Preface

This Non-Technical Summary (NTS) summarises the findings of the Environmental Impact Assessment Report (EIA Report) that has been prepared for the Lochluichart Wind Farm Extension II application by Infinergy, on behalf of Bluebell Wind Farm Limited.

The EIA Report and the supporting documentation are also available online; please visit the dedicated website at www.lxxwindfarm.co.uk under 'Downloads'. All Volumes are available on a CD free of charge. Printed copies of the EIA Report (Volumes 1, 2, 3 & 4) can be purchased from Infinergy for £750 per copy. To obtain a copy, please contact:

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Introduction

This Non-Technical Summary ('NTS') forms part of the Environmental Impact Assessment Report ('EIA Report') which accompanies an application by Infinergy on behalf of Bluebell Wind Farm Limited, the joint venture between Infinergy Limited and Loch Luichart Estate ('the Applicant').

The Applicant is proposing a wind energy development, Lochluichart Wind Farm Extension II (hereafter referred to as 'the Proposed Development'), north of the village of Lochluichart and approximately 18km north-west of Dingwall in the Highland region of Scotland.

As the Proposed Development does not exceed 50 MW, the Applicant is submitting the application in accordance with The Town and Country Planning Act (EIA) (Scotland) Regulations 2017.

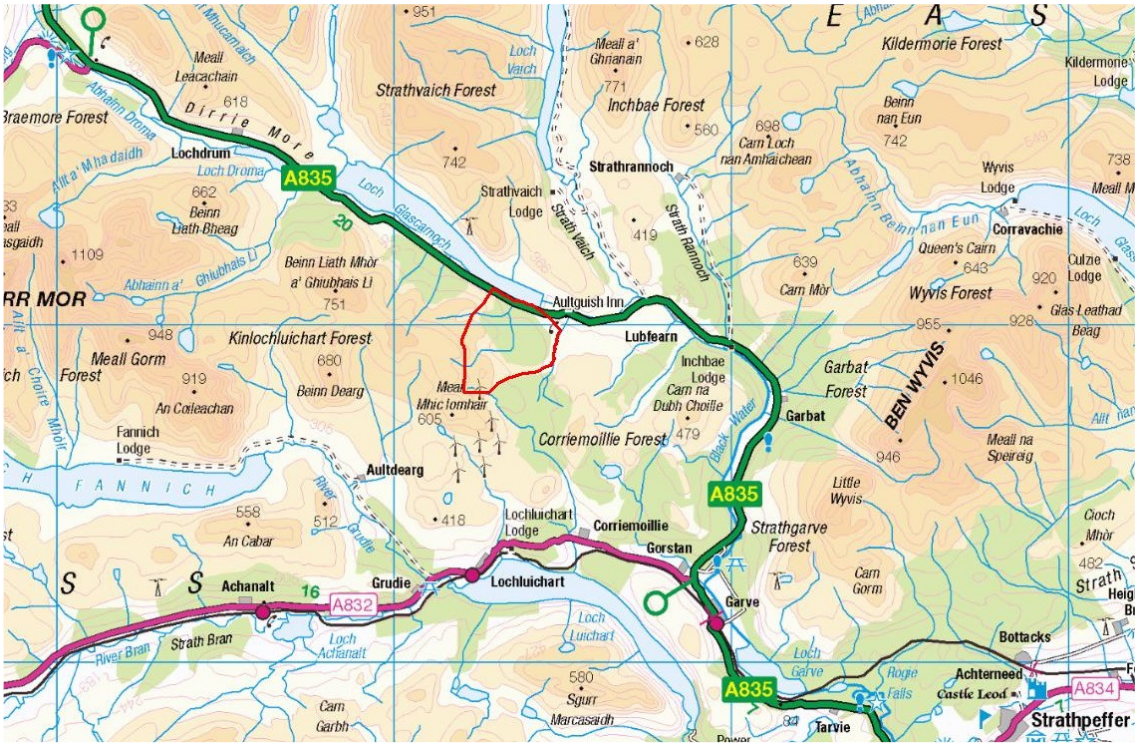

Figure 1: Site Location

Background

Bluebell Wind Farm Limited, the joint venture between Infinergy Limited and Loch Luichart Estate, (hereafter referred to as 'the Applicant'), is proposing a wind energy development, Lochluichart Wind Farm Extension II (hereafter referred to as 'the Proposed Development'), north-west of Dingwall in The Highland Council ('THC') area. This Environmental Impact Assessment Report (hereafter referred to as the 'EIA Report') has been prepared in support of an application submitted to The Highland Council seeking consent to construct and operate the Proposed Development.

The Applicant received a planning permission for Lochluichart Wind Farm Extension II, a 5-turbine scheme, together with associated infrastructure, on 1st July 2020 from THC (hereafter referred to as the 'Consented Development' (THC Ref: 19/01284/FUL).

