



Culachy Wind Farm

Non-Technical Summary

November 2023



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Introduction

Background

1. This document is a Non-Technical Summary (NTS) of the Environmental Impact Assessment (EIA) Report which accompanies an application made by Fred. Olsen Renewables Ltd. (the Applicant).
2. The Applicant is applying to the Scottish Ministers for Section 36 (S36) consent and deemed planning permission, under the terms of the Electricity Act 1989 and the Town and Country Planning (Scotland) Act 1997, for permission to construct and operate Culachy Wind Farm (hereafter referred to as the “Proposed Development”), located near Fort Augustus in the Highland Council local authority area (refer to **Figure 1**).
3. Renewable energy is a key factor in helping Scotland reach its target of Net Zero by 2045. The Proposed Development would make a meaningful contribution to those national targets for the generation of renewable energy and reduction in greenhouse gas emissions and contribute towards sustainable economic growth in the Highlands and Scotland as a whole.

Purpose of the Proposed Development EIA Report

4. ITP Energised was appointed by the Applicant to assess the environmental impacts of the Proposed Development in accordance with The Electricity Works (Environmental Impact Assessment (Scotland) Regulations 2017.
5. The EIA Report describes the methods used to assess the beneficial and adverse environmental impacts predicted to result from the construction, operation and decommissioning of the Proposed Development. Where appropriate, it also sets out mitigation and enhancement measures designed to prevent, reduce and, if possible, offset any significant adverse environmental impacts. In addition, it describes the measures proposed to deliver biodiversity enhancement as part of the Proposed Development. An assessment of residual effects, those expected to remain following implementation of mitigation measures, is also presented. This document is intended to present a summary of the findings of the EIA Report in non-technical language.

Availability of the EIA Report

6. Hard copies of the EIA Report are available by request from:
Fred. Olsen Renewables
Ochil House
Springkerse Business Park
Stirling
FK7 7XE
Email: communities@fredolsen.co.uk
Website: <https://culachywind.co.uk/>
7. Electronic copies of the EIA Report can be accessed at <http://www.energyconsents.scot/>
8. This Non-Technical Summary (NTS) is available free of charge from the Applicant. The cost of a hard copy of the EIA Report Volumes 1 to 5 is £1,600. In addition, all documents are available (as a PDF for screen viewing) on a CD/USB for £15. The price of the hard copy reflects the cost of producing all of the Landscape and Visual photographs at the recommended size. As such, a CD/USB version is recommended.



Representations to the Application

9. Any representations on the S36 application should be made directly to the Scottish Government Energy Consents Unit as follows:

Energy Consents Unit
 Scottish Government
 4th Floor
 5 Atlantic Quay
 150 Broomielaw
 Glasgow
 G2 8LU

Email: representations@gov.scot

Web: www.energyconsents.scot/Register.aspx

Site Location and Description

10. The Proposed Development site (“the site”) is located approximately 900 metres (m) south of Fort Augustus. The closest turbine is located approximately 6.5 kilometres (km) south of Fort Augustus. The site is in The Highland Council (THC) area and is in proximity to Loch Ness and the Great Glen (**Figure 1**). The approximate site centre is British National Grid (BNG) 237813 801506.
11. The site area is approximately 685 hectares (ha) across rolling upland moorland. The site elevation ranges from 200 m to 700 m above sea level and is bound to the north-east by the River Tarff. A number of tributaries to the Black Burn intersect the site in the north, and the watercourses Allt Lagan a Bhainne and Allt Coire Uchdachan intersect the site in the south.
12. There are sixteen Scheduled Monuments within 5 km of the site, including 5 designated sections, approximately 9 km, of the Corrieyairack Pass (a high pass notable for the presence of one of General Wade’s Military Roads) which runs through the Estate and adjacent to the site boundary.
13. The proposed turbines lie within Wild Land Area (WLA) 19: Braeroy – Glenshirra - Creag Meagaidh. Glen Tarff Site of Special Scientific Interest (SSSI) and Ness Woods Special Area of Conservation (SAC) overlap the Estate boundary but are outwith the site. There are some small areas of Ancient Woodland within the site.
14. The Beauldy-Denny 400 kilovolt (kV) overhead power line runs broadly north-south across the site to the west of Wade’s Road and the Corrieyairack Pass.
15. No residential properties lie within the site boundary. The closest residential property is 3.6 km from the proposed turbine locations. There are eight properties located within 500 m of the Proposed Development’s access junction and new access track. Five of the properties are within the Estate, two are along the Ardachy Road, and one is along the A82.



