliffs SPA and Ramsar site", which is a typographical error. To clarify, potential effects on qualifying ornithological interests of the Caithness and Sutherlands SPA and Ramsar site will be scoped in to the assessment, while (as correctly stated in Section 7.6.1), potential effects on qualifying ornithological interests of the North Caithness Cliffs SPA will be scoped in to the assessment.

In addition, as requested by the RSPB, potential impacts on common scoter and the North Caithness Cliffs will be scoped in. No other changes to the scoped in/out effects on ornithological interests are proposed and all remaining aspects of Section 7.6 of the April 2019 Scoping Report remain valid.

#### 7.7 Further Questions for the Council / Consultees

We would appreciate confirmation that further updates to baseline ornithology conditions are not required.



# 8 ARCHAEOLOGY AND CULTURAL HERITAGE

#### 8.1 Introduction

This chapter provides Updated Scoping Information, as necessary, to assess the potential effects of the updated layout on archaeology and cultural heritage. It supplements *Chapter 8: Archaeology and Cultural Heritage* of the April 2019 Scoping Report and should be read in conjunction with it.

#### 8.2 Changes to Legislation, Policy and Guidance

The Historic Environment Policy for Scotland 2109<sup>17</sup> replaces the operational practices which were set out in the Historic Environment Scotland (HEIAR) Policy Statement 2016. This guidance outlines the duty of care required when a decision will affect the historic environment. This updated guidance does not materially change the assessment methodology proposed within Section 8.2 in Chapter 8: Archaeology and Cultural Heritage of the April 2019 Scoping Report.

#### 8.3 Updated Assessment Methodology

The assessment methodology and significance criteria used within the Updated Scoping Report remain the same as stated within Section 8.2 of the April 2019 Scoping Report with regard to archaeology and cultural heritage.

#### 8.4 Updated Consultation

Consultation responses were received after submission of the April 2019 Scoping Report A summary of their responses with respect to Archaeology and Cultural Heritage and how these responses have been dealt with are summarised in Table 8.1 below.

Table 8.1: June 2019 Scoping Opinion Responses

Consultee	Summary of Consultation Response	Response to Consultee
Historic Environment Scotland (HES)	HES note the new Historic Environment Policy for Scotland (HEPS 2029) which was adopted on 1st May 2019.	This is addressed in Section 8.2 above.
	HEIAR have identified the following assets as having the potential to be impacted by the Development (but note that this list is not exhaustive):	These have been included within the key sensitives in Section 8.4 and will be included in the EIAR
	<ul> <li>Halladale Bridge, hut circles 670m</li> <li>NE of (SM3304);</li> </ul>	
	<ul> <li>Knock Stanger, cairn 730m E of Sandside House (SM458);</li> </ul>	
	<ul> <li>Reay, burial ground, old church and cross slab, 175m E of Parish Church (SM615);</li> </ul>	
	<ul> <li>Bighouse, garden pavilion and walled garden (LB7160);</li> </ul>	
	<ul> <li>Dandside House, kiln barn and single storey range of former byers, cottage and dairy and implement shed (LB14986);</li> </ul>	
	<ul> <li>Reay Parish Church and enclosed wall (LB14992); and</li> </ul>	

<sup>&</sup>lt;sup>17</sup> Historic Environment Policy for Scotland 2019 (Historic Environment Scotland). Available at <a href="https://www.historicenvironment.scot/archives-and-research/publications/publication/?publicationId=1bcfa7b1-28fb-4d4b-b1e6-aa2500f942e7">https://www.historicenvironment.scot/archives-and-research/publications/publication/?publicationId=1bcfa7b1-28fb-4d4b-b1e6-aa2500f942e7</a> [Accessed on 26/08/2019]

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Consultee	Summary of Consultation Response	nsultation Response Response to Consultee	
	<ul> <li>Sandside Harbour 1 and 2, Sandside and Fishing Store (LB14988).</li> </ul>		
	HEIAR have requested visualisation from Halladale Bridge, hut circles 670m NE of (SM3304) and additional heritage visualisations from assets which will receive an additional effect.	Consultation will be undertaken to confirm the final list of heritage visualisations.	
	HEIAR are content that if the assets and key views of the assets fall outwith the ZTV and will not have turbines in the backdrop of key views of the assets, then these can be scoped out of the assessment. They suggest that a Very brief summary of why these assets have been scoped out be included to avoid any confusion at the EIAR stage.	This will be included in the EIAR.	
THC	THC note that the assessment should identify all designated sites which have the potential to be directly or indirectly affected by the development.	This is addressed in Section 8.3 above.	

#### 8.5 Updated Baseline Conditions

The HER data and Canmore Data has been obtained for the Updated Site and 12 non-designated assets were identified, as listed in Table 8.2 below. A walkover survey of the Updated Site has been conducted and no additional heritage assets were noted. Full details will be included in the EIA Report.

Table 8.2: Non-Designated Assets within the Updated Site

HER Number	Canmore ID	Name	Туре
MHG10221	7393	Burnt Mound, Akran Burn	Burnt Mound
MHG10226	7403	Ackran Burn	Field System
MHG10296	n/a	Akran Burn	Hut Circle
MHG10297	7401	Akran Burn	Hut Circle
MHG13440	n/a	Akran Burn	Settlement
MHG17815	n/a	Golval	Building
MHG18613	86980	Cnoc Chorkael	Building
MHG19733	93267	Cnoc Chorkael	Enclosure
n/a	349450	Melvich	Sand and Gravel Workings (Period Unassigned)
n/a	348460	Golval Fam	Dyke (Period Unassigned)
n/a	348459	Golval Fam	Structure (Period Unassigned)



The 5 km baseline, as summarised in Section 8.3 within Chapter 8: Archaeology and Cultural Heritage has not changed and remains valid.

#### 8.6 Updated Key Sensitivities and Potential Effects

Key sensitivities and potential effects of the Development on archaeology and cultural heritage are described in Sections 8.4 and 8.5 respectively of the April 2019 Scoping Report. No additional key sensitivities or potential effects on these sensitivities have been identified and Section 8.4 and 8.5 within Chapter 8: Archaeology and Cultural Heritage of the April 2019 Scoping Report remain valid.

#### 8.7 Scoped In/Out Effects

Scoped in/out effects on to the archaeology and cultural heritage recourse are proposed in Section 8.5 of the April 2019 Scoping Report. Note, however, that HEIAR's response indicated some confusion over the assets which were to be scoped in.

For clarity, all designated assets within the 5 km Study Area will be included in the assessment regardless of whether they lie within the ZTV. For designated heritage assets between 5 and 10 km Study Area, only those that lie within the ZTV, or from which views across/towards the asset are within the ZTV, will be scoped into the assessment of indirect effects.

No changes to the scoped in/out effects are proposed and all remaining aspects of Section 8.5 of the April 2019 Scoping Report remain valid.

#### 8.8 Further Ouestions for the Council / Consultees

- Are Council and Consultees content with that their comments from the April 2019
   Scoping Report have been addressed or clarified?
- Are Council and Consultees aware of any changes current or recent archaeological work or projects being undertaken within or in the vicinity of the Development site, particularly those whose results may not yet be recorded in the Historic Environment Record?
- Are the Council and Consultees aware of any further sites with statutory protection within the wider landscape whose settings may be affected by the Development?



## 9 NOISE

The study areas, methodology, baseline conditions, key sensitivities, and potential effects provided in *Chapter 9: Noise* of the April 2019 Scoping Report Scoping Report remain valid, and no changes are proposed for the Updated Site.

Consultation responses were received after submission of the April 2019 Scoping Report. A summary of their responses with respect to Noise and how these responses have been dealt with are summarised in Table 9.1 below.

Table 9.1: Scoping Opinion Responses

Consultee	Summary of Consultation Response	Response to Consultee
THC	The Environmental Health Officer (EHO) has stated that a noise assessment should be submitted with regard to the operation phase of the development. This should be carried out in accordance with ETSU-R-97 "The Assessment and Rating of Noise from Wind Farms" and IOA Good Practice Guide.	This is addressed in Section 9.3 of the April 2019 Scoping Report and a full assessment will be presented in the EIAR.
THC	The EHO notes that the noise assessment must consider the potential cumulative effect from other existing, consented or proposed wind turbine developments, and must take into account predicted and consented levels from such developments.  The assessment should include a map showing all wind farm developments which may have a cumulative impact and all noise sensitive properties including any for which a financial involvement relaxation is being claimed.	This is addressed in Section 9.6 of the April 2019 Scoping Report and a cumulative assessment will be presented in the EIAR.
THC	If background noise surveys are required, these should be undertaken in accordance with ETSU-R-97 and the Good Practice Guide. It is recommended that monitoring locations be agreed with the Council's EHO.	This is addressed in Section 9.4 of the April 2019 Scoping Report and here.



Consultee	Summary of Consultation Response	Response to Consultee
	A noise construction assessment will be required:  • Where it is proposed to undertake work which is audible at the curtilage of any noise sensitive receptor, out with the hours Mon-Fri 8am to 7pm; Sat 8am to 1pm or;  • Where noise levels during the above periods are likely to exceed 75 dB(A) for short term works or 55 dB(A) for long term works. Both measurements to be taken as a 1hr LAeq at the curtilage of any noise sensitive receptor.  (Generally, long term work is taken to be more than 6 months)	Given that the nearest noise sensitive receptor is located approximately 1 km west of the closest turbine location (based upon the Scoping layout), it is unlikely that noise levels will exceed the referenced noise levels for both short term and long-term works. This is proposed to be scoped out of the assessment as, in lines with the EIA Regulations, significant effects are unlikely.

A noise contour plot of the latest turbine layout is shown in Figure 9.1 using the worst-case candidate turbine, Nordex N133 4.6MW with a maximum sound power level of 106 dBA. There are two properties that lie within the 35 dB noise contour: Ackron Farm and Golval which are both financially involved. Given that Golval is the closest of the two properties to the nearest turbine, it is proposed that the baseline noise measurements be taken here.

#### 9.1 Further Questions for the Council / Consultees

Are consultees content to scope out construction noise assessment as significant effect are unlikely?



#### 10 TRAFFIC AND TRANSPORT

The study areas, methodology, baseline conditions, key sensitivities, and potential effects provided in *Chapter 10: Traffic and Transport* of the April 2019 Scoping Report Scoping Report remain valid and no changes are proposed for the Updated Site.