The Applicant submitted the application for the Consented Development in April 2019, supported by an EIA Report (Infinergy, 2019), for a 9-turbine scheme. Following feedback from statutory consultees, the Applicant subsequently submitted Supplementary Information (hereafter known as 'SI' (Infinergy, 2019) in November 2019 to amend to scheme. The changes included reducing the number of turbines from 9 to 5 (by removing turbines T2, T3, T9 & T10), along with associated access tracks and infrastructure and micro-siting turbine T4 to avoid deep peat.

Environmental Impact Assessment

The EIA process identifies the methodologies used to assess the environmental impacts predicted to result as a consequence of the construction, operation and decommissioning of a development. Where appropriate, it also identifies mitigation measures designed to prevent, reduce and, if at all possible, offset potential significant adverse environmental effects. An assessment of residual effects, those expected to remain following implementation of mitigation measures, are also considered along with an assessment of the cumulative effects of a Development in conjunction with other relevant proposed and existing developments (in this case wind farms). The results of the EIA are then presented in an EIA Report and summarised in plain English in an accompanying NTS (this document).

The EIA process has been instrumental in informing the design of the Proposed Development. The site layout has undergone a number of iterations to ensure it can be accommodated within the environmental and technical constraints identified through the EIA process.

The Proposed Development

The Proposed Development is described in detail in the EIA Report. A brief description of the proposal is given as follows:

- The Proposed Development site boundary including internal access tracks occupies a total area of approximately 595 hectares, though the wind farm infrastructure occupies only a small fraction of this. The wind farm is located within an area of mainly upland moor and forestry plantation approximately 18km north-west of the village of Dingwall;
- Five turbines, with a maximum tip height of 149.9m, are proposed. Associated ancillary development including new access tracks, a sub-station & battery storage array, control building, a temporary construction compound and two borrow pits also form part of the application for the Proposed Development;
- Access to the site will be from an existing road off the A835, utilising the existing access track built for Lochluichart and Corriemoillie Wind Farms, and new track would be developed where required to transport components and materials to site and service the ongoing needs of the wind farm;

- It is anticipated the wind farm will connect into the national grid at Corriemoillie substation, approximately 5km south of the proposed wind farm site. The grid connection does not form part of the application for planning permission, and will be subject to a separate s37 Application by the Applicant;
- The installed capacity of the proposed wind farm is up to 24MW, though capacity and power output may vary depending on the turbine specified and procured for the site through a competitive tendering process, subject to the project receiving consent;
- Based on an installed generation capacity of 24MW (based on the candidate Nordex N133 (4.8MW), the proposed wind farm would have the potential to supply the equivalent of the average annual domestic electricity needs of over 13,599 homes. The proposed wind farm is designed with an operational life of 40 years and permission is sought for this period of operation only;
- Construction, commissioning and site restoration are anticipated to take around 14 months, with potential opportunities for local companies and local workforce to be involved, subject to meeting tender criteria.

