

3. APPROACH TO PREPARING THE ENVIRONMENTAL IMPACT ASSESSMENT REPORT 3-1

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3. Approach to Preparing the Environmental Impact Assessment Report

3.1 The Environmental Impact Assessment Process

- 1.1.1 The preparation of the EIA Report is one of the key stages in the EIA process, as it brings together information about any potentially significant environmental effects, which Scottish Ministers will consider as part of the decision making process about whether the Revised Consented Development should be allowed to proceed.

3.2 EIA Terminology

Impacts and Effects

- 3.2.1 In some EIA Reports, the terms 'impacts' and 'effects' are used interchangeably, whilst in others the terms are given different meanings. Some use 'impact' to mean the cause of an 'effect', whilst others use the converse meaning. This variety of definitions has led to a great deal of confusion over the terms, both among the authors and the readers of EIA Reports.
- 3.2.2 The convention used in this EIA Report is to use 'impacts' only within the context of the term EIA, which describes the process from scoping through EIA Report preparation to subsequent monitoring and other work. Otherwise, this document uses the word 'effects' when describing the environmental consequences of the Revised Consented Development, which may for example come about as a result of physical activities that would take place if the development were to proceed (e.g. vehicle movements during construction operations). The environmental changes that occur as a result of these activities (e.g. damage/loss of vegetation or an increase in noise levels as a result of construction vehicle movements) may in some cases cause another change, which in turn results in another environmental effect.
- 3.2.3 The predicted environmental effects are the consequences of the environmental changes for specific environmental receptors. For example, with respect to a species of bat, the loss of roosting sites or foraging areas (the change) could reduce its population size (the effect); with regard to people, an increase in noise levels (the change) could affect people's amenity, reducing their enjoyment of the local area (the effect).
- 3.2.4 This EIA Report is concerned with assessing the significance of the environmental effects of the Revised Consented Development, which requires the activities that will be undertaken to be understood and the resultant changes to be identified and quantified, often based on predictive assessment work.

Spatial and Temporal Scope

- 3.2.5 In this EIA Report, the spatial scope varies between environmental topics and is therefore described in each of the topic chapters. For example, the spatial effects of a development on landscape and visual amenity will cover a much greater area to that affected by noise.
- 3.2.6 The temporal scope covers the time period over which changes to the environment and the resultant effects are predicted to occur, and are typically defined as either being temporary or permanent.

3.3 EIA Scoping

3.3.1 Scoping involves identifying the following:

- The people and environmental resources (collectively known as 'receptors') that could be significantly affected by a proposed development;
- The work required to assess those effects identified as being potentially significant.

3.3.2 Our approach involves starting the scoping process at the outset of our EIA work, with the initial conclusions about the potentially significant effects of the development being set out in a scoping report. The preparation of the scoping report is informed by information about the legislative and policy context that will influence the scheme. It is also informed by the simple rule that, to be significant, an effect must be of sufficient importance that it should influence the process of decision-making about whether or not consent should be granted for a proposed development or an element of it. In this EIA Report, this is referred to as the 'significance test'.

3.3.3 At the scoping report stage, the conclusion that is made using the significance test is based upon professional judgement, with reference to the project description, and available information about:

- The magnitude and other characteristics of the potential changes that are expected to be caused by a proposed development;
- The sensitivity of relevant receptors to these changes;
- The effects of these changes on relevant receptors; and
- The value of receptors.

3.3.4 A precautionary approach is taken such that if the information that is available at the scoping report stage does not enable a robust conclusion to be reached that a potential effect is not likely to be significant, the effect is taken forward for further assessment.

3.3.5 The scoping report for the Revised Consented Development was submitted for comment to the Energy Consents Unit (ECU) along with a request for a Scoping Opinion on 9th March 2021 and is attached at **Appendix 3.A**.

3.3.6 Subsequent to the issuing of the scoping report, the scope of the assessment has been progressively refined in response to comments from the ECU and from consultees (see Section 3.4), together with environmental information that has been obtained from work carried out as part of the EIA and the evolution of the project proposals. A summary of further consultation undertaken is provided in Table 3.2.

3.3.7 The environmental topic chapters (6-18) detail the final scope of the assessment in relation to effects that were assessed as potentially significant; and therefore needed to be subject to more detailed assessment. All other effects (i.e. those that are not referred to in the technical chapters) are not likely to be significant.

3.4 Consultation

Scoping Opinion

3.4.1 The ECU issued a formal Scoping Opinion on 11th May 2021 and this is presented in full in **Appendix 3.B**. The scoping responses and how they are addressed in the EIA are summarised in Table 3.1.