Consultation responses were received after submission of the April 2019 Scoping Report. A summary of their responses with respect to Traffic and Transport and how these responses have been dealt with are summarised in Table 10.1 below.

Table 10.1: June 2019 Scoping Opinion Responses

Consultee	Summary of Consultation Response	Response to Consultee
THC	Transport Planning team advised that the response was the same as the pre-application consultation response, 18/05762/PREAPP, and the methodology set out in the Transport Statement for Renewable Energy Proposal.	The methodology is acknowledged and will be utilised where possible to develop the Transport Statement and Transport Chapter of the EIAR.
THC	The traffic assessment should identify all council roads to be affected and consider in detail the impact of development traffic, including abnormal load movements, on these roads and any necessary mitigation measured required.	Traffic assessment will be included as part of the EIAR

#### 10.1 Further Questions for the Council / Consultees

From reviewing the Renewable Energy Proposal Transport Statement/Assessment Methodology for Public Roads for which THC is the Roads Authority, the following additional questions have arisen:

- Whilst we are content to assess the viability of a route, the requirement to establish current condition of the roads would seem overly onerous at this stage of the Development. Given the timescales between the production of the EIAR and construction, it would be preferred if this element could be conditioned post consent to establish a truer condition nearer the construction phase?
- Is it possible for the following from section "Provision of Trial Runs to be carried out in order to prove the route is achievable and/or to establish the extent of works required to facilitate transportation" to be postponed until the post consent period and the turbine supplier has been determined? Given the change in requirements of turbine supplier, it is likely that the findings of the trial run will vary and therefore require to be updated before construction.



#### 11 HYDROLOGY AND HYDROGEOLOGY

This chapter provides Updated Scooping Information, as necessary, to assess the potential effects of the updated layout on hydrology and hydrogeology. It supplements *Chapter 11: Hydrology and Hydrogeology* of the April 2019 Scoping Report and should be read in conjunction with it.

#### 11.1 Study Areas

The study area parameters remain as described in Section 11.2 of the April 2019 Scoping Report.

#### 11.2 Updated Assessment Methodology

The assessment methodology and significance criteria used within the Updated Scoping Report remain the same as stated within Section 11.3 of the April 2019 Scoping Report with regards to hydrology and hydrogeology.

#### 11.3 Updated Consultation

Consultation responses were received after submission of the April 2019 Scoping Report. A summary of their responses with respect to hydrology and hydrogeology and how these responses have been dealt with are summarised in Table 11.1 below.

Table 11.1: June 2019 Scoping Opinion Responses

Consultee	Summary of Consultation Response	Response to Consultee
THC	Advise inclusion of potential impacts on water courses, water supplies incl. private supplies, water quality and quantity, groundwater and on aquatic flora and fauna.  Need to recognise periods of high rainfall in assessments.  Measures to prevent erosion, sedimentation and discolouration required.  Schemes should be designed to avoid crossing watercourses and to bridge watercourses where this cannot be avoided.	Potential effects of the hydrological environment will be included in the EIAR.  A WCEMP will incorporate measures to prevent erosion, sedimentation or discolouration, along with monitoring proposals and contingency plans for all phases of the Development.  The updated scoping site layout will make use of existing access tracks where possible and reduce the number of watercourse crossings required to a minimum.
Scottish Water	No objection. The Site of the 2019 April Scoping Report is not within a Scottish Water drinking water protected area (DWPA).	An updated assessment of the potential effects on Public Water Supplies is provided in Section 11.4.5 of this report.
SNH	Advise that hydrological effects on the peatland habitats of Caithness and Sutherland Peatlands SAC be scoped in. Due to apparent continuity of blanket bog habitat between T13 and T14 it is likely there is also hydrological continuity with this SAC.	The hydrological effects on the peatland habitats of Caithness and Sutherland Peatlands SAC and its hydrological continuity with the Site will be included within the EIAR.
SEPA	Advise that turbines to east of Gilligill Burn in 2019 April Scoping report indicative site layout are accessed from the east of the Site.	The Updated Site Layout includes no turbines to the east of Gilligill Burn.



Consultee	Summary of Consultation Response	Response to Consultee
SEPA	If battery storage is included then the EIA Report should include information on how the facilities will be bunded and drained.	Would be included as part of the WCEMP.

### 11.4 Updated Baseline Conditions

This Section outlines the potential hydrological and hydrogeological receptors which have been identified within the Updated Site and the wider catchment in which the Updated Site is located. The Updated Site (Figure 1.2) incorporates the site boundary as Scoped in April 2019, for which baseline conditions were assessed in Chapter 11.4 of the April 2019 Scoping Report and the extended are to the south and west as scoped in this Updated Scoping Report.

#### 11.4.1 Surface Hydrology

The extended area to the south and west within the Updated Site (Figure 1.2) lies within the catchment of the Akran Burn. The Akran Burn issues from Coal-Loch, situated immediately to the east of the Updated Site Boundary. Tributaries of the Akran Burn, which are unnamed watercourses, issue in the south-east of the Site and from Loch Akran, located immediately to the south-east of the Site. The tributaries flow north-west to join the Akran Burn before flowing into the Halladale River 0.5 km west of the Site.

The surface hydrology for April 2019 Scoping Report Site Boundary remains as detailed in Chapter 11.4.1 of the April 2019 Scoping Report.

Site surveys will ground truth the presence of watercourses and drainage features.

Appropriate buffers will be applied to watercourses and drains during the design phase.

#### 11.4.2 Hydrogeology

The groundwater units underlying the extended area to the south and west within the Updated Site (Figure 1.2) are identified as the Northern Highlands groundwater bodies<sup>18</sup>.

The BGS 1:625,000 shows the bedrock aquifer underlying the majority of the Updated Site as magmatic psammites and semipelites of the Moine Supergroup, with granite in the west of the Site. Both geological units are classified as 'low productivity aquifers with small amounts of groundwater in the near-surface weathered zone and secondary fractures. There is the potential for rare springs in areas underlain by granite.

The hydrogeology assessment of the April 2019 Scoping Report Site Boundary remains as detailed in Chapter 11.4.2 of the April 2019 Scoping Report.

An assessment of the potential effects on the groundwater resource will be undertaken in the EIA Report.

## 11.4.3 Groundwater Dependent Terrestrial Ecosystems

An NVC survey was conducted for the April 2019 Scoping Report Site Boundary and is provided as Appendix C of the April 2019 Scoping Report. A summary of the findings is in Chapter 11.4.3 of the April 2019 Scoping Report and identifies two NVC communities within the Site of moderate (M15) and high (M25) groundwater dependency.

<sup>&</sup>lt;sup>18</sup> Scottish Government Scotland Environment Map. Available at: <a href="https://map.environment.gov.scot/sewebmap/">https://map.environment.gov.scot/sewebmap/</a> (Accessed 04/09/2019)



The Phase 1 Habitat Survey and NVC Surveys have already been completed to incorporate the Updated Site. The key habitats and areas of high and moderate groundwater dependency observed during these surveys are shown in Figure 6.2. An assessment of the hydrological function of the GWDTEs across the Updated Site and potential effects from the Development will be undertaken in accordance with Land Use Planning System Guidance, Note 31, Version 3 (SEPA, 2017).

#### 11.4.4 Designated Hydrological Receptors

The Designated Hydrological Receptors within 10 km of the Site Boundary are identified in Chapter 11.4.4 of the April 2019 Scoping Report. There are no additional statutory designations identified within the 10 km radius and the hydrological assessment of the designated receptors remains as detailed in the April 2019 Scoping Report.

#### 11.4.5 Private and Public Water Supplies

Consultation with THC identified five potential Private Water Supplies (PWS) within 2 km of the Updated Site Boundary.

Residents at the five PWS were contacted to ascertain further information on the location and source of the PWS. A summary of the responses with respect to Hydrology and Hydrogeology and how these responses have been dealt with are summarised in Table 11.2 below.

Table 11.2: PWS identified by the Council within 2 km of the Site boundary and

resident responses

resident respe	esident responses				
PWS Property	Distance from Site	Source Type	Summary of Resident Response		
Kirkton Cottage	1.1 km west	Surface water	Describes supply from surface water source (Lochan Coulbackie), approximately 1.6 km to the west of the property.  Supplies 1 person.  Abstraction of less than 1 m <sup>3</sup> / day.		
Kirkton Farm Cottage	1.1 km west	Surface water	Supplies from groundwater with filtration and UV treatment. Supplies 6 people.		
Ackron Farm	45 m west	Surface water/ groundwater	3000 – 6000 litres per day from spring, near surface flow and groundwater. Supplies 6 people.		
Golval	17 m west	Mains supply	Scottish Water Mains		
Melvich	1.8 km north-west	Unknown	No response		

An assessment of the hydrological connectivity to the PWS and potential effects from the Development will be undertaken, including a PWS risk assessment (if required).

The Updated Site is not within a DWPA for surface water<sup>19</sup>.

#### 11.4.6 Flooding

The Indicative River and Coastal Flood Map (Scotland) produced by SEPA identifies the areas of Scotland with a 0.5% (1:200) or greater chance of flooding. These areas are known as medium to high risk areas for flooding.

<sup>&</sup>lt;sup>19</sup> Scotland's environment (2019) Scotland's environment map [Online]. Available at: <a href="https://map.environment.gov.scot/sewebmap/">https://map.environment.gov.scot/sewebmap/</a> (Accessed 05/09/2019)



The areas identified as having a 0.5% or greater chance of flooding are identified in Section 11.4.6 of the April 2019 Scoping Report and remain valid.

The extended area to the south and west within the Updated Site (Figure 1.2) encompasses upstream reaches of the Akran Burn, which is classified as having a "High" annual probability of river flooding in any year. The flooding is restricted to the extent of the Akran Burn and does not indicate widescale flooding across the Updated Site.

### 11.5 Updated Key Sensitivities and Potential Effects

The key sensitive receptors are outlines in Chapter 11.5 of the April 2019 Scoping Report and remain valid, with the addition of the upstream Akran Burn and associated tributaries.

## 11.6 Scoped In/Out Effects

Scoped in/ out effects of the hydrological and hydrogeological assessment are proposed in Sections 11.6.1 and 11.6.2 of the April 2019 Scoping Report and remain valid.

The following additional aspects will be assessed, and therefore scoped in, when considering the effects of the Development on hydrology and hydrogeology:

• The potential hydrological effects on the peatland habitats of Caithness and Sutherland Peatlands SAC and its hydrological continuity with the Site.