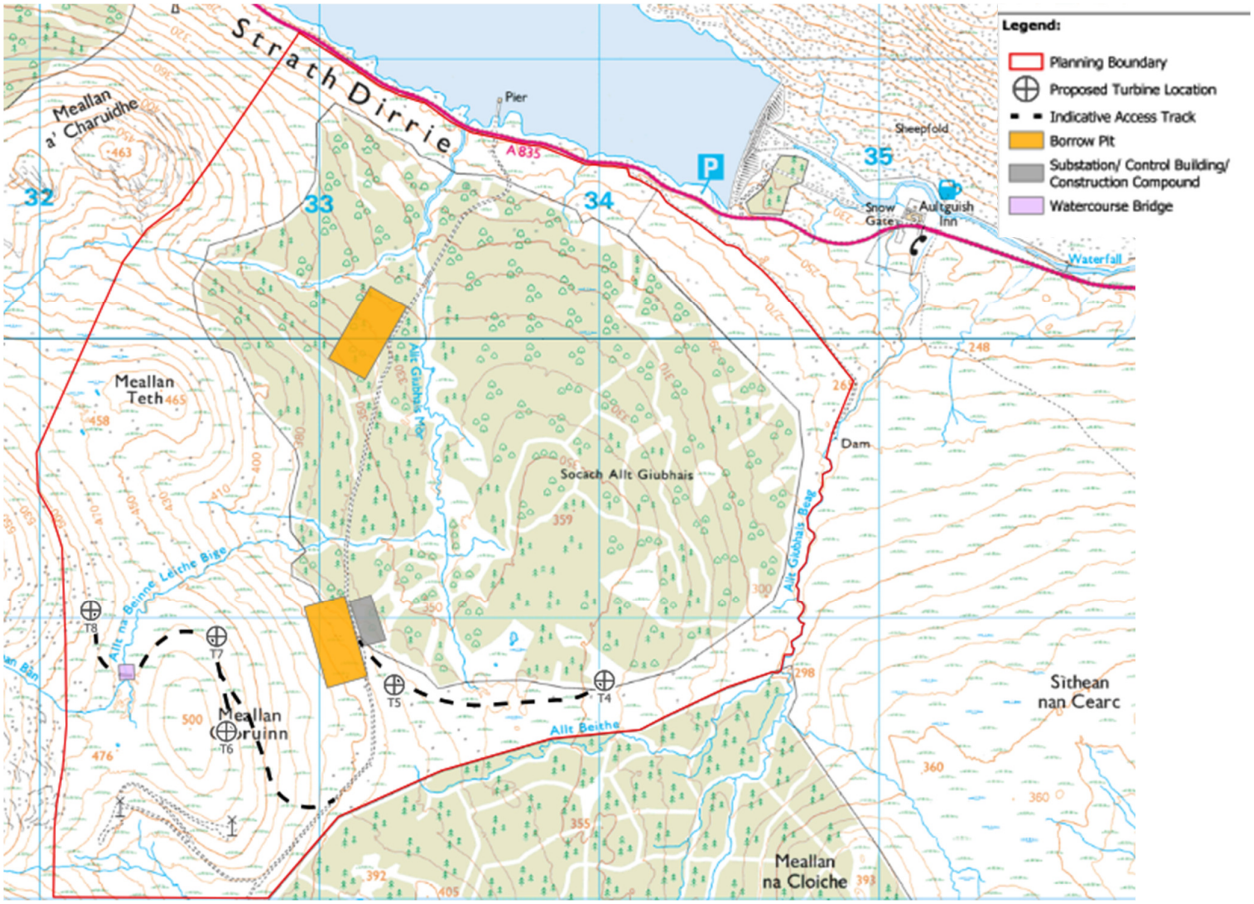

Figure 2: Proposed Wind Farm Layout

Policy Context

The importance of taking action to address climate change is recognised both nationally and internationally and successive EU, UK and Scottish Governments have set clear obligations to this end. This has been done by establishing firm commitments to reduce greenhouse gas emissions through, in part, the promotion and use of renewable energy. In addition, the UK has recognised that diversifying energy supply away from a heavy (and growing) reliance on imported fossil fuels to include renewables also helps to address risks associated with energy security and energy poverty (DECC 2009).

In response to this, National Planning Framework for Scotland 3 (June 2014) The National Planning Framework for Scotland 3 (NPF3) sets out the Scottish Government's strategy for Scotland's long-term spatial development.

In the Framework's discussion on a low carbon place, the stated ambition is to "..achieve at least an 80% reduction in greenhouse gas emissions by 2050". There is an acknowledgement in the NPF3 that at present the energy sector accounts for a significant share of our greenhouse gas emissions.

In respect to wind energy, the Framework notes that Scotland has a significant wind resource, both onshore and offshore, and electricity generation from wind continues to rise. The Framework states the Scottish Government wants to meet at least 30% of overall energy demand from renewables by 2020, including generating the equivalent of at least 100% of gross electricity consumption from renewables by the same date (Scottish Planning Policy, June 2014). *This 100% figure is not a cap, and support for renewable energy development, including onshore wind, would continue even when this target is achieved.*

Complementing the NPF3 objectives, Scottish Planning Policy (SPP) reiterates the importance of the planning system in achieving sustainable development. It notes the Climate Change (Scotland) Act 2009 target of reducing greenhouse gas emissions by at least 80% by 2050, with an interim target of reducing emissions by at least 42% by 2020. In addition, the Proposed Development can also draw strong support in the direction of travel set out in the NPF4 consultation.

SPP continues to support the further development of onshore wind as one of the key renewable energy technologies that can help deliver the Scottish Government's target of generating the equivalent of 100% of electricity demand from renewable sources by 2020. This support is balanced against the need to consider the wider environmental impacts of onshore wind energy developments.

The SPP requires planning authorities to include a spatial framework for onshore wind in their development plans. Authorities are required to categorise their land into three groups as set out in Table 1 of the SPP. The Proposed Development can be categorised as lying within Group 2:

- Group 2 - 'Areas of significant protection' (despite not being sited close to/or within any international or national designations and outside Wild Land Areas); and

Both the EIA Report and approval for the Consented Development demonstrates that impacts upon the only Group 2 interest can be 'significantly overcome', and the Site is therefore in effect in a Group 3 location.

The Proposed Development is a positive response to the ambitious targets to reduce greenhouse gas emissions and increase renewable electricity generation. As such, the

estimated generation of the Proposed Development of 24 MW would provide a meaningful contribution to the Scottish and UK Governments renewable electricity targets, while also strengthening diversification of the energy mix.

