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.

Copies of the EIA Report, including the NTS, can be viewed at the Highland Council offices:

Dingwall Service Point
The Highland Council
High Street
Ross House
Dingwall
IV15 9RY

In addition, the EIA Report is available to view at:

Garve Village Hall
Station Road
Garve
IV23 2PP

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 and 3) can be purchased from Infinergy for £750 per copy. To obtain a copy, please contact:

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Edinburgh
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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.

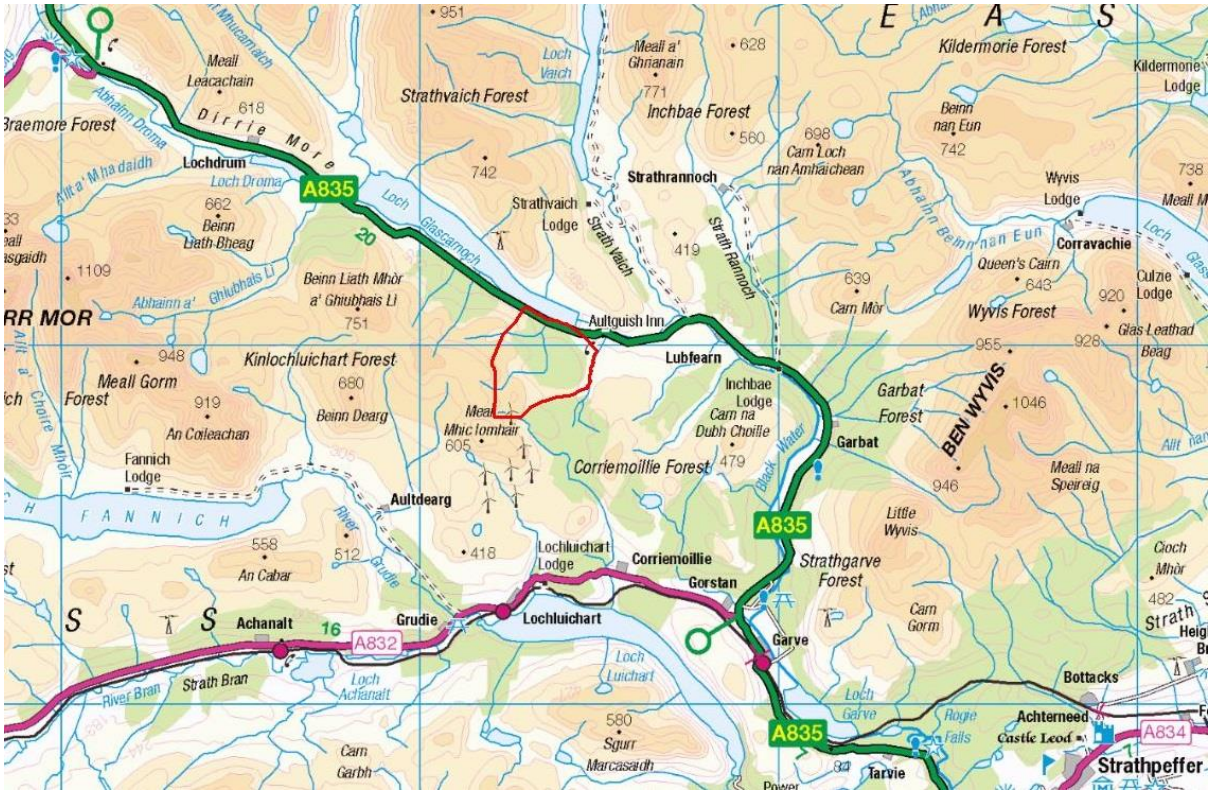

Figure 1: Site Location

Background

The Proposed Development is the outcome of a review of the existing planning permissions for the Operational Schemes, both Section 36 schemes which were consented by the Scottish Government on December 22nd 2008 for the 17 turbine Lochluichart Wind Farm, and 2nd October 2012 for the 6 turbine Lochluichart Wind Farm Extension.

As a consequence of the belief there existed landscape capacity for additional turbines, an extension to the Operational Schemes was progressed. Following extensive discussions with the local Distribution Network Operator (DNO), Scottish

Hydro Electric Limited, it was confirmed there was the capacity to connect any proposed scheme to the grid network.