#### 11.7 Further Questions for the Council / Consultees

The following questions have been designed to ensure that the proposed methodologies and assessment are carried out in a robust manner and to the satisfaction of the determining authorities:

• Does the Council, SNH, SEPA or other consultees have any information that would be useful in the preparation of the hydrology and hydrogeology assessment for the Updated Site as shown in Figure 1.2?



#### **GEOLOGY AND PEAT** 12

The study areas, methodology, baseline conditions, key sensitivities, and potential effects provided in Chapter 12: Geology and Peat of the April 2019 Scoping Report Scoping Report remain valid and no changes are proposed for the Updated Site. The extended area to the south and west within the Updated Site has been subject to peat depth survey at 100 m centres in line with the areas already probed, as shown in Figure 12.1.

Consultation responses were received after submission of the April 2019 Scoping Report A summary of their responses with respect to Geology and Peat and how these responses have been dealt with are summarised in Table 12.1.

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	ıne 2019 Scoping Opinion Responses I	
Consultee	Summary of Consultation Response	Response to Consultee
SEPA	Disturbance and re-use of excavated peat and other carbon rich soils  The planning submission must a) demonstrate how the layout has been designed to minimise disturbance of peat and release of CO2 and b) outline the preventative/mitigation measures to avoid significant drying or oxidation of peat through.  The submission must include:  a) A detailed map of peat depths overlain to demonstrate how the development avoids areas of deep peat and other sensitive receptors such as Groundwater Dependent Terrestrial Ecosystems.  b) A table which details the quantities of acrotelmic, catotelmic and amorphous peat which will be excavated for each element and details of its re-use.  To avoid delay and potential objection proposals must be in accordance with Guidance on the Assessment of Peat Volumes, Reuse of Excavated Peat and Minimisation of Waste and our Developments on Peat and Off-Site uses of Waste Peat.  Dependent upon the volumes of peat likely to be encountered and the scale of the development, applicants must consider whether a full Peat Management Plan is required or whether the above information would be best submitted as part of the schedule of mitigation.	An outline Peat Management Plan (oPMP) will be prepared as a Technical Appendix to Chapter 12: Geology and Peat. This will detail peat excavation volumes and re-use potential. This will also include a table which volumises acrotelmic peat and catotelmic peat based on the anticipated volumes of excavation and re-use associated with development footprint. The oPMP will detail best practices in the management of peat and peaty soils, and temporary storage, if required.



Consultee	Summary of Consultation Response	Response to Consultee
SEPA	Please note we do not validate carbon balance assessments except where requested to by Scottish Government in exceptional circumstances. Our advice on the minimisation of peat disturbance and peatland restoration may need to be taken into account when you consider such assessments.	A carbon calculation will form a Technical Appendix to Chapter 14: Climate Change and Carbon Balance



Consultee	Summary of Consultation Response	Response to Consultee
SEPA	Borrow pits The submission must provide sufficient information to address Scottish Planning Policy states (Paragraph 243). In accordance with Paragraphs 52 to 57 of Planning Advice Note 50 (PAN 50), a Site Management Plan should be submitted in support of any application. The following information should also be submitted for each borrow pit:  a) A map showing the location, size, depths and dimensions. b) A map showing any stocks of rock, overburden, soils and temporary and permanent infrastructure including tracks, buildings, oil storage, pipes and drainage, overlain with all lochs and watercourses to a distance of 250 metres. On this map, site-specific buffers should be shown. If minimum buffer cannot be achieved each breach must be numbered on a plan with an associated photograph of the location, dimensions of the loch or watercourse, drawings of what is proposed in terms of engineering works. c) justification for the proposed location of borrow pits and evidence of material suitability, including any risk of pollution. d) A ground investigation report giving existing water table details. e) A site map showing cut-off drains, silt management devices and settlement lagoons to manage surface water and dewatering discharge. f) A site map showing proposed water abstractions with details of the volumes and timings. g) A site map showing the location of pollution prevention measures and a commitment to check these daily. h) A site map showing soils and overburden details. Where the development will result in the disturbance of peat/carbon rich soils, a detailed map of peat depths is required. i) Sections and plans detailing how restoration will be progressed. j) Details of how the rock will be processed in order to produce a grade of rock that will not cause siltation problems.	As part of the geology appraisal, Arcus will prepare a preliminary borrow pit assessment, identifying potentially suitable locations for borrow pits and using digital terrain modelling, provide an estimate of the available material and the volume of material likely to be required for the construction of the wind farm. This would be prepared as a stand-alone technical appendix.  Details relating to points d) to j) are expected to be addressed post-consent during planning condition discharge.



Consultee	Summary of Consultation Response	Response to Consultee
THC	We advise that a peat depth survey should be carried out. The survey should conform to Peatland Survey 2017 guidance available from; http://www.gov.scot/Resource/0051/00517174.pdf  The peat depths should be clearly mapped and areas of deep peat should be clearly identified. We advise that turbines and other large infrastructure should be located to avoid areas of deep peat. The ER should fully explore opportunities to reduce any impacts on deep peat.  A Peat Slide Risk Assessment should also be undertaken following the latest 2017 guidance on peat slide risk assessments available from; http://www.gov.scot/Publications/2017/04/8868.	A Peat Slide Risk Assessment will be undertaken in accordance with latest guidance.  The Peat Slide Risk Assessment will comprise of detailed analysis and reporting on the design freeze and will include a hazard and slope stability assessment and preliminary peat management recommendations.  The hazards existing on the site will be ranked based on factors that influence stability, namely peat depth and slope gradient. In addition, potential receptors exposure to risk will be established and hazard rankings applied across the site, with management and mitigation measures recommended for an acceptable construction.
THC	The EIAR should fully describe the likely significant effects of the development on the local geology including aspects such as borrow pits, earthworks, site restoration and the soil generally including direct effects and any indirect. Proposals should demonstrate construction practices that help to minimise the use of raw materials and maximise the use of secondary aggregates and recycled or renewable materials. Where borrow pits are proposed the EIAR should include information regarding the location, size and nature of these borrow pits including information on the depth of the borrow pit floor and the borrow pit final reinstated profile.	Geology and Peat chapter will be included in the EIAR.  As part of the geology appraisal, Arcus will prepare a preliminary borrow pit assessment, identifying potentially suitable locations for borrow pits and using digital terrain modelling, provide an estimate of the available material and the volume of material likely to be required for the construction of the wind farm. This would be prepared as a stand-alone technical appendix.

#### 12.1 Further Questions for the Council / Consultees

- Do the consultees agree with the proposed methodology and scope of the Geology and Peat Assessment?
- Do the consultees have any information that would be useful in the preparation of the Geology and Peat assessment, including details of local quarrying activity?
- Do the consultees agree that the details relating to points d) to j) of the SEPA response can be addressed post-consent during planning condition discharge phase?



## 13 LAND USE, SOCIO-ECONOMICS AND TOURISM

#### 13.1 Introduction

This chapter provides Updated Scoping Information, as necessary, to assess the potential effects of the updated layout on land use, socio-economics, and tourism. It supplements *Chapter 13: Land Use, Socio-Economics and Tourism* of the April 2019 Scoping Report and should be read in conjunction with it.

### 13.2 Updated Assessment Methodology

There are no changes to the assessment methodology and it remains as described in Section 13.2 of the April 2019 Scoping Report.

#### 13.3 Updated Consultation

Consultation responses were received after submission of the April 2019 Scoping Report. A summary of their responses with respect to land use, socio-economics and tourism. and how these responses have been dealt with are summarised in Table 13.1 below.

Table 13.1: June 2019 Scoping Opinion Responses

Consultee	Summary of Consultation Response to Consultee	
THC	The EIAR should recognise the existing land uses affected by the development having particular regard for The Highland Council's Development Plan and other supplementary planning policies.	As discussed in Section 13.3.1 of the April 2019 Scoping Report and in Section 13.4.1 of this Report, due to the limited land take of the Development, the land use (open moorland used for grazing) will not change. As such, in line with the EIA Regulations, land use assessment is scoped out of the EIAR; however, a Planning Statement will accompany the EIAR, having regard to the Development Plan and other planning policies.
THC	The EIAR should indicate all the areas of where felling would occur. Compensatory woodland would be required with proposals identified in advance. Areas of retained forestry or tree groups should be clearly indicated with methods for their protection during construction and beyond.	Noted. Should the final design require felling and compensatory planting. This information would be provided as a technical appendix.
THC	THC note that the EIAR should identify those effected by the Development including relevant economic information. This should include a statement on local content required under The Highland Renewable Energy Strategy and Planning Guidelines (HREIAR).	The EIAR will include an assessment of effects upon socio-economics, recreation and tourism.

#### 13.4 Updated Baseline Conditions

The baseline conditions described in Section 13.3 remain valid for the April 2019 Scoping Report Site Boundary. The information presented below described the baseline conditions



for the extended area to the south and west of the Updated Site Boundary, as shown on Figure 1.2.

#### 13.4.1Land Use

The extended area to the south and west of the Updated Site Boundary consists of open moorland and semi-improved grassland/quarry, respectively. Portions of the open moorland and semi-improved grassland are used for rough grazing. Field boundaries within and close to the Site are mainly post and wire deer fencing. There is an electricity pylon which runs northeast/southwest through the southwestern corner of the Site. There are no residential properties within the Site.

Whilst there may be some disruption to land use during construction, this would be temporary and short term, and it is expected that the aforementioned land uses would continue across the Updated Site once the Development is operational. As such, changes to land use resulting in a significant effect would not occur and can be scoped out of the assessment.

#### 13.4.2Economy

Section 13.3.2 of the April 2019 Scoping Report remains valid. Since submittal of the April 2019 Scoping Report, the Applicant has investigated the potential of the Updated Site to provide broadband.

The Applicant commissioned an early stage Fixed Wireless Broadband Feasibility Study to explore the potential for the using the infrastructure of the Development to deliver superfast broadband. Whilst further technological and in-depth engineering studies are required, the initial finding show that fixed wireless broadband could be established to provide a service to large areas of the local community. Potential download speeds could be as high as 30-40 Mbps with upload speeds just as fast. If implemented, such a service could provide the potential for both commercial and residential benefits. Further details would be included in the EIA Report.

