Lochluichart Wind Farm Extension II

INFINERGY

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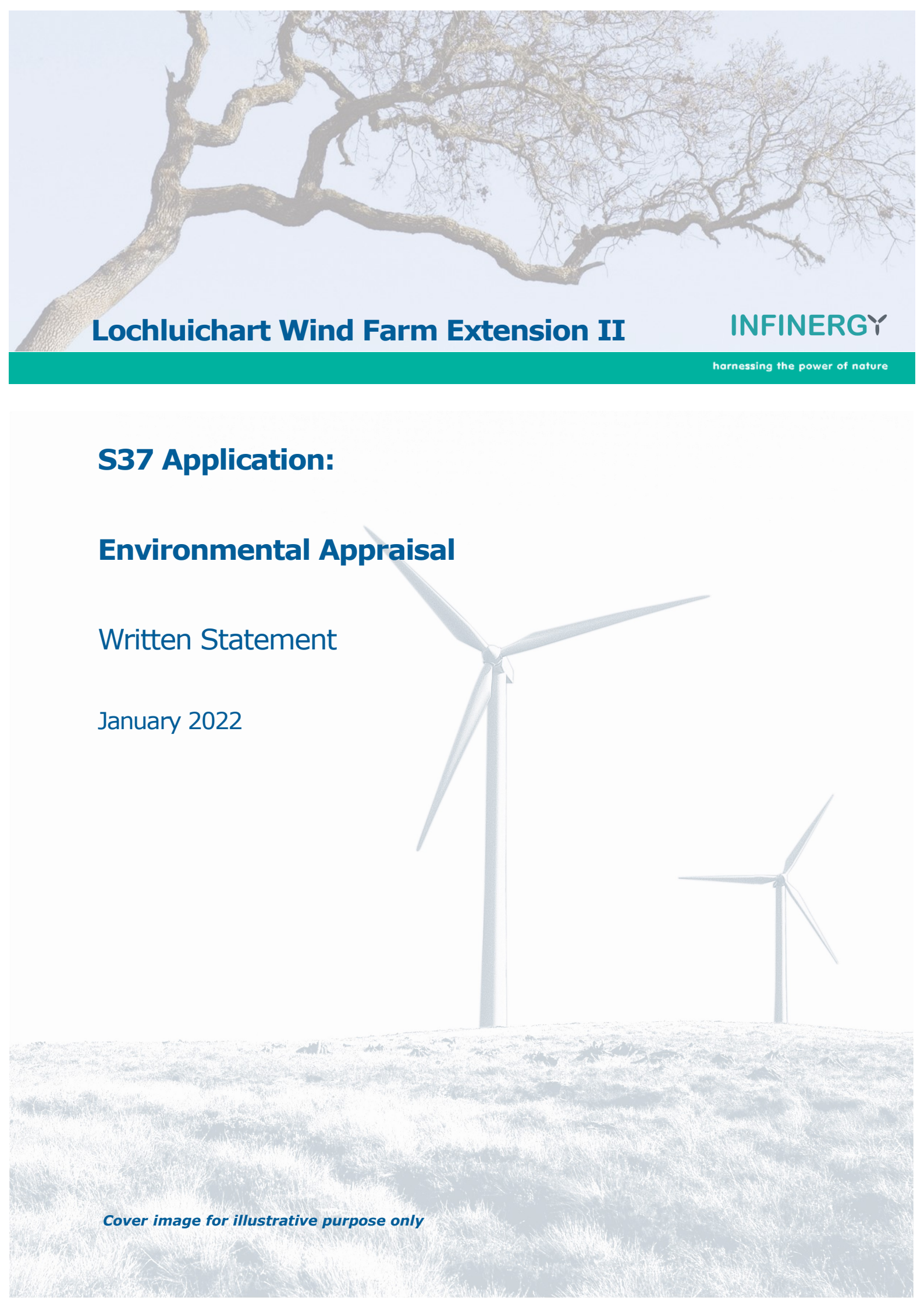
S37 Application:

Environmental Appraisal

Written Statement

January 2022



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1. Introduction

1.1 Background and Site Location

1.1.1 Nevis Environmental Ltd (Nevis) was commissioned by Bluebell Wind Farm Ltd ('the Applicant') to manage the submission of an application under Section 37 ('s37') of the Electricity Act (1989) to install an overhead line (OHL) ('the Proposed Development') between the consented Lochluichart Wind Farm Extension II (the 'Consented Development') and the existing Corriemoillie substation. The OHL route, together with a 100m wayleave corridor, is hereinafter referred to as 'the site'.

1.1.2 The Proposed Development under the s37 Application will not only be required for the Consented Development to export electricity into the National Grid, but also for the new application for Lochluichart Wind Farm Extension II (The Highland Council ('THC') Ref: 21/02985/FUL), to revise the tip height and MW capacity of the 5 turbines for the Consented Development.

1.1.3 This Environmental Appraisal Report (hereinafter referred to as 'the Report') has been prepared in support of the s37 consent application. On granting consent under section 37, Scottish Ministers may also direct that planning permission for that development, including any ancillary works, shall be deemed to be granted in terms of section 57(2) of the Town and Country Planning (Scotland) Act 1997.