Since the original application for Lochluichart Wind Farm, over 10 years ago, wind turbine technology has evolved significantly. The outcome has been that technology that would have been considered innovative in 2007, has now been superseded by new technology that enables significantly more energy to be harvested from a given wind resource. The original design of the Operational Schemes was based on candidate turbines with a maximum generation capacity of 3 MW. Today, turbines with a capacity of up to 5 MW would be considered more appropriate for the wind regime at the site.

Since the original application for the Lochluichart Wind Farm was submitted, there has been a wealth of wind data collected adjacent to the site of the Proposed Development, through development and operational phases, which has fed into the design and layout of the Proposed Development. As experience of operational sites has increased, design principals in relation to the optimal layout of a wind farm have also advanced, resulting in further improvements in potential energy yield, while minimising environmental impacts.

Optimisation studies based on the Proposed Development site's very good wind resource, more elevated typography in relation to the Operational Schemes and current wind technology, found that contemporary turbines would significantly increase electricity output at the site and materially increase environmental benefits compared to the Operational Schemes on a per MW basis.

In the subsidy free world in which new onshore wind farms will be operating, the development of which forms a key part of achieving the Scottish Government's ambitious renewable energy targets, extensions to existing operational schemes where economies of scale can be achieved via utilising existing access tracks and grid infrastructure, the Proposed Development is an excellent example of a financially viable project.

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;

- Nine turbines, with a maximum tip height of 133m, 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, as this will be the responsibility of the network operator, Scottish Hydro Electric Transmission Limited;

- The installed capacity of the proposed wind farm is up to 32.4MW, 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 32.4MW (based on the candidate Senvion 3.6M (MW) 114NES), the proposed wind farm would have the potential to supply the equivalent of the average annual domestic electricity needs of over 17,380 homes[i]. The proposed wind farm is designed with an operational life of 25 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.