Table 3.1 Summary of Scoping Opinion

Consultee(s)	Response	Chapter where considered in this EIA Report
<p>The British Horse Society (Scotland)</p> <p>(March 2021)</p>	<p>Stated that under the Land Reform (Scotland) Act 2003, horse-riders enjoy a right of access to most of Scotland. Land managers are obliged to respect equestrian access rights and take account of the right of responsible access in managing their land.</p> <p>Infrastructure like gates, bridges, cattle grids etc should be installed with equestrians in mind.</p>	<p>N/A</p>
<p>British Telecommunications (BT)</p> <p>(March 2021)</p>	<p>Responded stating that the "proposal for 21 turbine locations listed in the Scoping report should not cause interference to BT's current and presently planned radio network."</p>	<p>Chapter 15 Infrastructure</p>
<p>Caithness West Community Council (CWCC)</p> <p>(April 2021)</p>	<p>Stated that CWCC are "disappointed to see the proposals for such a significant change to the consented scheme. We are not familiar with the detailed planning legislation that would allow this to be considered as a variation. The addition of 5 new turbines (Limekiln extension), an increase of height to 150m and an extension from 25 to 40 operational years, would seem to be such a fundamental change, we struggle to understand why it does not have to be considered in its entirety as a new scheme."</p> <p>Stated that the CWCC would consider the increased turbine heights of 10 m and 20 m as "modest" and not "relatively modest" as is referred to in the Scoping Report.</p> <p>Stated that the Scoping Report does not specify exactly which model of turbine the developers propose to use. "Both Nordex N133 and Vestas V117 are mentioned but the actual power output is not specified, so turbines could be up to 4.8MW with rotor diameter up to 136m, compare to 82m approved. The swept area of each turbine could be 275% of what has been consented. The variation proposed is not simply an increase in turbine height, but an attempt to change the windfarm well beyond anything already consented. This is completely unacceptable."</p> <p>Stated that the EIS for the consented scheme acknowledged the "significant detrimental impacts to residential amenity in Reay and allegedly mitigated this by siting the higher (139m) turbines furthest south. Throughout the two public enquiries much was made of the 'sensitive siting' of turbines in relation to their height and topography. We therefore cannot understand why it would now be proposed as acceptable to increase the height of all turbines to 150m".</p>	<p>Chapter 9 LVIA</p>

Consultee(s)	Response	Chapter where considered in this EIA Report
	<p>Stated that the consented scheme acknowledged the impacts of the development on Wild Land Area 39. "We cannot accept that such a significant increase in height would not have further detrimental impacts to WLA 39."</p> <p>Stated that "the developer's recent newsletter to Reay residents cited the impact on tariffs to developments furthest away from electricity demand as being one of the key reasons for the increase in turbine height. We would strongly contest that the economics of a development is not a material planning consideration. If the consented scheme is no longer economically viable, then the development is in the wrong place."</p> <p>Stated that, deeming such a variation acceptable sends a clear signal that "the planning process can easily be manipulated through incremental scope changes".</p>	
Defence Infrastructure Organisation	<p>Request MOD accredited aviation safety lighting. States it wishes to be consulted and notified of the progression of planning applications and submissions relating to this proposal to verify that it will not adversely affect defence interests.</p> <p>If planning permission is granted, it would like to be advised of the date construction starts and ends; the maximum height of construction equipment; and the latitude and longitude of every turbine prior to commencement of construction.</p>	Chapter 15 Infrastructure
Fisheries Management Scotland (FMS) (March 2021)	<p>Stated that FMS represents the network of 41 Scottish District Salmon Fishery Boards (DSFBs). The remit of FMS is confined to alerting the relevant local DSFB/Trust to any proposal. The proposed development falls within the catchment relating to the Caithness DSFB and Flow Country Rivers Trust: both of these organisations should also be consulted.</p> <p>Stated that FMS have, in conjunction with Marine Scotland Science, developed "advice for DSFBs and Trusts in dealing with planning applications. We would strongly recommend that these guidelines are fully considered throughout the planning, construction and monitoring phases of the proposed development".</p>	Chapter 11 Ecology
Historic Environment Scotland (HES) (April 2021)	<p>Stated that one scheduled monument (Clach Clais an Tuire, standing stone 1000m SE of Loanscorribest (SM 441) lies at the edge of the development boundary. HES recommend that a visualisation showing the difference in visibility between the consented limekiln turbines and the proposed higher turbines is prepared, as this would confirm whether the proposal alters the level of impact on this monument.</p> <p>Stated that the Highland Council's archaeological and cultural heritage advisors will also be able to offer advice on the scope of the cultural heritage assessment.</p>	Chapter 10 Cultural Heritage
Highlands and Islands Airport (March 2021)	<p>Stated that Highlands and Islands Airports Limited have no objections to the proposal, as "at the given position and height, this development would not impact the safeguarding criteria for Wick Airport".</p>	Chapter 15 Infrastructure