1.1.4 The site is located 4.5 km to the north-west of Garve in Rosshire, Highland and is centred on Ordnance Survey (OS) grid reference (NH 3334 6686). The site lies between Lochluichart Wind Farm and Corriemoillie substation and generally follows north-south boundary between Loch Luichart and Corriemoillie Estates. The site mainly comprises wet heath with elements of blanket bog to the north and acid grassland and coniferous plantation to the south. The wider survey area comprises of mountainous/hilly terrain, upland moorland, areas of blanket bog, mature coniferous plantation, young, replanted conifers, and small areas of birch scrub. To the south, semi-improved grassland, rough grazing, and pockets of broadleaved woodland are present. Fresh water habitat consists of large to medium-sized lochs, and smaller upland lochans. The site is drained by tributaries of An Strathan and a small unnamed watercourse which flows into Loch Luichart, to the west of Lochluichart Lodge. The site and wider survey area are managed for deer stalking, as well as red grouse and annual pheasant shoots, forestry and agriculture.

1.2 Purpose of the Report

1.2.1 The purpose of this Environmental Appraisal Report is to review the pre-application process, from the initial EIA Screening, through preliminary route design informed by environmental assessment and design work, to final route design. The Report supports the application for consent under s37 of the Electricity Act, from the Scottish Government's Energy Consents Unit, and any deemed planning application determination from the Scottish Ministers.

1.2.2 As discussed below, the Proposed Development is not EIA development and has the benefit of an EIA Screening Opinion to that effect.

1.3 Assessment Team

1.3.1 The assessment was undertaken by the following technical consultancies:

- Infinergy Limited – Design Lead, Application Review, Community Consultation;
- Savills - EIA Screening;
- Nevis Environmental Ltd – Ecology, Breeding Bird Surveys, Peat Depth Surveys, Project Management;
- Nevis Environmental Ltd – Planning Policy and Due Process, Statutory Consultations;
- Optimised Environments –Landscape and Visual Appraisal;
- Fairhurst – Flooding and Erosion Assessment;
- Alan Motion Tree Consulting – Woodland Impact Assessment;
- Line Design Technology – Line Design.

2. Development Proposals and Consultation

2.1 Description of Development

2.1.1 The proposed comprises the construction of a new 33 kV single circuit grid connection supported on a combination of single wood and 'H' type wood poles to connect the Consented Development to the existing Corriemoillie substation.

2.1.2 The overhead line would have a length of approximately 5.182km, with the approximate grid references, including underground section, being the start point at the Consented Development in the north (NH 33237 68922), and the end point in the south at Corriemoillie substation (NH 34441 63890). It was anticipated in the EIA Screening request that the wooden poles would be approximately 12m-16m in height with the average span between poles of approximately 90m -110m.

2.1.3 The subsequent design work and detailed responses to the supporting assessments have resulted in a reduced overall pole height, still running as a combination of single and 'H' type poles; the timber pole lengths are proposed at 13m or less in height. The assessment process to date has also resulted in refinement to the originally considered route; this is now effectively fixed, subject to any site-specific micro-siting under agreed limits of deviation.

2.1.4 It is expected that access for construction works will utilise the existing access track for the operational Lochluichart Wind Farm to the north, off the A835. This runs south through the existing wind farm. Any construction compound requirements will be located at appropriate location(s) along the access road as part of the final design process and agreed construction methodology. Construction best practice would be adopted on site during construction, subject to consultation and agreement with statutory consultees, and would include adherence to an agreed Construction and Decommissioning Environmental

Management Plan, anticipated to incorporate a Pollution Prevention Plan, Drainage Management Plan, Habitat Management Plan, Access Management Plan and Construction Site License (under Controlled Activities Regulations) as necessary. Some limited tree felling is required in the southern part of the route within the area of coniferous plantation.

2.1.5 The construction methodology has still to be defined. However, in recognition of the wet ground conditions and peat deposits, it is intended that temporary trackway will be used to access each pole location, bringing poles and construction materials from the existing access track compound area(s). Low ground pressure ATVs will be utilised to minimise ground impacts and, where required, bog mats can be used to further reduce potential impacts.

2.1.6 The Proposed Development is related to the existing and ongoing works that have been consented separately in relation to the Consented Development, namely – the erection of 5 turbines, temporary construction compound, borrow pits, crane pads, access tracks, underground cables between turbines, sub-station, battery storage, maintenance and control buildings with welfare facilities, under planning application reference number 19/01284/FUL.

2.1.7 The Consented Development, granted consent on 1st July 2020, included the provision of potential borrow pits and a control station. Whilst these elements are not included in the current s37 Application they will nevertheless be utilised by the proposed overhead line development, including a direct connection to the proposed control station. The previous consent includes the following pre-commencement planning condition which controls the design and delivery of the control building:

Condition 4. Design of Ancillary Infrastructure

No development shall commence on the control building, substation or ancillary infrastructure until final details of the location, layout, external appearance, dimensions and surface materials of all buildings, compounds, parking areas including electric vehicle charging provision, battery storage, as well as any external lighting, fencing, walls, paths and any other ancillary elements of the development, have been submitted to, and approved in writing by, the Planning Authority.

Thereafter, development shall progress in accordance with these approved details. Details relating to the control building and substation buildings shall include additional architectural design, landscape and visual impact assessment and other relevant assessment work, carried out by suitably qualified and experienced people, to ensure that they are sensitively scaled, sited and designed.

Reason: To ensure that all ancillary elements of the development are acceptable in terms of visual, landscape, noise and environmental impact considerations.

2.1.8 Subject to certain exceptions, proposals to install and keep installed overhead power lines and associated ancillary development require consent under section 37 of the Electricity Act 1989. The Electricity Act 1989 itself has two exemptions

from consenting procedures. Section 37(2) provides that the following exemptions apply:

i) any line up to and including 20kV which is used or intended to be used for supplying a single customer; and

ii) any part of a line that will be, or is in, premises in the occupation or control of the person responsible for its installation.