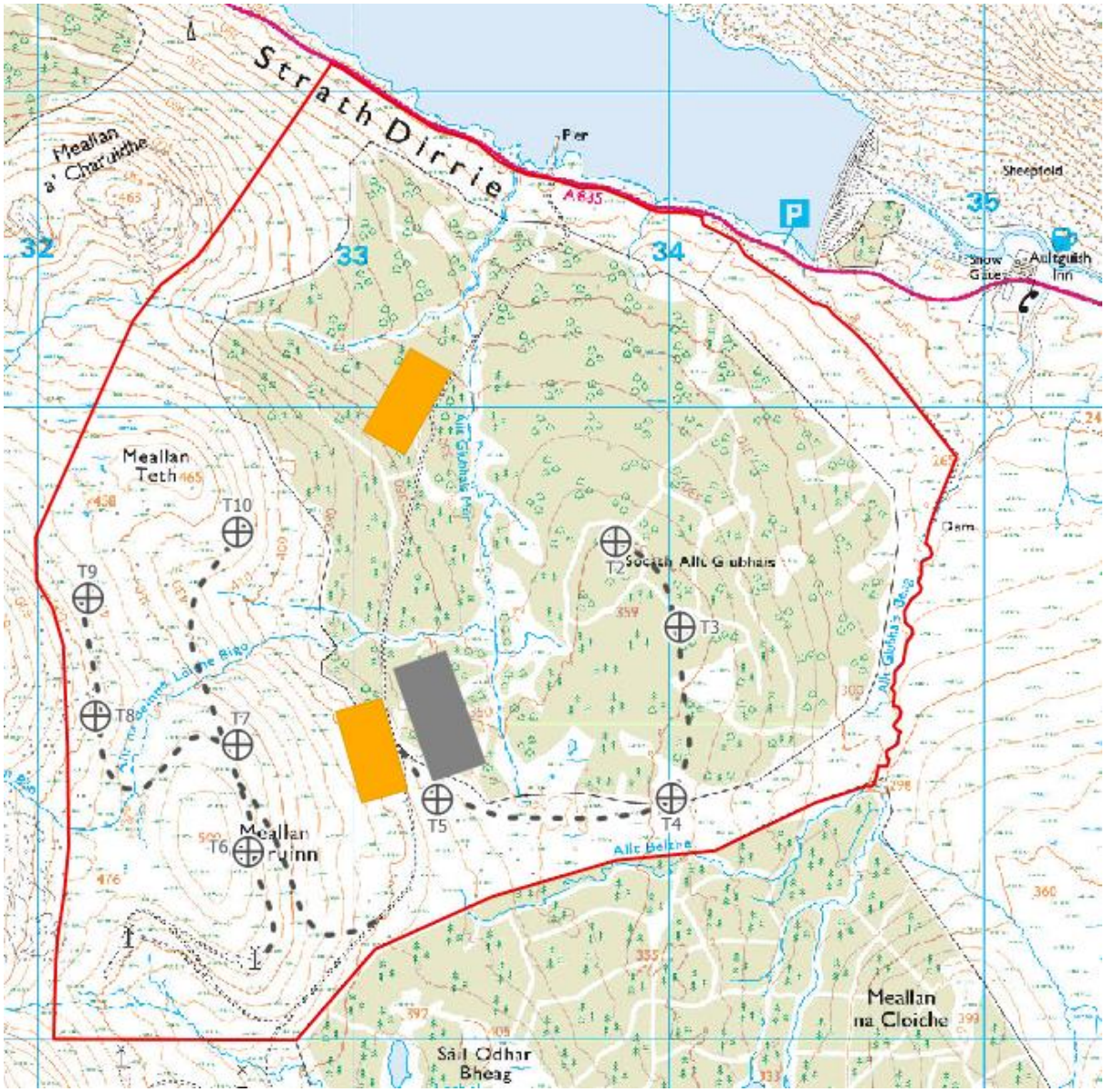

Figure 2: Proposed Wind Farm Layout

Rationale for Development

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.

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 both Groups 2 & 3:

- 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
- Group 3 - 'wind farms are likely to be acceptable, subject to detailed consideration against identified policy criteria'.

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 32.4 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
- SNH
- 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

Community Open Days were held in Achnasheen Village Hall and Garve Village Hall on 3th-4th October 2017, and at Garve Village Hall on Tuesday 3rd April 2018, for the Proposed Development at which members of the public were invited to provide their views and comment on the wind farm proposal.

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 PROCESS

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

The Proposed Development is expected to generate a direct, short-term positive effect on the economy in the local area, Highlands and in the wider Scottish economy during the construction phase. This is due to the contracts that could be secured in these areas by businesses, the jobs supported by these contracts and the spend of wages.

There is expected to be a moderate beneficial effect on tourism businesses during the construction phase and a slight beneficial effect in the Highlands from tourism

during the construction phase. This is due to construction workers, engineers and management staying in local tourism businesses.

During the operational phase there is expected to be no measurable impact on tourism as the main type of visitor is the general sightseer. Their key reason for visiting the local area is to go to the most northern part of the mainland. Discussions with local tourism businesses, in respect of the original proposal, have not noted any negative comments from tourists regarding the presence of wind farms. A review of existing tourism evidence and surveys of the potential and current effect on wind farms on tourism including evidence from planning decisions for other wind farms has found no evidence of wind farms affecting tourism negatively.

The proposed wind farm will generate sufficient electricity to power over 17,380 domestic homes, thereby reducing emissions of carbon dioxide into the atmosphere (when compared with electricity generation from fossil fuels). It will contribute to the UK and Scottish Government's greenhouse gas emissions reduction targets and renewable energy generation targets which will in turn contribute to efforts to mitigate climate change and the inherent economic, environmental and social stresses that climate change brings. Overall the Proposed Development will not have a significant effect on socio-economics, tourism, recreation or land use.

Infinergy intend to offer up to 10% of the project to be made available for shared ownership. This will bring additional benefit into the local area, subject to finding local communities or social enterprises willing to invest in the project. One idea could be to recycle some or all of the community benefit (approximately £4.05 million over the lifetime of the project) generated from the Proposed Development, into an equity stake in the proposed project.