Regulatory Consultation

Consultation is a critical component of the EIA process. In order to inform the EIA there has been on-going consultation with the Energy and Consents Unit, The Highland Council and statutory consultees, all of which were involved in the development of the original proposal and have played a key role in the iterative design process for the Proposed Development. The consultees include:

- Highland Council
- SEPA
- NatureScot
- Historic Environment Scotland
- Marine Scotland
- Transport Scotland
- Cromarty Firth Fisheries Board & Trust
- BT
- Civil Aviation Authority
- Defence Infrastructure Organisation (MoD)
- NATS Safeguarding
- RSPB Scotland
- OFCOM
- Mountaineering Council of Scotland
- Scottish Water
- Highlands and Islands Airport
- Visit Scotland
- Scottish Wildlife Trust
- Scottish Canoe Association
- Garve & District Community Council
- Forestry Commission
- Joint Radio Company
- The Crown Estate
- John Muir Trust
- Scotways
- Scottish Wild Land Group
- British Horse Society

Public consultation

Due to Scottish Government Covid-19 Guidance, Virtual Community Open Days were held on 3rd December 2020 for the Proposed Development at which members of the public were invited to provide their views and comment on the wind farm proposal. In addition,

newsletters were sent to the local community requesting feedback and regular updates with Garve District Community Council took place.

More information on our public consultation process is provided in the Pre-Application Consultation Report, submitted along with the planning application and EIA Report.

Environmental Impact Assessment

The EIA process is designed to identify the environmental effects (both adverse and beneficial) of development proposals.

A team of independent experts were employed by the Applicant to undertake the EIA process for the Proposed Development, the main steps in the assessment process have been:

- Baseline surveys (where appropriate and where possible) to provide information on the existing environmental character of the proposed site and the surrounding area;
- Consideration of the possible interactions between the Proposed Development and the existing and predicted future site conditions. These interactions or effects are assessed using criteria based on accepted guidance and best practice;
- Using the outline design parameters for the Proposed Development, prediction of the environmental effects, including direct, indirect, secondary, cumulative, short, medium and long-term, permanent and temporary, beneficial and adverse effects;
- Identification of mitigation measures designed to avoid, reduce or off-set adverse effects and enhance beneficial effects. Re-assessment of alterations to the design and determination of the effectiveness of mitigation proposals;
- Assessment of the significance of any residual effects after mitigation, in relation to the sensitivity of the feature impacted and the magnitude of the effect predicted;
- Identification of any uncertainties inherent in the methods used, the predictions made and the conclusions drawn during the course of the assessment process; and
- Reporting of the results of the EIA in the EIA Report.

The EIA process is iterative, with the findings of the EIA fed into the design process over the course of the assessment work.

The EIA considers the effects of the Proposed Development during the construction, operation and decommissioning with reference to the following:

- Socio-economics, tourism, and leisure (effects to the local and national economy, local tourism businesses, access paths and the change-in-use of the land of the Proposed Development);
- Traffic and transport (effects from traffic travelling to and from the Proposed Development);
- Noise (effects to local properties from noise and vibration from the Proposed Development);
- Landscape and visual (effects to the character of the landscape and views from agreed locations in the surrounding area);
- Cultural heritage (effects to the integrity and setting of historic sites);

- Ecology (the effects to protected habitats, flora and fauna, excluding birds) and aquatic ecology (fish populations and other aquatic habitats and fauna);
- Ornithology (the effects to birds and protected bird habitats);
- Geology, hydrology and hydrogeology (the effects to surface water, ground water, rocks, peat and soils); and
- Telecommunications, radar, aviation and shadow flicker.

In addition to the assessments above, a Forestry Chapter has been included within the EIA Report to demonstrate how the management of the commercial forestry in which the Proposed Development is located, would be affected by the Proposed Development (please note, Forestry is not being regarded as a receptor for Impact Assessment).

Environmental Effects

The following sections provide a brief summary of the main findings of the EIA set out in the technical sections within the EIA Report (Volume 1 – Written Statement). The assessments consider the potential environmental effects during the construction, operation and decommissioning phases of the Proposed Development.

Socio-Economics, Tourism and Recreation and Land Use

To ensure consistency of approach, the same significance criteria and assessment methodology has been followed to provide an assessment of the effects of the Consented Development.

In summary, the Proposed Development is likely to result in a minor increase in the beneficial effects on socio-economics, and a minor increase of adverse effects on tourism, recreation and land use.

The effect of the Proposed Development on Socio-Economics, Tourism & Recreation, and Land-Use is not significant.

Traffic and Transport

This discipline was scoped out of the Assessment. The larger bladed machine (Nordex N133 turbine, with 133m rotor diameter) can be transported to site, as demonstrated by the Abnormal Loads Assessment submitted for the Consented Development.

Noise

The proposed crane hardstanding changes do not require additional plant to that which would be required for the construction of the Consented Development. As such, there is no reasonable prospect of significant noise effect arising from the proposed crane hardstanding changes. Noise from construction remains subject to best practice noise management methods which are secured through the extant Planning Conditions for the Consented Development.