2.1.9 With regards to the Proposed Development, the exemptions do not apply. The requirements of s37 also relate only to overhead lines, therefore any underground cable lines will not be covered by the s37 requirements.

2.1.10 Applications must also be made in accordance with the Electricity (Applications for Consent) Regulations 1990. On granting consent under s37, Scottish Ministers may then also direct that planning permission for that development shall be deemed to be granted in terms of section 57(2) of the Town and Country Planning (Scotland) Act 1997.

2.1.11 The Proposed Development comprises of two relatively short underground cable runs at the northern and southern parts of the route, with a central run of approximately 5.182km of overhead lines. With regards to the planning application process, the underground sections are regarded as 'ancillary works' or 'associated works' to the proposed s37 application. Consequently, whereas this application seeks consent under s37 of The Electricity Act, 1989 for the overhead line development, the underground sections are included for information and to enable these to be deemed to be granted planning permission on behalf of THC.

2.1.12 The description of development for the purposes of the s37 consent process is as follows

- The installation and operation of a 33kv overhead line connecting Lochluichart Extension II Wind Farm to Corriemoillie substation, comprising of a series of single and H-type timber poles, pole stays where required, connector cables and pole head infrastructure, including temporary access trackway where required.

2.1.13 The ancillary works, not subject to the s37 application process but which should be addressed under the requirements for the deemed planning permission include the following:

- Northern underground cable section
- Southern underground cable section

2.1.14 **Limits of Deviation**

2.1.15 The following Limits of Deviation are proposed

- Horizontal Limit of Deviation of up to 50m east and west of the proposed route, to accommodate potential micro-siting requirements and the extent of wayleave agreed with Loch Luichart Estate, **Note:** the wayleave is solely within Loch Luichart Estate, the LOD to the east of the proposed route consequently would only extend as far east as the Estate boundary. The LOD is shown on attached Figure 2: Site Plan as being up to 50m either

side of the route; the LOD with regards to the underground section is 10m either side of the defined route

- Vertical Limit of Deviation – the proposed timber poles will have a proposed length of 13m or less. The line design identifies pole types, proposed pole lengths and pole foundations, a vertical LOD of 13m is however considered appropriate to cover any micro-siting issues

2.2 EIA Screening Opinion

Energy Consents Unit

2.2.1 The applicants submitted to the Scottish Ministers on 12th January 2021, a request under regulation 8(1) of the Electricity Works (Environmental Impact Assessment) (Scotland) Regulations 2017 ("the EIA Regulations") for an EIA screening opinion for the proposed new 33 kV overhead electric line to connect the Consented Development to the Corriemoillie substation.

2.2.2 Under regulation 9 of the EIA Regulations, the Scottish Ministers are required to adopt a screening opinion for the Proposed Development. The Scottish Minister's Energy Consents Unit issued their screening opinion in a letter dated 3rd March 2021.

2.2.3 The Scottish Ministers, taking into account the relevant Schedule 3 selection criteria, all of the information submitted in respect of the request for a screening opinion, and the views of THC, adopted the opinion that the Proposed Development does not constitute EIA development and any forthcoming application for consent (under section 37 of the Electricity Act 1989) does not therefore require to be accompanied by a full Environmental Impact Assessment report.

2.2.4 Regulation 8(5) of the EIA Regulations sets out that the Scottish Ministers must consult the planning authority as to the planning authority's views on whether the Proposed Development is EIA development, unless the planning authority's views have already been conveyed to the Scottish Ministers. The Scottish Ministers therefore consulted THC on 26 January 2021. The planning authority responded on 12 February 2021, stating their view that the Proposed Development does not constitute EIA development. THC's response is set out in detail in section 2.2.5 onwards.

The Highland Council

2.2.5 The Planning Authority is THC. The Energy Consents Unit consulted with THC to obtain their EIA Screening Opinion which was provided under reference 21/00381/SCRE, dated 12 February 2021.

2.2.6 The THC EIA Screening Opinion noted that as the proposal involves the construction of a new 33kv line, it only requires to be considered as an EIA scale development, as set out in Schedule 2 of the Electricity Works (Environmental Impact Assessment) (Scotland) Regulations 2017, if the development is to be located in a sensitive area.

2.2.7 THC concluded that as the Proposed Development site does not fall within any of the types of sensitive areas set out within Schedule 2 of the EIA Regulations, it does not meet the criteria of Schedule 2 Development and therefore is not EIA

Development. The Planning Authority is therefore of the view that any future s37 application need not be supported by an EIAR.

2.2.8 The Planning Authority therefore recognises that the proposal as presented, is unlikely to significantly impact any site designated for environmental interest, by virtue of the scale, nature and character of the development considered.

2.2.9 It is noted that the applicants committed to the future submission of a Construction and Decommissioning Environmental Management Plan, incorporating a Pollution Prevention Plan, Drainage Management Plan, Habitat Management Plan, Access Management Plan and Construction Site Licence (under CAR).

Summary of Findings

2.2.10 A copy of the ECU's EIA Screening Opinion is provided at **Appendix 1**. The outcome of the EIA Screening process required the following matters to be addressed.

- In the submission the consideration of alternatives in describing the project should be set out, including the design evolution with any design iterations or mitigation measures arising from the studies undertaken to be clearly set out.