Traffic and Transport

The traffic and transport assessment considers the effects of the Proposed Development on the local road network and the capacity of the network to support the additional traffic generated as a consequence of the Proposed Development.

The construction phase of the Proposed Development would require the movement of abnormal loads to transport turbine components to the site. A suitable delivery route for abnormal loads from the port of entry at Invergordon, the same route used for Lochluichart and Corriemoillie Wind Farms.

An assessment of the effect of the Development on Traffic and Transportation has been undertaken. The majority of construction vehicles are anticipated to approach the Development from the south, via the A9 and A835. The route for Abnormal Load Vehicles, which will be used for the delivery of wind turbine components, is from the Port of Invergordon via the A9, Cromarty Bridge and A835.

During construction overall traffic flow levels, and levels of HGV flow, can be expected to increase on routes approaching the Development. The peak month for traffic flow is expected to be month eight. During month eight overall traffic

flow is expected to increase by 3% and HGV flow by 7% on the A835 within the vicinity of the Development, this represents the highest predicted percentage increase on any route in the study. The predicted increase in traffic flow on all routes in the study is therefore negligible in terms of the EIA regulations.

As the predicted increase in traffic flow during construction is low and temporary no significant effects on traffic and transport are expected to occur. Traffic associated with operation of the Development is predicted to be minor, amounting to an average of three vans per day. The effect of operational traffic is therefore not significant.

Whilst effects are not considered to be significant, a Construction Traffic Management Plan (CTMP) would be agreed with the relevant road authorities in advance of the construction phase to reduce the potential for impacts as far as reasonably possible; this will also ensure any effects on highway safety are not significant.

Noise

An assessment of the effects of noise due to the Proposed Development has been undertaken. During construction, noise may result from the use of plant and machinery to carry out construction activities. Due to the substantial separation distance between the Proposed Development and nearby residential dwellings, no significant effects are anticipated. Notwithstanding this, Best Practice mitigation measures will be adopted to manage noise emissions, including restrictions on working hours during the construction the Proposed 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 planning conditions are used to ensure compliance with specified noise limits.

The assessment has been undertaken in accordance with the recommendations of ETSU R-97, the method of assessing wind turbine noise recommended by Government guidance, and following the current best practice methods described in the Good Practice Guidance (GPG), as endorsed by the Scottish Government. It has been shown that noise due to the Proposed Development would comply with the requirements of both ETSU R-97 and The Highland Council (THC) at the closest, and therefore all receptor locations.

A cumulative assessment has also been undertaken in conjunction with the adjacent Lochluichart, Lochluichart Extension and Corriemoillie Wind Farms. Worst-case operational noise levels are below the identified noise limits, and the impact of operational noise has therefore been shown to be acceptable.

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

The assessment of landscape and visual effects has been carried out to identify the significant effects that are likely to arise as a result of the Proposed Development. It has considered the effects on landscape and visual receptors during the short-term construction and long-term operational phases, as well as the cumulative effect of the Proposed Development in combination with other wind farm developments.

The Proposed Development comprises 9 wind turbines, each 133m 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, 6 operational Lochluichart Wind Farm Extension turbines (thereafter known as 'the Operational Schemes'), and 19 operational Corriemoillie Wind Farm turbines (thereafter known as 'Corriemoillie'), all of which are 125m in height to blade tip. The Operational Schemes and Corriemoillie (42 in total, hereafter known as the 'Operational Wind Farms') have an existing influence on landscape character and visual amenity within the study area.

The Proposed Development and the Operational Wind Farms occupy a part of the area of land that lies between Loch Glascarnoch to the north and Loch Luichart to the south, defined by the A835 and A832 roads respectively. It is relatively low-lying in contrast to the large scale Rugged Mountain Massif to the immediate west and Rounded Hills to the immediate east. Although also classified as part of Rounded Hills Landscape Character Type (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 phase but not the operational phase. The significant effects during the construction phase 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 phase.

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 Site. 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 otherwise denote physical attributes and perceptual responses relating to wildness qualities. While WLAs cover landscapes surrounding the Site, there will be no significant effects on these as a result of the Proposed Development.