During operation, wind turbines can generate noise from the machinery housed within the turbine and from the movement of blades through the air. Modern turbines are designed

to minimise noise and the extant Planning Conditions for the Consented Development are used to ensure compliance with specified noise limits.

The assessment has been undertaken in accordance with the recommendations of ETSU-R-97i, the method of assessing wind turbine noise recommended by Government guidance, and following the current best practice methods described in the Institute of Acoustics 'A Good Practice Guide to the Application of ETSU-R-97 for the Assessment and Rating of Wind Turbine Noise', as endorsed by the Scottish Government. It has been shown that noise due to the Proposed Development would comply with the noise limits set out by the Planning Conditions for the Consented Development.

Noise produced during decommissioning of the Proposed Development is likely to be of a similar nature to that during construction, although the duration of decommissioning will be shorter than that of construction. Any legislation, guidance or best practice relevant at the time of decommissioning would be complied with.

Landscape and Visual

The Proposed Development comprises five wind turbines, each 149.9m in height to blade tip, which form a direct extension to an existing wind farm cluster. They are located to the north of the 17 operational Lochluichart Wind Farm turbines, six operational Lochluichart Wind Farm Extension turbines (thereafter known as the 'the Operational Schemes'), and 17 operational Corriemoillie Wind Farm turbines (thereafter known as 'Corriemoillie'), all of which are 125m in height to blade tip. The Operational Schemes and Corriemoillie (thereafter known as the 'Operational Wind Farms') have an existing influence on landscape character and visual amenity within the Study Area.

In July 2020, a five-turbine layout comprising wind turbines each 133m in height to blade tip was consented in identical positions to the Proposed Development layout (hereafter referred to as the Consented Development). The Consented Development has the same location and layout as the Proposed Development. The only material variation is the 16.9m increase in blade tip height between the Consented Development and the Proposed Development. Either the Consented Development or, if consented, the Proposed Development will proceed, but not both as they are located in exactly the same location. The Consented Development, therefore, does not need to be considered in the cumulative assessment presented in this chapter.

The Proposed Development and the Operational Wind Farms occupy a part of the area that lies between Loch Glascarnoch to the north and Loch Luichart to the south, defined by the A835 and A832 roads respectively. This land is relatively low-lying in contrast to the large-scale Rugged Mountain Massif Landscape Character Type (LCT) to the immediate west and Rounded Hills LCT to the immediate east. Although also classified as part of the Rounded Hills LCT, the Proposed Development and Operational Wind Farms are located along the base of the low foothills which rise to the west, and into the undulating moorland and forest blocks to the east. This area is relatively low-lying amidst the context of larger hills and mountains.

The assessment has found significant effects on landscape character receptors will arise during the short-term construction stage, but not the operational stage. The significant effects during the construction stage will arise across parts of three Landscape Character Units (LCUs), one within which the Proposed Development will be located and the other

two adjacent to this. These effects will be contained within a 5km radius of the Proposed Development and occur only in relation to the construction stage.

The Proposed Development is not within an area covered by any national or regional landscape designations, which would otherwise denote special scenic value. The regional designation of Special Landscape Areas (SLAs) covers the more scenic landscapes surrounding the Proposed Development. There will be no significant effects on landscape designations as a result of the Proposed Development.

The Proposed Development is not within an area covered by a Wild Land Area (WLA) (which would denote physical attributes and perceptual responses relating to wildness qualities). While WLAs cover landscapes around the Proposed Development, there will be no significant effects on these as a result of the Proposed Development.

The assessment has found significant effects on visual receptors will arise during the short-term construction stage from Aultguish Inn and the adjacent 4.3km section of the A835 to the north and north-east of the Proposed Development (Viewpoints 1 and 2), as well as from the Old Drover's Road (Viewpoint 4). These findings relate to the closer position of the tall cranes and emerging turbines, in respect of the A835, Aultguish Inn, and Old Drover's Road, compared to the Operational Wind Farms.

Significant effects will arise in respect of the views of visitors and residents at Aultguish Inn during the long-term operational stage. This finding relates to the orientation of the inn broadly towards the Proposed Development and the additional influence the closer range turbines will have on this property despite the existing influence from the Operational Wind Farms in the same sector of the view.

No other visual receptors or representative viewpoints will undergo significant effects or significant in-conjunction cumulative effects, during the construction or operational stages of the Proposed Development.

All significant effects occur within an approximate 5 km radius of the Proposed Development. Beyond this it is unlikely that significant effects will arise.