Consultee(s)	Response	Chapter where considered in this EIA Report
<p>Marine Scotland Science</p> <p>(May 2021)</p>	<p>Provided generic guidance and standing advice</p>	<p>Chapter 13 Hydrology & Hydrogeology</p>
<p>NATS Safeguarding</p> <p>(March 2021)</p>	<p>Responded stating that "the proposed development does not conflict with our safeguarding criteria. Accordingly, NATS (En Route) Public Limited Company ("NERL") has no safeguarding objection to the proposal.</p>	<p>Chapter 15 Infrastructure</p>
<p>Nature Scot</p> <p>(April 2021)</p>	<p>Stated that the proposal has the potential to adversely affect the East Halladale WLA 39, a nationally important natural heritage interest and that Nature Scot considers it "unlikely that these adverse impacts can readily be mitigated. We are therefore likely to object to any forthcoming application for this proposal".</p> <p>Further appraisal is provided in an annex to the response letter:</p> <p>Wild Land Area 39 – East Halladale Flows</p> <p>Nature Scot would object to any forthcoming application for the proposed variation. Advice given in relation to questions raised within the scoping report, includes:</p> <ul style="list-style-type: none"> • Agree with that the Kyle of Tongue NSA can be scoped out. • Agree for the other Wild Land Areas to be scoped out. • Agree it would be acceptable to remove the Broubster Wind Farm from the cumulative assessment given the inactivity of the application, however the status of Broubster should be checked with THC. • Regarding the assessment for WLA 39, agree that it will be acceptable to use old photography unless there have been any changes, in which case the photography should be updated. <p>Peatland</p> <p>Agree with the proposals to update the Phase 1 Habitat survey and NVC survey for those new areas where infrastructure is now proposed to be located.</p> <p>Agree with the proposals to undertake peat depth surveys for the new infrastructure locations. The survey should conform to Peatland Survey 2017 guidance (http://www.gov.scot/Resource/0051/00517174.pdf).</p> <p>Stated that peat depths should be clearly mapped and areas of deep peat should be clearly identified. Infrastructure should be located to avoid areas of deep peat. The EIAR should fully explore opportunities to reduce any impacts on deep peat.</p>	

Consultee(s)	Response	Chapter where considered in this EIA Report
	<p>State that a Peat Slide Risk Assessment should also be undertaken following the latest 2017 guidance on peat slide risk assessments (http://www.gov.scot/Publications/2017/04/8868)</p> <p>Ornithology</p> <p>Agree that updated ornithology surveys will not be required to assess the impacts of the proposed variation on ornithological interests.</p> <p>Agree that updated collision risk modelling and cumulative impact assessment should be undertaken for greylag geese, a qualifying feature of the Caithness Lochs Special Protection Area which is welcomed.</p> <p>Agree that the potential impacts on ornithological interests in relation to construction and operational disturbance should be reassessed.</p>	
<p>Nature Scot</p> <p>(April 2021) - continued</p>	<p>Protected Areas</p> <p><u>Caithness and Sutherland Peatlands Special Area of Conservation</u></p> <p>Stated that the site borders the Caithness and Sutherland Peatlands Special Area of Conservation (SAC). As stated in response to the S36 application for the consented proposal, dated 31 August 2016, agree that there would be no adverse effects on the integrity of the SAC providing the following condition was adhered to:</p> <p>“The mitigation described in paragraph 11.10.12 of the environmental statement, a twice-yearly inspection of the deer-proof fence and immediate repairs made where damage is evident, is implemented to ensure the fence remains deer-proof. The first inspection and any necessary repairs should be made in the 3 months prior to the commencement of any construction activities, including any forestry preparation or investigation works. This will prevent an influx of deer onto the SAC due to disturbance and changes of land use on the development site. This is required to avoid damage to blanket bog through increased trampling and grazing.”</p> <p>State that, provided the above mitigation is imbedded in any consent issued for the proposed variation then Nature Scot are satisfied that there will be no adverse impacts on the integrity of the SAC.</p> <p>Protected Species</p> <p>Agree there should be updated surveys for otter, pine marten and water vole. Agree that no further surveys for bats, red squirrel or badger will be required to inform the EIA for the revised proposal.</p>	<p>Chapter 9 LVIA</p> <p>Chapter 11 Ecology</p> <p>Chapter 12 Ornithology</p>

Consultee(s)	Response	Chapter where considered in this EIA Report
	<p>Anticipate that the impacts of the proposed variation on protected species will remain largely as identified for the original proposal.</p> <p>Recommend that, should consent be granted for any forthcoming application then all mitigation measures detailed in the 2016 EIAR for the consented scheme implemented.</p>	
Office for Nuclear Regulation (ONR) (April 2021)	<p>Did not have any comments on the Scoping Report.</p>	N/A
RSPB (April 2021)	<p>Overall, largely agree with the content of the scoping report, with some additional comments.</p> <p>State that due to the proposed increase in turbine height there will be changes to the rotor swept area therefore the collision risk will need to be re-calculated. State that Significant effects on disturbance, displacement, loss of suitable habitat (breeding, wintering and foraging), and barrier effects should also be assessed for all relevant species, both during construction and operation.</p> <p>State that the EIAR should examine the impacts on golden eagle from risk of disturbance and displacement from the eastern part of the eagles' territory and the reduction of regular foraging areas, as well as the risk of increased collisions due to tree felling temporarily providing open areas for foraging.</p> <p>Recommended undertaking a "no forestry" Predicting Aquila Territory (PAT) model in order to assist with the assessment of the effect of likely changes in forestry cover and habitat on golden eagle behaviour.</p> <p>Sate Scoter have been known to feed at sea during the breeding season and it is possible that birds breeding in the Caithness and Sutherland Peatlands SPA could commute through the site, increasing the likelihood of collision risk. so advise that scoter records from across the Flow Country be requested from RSPB. Strongly recommend undertaking nocturnal surveys where possible. Understand the cost implications of this and believe that a strategic approach is needed. Potentially, developers of wind farms across the Flow Country could collaborate.</p> <p>Provide General comments in relation to the information which should be provided within the EIA report.</p> <p>Provide comments on the information which should be included in relation to peat and the peatland restoration proposals to be included in the Habitat Management Plan.</p>	Chapter 12 Ornithology