The assessment has found significant effects on road-users on the A835 will arise over a section 1km to the west of the Aultguish Inn and 3.3km to the east, during both the construction and operational phases. Significant effects will also arise in

respect of residents and visitors to the Aultguish Inn. No other significant effects will arise in respect of all other visual receptors during both the construction and operational phases.

The assessment identifies that no significant cumulative effects will arise. All significant effects occur within an approximate 5-kilometre (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 phases relate to a combination of the following factors:

1. the close location of the Proposed Development to the Operational Wind Farm developments, which will ensure it will appear as an integrated extension. This avoids the greater effect which would arise as a result of a new and separate development being introduced into this area;
2. the similarities in appearance ensure the proposed turbines integrate with the operational turbines despite some small differences in height and blade length;
3. 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; and
4. the landscape in which 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 mapping that support the LVIA.

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 phase.

The Historic Built Environment (Cultural Heritage)

A desk-based assessment and walkover survey were undertaken to establish the cultural heritage resource that exists at and around the wind farm site. The potential effect of the Proposed Development on this resource was then assessed.

The construction phase of the Proposed Development has the potential to directly impact two previously recorded archaeological assets along with any previously unrecorded cultural heritage assets within the development area. Without mitigation these effects will be of no more than a slight to moderate level of adverse effect. Appropriate mitigation will reduce this effect.

Indirect effects on three cultural heritage assets have been identified as a consequence of the operational phase of the Proposed Development. There will be

no greater than a slight level of adverse effect on the setting of these assets (not significant).

A study was also undertaken to establish what effect the Proposed Development would have on the setting of more distant cultural heritage features. No significant effects on the setting of these designated features have been identified.

Ecology

The assessment has been informed through desk study, field surveys and consultation with relevant stakeholders. Where relevant, information from the Operational Wind Farms has been referred. Field surveys undertaken have included:

- Extended Phase 1 habitat survey;
- National Vegetation Classification (NVC) survey;
- Bat Activity Surveys; and,
- Protected Mammal Surveys.

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 Proposed Development 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 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 this part of the Site 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.

Water voles were identified around the Proposed Development 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 badgers. 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 culverts. 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 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.

Ornithology

The assessment has been informed through desk study, ornithological field surveys and consultation with relevant stakeholders. Where relevant, information from the Operational Wind Farms has been referred.

The scope of field surveys undertaken was informed through desk study, the suitability of habitats to support sensitive species and consultation responses obtained from SNH and RSPB. Field surveys were undertaken in accordance with SNH guidance applicable at the time (SNH, 2014) and included:

- Vantage Point (VP) Surveys;
- Moorland Breeding Bird Surveys;
- Woodland Grouse Surveys; and,
- Breeding Raptor and Diver Surveys.

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

- Red-throated diver;
- Greylag goose;
- 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 study area and the presence of a nesting pair of red-throated diver has also been established outside of the Proposed Development. Other species were recorded in flight only.

The assessment 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 20km of the Site comprise the Glen Affric to Stranconon Special Protection Area (SPA) (5.8km), Beinn Daerg SPA (4.2km), Achnalt Marshes SPA (7.8km) and Ben Wyvis National Nature Reserve (NNR) (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 Proposed Development and surrounding wider area, are not considered to be significant upon ornithological features. Given the temporary and restricted nature of works associated with the construction and decommission phases of the development, no significant effects upon ornithological features is 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 Scottish Natural Heritage.

On this basis, effects from collision mortality for any species will be inconsequential at any population level. No potentially significant effects upon 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.

Hydrology and Hydrogeology

The Proposed Development lies within the overall catchment of Loch Glascarnoch and the River Glascarnoch and is drained by a series of tributaries of Allt Giubhais Mor and Allt Giubhais Beag. The southernmost part of the Proposed Development boundary lies within the catchment of Loch Luichart, however no infrastructure is located within this catchment.

Two private water supplies were identified within 1 km of the Development boundary however neither are within 1 km of proposed infrastructure and the effect of the Development on PWS has been assessed as negligible.

British Geological Survey mapping information on superficial soils indicates the majority of the site to be underlain by peat, with pockets of either glacial till or no superficial cover in the north, west and south respectively. Solid geology mapping indicates the majority of the Proposed Development to be Neoproterozoic aged Crom Psammite belonging to the Morar Group.