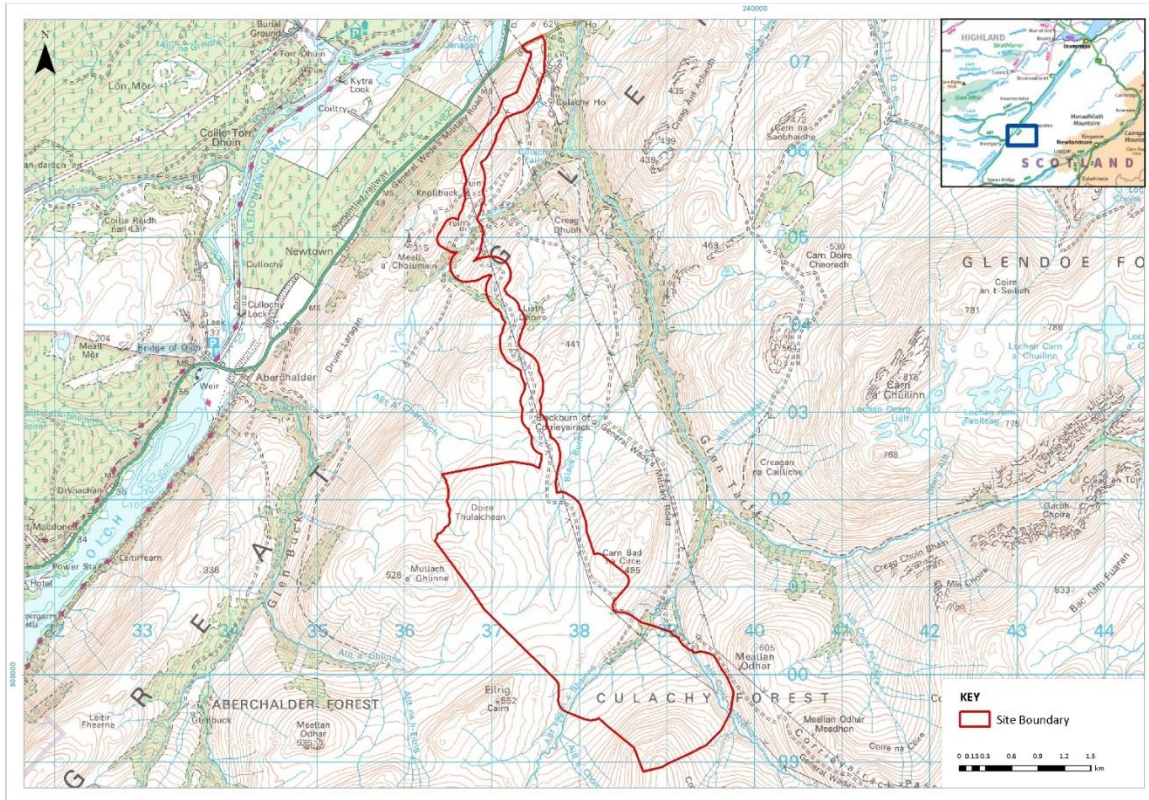


Figure 1 – Site Location

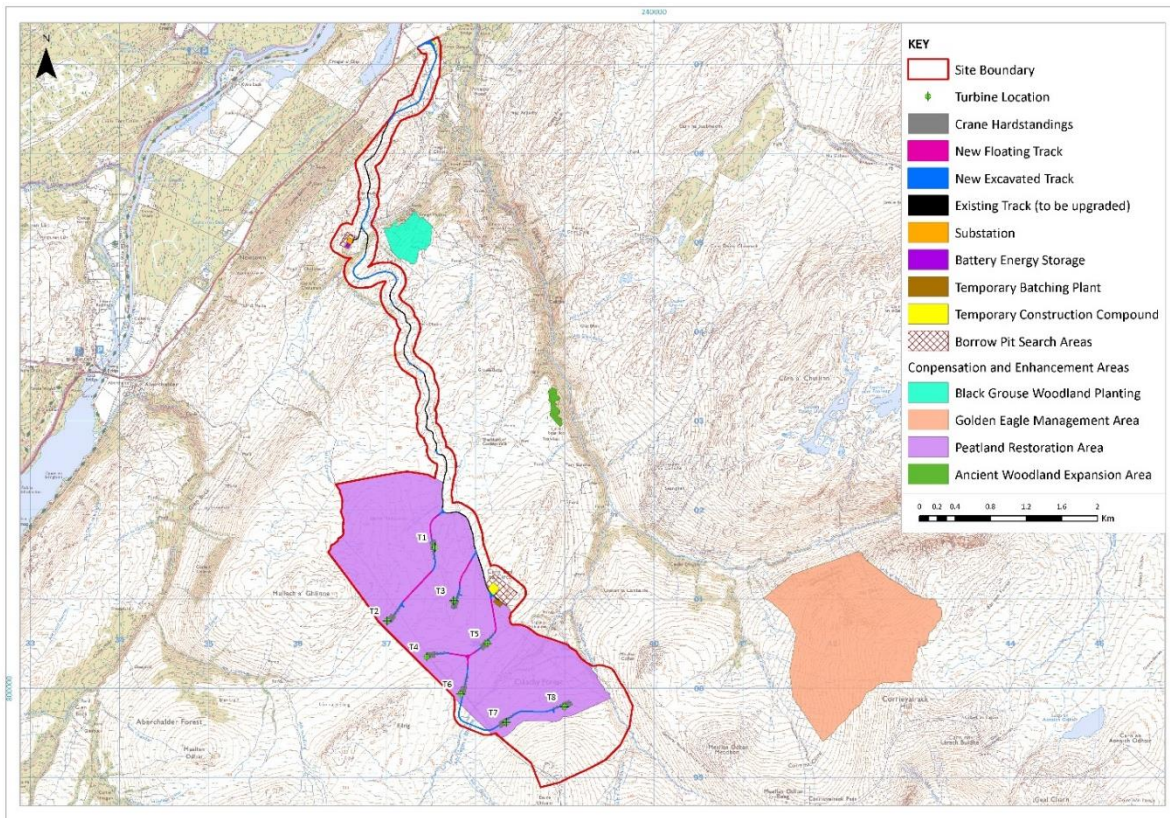


Figure 2 – Site Layout and Compensation and Enhancement Areas



The Proposed Development

16. The Proposed Development will comprise eight wind turbines up to 200 m tip height, with a total overall capacity of approximately 57.6 megawatts (MW), supported by additional energy storage provision (from an on-site battery storage facility) with an output capacity of up to 10 MW. The associated infrastructure will include: site access, access tracks; crane hardstandings; underground cabling; on-site substation and maintenance building; energy storage facility; temporary construction compound; laydown area; batching plant; and potential excavations/borrow pit workings. The proposed layout is illustrated on **Figure 2**.
17. Although the layout and locations of the tracks, substation etc. have been determined through an iterative environmental-based design process (refer to the Site Selection and Design section below), there is the potential for the precise locations to be altered through micro-siting allowances prior to or during construction. A micro-siting allowance of up to 50 m in all directions is being sought in respect of all infrastructure, to suitably respond in the event that pre-construction surveys identify unsuitable ground conditions or environmental constraints that could be avoided by relocation. No micro-siting will be undertaken that results in a significant adverse effect where there would otherwise not be one.
18. Each of the eight wind turbines will comprise the following components: three blades; tower; nacelle; hub and transformer and switchgear. The wind turbines will be of a typical modern, three-blade, horizontal axis design in semi-matt white or light grey with no external advertising or lettering except for statutory notices. For the purposes of the EIA, the turbine parameters for the Proposed Development have a maximum overall height (to blade tip) of 200 m, with a rotor diameter of 162 m and a hub height of 119 m. The rotor diameter and hub height of the final selected turbine model may differ from these values, however the turbine tip height will not exceed 200 m.
19. To enable the construction of the turbines, a crane hardstanding area (crane pads and laydown area) at each turbine location will be required to accommodate assembly cranes and construction vehicles. Each hardstanding will comprise a crushed stone area approximately 2,600 m². The crane hardstandings will remain in place during the lifetime of the Proposed Development to facilitate maintenance work. The laydown areas and supporting crane pads will be reinstated to peatland once the Proposed Development is operational.
20. The Proposed Development site will be accessed from a newly constructed junction on the U1667 Ardachy Road, entering the site from the north. The Proposed Development will include approximately 8 km of new access tracks and 5.5 km of existing tracks which will be upgraded. They will be formed largely of locally sourced stone and from the on-site borrow pits and will have a typical running width of 6 m plus drainage provision in verges.
21. Where proposed access tracks cross areas of deep peat, floating tracks are proposed to avoid peat excavation. It is proposed that approximately 2 km of the new access track would be

Number of Turbines: 8

Dimensions: Maximum height of 200 m to blade tip

Operational Lifespan: 35 years

Generation Capacity: Around 7.2 MW per turbine or 57.6 MW in total

Energy Storage: On site energy storage facility of around 10 MW output

Community Benefit: £288,000 per year or £10.1 million in total*

Energy Generated: Provide electricity for approximately 60,487 average Scottish households

Principal Access: via U1667 Ardachy Road

**based on 8 x 7.2 MW turbines being installed*



floated if, following detailed site investigations, deep peat cannot be avoided by micro-siting. This would involve placing of a geotextile membrane on existing topsoil and vegetation followed by aggregate layers. Floating tracks would be designed to ensure suitability for site traffic during construction and operation.