- Given the anticipated tree felling requirements, the Planning Authority also suggest that an Arboricultural Impact Assessment, with proposals for compensatory tree planting be provided.

- It may also be advantageous for the submission to be accompanied by a Landscape and Visual Appraisal with a limited selection of visualisations to be taken from localised viewpoints from the most sensitive nearby receptors

2.2.11 In addition to the foregoing the applicants have commissioned a separate hydrology study to consider the potential hydrology, flood risk and erosion issues arising from the development proposal.

Pre-Application Consultation

2.2.12 In addition to the EIA screening process discussed above, the applicants have consulted with the following consultees.

Historic Environment Scotland (HES)

2.2.13 The Applicant consulted with HES in August 2021 with regards to the Proposed Development and the potential for impacts on heritage assets. HES replied by email dated 27th August 2021 that

- "There are no heritage assets within our remit either within, or in the immediate vicinity of, the Proposed Development. We are therefore content that the proposed works are unlikely to have significant impacts on assets within our statutory remit."

NatureScot

The principal consultation response from NatureScot is in an email dated 22nd March 2021 which set out the following requirements:

Ornithology

- We recommend that survey work and mitigation follow our guidance "Assessment and mitigation of impacts of power lines and guyed meteorological masts on birds (2016)", see: https://www.nature.scot/guidance-assessment-and-mitigation-impacts-power-lines-and-guyed-meteorological-masts-birds
- Your report notes that impacts to birds are likely to be limited to construction stages due to the presence of existing wind farms either side of the line, and it seems that vantage point survey work is not currently proposed. Available information for the surrounding area suggests there could also be operational impacts to sensitive species. In particular, I note the potential for red-throated divers to be present and that the grid connection may cross their flight path. It is not clear how we could assess collision risk to this species without VP work. The overhead line is also within connectivity distance of the Glen Affric to Strathconon Special Protection Area (SPA) meaning a Habitats Regulations Appraisal (HRA) is likely to be required, and as part of this we would need to assess collision risk to golden eagle. The southerly section of the line is closest to the SPA and more distant from the existing developments and it is not clear how we could assess collision risk without VP work. If you have further information which demonstrates VP work is not required, we would be happy to review it. Our current advice would however be that VP work is carried out in line with our guidance, unless flight activity information is already available from previous surveys undertaken in this area, and this covers the route of the line and is less than 5yrs old. I would suggest that breeding season VP work may be most important to complete at this site and that depending on the outcome of that we can review the need for any winter work.
- Survey work for breeding birds is currently proposed within 500m of the line. Our guidance recommends that surveys cover a wider buffer for certain species (see Table 1.6 of "Recommended bird survey methods to inform impact assessment of onshore wind farms": https://www.nature.scot/recommended-bird-survey-methods-inform-impact-assessment-onshore-windfarms). We would therefore recommend that, if suitable habitat exists for target species beyond 500m, surveys extend to 1km for divers, 1.5km for black grouse and relevant distances for raptors and follows recommended methods. If however existing data is available, covers the relevant area and is less than 5 years old it is likely this can be used for your assessment. We also recommend contacting the Raptor Study Group for information on their coverage of the area and any data they may hold.
- Once survey work is complete we recommend an assessment of potential impacts through habitat loss/change, disturbance and/or displacement, and collision risk to SPA and wider countryside bird populations. Mitigation options should be considered as part of this process.

Ecology

- We recommend habitat survey to NVC level is carried out along areas of the route outside the forestry plantation. The Carbon and Peatland 2016 map shows that the grid connection route is within an area mapped as nationally important Class 1 peatland. The 2016 mapping is indicative, and we recommend site specific peat and vegetation surveys to confirm the quality and distribution of peatland over the development area plus an appropriate buffer. For further advice, see: https://www.nature.scot/professional-advice/planning-and-development/planning-and-development-advice/planning-and-development-standing-advice-and-guidance-documents.
- We agree with your recommended protected species surveys. In addition, we advise that badger surveys are carried out if there is suitable habitat and, as the site is around 3.5km from a wildcat priority area, that the need for wildcat surveys are considered in line with our guidance, see: https://www.nature.scot/standing-advice-planning-consultations-wildcats. For our standing advice on protected species survey and mitigation, see: https://www.nature.scot/professional-advice/planning-and-development/planning-and-development-advice/planning-and-development-protected-species.

SEPA

2.2.14 SEPA's consultation response dated 14th July 2021 stated that

- "I think what you are proposing is fine so long as enough peat probing is done to inform the location of any permanent infrastructure – i.e. if you encounter deep peat, are their viable alternatives supported by the peat probing information? The peat probing should inform the location of infrastructure as much as is reasonably practicable."

Garve and District Community Council

2.2.15 As part of the ongoing community engagement process with the local community council, Garve and District Community Council ('GDCC'), and together with regards to the proposed Lochluichart Wind Farm Extension II revised tip height application, the Applicant have regularly updated GDCC to keep them informed of the Proposed Development.

2.2.16 The Applicant attended the 7th September 2021 GDCC Meeting where a presentation was made (see **Appendix 2**) on the latest updated wayleave (s37) route and key project details. Similar informative discussions have also taken place with the relevant case planning officer at THC Peter Wheelan, who is also the case planning officer for the revised tip height application.

Consultation Responses

2.2.17 The pre-application consultation responses that have informed this report, received from NatureScot, SEPA and Historic Environment Scotland, are collated in **Appendix 3** to this document.