#### 13.4.3Tourism and Recreation

As a result of the Updated Site, THC Core Path SU19.03, Kirkton – Upper Bighouse is now located 500 m to the south-west at its closest point. All additional information presented in Section 13.3.3 of the April 2019 Scoping Report remains valid. There are no tourist attractions, footpaths, or recreational routes within the Updated Site.

#### 13.5 Scoped In/Out Effects

Effects upon socio-economics and recreation and tourism will be included within the EIA Report.

As there will be no significant change to land use as a result of the Development, consideration of changes to land use is scoped out of the assessment.

#### 13.6 Further Questions for the Council / Consultees

Key questions for consultees are:

• Are Consultees content to scope out land use from the EIA?



# 14 CLIMATE CHANGE AND CARBON BALANCE

The study areas, methodology, baseline conditions, key sensitivities, and potential effects provided in *Chapter 14: Climate Change and Carbon Balance* of the April 2019 Scoping Report Scoping Report remain valid and no changes are proposed for the Updated Site.

Consultation responses were received after submission of the April 2019 Scoping Report. A summary of response within the June 2019 Scoping Opinion with respect to climate change and carbon balance and how these responses have been dealt with are summarised in Table 14.1 below.

Table 14.1: June 2019 Scoping Opinion Responses

Consultee	Summary of Consultation Response	Response to Consultee
THC	The EIAR needs to address all relevant climatic factors which can greatly influence the impact range of many of the preceding factors on account of seasonal changes affecting, rainfall, sunlight, prevailing wind direction, etc.	A chapter on climate change will be included in the EIAR.
SEPA	SEPA do not validate carbon balance assessments. Our advice on the minimisation of peat disturbance and peatland restoration may need to be taken into account when you consider such assessments.	A full assessment on peat will be undertaken as detailed in Chapter 12.

#### 14.1 Further Questions for the Council / Consultees

Key questions for consultees are:

- Are consultees content to scope out the Development's vulnerabilities and resilience to climate change?
- Are consultees content with the proposed method of assessment?



#### 15 OTHER ISSUES

The information presented in *Chapter 15: Other Issues* of the April 2019 Scoping Report Scoping Report covered:

- Health and Safety;
- Shadow Flicker;
- Waste;
- Telecommunications, Television Reception and Utilities; and
- Aviation.

No changes are proposed for the Updated Site and Chapter 15 of the April 2019 Scoping Report remains valid for the extended area to the south and west within the Updated Site Boundary.

Consultation responses were received after submission of the April 2019 Scoping Report. A summary of their responses with respect to Other Issues and how these responses are to be dealt with are summarised in Table 15.1 below.

Table 15.1: June 2019 Scoping Opinion Responses

Consultee	Summary of Consultation Response	Response to Consultee
THC	Existing air quality and qualities of the local environment should be addressed alongside any impacts of the development. Issues such as dust, air borne pollution and / or vapours, noise, light, shadow- flicker should also be considered.	Long term there is really no change to the air quality as only affects are during construction and demolition which are temporary. This will be addressed in other chapter such as traffic and transport and noise.  Noise and shadow flicker will be included in EIAR.
THC	Depending on the proximity of the working area to houses etc. the applicant may require to submit a scheme for the suppression of dust during construction. Particular attention should be paid to construction traffic movements.	Should the final design have working areas near the limited residences to the site, then dust suppression could be incorporated into the Construction Environmental Management Plan as per an appropriate condition.
THC	THC notes that the EIAR needs to recognise community assets that are currently in operation for example TV, radio, telecommunications links, radar, MOD safeguards, etc.	If any community assets are identified that will be affected by the Development, these will be included within the Other Issues Assessment in the EIA Report. Preliminary studies show that due to the location of the Development it is unlikely that any significant impacts will be anticipated. As such, this has been scoped out of further assessment.
Scottish Water	A review of our records indicates that there are no Scottish Water drinking water catchments or water abstraction sources, which are designated as Drinking Water Protected Areas under the Water Framework Directive, in the area that may be affected by the proposed activity.  For reasons of sustainability and to protect our customers from potential future sewer flooding,	No further work required.



Consultee	Summary of Consultation Response	Response to Consultee
	Scottish Water will not accept any surface water connections into our combined sewer system.	

#### 15.1 Further Questions for the Council / Consultees

Key questions for Consultees are:

- Are any consultees aware of any additional telecommunications or utilities? stakeholders that should be taken into account?
- Are consultees content that effects upon television reception and utilities can be scoped out of the EIA? and
- Following detailed consultation with telecoms providers, should no telecommunications links be found in the immediate vicinity of the Development, are consultees content that telecommunications can be scoped out?

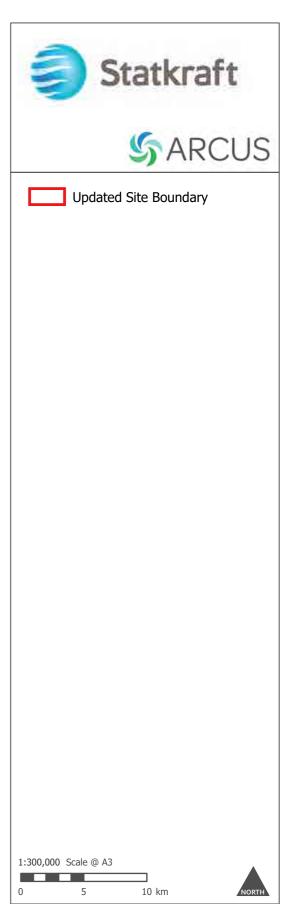


## APPENDIX A: FIGURE LIST

This Appendix contains the following figures:

- Figure 1.1: Site Location;
- Figure 1.2: Updated Site Boundary;
- Figure 1.3: Updated Indicative Layout;
- Figure 5.1: Zone of Theoretical Visibility (40 km) and Proposed Viewpoints;
- Figure 5.2: Zone of Theoretical Visibility (20 km) and Proposed Viewpoints;
- Figure 5.3: Landscape Character Types and Designated Landscapes;
- Figure 6.1: Ecological and Ornithological Designations;
- Figure 6.2: Phase 1 Key Habitat Areas and GWDTE;
- Figure 7.1: Vantage Point Locations and Viewsheds;
- Figure 9.1: Noise Contour Plot; and
- Figure 12.1: Peat Depth Interpolation.