Peat probing was carried out within the Proposed Development site over several phases and recorded that peat depths to the east of the existing windfarm track were generally thicker in comparison to that of the western area, typically in line with topography. A maximum depth of 3.75 m was recorded to the east although more generally the peat depths were between 1.0 m and 2.5 m. Peat depths in the western site area were generally less than 1.0 m, and more frequently, in the region of 0.5 m or less.

The assessment considered the effects of the Development on surface water runoff rates, potential for release of suspended solids to streams, potential for contamination of surface and groundwater from oil and chemical spills, effects on ground water dependent terrestrial ecosystems (GWDTEs) and impacts on soils and peat.

Two new watercourse crossings are proposed for the access track to turbines eight, nine and ten. Watercourse crossings will be designed in detail at the construction phase and agreed with SEPA.

Peat probing at the turbine locations and proposed infrastructure confirmed the presence of deep peat in the eastern site area. This area is relatively flat lying, and with exception to localised hagging noted within the flatter topography in both the western and eastern site area. With limited deep peat across the remainder of the site and the deeper deposits existing in flatter topographic areas, no significant risk of peat instability was identified.

During construction, operation and decommissioning of the Proposed Development, a number of established good practice measures will be put in place to minimise peat disturbance, control surface and groundwater pollution and

manage surface water run-off/drainage. These are designed to ensure the protection of the surface water, geology and hydrogeological regimes. These mitigation measures will be included in the Construction Environmental Management Plan (CEMP) and a monitoring program will be supervised by an Ecological Clerk of Works (or equivalent).

With effective and well managed mitigation measures in place no significant residual effects of the Development on hydrology, water quality, water resources, hydrogeology and geology are predicted.

Other Study Areas

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

Forestry

The proposed development lies partly within an existing commercial plantation, which is owned and managed by a single private landowner. Some areas of forestry would require felling and replanting to accommodate the construction and operation of the Proposed Development.

The forestry proposal has been developed to:

- Identify areas of forest to be removed for the construction and operation of the Proposed Development;
- Identify areas which may be replanted as part of the Proposed Development; and
- Identify management practices for the required forestry works.

The total Forestry Study Area extends to 296.97 ha. and is comprised of privately owned and managed woodlands. The forestry assessment identified that the overall species composition of the forests would change slightly as a result of Proposed Development. The net area of crops to be felled and left unplanted to accommodate the Proposed Development is 4.09 hectares. This equates to approximately 1.4% of the existing forestry area.
All forestry products and residues generated as a consequence of the Proposed Development will be given full consideration and further clarification to be included in a Forestry Waste Management Plan to form part of the Construction Environmental Management Plan (CEMP) during the detailed planning phase following receipt of planning consent.

It is acknowledged that the proposal does not comply with the requirements of the Scottish Government's Control of Woodland Removal Policy and as such off-site compensation planting would be required. The Developer is committed to providing appropriate compensation planting; the extent, location and composition of such would be agreed with Forestry Commission Scotland (FCS), taking into account any revision to the felling and restocking plans, prior to the commencement of construction.

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 9 turbines with a maximum tip height of 133m, giving a total installed capacity at the site of 32.4MW. The operational life of the development will be 25 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 32.4 MW the estimated generation of the Proposed Development would power the equivalent of 17,380 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.

Further Information

Further information on the Lochluichart Wind Farm Extension II is contained in the EIA Report, which can be inspected at the following locations:

The Highland Council
Ross House
Dingwall
IV15 9RY

Garve Village Hall
Station Road
Garve
IV23 2PP

Printed copies of the EIA Report (Volumes 1, 2, 3 and 4) can be purchased from Infinergy for £750 per copy. All Volumes are available on a CD free of charge. To obtain a copy, please contact:

Infinergy Limited
93 Constitution Street
Leith
Edinburgh
EH6 7AE
Freephone 0800 980 4299

[i] http://www.gov.scot/Topics/Statistics/Browse/Business/Energy/onlinetools/ElecCalc (17/05/18 10.27am)