3. Supporting Documents

3.1 Ecological Impact Assessment (EcIA)

3.1.1 An Ecological Impact Assessment was undertaken by Nevis Environmental Ltd., through the summer of 2021. The assessment work findings are set out below and found in **Appendix 4**.

3.1.2 *Habitats:* The majority of the route corridor (67%) is comprised of M15 wet heath vegetation on both shallow (<0.5m) and deep (>0.5m) peat. Small areas of blanket bog are also present in the central and northern sections of the route corridor. Coniferous, broadleaved and mixed plantation woodland account for around 15% of the route corridor and occur mainly in the south of the site. Two alkaline flushes are present, one in the northern part of the site and one in the south. Small areas of acid grassland, acid flush, bog pool and atypical 'marshy' grassland area also present.

3.1.3 *Invasive Plant Species:* Two invasive plant species; rhododendron and the moss Campylopus introflexus were recorded within the site boundary, with rhododendron distribution being limited to the southern section (woodland).

3.1.4 *Reptiles:* No reptiles were recorded during the survey. However, the site offers excellent potential habitat for all three species of reptile found within the region; common lizard, slow worm and adder.

3.1.5 *Otter:* No signs of otter were recorded during the survey. The watercourses on site connect the site the wider landscape, including a number of large waterbodies, such as Loch Luichart and Loch Glascarnoch. No resting sites were identified within the survey area, so any impact on otters would likely be limited to potential disturbance during the construction works.

3.1.6 *Water Vole:* The watercourses on site are suitable for supporting a population of water vole, although no confirmed water vole activity was recorded during the survey. No construction works within 30 m of any watercourse is anticipated therefore any local water vole populations are unlikely to be affected by the proposal.

3.1.7 *Badger:* No setts were noted within 50 m of the Proposed Development; however, signs of badger activity are present in the southern section of the site. Habitat loss (including felling) will be minimal and therefore any impacts of the development on badger are likely to be restricted to potential disturbance of foraging/commuting behaviour during construction only.

3.1.8 *Pine Marten:* No signs of pine marten were recorded. The woodland to the south has suitability to support a population of pine marten, however any impacts from the overhead line will be limited, with minor felling of trees required.

3.1.9 *Red Squirrel:* No signs of red squirrel were recorded, however the woodland to the south is known to support a population of red squirrel. Any impacts from the overhead line will be limited, with minor felling of trees required.

3.1.10 *Scottish Wildcat:* The site offers suitable habitats which could support wildcat, however no potential den sites were recording within the survey area. The development is not considered likely to negatively impact any populations due

to the nature of the development not posing a risk to the behaviour of any local populations.

3.1.11 *Mountain Hare:* Mountain hare recorded during surveys and suitable habitat is widespread in the northern part of the site. Due to the small footprint of the Proposed Development, permanent habitat loss is expected to be minimal. It is considered unlikely that the works will have a negative effect on the local mountain hare population.

3.2 EcIA Recommendations

3.2.1 The Ecological Impact Assessment makes the following recommendations

3.2.2 *Habitats:*

- Construction will be completed under a Construction Environmental Management Plan (CEMP) and supervised by an experienced Environmental/Ecological Clerk of Works (ECoW).
- Temporary trackway or similar will be used particularly on the wetter regions of the wet heath/blanket bog vegetation to minimise disturbance.
- Excavated materials will be temporarily stored on boards/trackway and will be replaced in the order excavated to prevent changes soil or hydrological conditions.
- A 50 m buffer will be demarcated around the potential Ground Water Dependent Terrestrial Ecosytem (GWDTE) in the northern part of the site.

3.2.3 *Invasive Plant Species*

- A 7 m buffer will be demarcated around stands of rhododendron,
- Good biosecurity measures including cleaning equipment, tools and PPE prior to mobilising and demobilising from site to prevent spread of invasive species.

3.2.4 *Reptiles:*

- If ground clearance works are to take place during the colder months e.g., October/November or March, when reptiles may be active but moving slowly, pre-construction checks immediately prior to vegetation clearance or ground-breaking should be undertaken by a suitably qualified ECoW.

3.2.5 *Otter:*

- A pre-works check for otter activity should be undertaken on all watercourses within 200 m of the development at least six weeks prior to works commencing.

3.2.6 *Water Vole:*

- A 30 m buffer should be maintained from all watercourses, where possible. Where this is not possible, a pre-construction check for water vole activity should be undertaken ideally between April to September to ensure water voles are active.

3.2.7 *Badger:*

- A pre-construction check within 30 m of construction should be undertaken at least six weeks prior to construction commencing.

3.2.8 *Red Squirrel/ Pine Marten:*

- At least six weeks prior to felling and/or construction, a pre-construction check of the suitable woodland should be undertaken, including a 50 m buffer for red squirrel and 250 m for pine marten. Wildcat: A pre-construction check of the woodland and areas of young plantation within 200 m of the proposed OHL route should be undertaken within six weeks of construction.

3.2.9 *General Mitigation:*

- Prior to any ground clearance or vegetation clearance, a preconstruction check will be conducted by a suitably experienced Ecologist.
- Open ended pipes or excavations will be covered or fitted with ramps when unattended to prevent the accidental entrapment on any animals on site. Ramps can be made using wooden boards that is no less than 0.5m wide and positioned at an angle of no more than 45o. Each open trench/excavation should be checked daily.
- Any temporary lighting used during the construction phase should be directional and focus on the working area. Unintentional light spill should be minimised to prevent disturbance to any crepuscular species using the site.
- No construction activities should take place on should during the two hours before dawn and works should aim to finish at least one hour before dusk.