The limited occurrence of significant effects during both the construction and operational stages relate to a combination of the following factors. Firstly, the location of the Proposed Development close to the Operational Wind Farms developments, will ensure it will appear as an integrated extension. Secondly, the similarities in appearance ensure the proposed turbines integrate with the operational turbines despite variations in height, blade length and spacing. Thirdly, the Proposed Development will be contained within the same landscape character type as the Operational Wind Farms. This forms a clear association between this type of development and this type of landscape and avoids spreading the influence into other surrounding landscapes. Fourthly, the landscape in which the Proposed Development and Operational Wind Farms are located, is relatively low-lying amidst a wider upland landscape. This reduces the extent to which the Proposed Development will be visible and where visibility does occur, moderates the influence the Proposed Development will have on landscape and visual receptors. This is confirmed in the ZTV maps that support the Landscape and Visual Impact Assessment (LVIA).

To assist the decision maker, the assessment also provides an overview of the likely combined cumulative effects of the Proposed Development in-combination with the relevant Operational Wind Farms. The purpose of this is to consider whether the resulting pattern of development (including the Proposed Development) will result in the redefinition of landscape character or visual receptors.

The assessment has found that significant in-combination cumulative effects will arise across parts of the Lochluichart LCU, Inchbae LCU and Ben Wyvis LCU, all of the Rounded Hills LCT and the Aultguish LCU of the Undulating Moorland LCT. Significant effects on landscape character during the construction stage will occur within a 12km radius of the Proposed Development. Significant in-combination cumulative effects will arise in respect of the designated Ben Wyvis SLA and the Rhiddoroch – Beinn Dearg – Ben Wyvis WLA, across those parts which coincide with where the Ben Wyvis and Inchbae LCUs will undergo significant in-combination cumulative effects. Visual receptors associated with Aultguish Inn and the A835, the Old Drover's Road and the Ben Wyvis mountain range, will also undergo significant in-combination cumulative effects.

Significant in-combination cumulative effects will arise across an approximate 10km radius of the Proposed Development. The in-combination cumulative effects will extend further than the solus effects or in-conjunction cumulative effects as the Proposed Development is being assessed in combination with the 40 turbines of the Operational Wind Farms rather than in addition to it. The extent of the combined effects is, however, also limited, despite the larger size of the combined developments, owing largely to the consolidated nature of the proposed and operational turbines, their location within a relatively low-lying area amidst rising hills and mountains, and the notable reduction in visibility that occurs beyond the enclosing upland landscapes.

The assessment of in-combination cumulative effects has helped inform an understanding of how the Proposed Development will affect the pattern of wind farm development in this area, with consideration of the relationship between the landscape and the Operational Wind Farms, and the extent to which the Proposed Development in combination with the Operational Wind Farms will redefine landscape character.

The Proposed Development will reflect the existing pattern of wind farm development by extending a part of the northern edge of the existing consolidated group and containing this type of development within the same LCU. While there will be significant in-combination cumulative effects, as described above, the Proposed Development in combination with the Operational Wind Farms will not have a sufficient magnitude of change to redefine the character from a landscape with wind farms to a wind farm landscape.

In summary, the Proposed Development will give rise to a small number of significant landscape and visual effects, albeit all contained within a relatively close-range area and mostly relating to the short-term effects of the construction stage.

Cultural Heritage

There are three known heritage assets within the Inner Study Area (ISA). All three are undesignated; two are recorded on the Historic Environment record (HER) and one is in the National Record of the Historic Environment (NRHE). They comprise a possible standing stone (MHG55902), and a probable survey post (MHG53676) and possible chimney or borehole (C3531919) associated with the construction of the nearby Loch Glascarnoch Dam.

The distribution patterns of known archaeology in the study areas, the results of previous surveys in the ISA and the topography of the area suggest that the ISA is of negligible archaeological potential.

There is one designated asset within 5km of the Lochluichart Wind Farm Extension II (thereafter referred to as 'the Proposed Development'), it comprises the Category B-listed Loch Glascarnoch Dam.

There will be no construction or operational impacts of more than negligible significance. The proposed increase in blade tip height will not have a greater impact on the setting of cultural heritage assets within the surrounding area which remains substantively unaffected.

As the ISA is of negligible archaeological potential, it is considered unlikely that there will be construction impacts upon previously unknown archaeological deposits. However, if impacts on currently undiscovered archaeological remains do occur during the construction-phase then a programme of archaeological investigation will act as mitigation of these impacts.

Ecology

The assessment largely relies on information submitted to inform the application for the Consented Development, and has been informed through desk study, field surveys and consultation with relevant stakeholders. Where relevant, information from the operational Lochluichart Wind Farm, Lochluichart Wind Farm Extension (the 'Operational Schemes') and Corriemoillie Wind Farm has been referred. Field surveys undertaken have consisted of:

- Extended Phase 1 habitat survey (2017);
- National Vegetation Classification (NVC) survey (2017);
- Bat Activity Surveys (2015, also being updated 2021); and,
- Protected Mammal Surveys (2017, being updated 2021).