Consultee(s)	Response	Chapter where considered in this EIA Report
<p>Scottish Forestry (April 2021)</p>	<p>Proposed development site is located within commercial conifer plantation covered by Limekiln Long Term Forest Plan (LTFP), ref. 16FGS09175, approved by Forestry Commission Scotland on 28 August 2017. A felling and restocking amendment to the above LTFP, submitted to allow the changes to accommodate the Limekiln Wind Farm development, was approved by SF on 27 March 2020.</p> <p>SF agree with the proposed scope of the assessment, as per section 8.15 of the Scoping Report, but requests that following information is provided:</p> <ul style="list-style-type: none"> • clear distinction of felling required to accommodate proposed development’s infrastructure (ha)- permanent woodland loss; and felling required to allow for construction and operating of the proposed development (ha) - temporary woodland loss; • clear indication of any changes in area of permanent woodland loss (ha) associated with proposed development’s infrastructure (as compared with consented Limekiln Wind Farm proposal), for which compensatory planting will be required, as per Scottish Government’s Policy on Control of Woodland Removal (CoWRP), and a clear commitment on timing of producing compensatory planting plan for area corresponding with area of permanent woodland loss; • information on area and timing of felling required for the construction and operating (e.g. required for wind energy resource) of the proposed development (temporary woodland loss) – the applicant needs to be aware that the felling proposal must meet the minimum requirements for sustainable forest management, as set out in the UK Forestry Standard (UKFS) (2017). That information should be provided in a form of revised felling proposal for areas covered by LTFP, and will require separate approval from SF under the Forestry and Land Management (Scotland) Act 2018 (the Act); and • information on area and timing of restocking (replanting of areas cleared to allow for construction and operating of the proposed development), with a clear commitment that the restocking is to be carried out before the proposed development is commissioned – again, the restocking proposals need to meet the UKFS requirements and be approved separately by SF under the Forestry and Land Management (Scotland) Act 2018. 	<p>Chapter 14 Forestry</p>
<p>The Highland Council (THC) (April 2021)</p>	<p>The Council provides a summary of comments on the following sections of the Scoping Report:</p> <ol style="list-style-type: none"> 1. Description of the Development 2. Alternatives – design and locational options for all elements of the development 3. Environmental elements affected, including: <ul style="list-style-type: none"> • Land Use and Policy; • Sustainability 	<p>Chapter 7 Traffic & Transport</p> <p>Chapter 9 LVIA</p> <p>Chapter 10 Cultural Heritage</p> <p>Chapter 11 Ecology</p> <p>Chapter 12 Ornithology</p>

Consultee(s)	Response	Chapter where considered in this EIA Report
	<ul style="list-style-type: none"> • Landscape and Visual – photomontages should follow the Council’s Visualisation Standards (https://www.highland.gov.uk/downloads/file/12880/visualisation_standards_for_wind_energy_developments). There are a number of similar applications in the area. The status of these other developments will need to be updated in the revised assessment. THC interactive wind turbine map (http://highland.gov.uk/windmap) should be consulted. • Geology, Hydrology and Hydrogeology • Ecology and Ornithology • Cultural Heritage • Noise (operational, cumulative, noise exposure, background noise measurements, amplitude modulation) • Traffic and Transport • Socio-Economic, Tourism and Recreation (refer to Guidance for developments impact and Access Management Plan: • Aviation, Radar and Telecoms • Health and Safety, Shadow Flicker and Forestry <p>4. Significant Effects on the Environment</p> <p>5. Mitigation</p> <p>Refer to mitigation guidance: http://www.highland.gov.uk/NR/rdonlyres/485C70FB-98A7-4F77-8D6B-ED5ACC7409C0/0/construction_environmental_management_22122010.pdf</p> <p>THC Consultee comments include:</p> <ul style="list-style-type: none"> • Flood Team – stated the Flood team does not wish to comment. • Historic Environment Team (Archaeology) – state that the methodology set out in section 9 of the Scoping report is acceptable. • Transport Planning – state that assessments to be carried out include: a revised Transport Assessment; an updated Traffic Management Plan (TMP); Abnormal Load Assessment; Schedule of Mitigation; Swept Path Analysis. A suitable agreement relating to Section 96 of the Roads (Scotland) act may be required, due to the risk of damage to Council maintained roads. • Environmental Health Officer – assessments required include: updated Operational noise assessment; Construction noise – scheme of best practicable means; Dust suppression scheme; Private water supply survey/mitigation scheme. 	<p>Chapter 15 Infrastructure</p> <p>Chapter 17 Noise</p> <p>Chapter 18 Shadow Flicker</p>