3.3 Breeding Bird Surveys

3.3.1 The objectives of the report, found at **Appendix 5**, are to:

- Carry out a desk study, to obtain existing information on statutory and non-statutory sites of nature conservation interest and relevant records of relevant bird species within the site and its zone of influence;
- Outline the results of surveys carried out in 2021 for black grouse, breeding waders, breeding divers and breeding raptors within appropriate buffers of the OHL, together with a vantage point survey of the OHL route;
- Carry out an assessment of the ornithological features present, any constraints they pose to the proposals and any recommendations for avoidance, mitigation, compensation or enhancement measures that are needed (as appropriate).

3.3.2 The general findings of the Breeding Bird Survey are set out below:

3.3.3 *Previous studies:*

Previous studies undertaken under the Lochluichart Wind Farm Habitat Management Plan ('HMP') between 2011 and 2020 include breeding wader

surveys and breeding diver surveys. An ornithological study in respect of a revised tip height Town & Country Planning Act ('T&CPA') application to the Consented Development ran concurrently with the studies for the OHL. The outcomes of the OHL studies were largely similar to those of HMP work and the T&CPA study.

3.3.4 *Designated sites:*

Glen Affric to Strath Conon SPA is located 2.0 km south of the site; Beinn Dearg SPA & SSSI is located 6.5 km north of the site; Achanalt Marshes SPA & SSSI is located 6.8 km south-west of the site; Ben Wyvis SPA is located 9.9 km east of the site; Ben Wyvis SSSI is located 9.1 km east of the site.

3.3.5 *Vantage Point Surveys:*

A total of 100 flight lines and 62 ground-based registrations were recorded for 13 target species and four secondary species during the vantage point watches. Target species recorded were: black grouse, golden eagle, golden plover, goosander, greylag goose, greenshank, little grebe, mallard, osprey, pink-footed goose, red kite, red-throated diver and teal.

3.3.6 *Moorland Breeding Bird Survey (MBBS):*

Four territories of golden plover, five territories of snipe and additional confidential species were recorded during the MBBS. Two territories of common sandpiper were recorded during the raptor survey.

3.3.7 *Breeding Raptor Survey*:

Activity by golden eagle, red kite, merlin, osprey, hen harrier, buzzard and kestrel was recorded during the raptor survey. Red kite was the most active species in the vicinity of the proposed OHL.

3.3.8 *Black Grouse Survey:*

Six black grouse leks were registered within 1.5 km of the proposed OHL route. The closest lek to the route was a single bird located 0.32 km to the south-east of the line on the southern slope of Beinn a' Bhric. In addition to lekking birds, groups of up to three and four black grouse were regularly observed foraging within areas of newly planted trees within Corriemoillie Wind Farm.

3.3.9 *Breeding Diver Survey:*

The results of the breeding diver survey are presented in **confidential Appendix** 1 to the Breeding Bird Survey.

3.4 Breeding Bird Survey Recommendations

3.4.1 The report makes the following recommendations:

3.4.2 Construction Phase Mitigation:

- A Construction Environmental Management Plan (CEMP) should be prepared for the site to outline the measures to be taken to ensure environmental protection during the construction process. The CEMP should include a Bird Protection Plan (BPP).
- Ground clearance operations should be carried out outside the periods when nests could be present (01 April to 15 August in this locality). In

the event that it is necessary to undertake ground clearance within the breeding season, the area would be searched by a qualified ecologist no more than 24-hours before clearance occurs.

- Should construction be scheduled to commence during the bird breeding season, pre-construction surveys for raptors, diver and breeding bird surveys, including black grouse must be carried out.
- During construction, walkover breeding bird surveys should also be carried out between April to August on a regular basis, to attempt to detect breeding territories and nests. If a nest is detected for any bird species, then an appropriate buffer zone, would be employed to protect it from damage and/or disturbance.

3.4.3 Operational Phase Mitigation:

- Mitigation will be built into the design of the infrastructure to include: Insulation of key components to prevent electrocution and configuration of the infrastructure with minimum number of cable layers.
- Line marking is required in two sections of the OHL which were considered to be 'hotspots' of activity by sensitive species
- Along the northern/central section of the line, between Sàil Odhar Bheag and the point the line turns south along the west face of Beinn a' Bhric; and
- Along the southern section around Coire Bhratag.
- Other species-specific measures are described in **Breeding Bird Survey Confidential Appendix 1**.

3.4.4 Monitoring:

- It is recommended that the following monitoring surveys take place during the operational phase of the OHL:
- Red-throated diver surveys of relevant waterbodies within Loch Luichart and Corriemoillie Estates in years 1, 2 and 5 following completion of the OHL;
- Monitoring of line marker condition in years 1, 5, 10, 15, 20 and 25 of the line; and
- A specific additional measure for red-throated diver (see **Breeding Bird Survey Confidential Appendix 1**).

3.4.5 The results of the survey work have resulted in the following changes that have been made to the original overhead line route:

- Line route variation to avoid divers;
- Line route deviation to avoid very wet parts of the route;
- Deviation to avoid dep peat deposits;
- Deviations to avoid potential GWDTE systems.

3.5 Landscape and Visual Appraisal

3.5.1 The Landscape and Visual Appraisal (LVA) evaluates the effects on the landscape and visual resource of the proposed new grid connection that will connect the Consented Development to Corriemoillie substation. The LVA has been carried out by landscape architects at Optimised Environments Limited (OPEN).