22. A Transport Assessment (**Chapter 12** of the EIA Report) has been undertaken which provides detail on access routes to the site for construction vehicles and provides an estimate of trip generation during construction. The Transport Assessment includes a review of the proposed route, construction traffic impacts, and an abnormal load route review. See the Traffic and Transport section below for a summary of the transport assessment findings.
23. Two secure construction and material storage compounds will be required during the construction period. The location of these compounds is shown in **Figure 2**. The compounds will comprise an area of approximately 10,000 m² and 2,500 m² respectively. On completion of construction works, all temporary structures will be removed and the compound areas will be restored.
24. The electrical power produced by the individual turbines will be fed to an onsite substation and energy storage facility via underground cables, for onward connection to the national energy electricity network. The substation compound will be approximately 3,750 m² to incorporate a substation and control room building, which will accommodate all the equipment necessary for automatic remote control and monitoring of the Proposed Development.
25. A separate battery and energy storage facility with an output of around 10 MW is proposed adjacent to the control building. The footprint of the energy storage facility will be approximately 1,500 m².
26. The Proposed Development will include four areas for compensation and enhancement activities (678 ha in total). These are shown on **Figure 2** and outlined below. There are further details on these measures provided in **Appendix 3.3** and **Appendix 8.6** of the EIA Report.
 - Peatland Restoration Area (424.63 ha)
 - Golden Eagle Management Area (231 ha)
 - Black Grouse Woodland Planting (19.11 ha)
 - Ancient Woodland Expansion, Natural Regeneration (3.88 ha)
27. A Biodiversity Net Gain (BNG) Assessment has been undertaken for the Proposed Development (**Appendix 8.6**). This assessment calculates the biodiversity baseline of all habitats within the site, habitat losses due to permanent and temporary infrastructure and potential indirect loss, and biodiversity gains following implementation of the Biodiversity Enhancement Management Plan (BEMP), to determine the overall impact on biodiversity value of the site from the Proposed Development. This assessment has shown that the Proposed Development would result in a result in a 12% net gain from the current baseline.

Indicative Construction Programme

28. The Proposed Development will be constructed over a period of approximately 24 months as shown in **Table 1**.



Table 1: Indicative Construction Programme

Task	Year 1 (quarters)				Year 2 (quarters)			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Mobilisation	■							
Access & Site Tracks		■	■					
Foundations			■	■				
On-site Cabling			■	■				
Substation civils works		■	■					
Substation construction			■	■	■	■	■	
Crane Hardstanding			■	■	■	■		
Turbine Delivery					■	■	■	
Turbine Erection							■	■
Commissioning & Testing								■
Site Reinstatement								■

29. Normal construction hours will be between 07:00 and 19:00 Monday to Friday and 07:00 and 13:00 on Saturdays. These times have been chosen to minimise disturbance to local residents. It must, however, be noted that out of necessity due to weather conditions and health and safety requirements, some generally quiet activities, for example abnormal load deliveries (which are controlled by Police Scotland) and the lifting of the turbine components, may occur outside the specified hours stated. Details of the construction programme will be provided to the Highland Council in the Construction Environmental Management Plan (CEMP) and the Construction Traffic Management Plan (CTMP) prior to the commencement of construction.
30. The lifetime of the Proposed Development is envisaged to be 35 years from the final commissioning to commencement of decommissioning. If any life extension or repowering was to be considered, that would be subject to a new planning process with the appropriate level of environmental assessment and scrutiny at that time.