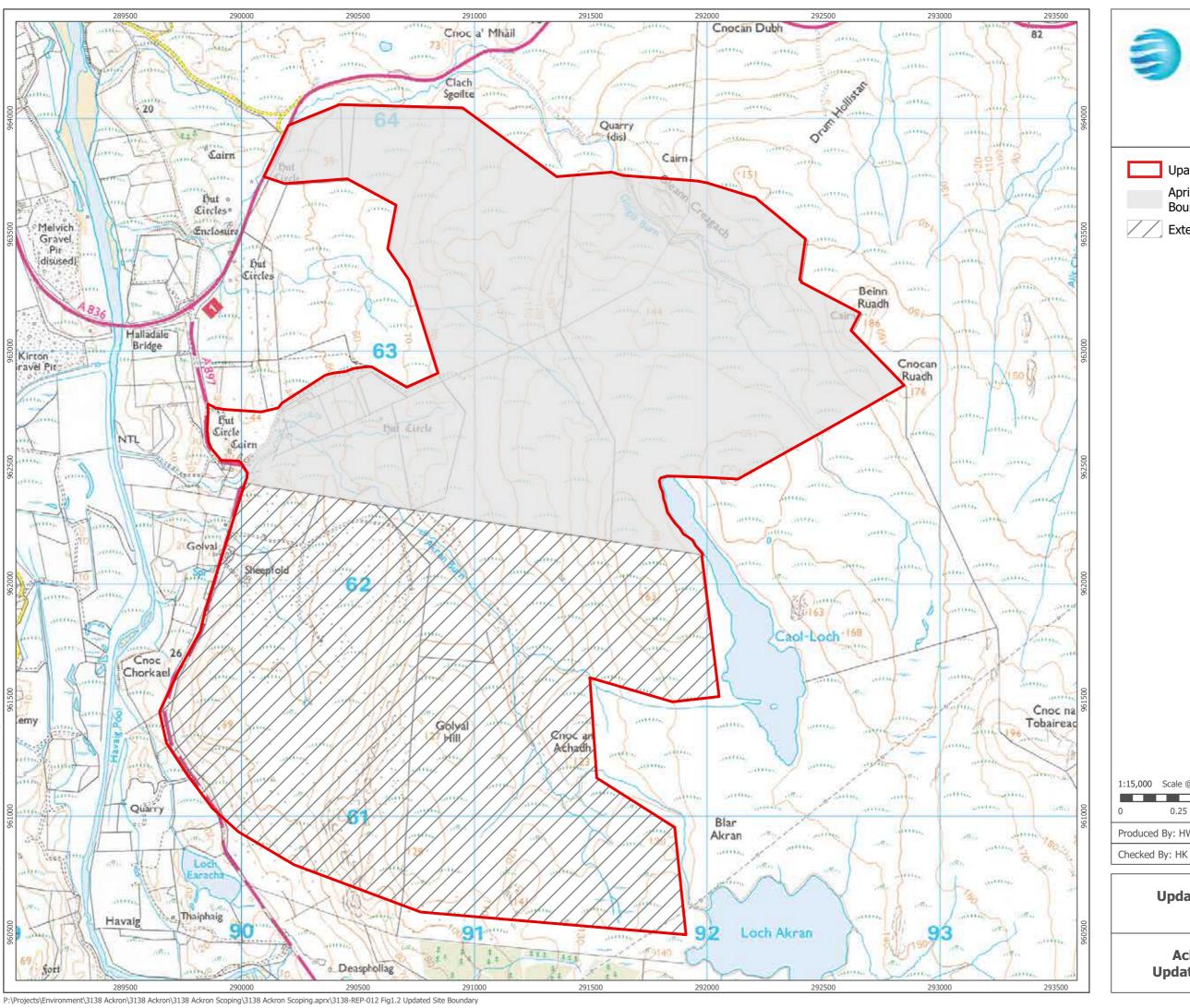


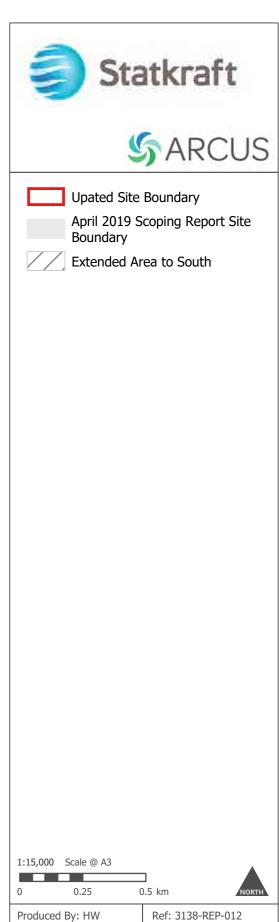


**Site Location** Figure 1.1

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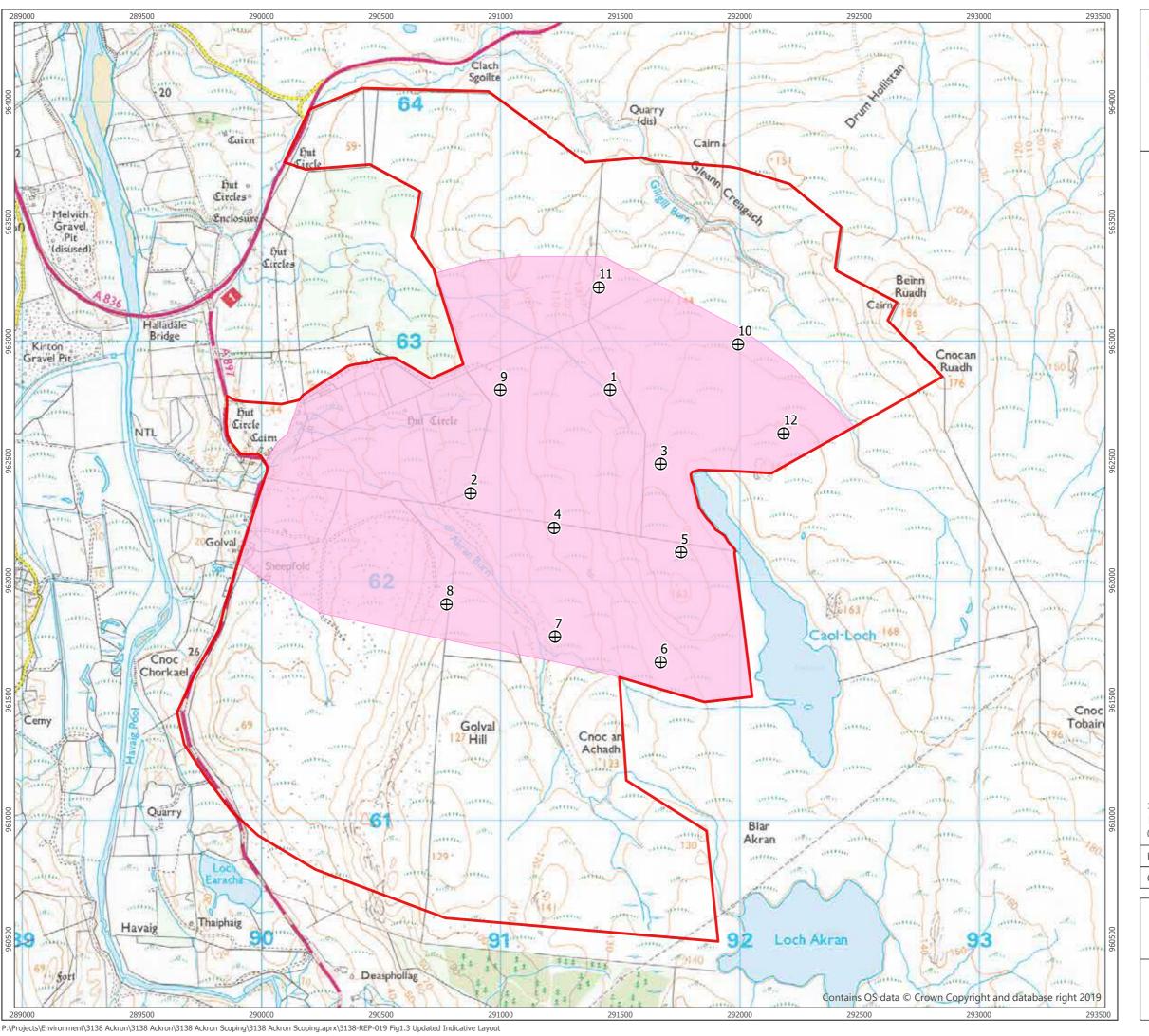
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**Updated Site Boundary** Figure 1.2

Date: 21/10/2019







Upated Site Boundary

Indicative Turbine Area

Proposed Turbine Location

Turbine	Easting	Northing
1	291458	962797
2	290875	962365
3	291670	962487
4	291224	962220
5	291755	962118
6	291670	961659
7	291228	961765
8	290774	961901
9	290999	962797
10	291993	962988
11	291411	963226
12	292184	962615

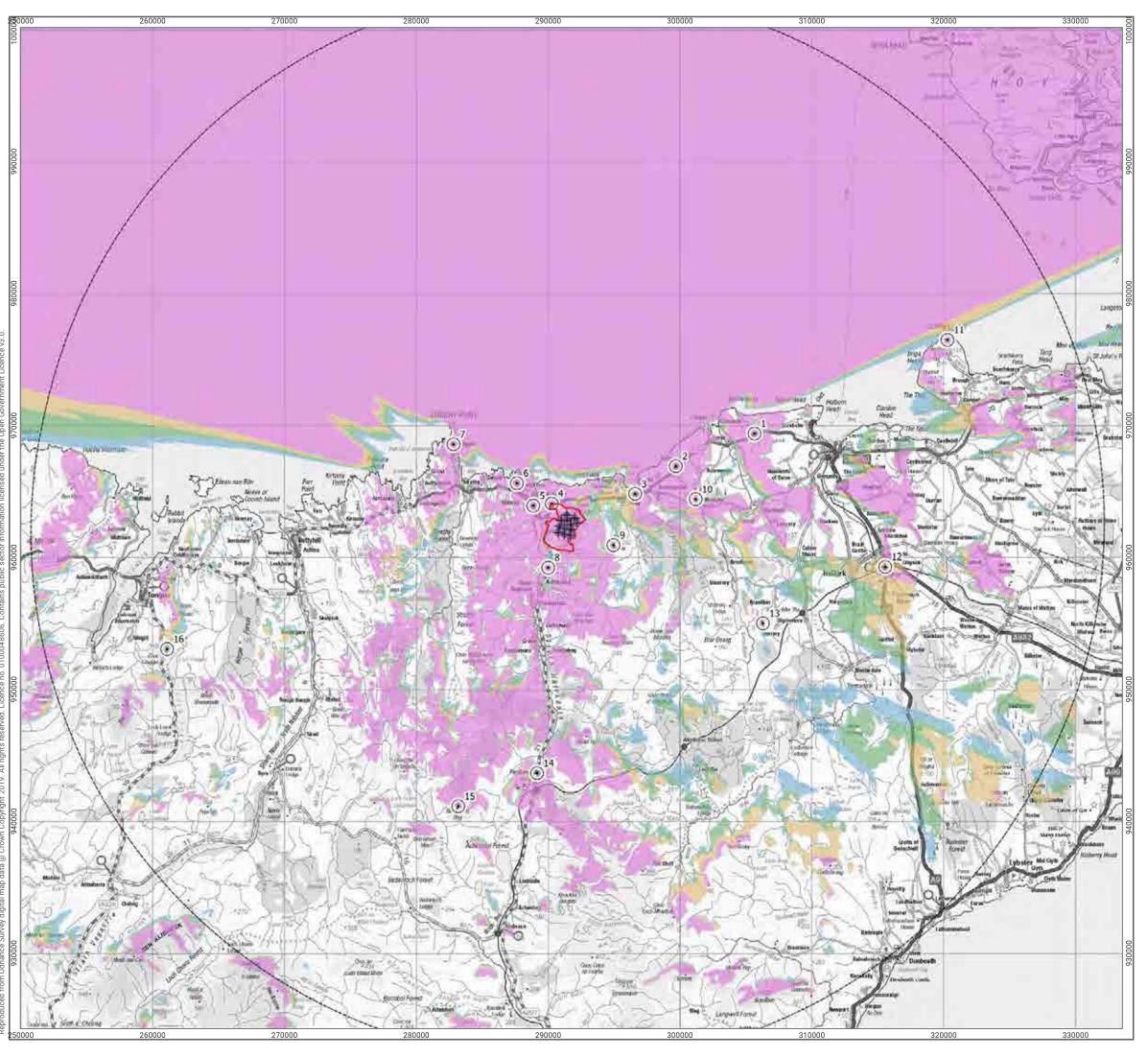
1:15,000 Scale @ A3

0 0.25 0.5 km

Produced By: HW Ref: 3138-REP-019

Checked By: HK Date: 16/10/2019

**Updated Indicative Site Layout**Figure 1.3





Turbine Locations

Updated Site Boundary

40km Buffer

Zone of Theoretical Visibility

10-12 turbines visible

7-9 turbines visible

4-6 turbines visible
1-3 turbines visbile

Proposed Viewpoints

- 1 A836 Forss
- 2 A836 Dounreay
- 3 A836 Reay
- 4 A836 Layby
- 5 A836 Melvich
- 6 Portskerra
- 7 Strathy Point
- 8 Stath Halladale, Calgarry
- 9 Beinn Ratha
- 10 Hill of Shebster
- 11 Dunnet Head
- 12 A9 Georgemas station
- 13 Ben Dorrery
- 14 A897 Forsinard
- 15 Ben Griam Beg
- 16 A836 Cnoc Craggie