Consultee(s)	Response	Chapter where considered in this EIA Report
<p>The Scottish Government</p> <p>Energy Consents Unit</p> <p>(May 2021)</p>	<p>Stated that No responses were received from,</p> <ul style="list-style-type: none"> •SEPA; •Caithness District Salmon Fishery Board; •Civil Aviation Authority – Airspace; •Crown Estate Scotland; •Joint Radio Company; •John Muir Trust; •Mountaineering Scotland; •Scottish Rights of Way and Access Society (ScotWays); •Scottish Wildlife Trust; •Visit Scotland; •Flow Country Rivers Trust; •Scottish Wild Land Group (SWLG); •Reay Area Windfarm Opposition Group. <p>Stated the Scottish Ministers are satisfied that the requirements for consultation set out in Regulation 12(4) of the Electricity Works (Environmental Impact Assessment) (Scotland) Regulations 2017 have been met, and are satisfied with the scope of the EIA, however request the inclusion of a noise assessment in line with THC’s request is considered.</p> <p>Scottish Ministers requested that Scottish Water are contacted and the presence of any private water supplies are investigated</p>	<p>Chapter 15 Infrastructure</p> <p>Chapter 17 Noise</p>
<p>Transport Scotland</p> <p>(March 2021)</p>	<p>It is satisfied with the approach outlined in the scoping report in terms of use of Transport Assessment Guidance (Transport Scotland, 2012) and the Guidelines for the Environmental Assessment of Road Traffic (Institute of Environmental Assessment (IEMA), 1993).</p> <p>States that a full Abnormal Loads Assessment report should be provided with the EIAR that identifies key pinch points on the trunk road network, and details provided with regard to any required changes to street furniture or structures along the route.</p>	<p>Chapter 7 Traffic & Transport</p>

- 3.4.2 Topic specific refinements to the work scope following additional post-scoping report consultation are summarised in Table 3.2.

Table 3.2 Summary consultation following issue of the Scoping Opinion

Consultee(s)	Response	Chapter where considered in this EIA Report
Scottish Water	Ongoing consultation in relation to the Consented Development enabling works and Revised Consented Development. Two SW assets accounted for within the site boundary.	Chapter 15 Infrastructure
Joint Radio Company	Further attempt made to consult following no response to scoping. No response received to date.	Chapter 15 Infrastructure

3.5 Limekiln S36C Consultation with local residents

- 3.5.1 Community consultation is at the centre of Infinergy's approach to development, not only in the pre-application stage, but also throughout the life of the project. This is delivered through direct (either in-person or virtual) contact with local community councils, an online consultation website (www.limekilnwindfarm.co.uk), a freephone telephone number (0800 316 8134), newsletters, Community Open Days (or virtual events) and advertisements/editorial in local newspapers.
- 3.5.2 Infinergy has been engaged in dialogue with the local community council and residents since the Limekiln Wind Farm project was launched 10 years ago. Through the various planning section 36 applications and determination processes, we have maintained contact, and in the run up to the initial enabling works, increased engagement in order to ensure the public were fully informed and engaged. Following a newsletter updating the local community on the enabling works in December 2020, Infinergy attended Caithness West Community Council virtual meeting on 12th April 2021 and subsequently distributed newsletters to the local community (409 properties) in May 2021. The newsletter provided an enabling works construction update and details of the proposed variation to the existing consent and invited recipients to engage via an online consultation website hosting two rounds of live chat with the team. The virtual consultation was also advertised in the local newspaper.
- 3.5.3 The virtual consultation replaced in-person community open days due to ongoing pandemic restrictions and aimed to explain the proposal and highlight the main issues being considered using the same information that would have been presented in person: information boards, landscape and visual assessment photomontages, and zones of theoretical visibility. In addition, members of Infinergy's project team were on hand to answer any questions via live chat sessions which were provided twice a day over 4 days in both the afternoon and evening.

- 3.5.4 During the virtual consultation period, which ran from 11th May to 4th June 2021, the attendees were invited to fill out a 'Voice Your Opinion' questionnaire. Only one response was received during this period.
- 3.5.5 A Statement of Community Consultation report has been provided to support the section 36 planning application for the Proposed Development.