Site Selection and Design

31. The site was identified by the Applicant as being suitable for a wind energy development for the following key reasons:
- Strong wind resource;
 - Separation of over 3 km from residential properties to turbine development area;
 - Good opportunity for genuine community engagement and benefit;
 - Opportunities for peatland habitat restoration and biodiversity enhancement, given that the peatland habitat on site has been historically degraded;
 - Potential to make use of existing infrastructure and tracks put in for construction of the Beaully Denny Overhead Line (BDOHL);



- No aviation constraints; and
- The potential for the development to positively and significantly contribute to regional and national renewable energy and carbon reduction targets.

Design Process

32. As part of the EIA process, the design and layout of turbines, access tracks, and other infrastructure such as the construction compound and substation/energy storage facility, continuously evolved as surveys and studies were undertaken, and feedback was received from consultees and local stakeholders. The design process of the Proposed Development was led with the following broad Landscape and Visual Design objectives:
- To ensure the turbine layout appears as a simple form, which relates to the landscape character of the site and its surroundings.
 - To ensure that the design and layout of the turbines expresses the function of the Proposed Development as an energy generator as clearly as possible by avoiding complexity and visual confusion.
 - To ensure the turbine layout relates to the scale of the landscape it is located in and relates well to the surrounding landform.
 - To ensure a visually balanced composition of turbines is achieved against the landscape, skyline and in association with other cumulative windfarm developments.
33. In addition, the design of the Proposed Development focused on the following specific design objectives which have formed the basis of the landscape and visual design strategy for the Proposed Development:
- Create as compact a layout as possible to contain effects on wildness qualities in consideration of Wild Land Area (WLA) 19.
 - Minimise effects on the nearby Loch Lochy and Loch Oich Special Landscape Area (SLA), Loch Ness and Duntelchaig SLA, and WLA 19.
 - Reduce turbine visibility from Fort Augustus, scattered settlements and surrounding road network.
 - Create a compact layout with a simple appearance so it would be viewed as a cohesive arrangement in longer distance views.
34. The following environmental and technical principles were adopted during the design iterations made by the Applicant to ensure that the final design of the Proposed Development is the most suitable for the site:
- Minimise effects on cultural heritage receptors as far as possible and avoid direct effects.
 - Minimise impacts on areas noted within the Ancient Woodland Inventory (AWI) by utilising existing tracks on site.
 - Avoid areas of deep peat wherever possible.
 - Avoid siting turbines on steep slopes.
 - Maintain a minimum 50 m buffer around watercourses except where crossings are required.
 - Maintain suitable buffers from protected species and around bird breeding sites.
 - Maintain suitable buffers from private water supplies.
 - Create a scheme which maximises the potential of the site to generate renewable energy.
 - Consideration of the BDOHL and application of a 312 m buffer to turbines
 - Respect other environmental and technical constraints and associated buffers.



Alternatives

Turbine layout and Scale

35. The Applicant has considered a number of alternative turbine layouts for the Proposed Development (described fully in **Chapter 2** of the EIA Report), developed from an initial desk-based study and survey data and each time taking into consideration information gathered at the site or comments from consultees, as well as the professional judgment of technical experts.
36. The iterative process of the Proposed Development design started early in 2022, comprising ten turbines at 230 m tip height. Together with careful consideration of the siting and design of hardstandings tracks and ancillary infrastructure (discussed further below), the final Proposed Development layout was arrived at, including eight turbines at 200 m tip height. This final development layout has been designed to maximise renewable energy generation from the site, whilst minimising potential impacts on the environment.

Site Access and Site Tracks

37. The proposed access route on site has been carefully considered throughout the design process. The Proposed Development is to be accessed from a newly constructed junction on the U1667 Ardachy Road, entering the site from the north. There is a large amount of existing track within the site boundary which was put in place for construction of the BDOHL. The main objective of designing the site tracks was to use as much of this existing track as possible.
38. Proposed new tracks have been designed to take into account existing site topography, ground conditions including peat depth, and to minimise and appropriately locate water crossings. Comments from consultees, such as the Scottish Environmental Protection Agency (SEPA) and The Highland Council (THC), were also taken into consideration and the layout amended to incorporate suggested changes.

Ancillary Infrastructure

39. Borrow pits (i.e. small stone quarries) are required as a source of rock to be used in the construction of the tracks, hardstandings and foundations. Potential locations for the borrow pits were identified based upon a review of geological mapping and site investigation work to target suitable rock types, shallow peat depth, suitable topography, and avoidance of sensitive habitats. The borrow pit locations are also discretely located in the landscape to minimise any additional visual impacts.
40. There are two borrow pit locations included as part of the Proposed Development. One of these is an existing borrow pit used for construction of the BDOHL track.
41. The locations of the temporary construction compounds, substation and energy storage facility have been considered through the iterative design process and have been located to avoid areas of deep peat and watercourses with the aim of limiting the effects on sensitive habitats and cultural heritage features. Steep areas have been avoided to reduce the requirement for excavation works. The construction compounds have also been located for practical purposes; to control traffic entering the site, to be located close to turbines and to facilitate construction of the substation and energy storage facility.
42. The substation and energy storage facility are located within one of the borrow pit locations and are located over 1 km from the closest residential receptors so as not to cause any noise impacts.