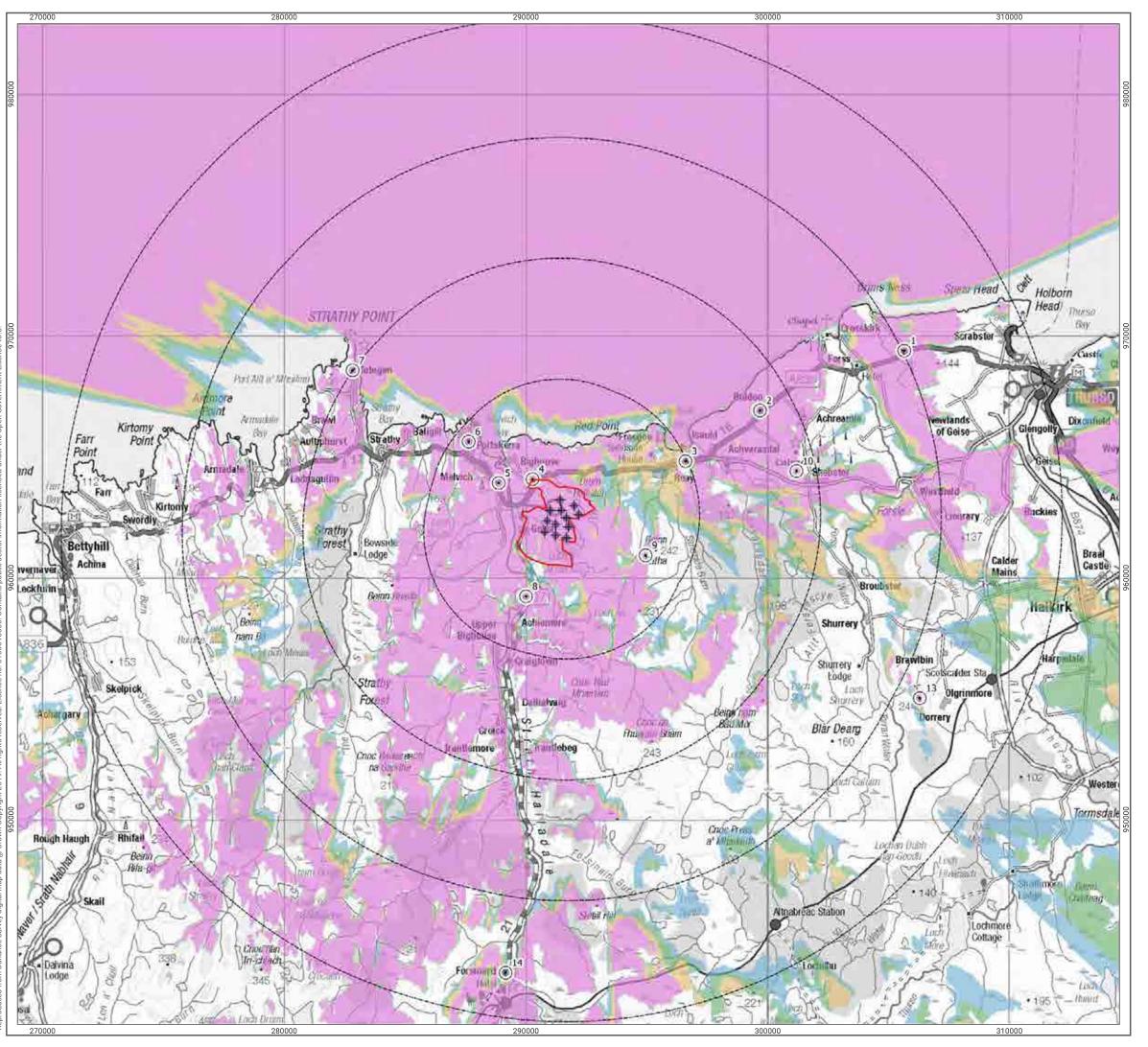
Notes: The ZTV is calculated to turbine tip heights of up to 149.9m from a height of 2m above ground level. The terrain model is bare ground derived from OS Terrain 50 Height data. Earth curvature and atmospheric refraction have been taken into account





Produced by: JPM	Ref: 18016-10-r4
Checked by: MvG	Date: 08/10/2019

# Zone of Theoretical Visibility (40km) and Proposed Viewpoints Figure 5.1





Turbine Locations

Updated Site Boundary

Buffers (5km increments)

Zone of Theoretical Visibilty

10-12 turbines visible

7-9 turbines visible

4-6 turbines visible

1-3 turbines visbile

Proposed Viewpoints within 20km

- 1 A836 Forss
- 2 A836 Dounreay
- 3 A836 Reay
- 4 A836 Layby
- 5 A836 Melvich
- 6 Portskerra
- 7 Strathy Point
- 8 Stath Halladale, Calgarry
- 9 Beinn Ratha
- 10 Hill of Shebster
- 11 Dunnet Head
- 12 A9 Georgemas station
- 13 Ben Dorrery
- 14 A897 Forsinard
- 15 Ben Griam Beg
- 16 A836 Cnoc Craggie

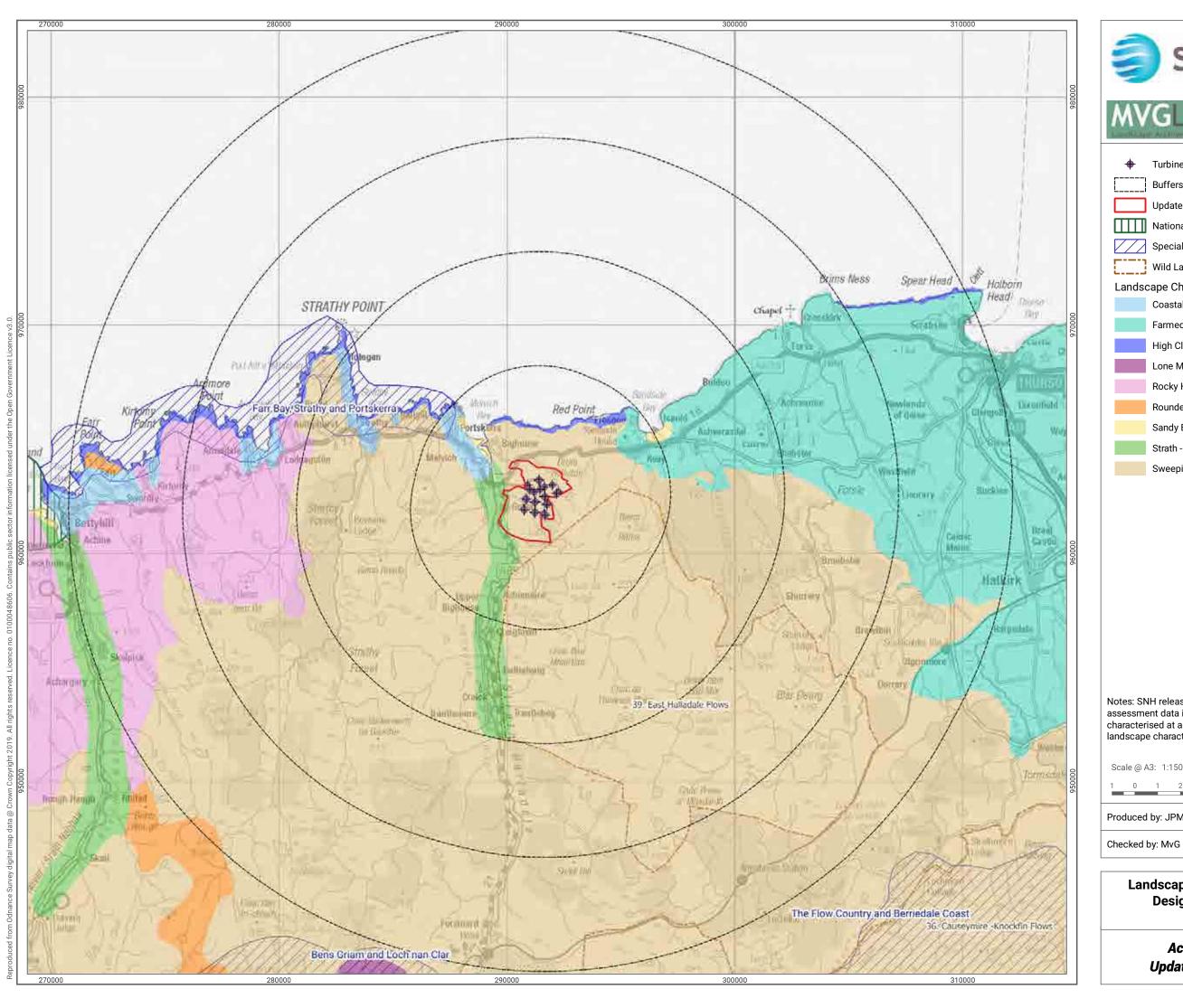
Notes: The ZTV is calculated to turbine tip heights of up to 149.9m from a height of 2m above ground level. The terrain model is bare ground derived from OS Terrain 50 Height data. Earth curvature and atmospheric refraction have been taken into account