3.5.2 The LVA is found at **Appendix 6** and is supported and illustrated by a set of figures, including GIS maps, a Zone of Theoretical Visibility diagram (ZTV), photographs and photomontages to illustrate different aspects of the appraisal.

3.5.3 The appraisal focusses on the overhead section of the grid connection as the underground sections will not notably affect the landscape and visual resource and in any event are not subject to the s37 application process. It is also acknowledged that there is no permanent infrastructure associated with the Proposed Development and that any construction tracks required would be temporary.

3.5.4 Site work and the theoretical zone of theoretical visibility (ZTV) of the overhead line have indicated that the effects of the Proposed Development will be limited to a localised area due to the nature of the development and the topography of the site and surroundings. The study area was set at a radius of 5km from the Proposed Development corridor, as any apparent visibility of the Proposed Development will be contained within this area. There may be visibility of the Proposed Development outwith the 5km radius but this is unlikely to be discernible.

3.5.5 The study concludes that the Proposed Development will have a maximum 'moderate effect' on the landscape and visual resource of the study area. The higher levels of effects – moderate and moderate/minor – are found in a very localised area around the site, beyond which the level of effect drops to a 'minor' or 'negligible' level due to very limited visibility of the Proposed Development and its accommodation into the landscape context in which it is seen. In particular, screening by landform, woodland and forestry prevents any notable visibility of the Proposed Development from beyond the immediate site area. In closer views, such as those from the access tracks that run through Lochluichart and Corriemoillie Wind Farms, the effect is limited to a maximum moderate effect due to the limited influence of the Proposed Development and the context in which it is seen, which consists of close proximity operational wind farms and infrastructure, ensuring that the Proposed Development will not introduce new characteristics of development into the surrounding area.

3.6 Flooding and Erosion Assessment

3.6.1 Fairhurst were commissioned by the Applicant to undertake an assessment of existing water features to determine if the proposed project and its construction works would be likely to increase the risk of future flooding events. It was considered prudent to commission the work due to the recorded flood event on 25th August 2017 that resulted in erosion within an existing watercourse channel, and damage to property and infrastructure within Loch Luichart Estate.

3.6.2 The Fairhurst Report is provided as **Appendix 7**.

3.6.3 The report notes that the proposed OHL route is located to the east of the watercourse associated with the previous 2017 flood event. A review of the topography has concluded the section north of Beinn a Bhric will have no surface water shedding to the west and will therefore have no impact on the watercourses involved in the previous flood events.

3.6.4 A short section at the southern point of the OHL route does fall within the catchment for the watercourse flowing to Lochluichart, however, any discharge into the existing watercourse would be indirect, via overland flows, therefore mitigating any risk of bank and bed erosion.

3.6.5 As the majority of the catchment falls to the east an assessment was made as to any perceived flood risk due to the OHL for the water Allt Coire Mhuilidh.

3.6.6 A review of the SEPA flood maps for the Allt Coire Mhuilidh show fluvial flooding where the watercourse is adjacent to Corriemoillie Lodge, and where it passes underneath the A832. The OHL route crosses three tributaries to the Allt Coire Mhuilidh.

3.6.7 The report notes that where proposed haul road would be used, this would cross these tributaries at a significant distance from Allt Coire Mhuilidh, therefore any flow velocity would be dissipated by the time it discharges into the watercourse and therefore will not have any significant effect on the river. In addition, all tributaries run along ground with a relatively shallow gradient which will result in low flow velocities, minimising any risk and bed or bank erosion.

3.6.8 It should be noted that the proposed construction methodology for this project is to utilise temporary access points with the use of trackway rather than a full route haul road. The impact on the tributaries would therefore be even less than anticipated in Fairhurst's report.

3.6.9 The report concluded that the proposed OHL route would not contribute to an increase in flood risk in relation to the 2017 flood event. Although risk of any flood event relating to the Allt Coire Mhuilidh is considered to be negligible, care should still be taken when designing the haul road drainage (if this is the construction method adopted) to not concentrate large catchment areas into the existing burns resulting in a change in flow characteristics with potential for bank and bed erosion.

3.7 Woodland Impact Assessment

3.7.1 A woodland impact assessment report was prepared by Alan Motion Tree Consulting Ltd., to consider the potential impacts from the Proposed Development with regards to woodland assets.

3.7.2 The report, provided at **Appendix 8**, notes that with the exception of the southern extent of the overhead alignment, there is no detrimental impact on any of the existing forestry. The underground sections, and the majority of the overhead route, traverses open ground.

3.7.3 The tree survey considered the original route of the OHL and found that it is likely that around 0.25 hectares in total of existing forest would need to be removed to provide sufficient clearance for overhead wayleaves. It was further noted that with careful planning and micro-siting, the proposed cable route can minimise impact on the existing forest areas.

3.7.4 Since the original survey was carried out the line of the cable route has been varied slightly in this location, principally to avoid a sensitive GWDTE location, but in addition from a line design perspective. The proposed line route now follows a course that will likely have less impact than the marginal impact originally envisaged.

3.7.5 Given the typical ground cover in the area, mitigation planting can be accommodated in close proximity to the wayleave. There are existing areas of open ground to the west of Corriemoillie substation that would accommodate compensatory planting, in addition to extensive areas of open hill around the existing wind farm and the control building/substation in the north of the site.

3.7.6 It is anticipated that suitable replacement planting within the vicinity of the development would meet the requirements of no net loss of woodland cover in accordance with current Scottish Government guidance on control of woodland removal.