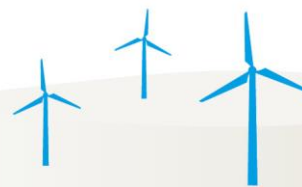
Community Benefit

43. In line with Scottish Government recommendations, the Applicant has committed to offering £5,000 per installed MW per year in community benefit funding for the local area. The indicative installed capacity of the Proposed Development is approximately 57.6 MW, so this would mean approximately £288,000 going into community benefit funding each year to support local groups and projects. This is an approximate total of **£10.1 million over the 35-year lifespan** of the Proposed Development.
44. The Applicant has undertaken extensive engagement with the communities closest to the site, in particular Fort Augustus, Invergarry and Spean Bridge – discussing at length the opportunities associated with the community benefit fund that Culachy Wind Farm will deliver.
45. The Applicant has followed an approach that is focussed on developing an understanding of community needs and local aspirations. As a result, the Applicant is very aware of the appetite within the community to utilise the funding to support existing and future long-term sustainable projects – such as the development of affordable housing and investing in community buildings.
46. The Applicant has committed to seeking to deliver a fund that utilises and supports development of existing structures and acknowledges the different challenges being faced across the communities. Therefore, the Applicant will continue to work with the communities to deliver a fund using the best mechanisms to ensure that it is empowering communities to make the important decisions about what they want to see happen locally and how the fund is allocated.

Consultation

Statutory Consultation

47. The Applicant participated in a formal pre-application consultation meeting in November 2021, organised by The Highland Council and involving other consultees including SEPA, NatureScot and Historic Environment Scotland (HES). The purpose was to introduce the project, describe the assessments and design work undertaken to date, provide information on the proposed scope of the EIA, and gain feedback from the various consultees.
48. A formal EIA Scoping Opinion was requested from the Energy Consents Unit (ECU) in February 2022 through the submission of an EIA Scoping Report. The EIA Scoping Report contained information on the current nature and condition of the site, and details of the Proposed Development. It also proposed which environmental impacts would be assessed in the EIA, and the assessment methodologies that would be used.
49. The ECU consulted with a variety of statutory and non-statutory consultees (for example the Highland Council, SEPA, NatureScot, and HES among others) before providing an EIA Scoping Opinion in May 2022. A summary of how the Scoping responses were addressed in the final submission is presented in an **EIA Gatecheck Report** that can be found in **Appendix 4.4** of the EIA Report.
50. Beyond the formal engagement platforms, the Applicant continued to liaise directly with key stakeholders in order to refine the approach to the EIA Report and develop the site design, where possible and appropriate, to reflect the feedback received. Direct consultation has also been undertaken with specific statutory consultees, to confirm and agree the detailed approach to the technical surveys and assessments on a topic by topic basis.



Public Consultation

51. A programme of pre-application community engagement and consultation for the Proposed Development has been undertaken by the Applicant. Communicating information about the project has been at the forefront of engagement and the Applicant has used a number of methods to communicate locally, including sending newsletters to all households within a 10 km radius of the Proposed Development; launching a dedicated project website (www.culachywind.co.uk), providing a regular column in Lochaber Life and updates in the Ness News. This has been combined with a mixture of face to face meetings, telephone calls and written updates with local community councils, local MSPs and MPS, and key local stakeholders.
52. The Applicant provided a dedicated point of contact via telephone number and email address and encourage local residents to get in touch. The project website also provides information about the Proposed Development, including information about the Applicant; potential community benefits; the project background and timeline; updates on progress; a registration facility for local businesses interested in supplying the project; and contact information for the team.
53. Two rounds of in-person public exhibitions took place in April 2022 and October 2022. The Round 1 exhibition outlined the draft proposal for the site with the aim to gain initial feedback. Round 2 exhibitions intended to inform the local community of the design changes which had been made and demonstrate how the Applicant had considered the comments received to date.
54. A stand-alone **Pre-Application Consultation (PAC) Report** has been prepared which gives details of the correspondence, online and in-person public consultation and other discussions which have taken place with the communities closest to the Proposed Development. The PAC Report also details findings of that work and illustrates the ways in which community engagement has helped identify potential issues arising from the emerging development proposal, and where appropriate, shape the final proposal which is now the subject of an application for S36 consent.
55. Engagement with local people, organisations and local businesses continues and will continue after the submission of the S36 application.



The Environmental Impact Assessment Report

56. The EIA Report considers the effects of the Proposed Development during construction, operation and decommissioning on the following topics:
- landscape and visual (effects on the character of the landscape and representative views from agreed locations);
 - ornithology (the effects on birds and protected bird habitats);
 - ecology (the effects on protected habitats, flora and fauna, excluding birds);
 - hydrology, geology, hydrogeology and peat (the effects on surface water, groundwater, rocks and soils);
 - cultural heritage (effects on the integrity and setting of historic sites and/or features);
 - noise and vibration (effects on local properties from noise and vibration arising from the Proposed Development);
 - traffic and transport (effects from traffic travelling to, and from, the Proposed Development on local roads and receptors);
 - socio-economics, tourism, and recreation (effects on the local and national economy, local tourism businesses, and recreation facilities);
 - aviation and radar (effects on civil and military aviation facilities and air space); and
57. **Chapter 4** of the EIA Report describes the EIA process in more detail.
58. For each topic the existing conditions (the baseline) was identified and the effects of the Proposed Development on these conditions assessed (the potential effects). Potential effects are assessed on a scale of negligible, minor, moderate and major, with effects of moderate or major deemed to be 'significant' in the terms of EIA. Mitigation measures have then been proposed to minimise significant adverse effects where required. These mitigation measures are commitments made by the Applicant and their implementation will normally be required by conditions attached to the S36 and deemed planning permission, if granted. Following this, an assessment was undertaken of the effects of the Proposed Development on the existing conditions taking into consideration the committed mitigation measures (the residual effects).
59. In addition to the above, the cumulative effects of the Proposed Development, i.e. effects considered in conjunction with other developments in the local area, primarily other wind farms, were assessed.
60. A summary of the baseline conditions, the committed mitigation, the resulting residual effects and the cumulative effects for each topic is provided below. Full details of the assessment for each of the topics are provided in **Chapters 6 to 14** of the EIA Report.