Produced by: JPM	Ref: 18016-11-r4
Checked by: MvG	Date: 08/10/2019

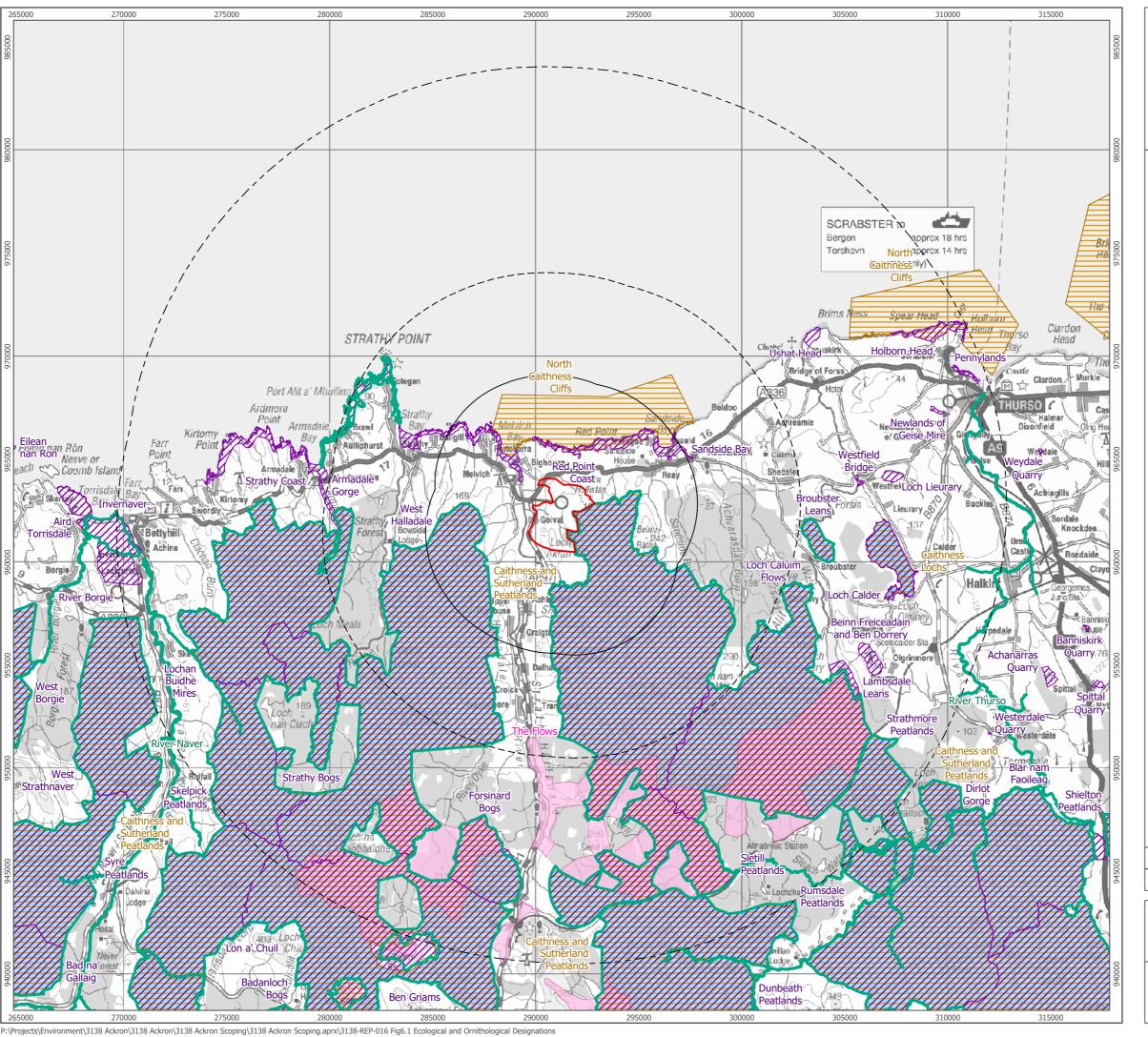
## Zone of Theoretical Visibility (20km) and Proposed Viewpoints Figure 5.2





# Landscape Character Types and Designated Landscapes Figure 5.3

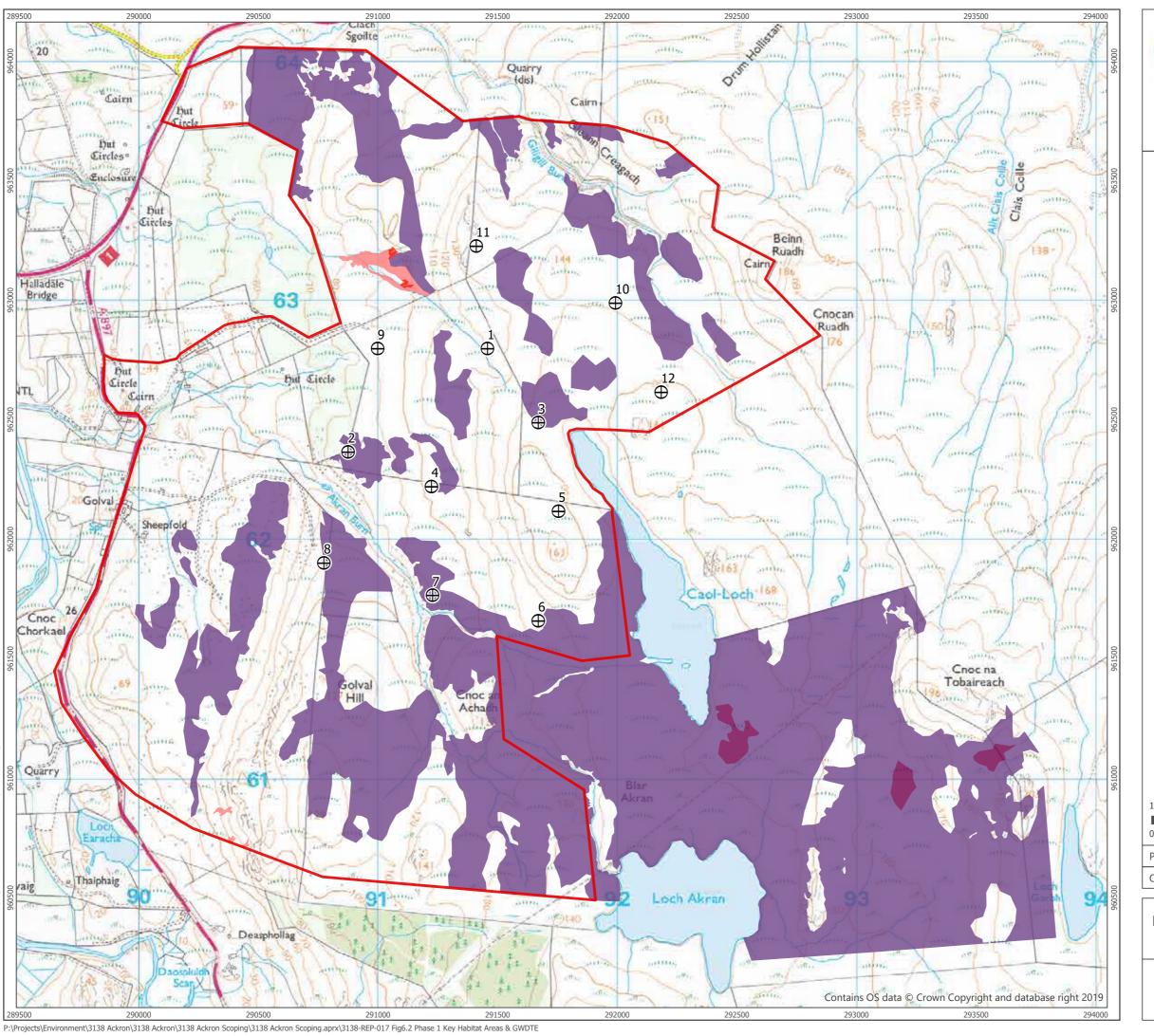
Date: 08/10/2019

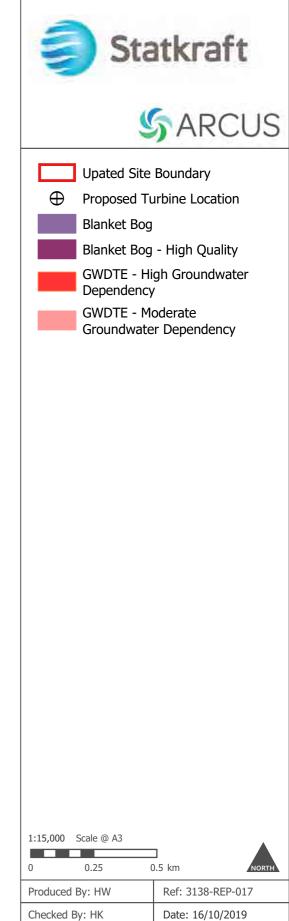




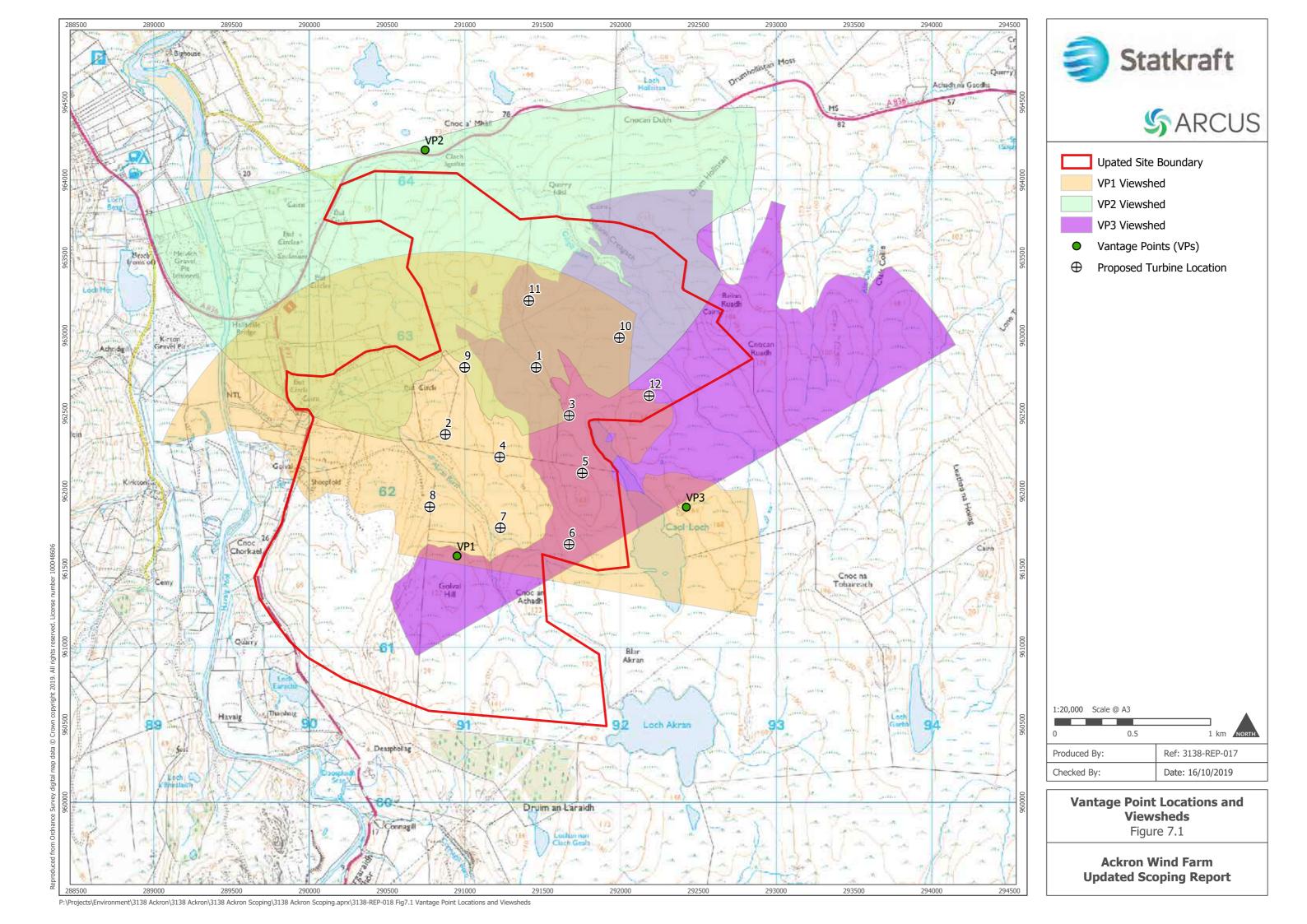
# Ecological and Ornithological Designations