3.6 Overview of Assessment Methodology

Introduction

- 3.6.1 All the topic assessments presented in the EIA Report have been undertaken on the basis of a common understanding of the nature of the project, as described in Chapter 4.
- 3.6.2 For those topics considered in this EIA Report, noting that many have been scoped out given the nature of the variations to the Consented Development proposed, the assessment of effects has been undertaken by competent experts with relevant specialist skills, drawing on their experience from other projects, good practice in EIA and on relevant published information. A list of these experts and their qualifications has been provided in **Appendix 1.A**. For some topics, use has been made of modelling or other methodologies, as appropriate.
- 3.6.3 With certain exceptions, each topic considered in this EIA Report uses the following common chapter format:
1. Non Technical Summary;
 2. Introduction;
 3. Legislation Policy and Guidance;
 4. Assessment methodology and Significance Criteria;
 5. Baseline conditions;
 6. Future Baseline;
 7. Design Evolution;
 8. Scope of the Assessment;
 9. Identification and Evaluation of Key Effects;
 10. Cumulative effects;
 11. Mitigation Measures;
 12. Residual Effects;
 13. Summary; and
 14. References.

3.7 Identification of Baseline Conditions

- 3.7.1 As the various elements of the Revised Consented Development would be built over a period of approximately 22 months from a start date yet to be determined and then operated for 40 years (if the variation to increase the operational period from 25-40 years is granted), future baseline conditions during construction and operation may not be the same as the current baseline conditions. Where relevant, technical

chapters therefore provide a description of the potential changes to the baseline in the absence of the project.

- 3.7.2 To determine the baseline conditions that should be used for the assessment of the likely significant effects of the Revised Consented Development, it is necessary to consider whether baseline conditions are likely to have changed by the 'assessment years' that are selected for the construction and operation periods. If this predicted future baseline is more likely to occur than the existing baseline conditions, the former is used for the assessment of effects. Where it is concluded that the existing baseline conditions are just as likely, or even more likely, to occur in the construction and operation assessment years, these conditions are used for the assessment.
- 3.7.3 The baseline is determined for the 'Study Area' for each environmental topic by a combination of desk-based research, including consultation with the relevant statutory and non-statutory authorities, together with field survey work (where required). In its simplest form, the Study Area comprises the site of the Revised Consented Development. However, as for most developments, the Study Area also includes land outside the site, especially where effects are likely to extend beyond such geographical limits. 'Zones of influence' (ZoIs) where the Revised Consented Development could affect off-site areas are therefore considered for each technical topic considered in the EIA.
- 3.7.4 Details of the relevant ZoIs are discussed in the baseline section of each environmental topic chapter considered. These chapters also explain the basis for defining the future baseline conditions, where this is appropriate. This is based on the following:
- Changes to the baseline that can be predicted based on reasonable assumptions and modelling calculations, e.g. the application of traffic growth factors based on relevant guidance;
 - Information relating to other likely and predictable changes, e.g. climate change, which could affect current prevailing environmental conditions; and
 - Information about other relevant developments, including the nature of the development proposals, their likely timing and their location relative to the Revised Consented Development.

3.8 Overview to Approach to Significance Evaluation Methodology

Introduction

- 3.8.1 One of the requirements of an EIA Report is to set out the conclusions that have been reached about the likely significant environmental effects that it is predicted will result from the Revised Consented Development. Reaching a conclusion about which effects, if any, are likely to be significant is the culmination of an iterative process that involves the following stages:
- Identifying those effects that could potentially be significant (see Section 3.4 on scoping);
 - Assessing the effects of the proposed variations to the Consented Development against the baseline conditions; and concluding whether these are likely to be significant.

- 3.8.2 Chapters 6 to 18 describe the approaches that have been used, in relation to the stages outlined in the sections above, for each of the environmental topics that are considered in this EIA Report.

Identification of Likely Significant Effects

- 3.8.3 To inform the identification of likely significant effects, all of those involved in the preparation of the EIA Report were supplied with information about the proposed revisions to the Consented Development; noting that this is limited to increases in turbine height, operational life, number of borrow pits, track alignment, and location of construction compound and that otherwise the infrastructure and the methods of construction, operation and decommissioning effectively remain unchanged to those considered in the 2012 and 2016 ES and 2017 Supplementary Information (SI).
- 3.8.4 As noted in Chapter 1 Introduction, the Electricity Works (Environmental Impact Assessment) (Scotland) Amendment Regulations 2017 make it clear that for a variation application relating to an EIA development, any further assessment required to inform the application should primarily consider the impacts of the variation itself rather than requiring the whole development to be assessed again. As such, the identification of receptors that needed to be considered within this EIA Report drew on available information about only the environmental changes as a result of the proposed revisions to the Consented Development. Furthermore Regulation 5(4) of the Electricity Works (Environmental Impact Assessment) (Scotland) Regulations 2017 states: "With a view to avoiding duplication of assessments, account is to be taken of the available results of other relevant assessments in preparing the EIA report" and cross reference has therefore been made to the 2012 and 2016 ES and 2017 SI where the results of assessments have not changed.
- 3.8.5 The technical assessments, undertaken in Chapters 6 to 18 of this EIA Report, describe how environmental changes resulting from the proposed revisions are assessed to determine the significance of effects, together with the topic specific approaches that have been used to identify the receptors that could be significantly affected by the Revised Consented Development.