Landscape and Visual

61. The full assessment of the effects on landscape and visual receptors is provided in **Volume 1, Chapter 6** of the EIA Report.
62. The Landscape and Visual Impact Assessment considers the effects of the Proposed Development on landscape character and visual amenity within a study area up to 45 km from the site. The assessment has been undertaken in accordance with all relevant published guidance and has involved desk-based and field-based assessments. The approach and scope of the assessment was agreed through the EIA Scoping process and through consultation with NatureScot and The Highland Council. The baseline for the assessment includes landscape, visual receptors and other developments in the area. Visual receptors include people in settlements, using the local area for recreation, and travelling through the area on roads.



63. The Proposed Development turbines are located approximately 6.5 km to the south of Fort Augustus and are situated within rolling upland moorland to the east of the Great Glen. The immediate landscape includes a series of large-scale, smooth rounded hills and the steep-sided Glen Tarff. The BDOHL is present through the site. General Wades Military Road (GWMR) and the Corrieyairack Pass are found to the north-east of the Proposed Development turbines, connecting Fort Augustus to Laggan.
64. The Proposed Development is not located within any national or regional landscape designations (for example National Scenic Areas (NSAs), Special Landscape Areas (SLAs) and Gardens and Designed Landscapes (GDLs)).
65. Although not a landscape designation (as defined and described by NatureScot), Wild Land Areas are considered to be of national importance in the recently adopted planning framework for Scotland, National Planning Framework 4 (NPF4). The Proposed Development turbines and some of the access infrastructure is located within WLA 19: Braeroy – Glenshirra - Creag Meagaidh which extends to around 20 km to the south of the Proposed Development.
66. In terms of landscape character, significant effects would be localised and contained to the landscape character of the site area and immediately surrounding upland landscape (within approximately 5 km of the Proposed Development). Significant effects would occur within the host character area, Landscape Character Type (LCT) 236 Smooth Moorland Ridges. Significant effects would also occur within LCT 221, Rolling Uplands – Inverness, located north-east of the proposed turbines.
67. None of the landscape designations in the area would be significantly affected as a result of the Proposed Development. In respect of wild land, the Wild Land Impact Assessment (**Appendix 6.2** of the EIA Report) found localised significant effects on the wildness qualities of this WLA 19, localised to 3.5 km to the south of the Proposed Development. These effects on the WLA are localised have been minimised by design and moderated by the existing influence of the BDOHL which already has an influence on the wild land qualities of a similar area that the Proposed Development would affect.
68. The Proposed Development would introduce significant visual effects extending to around 5.5 km to the south and 4.5 km to the north of the site. The significant visual effects are largely because of closer proximity views from higher sensitivity recreational receptors. This is particularly relevant for hill walkers and recreational walkers on the Corrieyairack Pass and GWMR. It has been assessed that there would be significant visual effects at 6 of the 21 representative viewpoints during daylight hours, namely:
- Viewpoint 1 - Corrieyairack Pass
 - Viewpoint 2 - General Wade's Military Road
 - Viewpoint 3 - Corrieyairack Hill
 - Viewpoint 4 - Carn a' Chuilinn
 - Viewpoint 5 - Carn Dearg,
 - Viewpoint 20 - Meallan Odhar
 - Viewpoint 21 Beauldy-Denny track



69. Due to their height, four of the wind turbines would be fitted with visible aviation lighting in accordance with the Air Navigation Order (2016) and Civil Aviation Authority (CAA) requirements. As such, there is potential for the Proposed Development to be visible at night. Of these viewpoints, it has been assessed that Viewpoint 21 would also experience a significant effect during the hours of darkness.
70. In relation to cumulative landscape and visual effects, when each of the other consented and in planning wind farms are added into the assessment such that they are considered to already form part of the baseline it is considered that significant cumulative effects would occur for - LCT 221, Rolling Uplands Inverness; Viewpoint; Viewpoint 3; Viewpoint 4; Viewpoint 5; Viewpoint 13; and Viewpoint 20.
71. It is noted that localised significant effects on landscape character and visual amenity are inevitable as a result of commercial wind energy development anywhere in the UK. Whilst the LVIA identified some significant landscape and visual effects it is considered that the landscape is capable of accommodating the Proposed Development and that wider landscape and visual effects are relatively limited in extent and severity.

Ornithology

72. The full assessment of the effects on ornithology is provided in **Volume 1, Chapter 7** of the EIA Report.
73. The scope of the ornithological assessment and baseline conditions were determined through a combination of desk study, targeted surveys (including flight activity surveys, scarce breeding bird surveys, black grouse surveys, breeding bird surveys and winter walkover surveys), and consultation with relevant nature conservation organisations. This process established ornithological features that could potentially be affected by the Proposed Development.
74. There are no statutory designations with ornithological features within the Proposed Development site. The nearest Special Protection Area (SPA) and Site of Special Scientific interest (SSSI) with ornithological features is located approximately 3.7 km north-east of the nearest turbine. As such no potential effects on statutory designated sites were identified.
75. In terms of ornithological interests on the site, golden eagle and merlin were identified to be breeding within the survey area. Black grouse were also identified to be present in the area with up to 11 lek areas located. Wader activity in the survey area was low with only curlew, golden plover and woodcock recorded during surveys and of these only a small number of golden plover were identified to be breeding.
76. Assessment of potential effects and their significance were determined through consideration of the sensitivity of the feature and the magnitude of change. The following Important Ornithological Features (IOFs) were taken forward to the assessment stage: black grouse, golden eagle and golden plover. The only potentially significant effect that was identified in the assessment of the IOFs was disturbance/displacement to black grouse during the construction phase, with all other effects during construction or operation on black grouse, golden eagle and golden plover predicted to be not significant. Cumulative effects were also considered and were not predicted to be significant.
77. A Biodiversity Enhancement Management Plan (BEMP) for the Proposed Development would be developed to further mitigate the effects on black grouse and to provide additional enhancement to provide significant biodiversity enhancements in accordance with NPF4, Policy 3. With the implementation of the BEMP, adverse effects on black grouse would be expected to reduce further through the restoration and enhancement of habitats. The implementation of