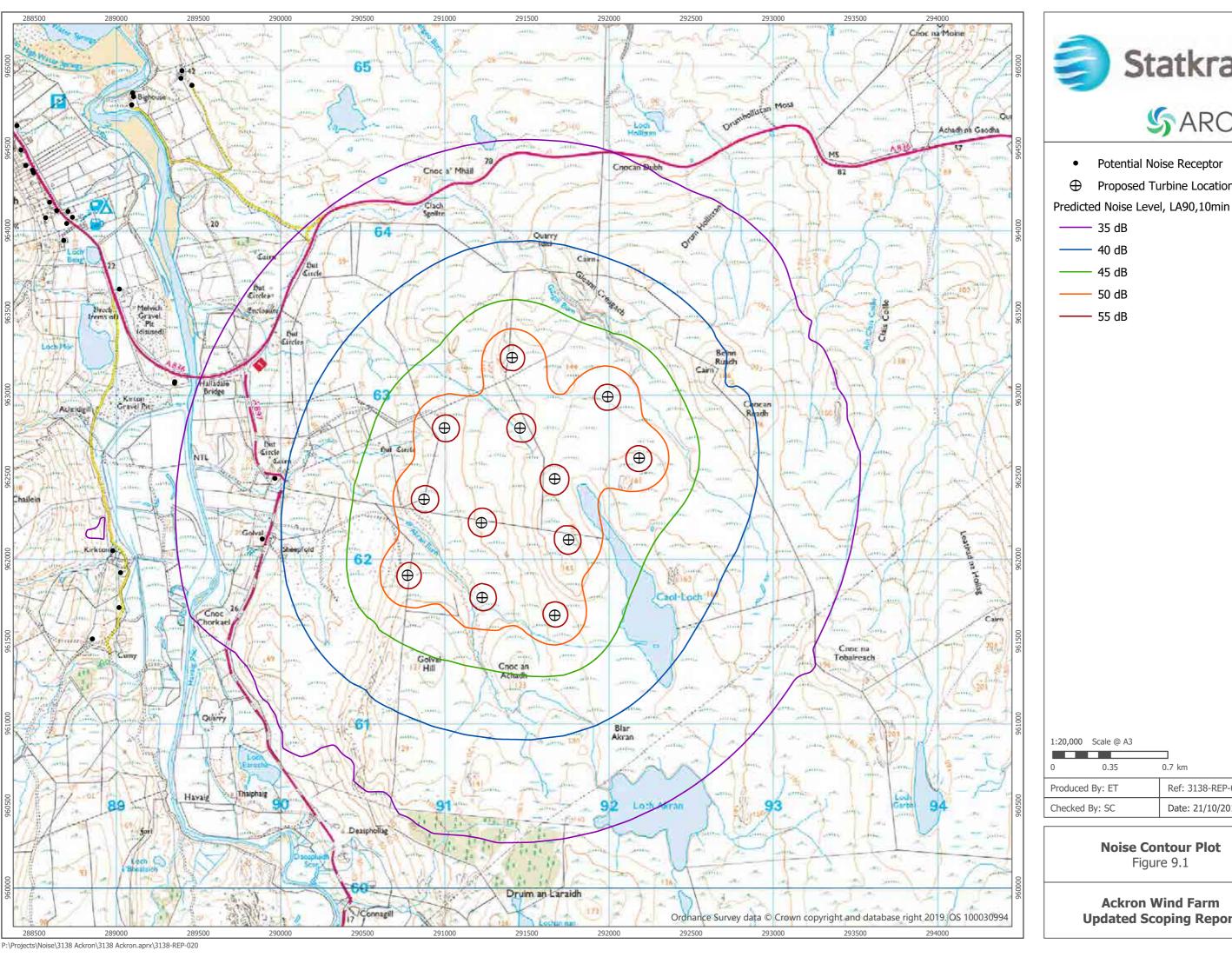
Figure 6.1





**Phase 1 Key Habitats and GWTDE** Figure 6.2







**S**ARCUS

- Potential Noise Receptor
- Proposed Turbine Location

- 35 dB

40 dB

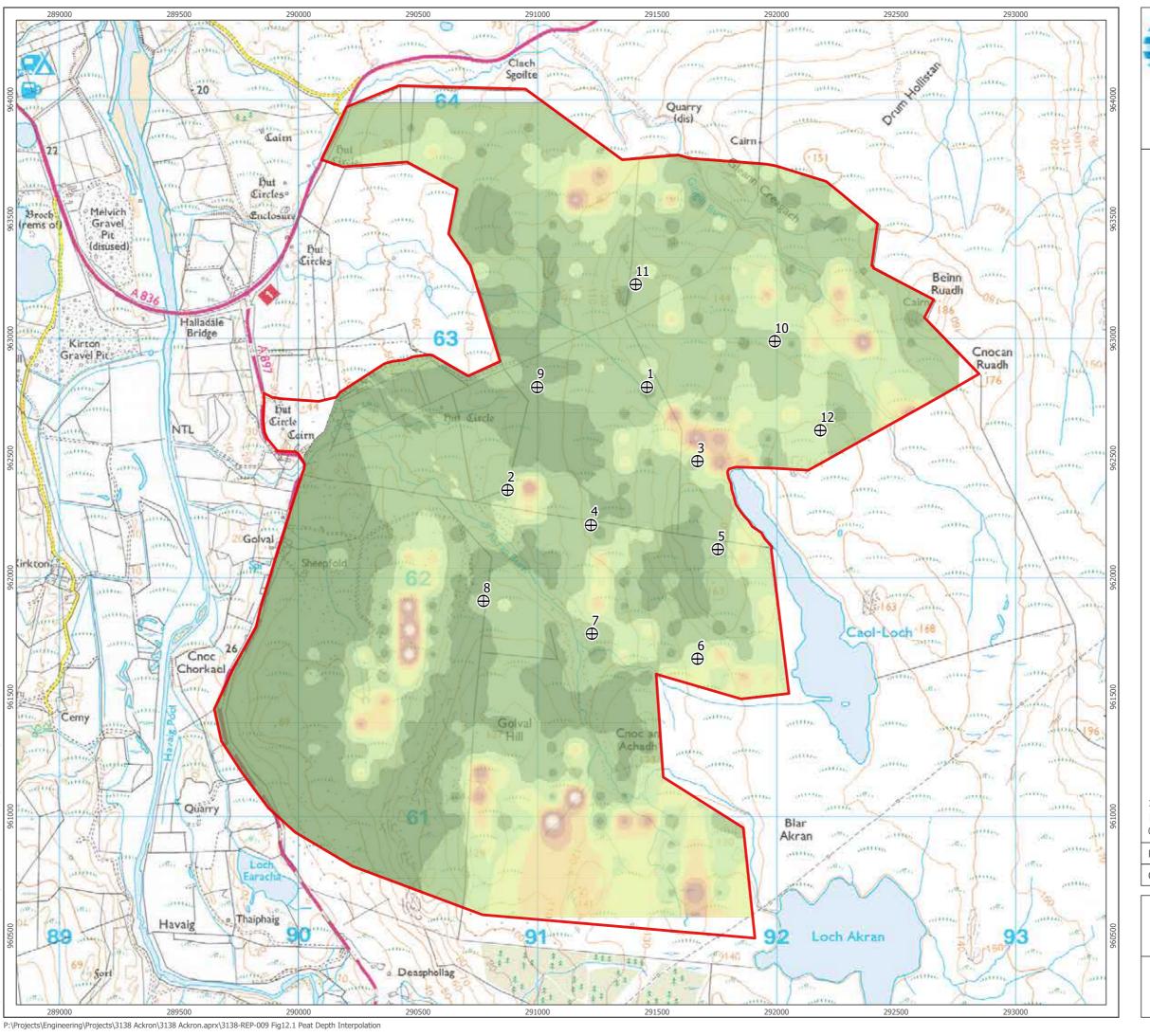
45 dB

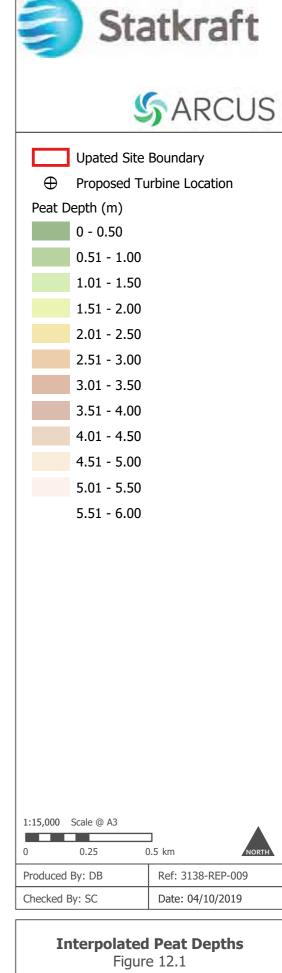
50 dB

- 55 dB



**Noise Contour Plot** Figure 9.1





Ackron Wind Farm Scoping Report



#### APPENDIX B: LIST OF SUGGESTED CONSULTEES

The organisations shown below will be consulted with the relevant information as part of the Scoping process, although not all consultees will receive a copy of the Scoping Report. Consultees to receive a copy of the Scoping Report

- The Highland Council
- SEPA
- SNH
- Historic Environment Scotland
- Melvich Community Council
- Atkins
- Caithness West Community Council
- Civil Aviation Authority Airspace
- Crown Estate Scotland
- BT
- Defence Infrastructure Organisations
- Fisheries Management Scotland
- Scottish Forestry
- Highlands and Islands Airports
- John Muir Trust
- Marine Scotland
- Mountaineering Scotland
- Northern District Salmon Fisheries Board
- NATS Safeguarding
- Ofcom
- RSPB Scotland
- Scottish Rights of Way and Access Society
- Scottish Water
- Scottish Wild Land Group
- Scottish Wildlife Trust
- Transport Scotland
- Visit Scotland



# APPENDIX C: APRIL 2019 SCOPING REPORT



# APPENDIX D: SCOPING OPINION 6<sup>TH</sup> JUNE 2019