The Proposed Development does not form part of any statutory or non-statutory designated site for nature conservation. Two such nationally and internationally designated sites are located within 5km; Beinn Daerg Special Area of Conservation (SAC) and Site of Special Scientific Interest (SSSI), and Fannich Hills SAC and SSSI. By virtue of spatial separation, absence of hydrological connectivity and embedded 'good practice' construction techniques, no direct or indirect upon any designated site for nature conservation will occur.

The Site is upland in character and dominated by habitats typical of the region. The majority of habitats comprise large areas of blanket bog and wet heath communities, developing on peat of variable depth. Blanket bog is the most prominent habitat type on the northern slopes where the ground is much wetter and north facing. Centrally and towards the south the bog becomes more heath-like, with wet dwarf shrub heath dominating.

Resultant habitat losses and disturbance and the potential for pollution events has been minimised through sensitive scheme design and the implementation of good practice construction techniques, to be detailed within a Construction Environmental Management Plan (CEMP). The Proposed Development will result in very small permanent losses of the total area of habitat, which is not considered to be significant or affect the integrity of such habitats at a local scale. Temporary habitat losses, whilst larger, will be reversible following the completion of construction activities.

Bat surveys completed in 2015 recorded very low levels of bat activity within the study area, comprising that of common pipistrelle and soprano pipistrelle only. The Proposed Development has, in large, avoided the placement of turbines within habitats of value for bats and where possible adopted a 50m stand-off distance from typical bat habitat features following recommendations in statutory guidance. The majority of habitats to be affected by the development are of low suitability for commuting and foraging bats. As such, habitat losses are not considered to be significant, or likely to affect the conservation status of bat species. Mitigation measures to ensure legislative compliance during any tree works are proposed to protect individual bats and their roost sites. As with all wind farms, operational impacts upon bat species are difficult to characterise; however, the risk of operational mortality is generally acknowledged to be minimal at locations with low bat activity such as the Proposed Development. Subsequently the mortality risk to bats is considered to be very low based on the currently available information, and no measurable increase in mortality is currently anticipated as a result of the increased turbine tip height above the Consented Development.

Water voles were identified within the Site and a single pine marten scat was found. No other evidence of protected mammals was found and the habitats were considered unlikely to support wildcat or badger. Any potential impacts upon terrestrial mammals are unlikely to be significant. Impacts on water voles have been largely avoided by the minimisation of water crossings and sensitive design of crossings and pre-construction surveys provided as part of the CEMP. Mitigation measures are proposed to ensure legislative compliance during the construction and decommissioning phases.

Incidental observations of common lizard were made during habitat surveys, and adders are also likely to be present. Significant adverse impacts upon reptile species are not anticipated. As individual reptiles are protected against intentional or reckless killing and injuring, measures are proposed to ensure legislative compliance during the construction and decommissioning phases.

The Proposed Development is known to fall within a sub-catchment area where salmon are absent, although brown trout are present year-round. The two watercourse crossings required for the development follow current SEPA guidance and will maintain existing bed substrate, hydraulic connectivity and passage for fish and additional wildlife, such as water vole. No significant adverse impacts upon fisheries are therefore predicted.

Subsequently the Proposed Development is not anticipated to lead to significant adverse effects for any protected or notable species and habitats.

In recognition of responses received from The Highland Council and NatureScot additional surveys are proposed to be undertaken in spring and summer 2021 for bats and other terrestrial mammals. An updated assessment of effects will be provided thereafter.

Ornithology

The assessment largely relies on information submitted to inform the application for the Consented Development, and has been informed through desk study, field surveys and consultation with relevant stakeholders. Where relevant, information from the operational Lochluichart Wind Farm, Lochluichart Wind Farm Extension and Corriemoillie Wind Farm has been referred. Field surveys were undertaken in accordance with NatureScot guidance applicable at the time (NatureScot, 2014) and included:

- Vantage Point (VP) Surveys (2015, 2016);

- Moorland Breeding Bird Surveys (2015);
- Woodland Grouse Surveys (2015); and,
- Breeding Raptor and Diver Surveys (2015).

Important ornithological features identified through field survey and desk study included:

- Red-throated diver;
- Red Kite
- Hen Harrier
- Golden eagle;
- Osprey;
- Merlin;
- Black grouse;
- Golden plover; and,
- Greenshank.

Activity for all of the above species was extremely low. A single lekking black grouse was identified within the Site and the presence of a nesting pair of red-throated diver has also been established outside of the Site. Other species were recorded in flight only.

The assessment presented within Chapter 11 assesses the potential effects upon important ornithological features during the construction, operational and decommissioning phase of the Proposed Development. Key impacts include habitat loss, disturbance and displacement and collision mortality risk.

The Proposed Development does not form part of any statutory or non-statutory designated site for nature conservation with ornithological features of interest. Internationally designated sites located within 10km of the Site comprise the Glen Affric to Stranconon SPA Special Protection Area (SPA) (5.8km), Beinn Daerg SPA (4.2km), Achnalt Marshes SPA (7.8km) and Ben Wyvis (9.7km).