3.8 Line Design Detail

3.8.1 Line Design Technology were appointed to design the final connector route taking into account the available survey and assessment work, the EIA Screening Opinion and any further site constraints.

4. Route and Line Design

4.1 Outline Design

4.1.1 Infinergy Limited developed the proposed initial overhead line route to support the EIA Screening request late in 2020. The line route will connect the Consented Development to the existing Corriemoillie sub-station to the south. The Consented Development includes additional infrastructure proposals to service the wind farm, including borrow pits, control centres, storage etc. The nominal location of the control centre is already known, although the design has still to be confirmed through compliance with pre-commencement conditions. The brief therefore was to provide a connection from the control centre to the existing sub-station in the south.

4.1.2 The developer needs to work closely with Loch Luichart Estate to secure a wayleave for the connection route. The direct route that the connection could follow also roughly follows the boundary between the Loch Luichart Estate (i.e. the landowner) and the estate to the east, Corriemoillie. The connection route consequently was partially dictated by the ownership boundary.

4.1.3 The topography of the nominal route, changes from the northern connection point to the southern sub-station connection. The connection point is adjacent to the existing access road that serves Lochluichart Wind Farm. The route then follows approximately the march fence line of the ownership boundary between the two estates, following a level pass area between Meallan a' Mhuthaidh Mor on the west and Beinn nan Cabag and Beinn a Bhric on the east. The plateau area is fairly wet and interspersed with lochans and watercourses. The route heading south meets the shoulder of Beinn a Bhric and rises slightly to the fence boundary below the ridge before heading southwest along the shoulder and then generally southeast threading a way through some woodland plantation and

native cover, latterly following the boundary between Loch Luichart and Corriemoillie Estates and then to the substation.

4.1.4 In early discussions with Loch Luichart Estate, it was agreed that the northern section of the connector, where it follows the access road, would be placed underground. The southern section of the connector was also placed underground within Corriemoillie woodland.

4.1.5 The EIA Screening Opinion discussed above, identified additional survey requirements with regards to potential woodland impact and landscape and visual impact. The EIA Screening was based on timber poles at an approximate spacing of 90 – 110m and an anticipated height of 12 – 16m.

4.1.6 The initial breeding bird survey results identified a potential risk to breeding red throated divers which prompted the line route being varied close to Coire Mhuilidh and Lochan Dubh Beag. The variation moved the route further west to avoid recorded flight lines.

4.1.7 The initial woodland impact study noted that tree cover was only present at the south end of the route. It noted that there was potential for some tree removal but also the availability of space to provide compensatory planting where this was required. The report also noted that micro-siting through the tree cover would reduce the potential impact.

4.1.8 Subsequent ecology work identified two areas where there were potential GWDTE impacts, these were where the line changed from underground to overground to the north and around the north of the southern Corriemoillie plantation. The line route was consequently varied to avoid any impacts. Specifically, the overhead line was moved 50 m southwest along the access road and the line was varied slightly north of the southern plantation.

4.1.9 A peat depth survey was undertaken along the whole route, and this further informed the line design team with regards to likely pole locations and a need to avoid more significant peat depths or excessively wet areas. Neither the hydrology survey report nor the LVIA work led to any line route changes.

4.1.10 The final line design assessment work took into consideration all the initial environmental reports, particularly the ecology and habitat work and the peat depth survey.

4.1.11 The final route has resulted in further minor tweaks proposed by the line designer. These ensured more significant peat deposits are avoided, as are particularly wet areas around the south of Lochan Dubh Beag. The route also reflects the limitations with regard to pole span distances and a need to avoid watercourses. The design work also determined that the overall pole height would be less than first envisaged, respecting the altitude of the route, prevailing weather impacts and topography.

4.1.12 The line design team's final route design is included in **Appendix 9**. The line design profile notes the following:

- Timber poles to be used at 10m, 11m, 12m and 13m height;
- The type of pole recommended for each location, whether H-pole or single timber pole;

- The location and use of stays;
- Pole location;

4.1.13 The final design route, pole heights, location and type were shared with the project design team to ensure no further conflicts and all responses back were positive.

4.1.14 The application supported by this report therefore is based on the final line design as set out in **Appendix 9** and supported by the plans prepared by Infinergy.

Construction Methodology

4.1.15 The intended construction methods will avoid the need for either permanent tracks or temporary haul roads. The existing access road that serves the existing Lochluichart Wind Farm will be used to bring poles and equipment, including ATVs to site. The precise location of any compound(s) along this route is still to be confirmed however there are a number of opportunities for compound formation. Access to pole locations will be low pressure ATVs. Where ground is particularly wet and local conditions require it 'trackway' can be used to access pole positions and to locate poles.

4.1.16 It is proposed that each pole location is excavated, and the pole set in a single operation. This would avoid temporary trackway being located for any significant period of time.

5. Summary

5.1.1 This report supports the application for consent under s37 of The Electricity Act and any deemed planning permission to be granted by THC. The Proposed Development has been subject to EIA Screening with a negative Screening Opinion being issued, the project is not an EIA development.

5.1.2 The initial line route has been amended through additional survey work scoped through discussion and agreement with statutory consultees. The final route in particular avoids the following:

- Red throated divers' flight paths;
- GWDTE;
- Areas that are particularly wet underfoot;
- More significant peat depths;
- Water courses;
- Tree cover.

5.1.3 The final route has been assessed by the environmental team and is considered to address all environmental requirements. The Proposed Development is within the scope parameters of the original EIA Screening, following a similar route and with a pole design height that is less than originally envisaged.

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