Types of Effects

- 3.8.6 Paragraph 4 of Schedule 4 of the EIA Regulations states that "The description of the likely significant effects on the factors specified in regulation 4(3) should cover the direct effects and any indirect, secondary, cumulative, transboundary, short-term, medium-term and long-term, permanent and temporary, positive and negative effects of the development."
- 3.8.7 Where appropriate, this EIA Report considers all these types of effects where they are relevant to different environmental topic chapters, with the exception of cumulative effects, which are dealt with separately in Section 3.8.

Direct Effects

- 3.8.8 Direct effects are those that result directly from a proposed development. For example, where a machine traverses an area of habitat; the associated physical activity could result in damage/destruction of this receptor.

Indirect and Secondary Effects

- 3.8.9 Indirect and secondary effects are those that result from consequential change caused by the proposed development. As such, they would normally occur on a

different receptor, later in time or at locations farther away than direct effects. For example, where an area of habitat traversed by machinery results in loss of vegetation and soil compaction, silted run-off rates into nearby watercourses could increase, smothering downstream gravel beds used by spawning salmon.

Transboundary Effects

- 3.8.10 Transboundary effects are those that would affect the environment in another state within the European Economic Area (EEA).

Temporal Effects

- 3.8.11 As discussed in Section 3.2, temporal effects are typically defined as being permanent or temporary as follows:
- Permanent - these are effects that will remain even when a proposed development is complete, although these effects may be caused by environmental changes that are permanent or temporary. For example, an excavator that is driven over an area of valuable habitat could cause so much damage that the effect on this vegetation would be permanent; and
 - Temporary – these are effects that are related to environmental changes associated with a particular activity and that will cease when that activity finishes. For example, an increase in noise levels during construction may affect nearby residential receptors, but any effects would cease on completion of this phase of a proposed development. Where effects are temporary, they may be defined as short, medium or long-term, the duration of which may depend on the receptor in question and would therefore be defined in technical chapters as appropriate.

Significance Evaluation

Overview

- 3.8.12 The receptors that could be significantly affected are identified within each topic chapter. The approach that is adopted to determine whether the effects on these receptors are significant is to apply a combination of professional judgement and a topic-specific significance evaluation methodology that draws on the results of the assessment work that has been carried out.
- 3.8.13 In applying this approach to significance evaluation, it is necessary to ensure that there is consistency between each environmental topic in the level at which effects are considered to be significant. Therefore, it is inappropriate for the assessment of one topic to conclude that minor effects are significant, when, for another topic, only comparatively major effects are significant.
- 3.8.14 In order to achieve the desired level of consistency, each environmental topic lead has been guided in their decision-making about likely significance by the 'significance test' that informed the preparation of the scoping report (see Section 3.4 above), as well as the relevant topic-specific significance evaluation methodology.
- 3.8.15 The conclusion about significance is arrived at using professional judgement, with reference to the project description, and available information about the magnitude and other characteristics of the potential changes that are expected to be caused by

the proposed revisions to the Consented Development, receptors' sensitivity to these changes and the effects of these changes on relevant receptors.

- 3.8.16 In some cases, use of the 'significance test' alone will enable a conclusion to be reached in the 'Scope of the assessment' section of the topic chapter that a potential effect is not likely to be significant (i.e. without the need for more detailed assessment). However, in other cases, effects identified in the 'Scope of the assessment' section are subject to further assessment in the subsequent section(s) of each topic chapter.
- 3.8.17 For some of these effects, relatively little assessment work may be required to reach a conclusion that it is not significant, whereas in other cases, more extensive assessment work is required. Sometimes the application of the 'significance test' is sufficient to support this conclusion but, in other cases, the relevant topic-specific significance evaluation methodology is used to inform the evaluation of significance (to determine whether an effect is or is not significant).
- 3.8.18 Having applied the relevant topic-specific significance evaluation methodology, the topic specialists check the conclusions against the significance test. If this test results in a different conclusion to that reached using the significance evaluation methodology, a detailed justification is provided as to why this different conclusion is valid.
- 3.8.19 For some of the topics that are assessed in the EIA Report, there is published guidance available about significance evaluation. Where such guidance exists, it has been used to inform the development of the significance evaluation methodologies that are used in this EIA Report. For other topics, it has been necessary to develop methodologies without the benefit of guidance. This has involved technical specialists drawing on their previous experience of significance evaluation in EIA.
- 3.8.20 While there may be variation depending on the technical topic being considered, significance evaluation generally involves combining information about the sensitivity, importance or value of a receptor, and the magnitude and other characteristics of the changes that affect the receptor. The approach to using this information for significance evaluation is outlined below.

Receptor Sensitivity, Importance, or Value

- 3.8.21 The sensitivity or value of a receptor is largely a product of its importance as informed by legislation and policy, and as qualified by professional judgement. For example, receptors for landscape, biodiversity or the historic environment may be defined as being of international or national importance. Lower value resources may be defined as being sensitive or important at a county or district level. For each environmental topic, it is necessary to provide a detailed rationale that explains how the categories of sensitivity/importance/value have been used.
- 3.8.22 The use of a location or physical element that may be representative of receptors, e.g. people, would also play a part in its classification in terms of sensitivity, importance, or value. For example, when considering effects on the amenity of people, a location used for recreational purposes may be valued more than a place of work.