the BEMP will also provide enhanced habitat for foraging golden eagle and breeding golden plover.


Ecology

78. The full assessment of the effects on ecology is provided on **Volume 1, Chapter 8** of the EIA Report.
79. The scope of the assessment and baseline conditions were determined through a combination of desk study, targeted surveys, and consultation with relevant nature conservation organisations. The surveys undertaken included Phase 1 and National Vegetation Classification (NVC) habitat surveys, protected species surveys, bat surveys (roost assessment and activity surveys) and fish surveys, following standard NatureScot guidance.
80. An assessment has been made to establish the ecological features that could potentially be affected by the Proposed Development. No potential effects on statutory designated sites were identified.
81. The Proposed Development has been designed to minimise impacts on important habitats, peatland and protected species as far as practicable. This has been achieved through embedding mitigation measures into the iterative design process. This process, combined with further commitments to certain mitigation measures pre-construction, during construction, and during operation allowed potential effects on several habitats and species present to be scoped-out of the assessment. The following Important Ecological Features (IEFs) were taken forward to the assessment stage: ancient woodland, blanket bog and wet modified bog.
82. Assessment of potential effects on IEFs and their significance were determined through consideration of the sensitivity of the feature and the magnitude of the change. The most tangible effect during construction of the Proposed Development on blanket bog and wet modified bog would be direct habitat loss due to the construction of infrastructure, in addition to some indirect drainage effects. The assessment concluded that the effect would be not significant on blanket bog and wet modified bog. No significant operational, decommissioning or cumulative effects were identified.
83. A BEMP for the Proposed Development will be implemented to compensate for the effects on blanket bog and wet modified bog within the site, and further enhance habitats (**Appendix 8.6**). With the implementation of the BEMP, overall effects on wet modified bog and blanket bog would be positive with the restoration and enhancement of habitats. As detailed in **Appendix 3.3**, woodland creation through natural regeneration would be included in a Forestry Plan and measures will be implemented on site which would reduce the risk of adverse effects on ancient woodland.

Geology, Peat Hydrology and Hydrogeology

84. The full assessment of the effects on geology, peat hydrology and hydrology is provided in **Volume 1, Chapter 9** of the EIA Report.
85. The assessment study area is larger in extent than the Proposed Development and includes the upper and lower reaches of watercourse catchments. A desktop assessment and series of site investigations have been undertaken to identify and characterise the hydrological, geological and hydrogeological environment within the vicinity of the Proposed Development. These site investigations included peat surveys, a hydrological walkover and residential visits as part of the assessment of potential impacts on private water supplies to local residences. Habitat survey work as outlined in the above ecology section also informed the assessment.



86. The site is located within the catchments of the River Tarff and Calder Burn, which both contribute to Loch Ness. There are also several minor unnamed and named tributaries of the River Tarff located within the site. The bedrock beneath the site consists of sedimentary and metamorphic rocks which have been significantly faulted by the Great Glen Fault (a long strip like fault that runs across the Scottish Highlands formed thousands of years ago). Superficial deposits where present comprise peat and till, which are typically low permeability, with localised granular glacial, glaciofluvial and alluvium deposits beside watercourses. The peat is identified as Class 1 and Class 2 priority peatland.
87. Extensive peat probing surveys found peat deposits across the site, which have been largely avoided through design iterations in consultation with SEPA. Much of the peat on site has been assessed to be in degraded condition due to historical drainage and grazing. A peat slide risk assessment has identified that there is an insignificant risk of a peat landslide at the proposed turbine locations and associated infrastructure.
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88. Two private water supplies were identified on site, the closest one within 250 m of the access track for the Proposed Development. The majority of the Proposed Development's infrastructure has been separated from this supply by a sub-catchment of an unnamed tributary of the River Tarff.
89. Potential construction and operational effects include changes to surface water and groundwater flow and quality, excavation of peat, peat slide risk and effects to designated sites.
90. The mitigation measures to avoid or reduce impacts on the identified receptors, include the implementation of a CEMP, specific mitigation relating to peat management will be outlined in a Peat Management Plan (draft provided in **Appendix 9.2** of the EIA Report). Additional measures to reduce impact to the private water supply will include water quality monitoring prior to and for the duration of construction.
91. It has been concluded that with good practice design and construction of the Proposed Development delivered through a skilled team of competent workers, with mitigation and compliance monitored in collaboration with SEPA and THC and other engaged stakeholders, residual effects are considered to be not significant in EIA terms.
92. In addition, during the operational phase a Biodiversity Enhancement Management Plan (BEMP) (**Appendix 8.6** of the EIA Report) will be implemented for habitat enhancement and peatland restoration. The effects of the BEMP could mean a beneficial, long-term effect during the operational phase of the Proposed Development.

Cultural Heritage

93. The full assessment of the effects on cultural heritage is provided in **Volume 1, Chapter 10** of the Proposed Development EIA Report.
94. The assessment identifies the archaeological and cultural heritage value of the site and assesses the likely significant effects on archaeological features and heritage assets resulting from the construction, operation and decommissioning of the Proposed Development.