Potentially significant effects on black grouse and breeding divers have been avoided and mitigated through project design, i.e. the turbines and associated infrastructure have been located so as to minimise any effects.

Habitat losses as a result of the Proposed Development, in the context of their remaining availability within the Site and surrounding wider area, are not considered to be significant for birds. Given the temporary and restricted nature of works associated with the construction and decommission phases of the development, no significant effects upon ornithological features are predicted. Flight activity of important species within the 'Collision Risk Window' was very low and provided too small a sample to enable a Collision Risk Assessment, which was acknowledged by NatureScot (formally Scottish Natural Heritage) in their consultation responses to the Consented Development. On this basis, effects from collision mortality for any species will be inconsequential at any population level.

No potentially significant effects upon widespread bird these species as a result of the Proposed Development are anticipated.

Mitigation is proposed in relation to the potential for offences to occur under the provision of the Wildlife and Countryside Act 1981 (as amended) during the construction and decommissioning phases. A Breeding Bird Protection Plan (BBPP) will be included in the

Construction Environmental Management Plan (CEMP) to ensure breeding birds and their nest sites are protected from disturbance.

The assessment has also considered the potential effects of the Proposed Development upon important ornithological features in combination with other operational, consented and proposed wind farm developments. No potentially significant cumulative effects are identified.

In recognition of responses received from The Highland Council and NatureScot in November 2020 additional surveys are proposed to be undertaken in spring and summer 2021 for breeding birds. An updated assessment of effects will be provided thereafter.

Hydrology, Hydrogeology, Geology & Peat

An assessment of the effects on hydrology and peat due to the proposed five turbines up to 149.9 meters (m) and change in turbine model and associated increase in crane hardstanding has been undertaken.

Chapter 13 of the Environmental Impact Assessment Report 2019 (the EIA Report 2019) assessed that the Proposed Development as having no significant effects on the hydrological environment.

The increase in the dimensions of turbine and crane hardstanding will increase the potential of effects on the hydrological environment. Due to buffer distances and the implementation of a Construction Environmental Management Plan (CEMP), the potential for all effects remain not significant in terms of the Environmental Impact Assessment (EIA) Regulations.

Other Study Areas

No significant effects in terms of infrastructure, telecommunications, television, air quality, and ground conditions have been identified through the EIA for the Proposed Development.

Shadow Flicker & Safety

Shadow Flicker was scoped out of the assessment due to

The Applicant has requested a 40-year operational lifetime for this application, Applications for extensions to operational lifetime are increasingly common from wind farm developers and asset owners. An operational wind farm would be subject to planning conditions ensuring that noise emissions are not breached and the asset continues to perform. Studies which have been completed show that subject to the ongoing operation and maintenance of a wind farm and additional investment in key components, significant health & safety impacts are not predicted to arise.

Forestry

An assessment of the effects on forestry due to the Proposed Development has been within the Forestry study area of some 296.97 hectares. The baseline survey identifies Scots pine planted in 1985 which contains failed woodland and open ground.

The woodland is part of a Long-Term Forest Plan and is managed as Long Long-Term Retention. The resultant loss of woodland required for the construction and operation of the Proposed Development is 3.70 hectares.

The Applicant is committed to providing the equivalent area as compensatory planting.

Conclusion

Bluebell Wind Farm Limited is seeking planning consent to construct and operate a wind farm at the Loch Luichart Estate, due north of the village of Lochluichart and approximately 18km north-west of the town of Dingwall, in the Highland region of Scotland. The Proposed Development will consist of 5 turbines with a maximum tip height of 149.9m, giving a total installed capacity at the site of 24MW. The operational life of the development will be 40 years.

The EIA carried out to support the Proposed Development involved detailed surveys, studies and assessments to determine any potential 'effects' to the natural, physical and manmade environment that would result as a consequence of the construction, operation and decommissioning of the proposed development. Through careful design, in response to the findings of the EIA as well as the Applicant's commitment to mitigation measures, the results of the EIA the Proposed Development would not have any long-term unacceptable impacts on the surrounding environment.

The Applicant has engaged with the local community throughout the EIA process in order to inform the community about the proposed development, to explain its components and potential effects, and to obtain feedback and an understanding of any key concerns or issues. A full account of the consultation undertaken is provided in the Pre-Application Consultation Report that accompanies the EIA Report.

There is an urgent need to change existing energy infrastructure if the established renewable energy targets set by successive EU, UK and Scottish Governments are to be met, in order to help address climate change, energy security and energy poverty. The Proposed Development is a positive response to the ambitious targets set for renewable electricity generation. At a size of 24 MW the estimated generation of the Proposed Development would power the equivalent of 13,599 average UK homes with Renewable energy while providing a meaningful contribution to the Scottish and UK Governments' renewable electricity targets, reducing CO^2 emissions, and ensuring further diversification of the UK energy mix.