Magnitude of Change

- 3.8.23 The magnitude of change affecting a receptor as a result of the Revised Consented Development would be identified on a scale from very low to very high. As with receptor sensitivity and value, a rationale is provided in each topic chapter that

explains how the categories of environmental change are defined. For certain topics, the magnitude of change would be related to guidance on what levels of change are acceptable (e.g. for air quality or noise), and be based on numerical parameters. For other changes, it will be a matter of professional judgement to determine the magnitude of change, using descriptive terms.

Determination of Significance

- 3.8.24 The significance of effects is determined with reference to information about the nature of the development, the receptors that could be affected and their sensitivity, importance or value, together with the magnitudes of environmental change that are likely to occur.
- 3.8.25 Significance evaluation for many environmental topics can be guided by the use of matrices that combine sensitivity/value and the characteristics of environmental changes as shown in the example in Table 3.3. In addition, professional judgement is applied because, for certain environmental topics, the lines between the sensitivities or magnitudes of change may not be clearly defined and the resulting assessment conclusions may need clarifying.

Table 3.1 Significance Evaluation Matrix

		Magnitude of change				
		Very high	High	Medium	Low	Very low
Sensitivity/importance/value	Very high	Major (Significant)	Major (Significant)	Major (Significant)	Major (Significant)	Moderate (Probably significant)
	High	Major (Significant)	Major (Significant)	Major (Significant)	Moderate (Probably significant)	Minor (Not significant)
	Medium	Major (Significant)	Major (Significant)	Moderate (Probably significant)	Minor (Not significant)	Negligible (Not significant)
	Low	Major (Significant)	Moderate (Probably significant)	Minor (Not significant)	Negligible (Not significant)	Negligible (Not significant)
	Very Low	Moderate (Probably significant)	Minor (Not significant)	Negligible (Not significant)	Negligible (Not significant)	Negligible (Not significant)

- 3.8.26 Where this matrix is used in the significance evaluation exercises, reference is made to:
 - Major effects, which will always be determined as being significant in EIA terms;

- Moderate effects are likely to be significant, although there may be circumstances where such effects are considered not significant on the basis of professional judgement; and
 - Minor or negligible effects, which will always be determined as not significant.
- 3.8.27 Variations to this approach, which may be applicable to specific environmental topics, will be detailed in the relevant 'Significance evaluation methodology' sub-section contained in each environmental topic chapter.
- 3.8.28 Definitions of how the categories that are used in the matrix are derived for each topic are also set out in each environmental topic chapter, along with the relevant explanation and descriptions of receptor sensitivity, magnitude of change and levels of effect that are considered significant under the EIA Regulations.

3.9 Assessment of Cumulative Effects

- 3.9.1 For each environmental topic that is dealt with in this EIA Report, an assessment is undertaken of how the environmental effects resulting from the Revised Consented Development could combine with the same topic-related effects generated by other developments to affect a common receptor. To do this, it is important to first identify which other developments need to be included in the cumulative effects assessment (CEA) under each environmental topic assessment undertaken. The starting point for this is to determine the ZoIs from the Revised Consented Development for each receptor that could be significantly affected under each environmental topic considered.
- 3.9.2 Identifying the other developments that should be considered in the CEA involves first acknowledging that the availability of information necessary to conduct this will partly depend on the prevailing status of the other relevant developments.
- 3.9.3 In the context of the Revised Consented Development, the relevant SNH guidance¹ states that the CEA should be undertaken only for operational and consented wind energy development and other planning applications for wind energy development. In addition paragraph 5 of Schedule 4 of the EIA Regulations states "cumulation of effects with other existing and/or approved development". Therefore, such developments, where they are located within the ZoI for a given environmental topic, have been subject to CEA. These other developments are discussed, as appropriate, in the sub-section of each environmental topic chapter that deals with the assessment of cumulative effects.
- 3.9.4 Types of development other than wind farms have been considered, but none were identified that were relevant to the CEA. Chapter 9 of the 2012 ES included a cumulative landscape and visual impact assessment (CLVIA) which was updated in Chapter 9 of the 2016 ES and Chapter 9 of the 2017 SI. This latter assessment was based on the identification of wind energy developments within a 35km Search Area from the Development Site (40km for the SI). In line with SNH guidance (Assessing the Cumulative Impacts of Onshore Wind Energy [March 2012]), the CLVIA considered the potential for cumulative effects with other operational, consented and planning application stage wind farm developments within a 40km Study Area from the Development Site, as detailed in Table 9.5 of the 2017 SI (see **Appendix 3.C**).
- 3.9.5 To account for potential changes to cumulative wind energy development within this Study Area, an updated cumulative search was undertaken in May 2021. The sites

¹ *Assessing the Cumulative Impact of Onshore Wind Energy Developments*, SNH (2012)

considered for inclusion in the updated CEA are listed in Table 9.4 of **Chapter 9 LVIA**.