95. The assessment has identified all heritage assets within the Estate to allow for the identification of the potential for direct impact upon known heritage assets and to identify the potential for unrecorded remains to survive on-site. The assessment also identified designated heritage assets up to 20 km from the Estate in order to identify any assets whose cultural significance may be impacted by the Proposed Development. Five scheduled sections of the Corrieyairack Pass have also been subject to detailed assessment of potential impacts to their setting.
96. The majority of heritage assets within the site have been avoided by design. There is potential for one heritage asset and seven non-designated heritage assets to experience a direct physical effect during construction of the Proposed Development. Following implementation of mitigation, no significant effects are anticipated. A programme of archaeological works will be undertaken, including the demarcation and fencing of heritage assets. Details of mitigation will be agreed with the Historic Environment Team at THC through a Written Scheme of Investigation (WSI).
97. The integrity of the setting of the five Scheduled Monuments, sections of the Corrieyairack Pass, assessed would not be significantly affected as a result of the Proposed Development.
98. The possibility of cumulative effects has been assessed. No significant cumulative effects were identified.

Noise and Vibration

99. The full assessment of the effects of noise and vibration is provided in **Volume 1, Chapter 11** of the EIA Report.
100. The assessment of noise comprised consultation with THC, characterisation of the baseline noise environment, prediction of noise levels associated with operational wind turbines and operation of other non-turbine fixed plant (i.e. the substation and energy storage facility), and evaluation of predicted noise levels against appropriate noise limits. Cumulative noise impacts in combination with the BDOHL were also considered.
101. Noise effects associated with construction and decommissioning have been scoped out, in consultation with THC, on the basis that these phases will be of relatively short duration and noise from the works can be restricted to meet appropriate limits by implementation of suitable controls.
102. The assessment showed that the Proposed Development will meet all the conditions regarding noise and vibration, and it is concluded that there will be no significant effects on nearby residential properties in terms of noise emission or ground-borne vibration.
103. The noise from the Proposed Development turbines over that already occurring or likely to occur from cumulative operational and consented wind farms in the locality and the BDOHL was assessed to be within acceptable limits and therefore not significant.

Traffic and Transport

104. The full assessment of the effects on traffic and transport is provided in **Volume 1, Chapter 12** of the Proposed Development EIA Report.
105. Access to the Proposed Development will be taken via a new simple priority junction on the U1667 Ardachy Road, located approximately 520 m to the north-east of its junction with the A82(T).



106. Existing traffic data established a base point for determining the impact during the construction phase and was factored to future levels to help determine the effect of construction traffic on the local road network.



107. The construction traffic would result in a temporary increase in traffic flows on the road network surrounding the Proposed Development. The maximum traffic effect associated with construction of the Proposed Development is predicted to

occur in Month 10 of the construction programme. During this month, an average of 72 Heavy Goods Vehicles (HGV) movements is predicted per day and it is estimated that there would be a further 46 car and light van movements per day to transport construction workers to and from the site.

108. With the implementation of appropriate mitigation, no significant residual effects are anticipated in respect of traffic and transport matters. The residual effects are all assessed to be slight or not significant and as they will occur during the construction phase only, they are temporary and reversible.

109. Traffic levels during the operational phase of Proposed Development will be approximately two vehicles per week for maintenance purposes. Traffic levels during the decommissioning of the Proposed Development are expected to be lower than during the construction phase as some elements are likely to be left in situ and others broken up on-site.

110. The movement of Abnormal Indivisible Loads (AIL) traffic will require small scale and temporary remedial works at a number of locations along the identified delivery route.

Socio-Economic, Tourism and Recreation

111. The full assessment of the effects on socio-economics, tourism and recreation is provided in **Volume 1, Chapter 13** of the EIA Report.

112. THC administrative area features both an ageing and declining population, with the Local Area (comprising of the electoral wards of Aird and Loch Ness, Caol and Mallaig, Badenoch and Strathspey and Fort William and Ardnamurchan) surrounding the Proposed Development expected to follow the same trends. A lack of employment opportunities and an influx of retirees to Highland is contributing to this demographic challenge. The industrial structure of the Local Area suggests that the economy is highly reliant on sectors associated with the tourism industry for employment.

113. During the development and construction phase, it is estimated that the Proposed Development will generate up to:

- £10.8 million and 1,455 job years of employment in Highland;
- £17.8 million and 260 job years of employment in Scotland; and
- £332.6 million and 475 job years of employment in the UK.

114. During the operations and maintenance phase, it is estimated that the Proposed Development will generate an annual impact of up to:

- £0.4 million and 5 job years of employment in Highland;



- £1.6 million and 15 job years of employment in Scotland; and
 - £2.3 million and 25 job years of employment in the UK.
115. The Proposed Development would also provide community benefit funding for the Local Area of up to £288,000 annually.
116. It is estimated that the Proposed Development would pay £403,000 each year in non-domestic rates, helping to support local government services.
117. The most recent evidence on the relationship between wind farms and tourism suggests that there are no adverse effects on the tourism economy resulting from the development of onshore wind. An assessment of the likely effects of the Proposed Development on specific local tourism assets, accommodation providers and routes found no significant adverse effects are expected.
118. Overall, there were no significant adverse effects identified. While the beneficial construction and operation socio-economic effects are not significant in EIA terms, they would be important to the local and national economies, contributing to sustainable economic growth.
119. The Applicant is committed to a local supplier approach which aims to deliver a significant proportion of construction and operational contracts to local companies and has joined the Inverness Chamber of Commerce to engage the supply chain further.

Aviation and Radar

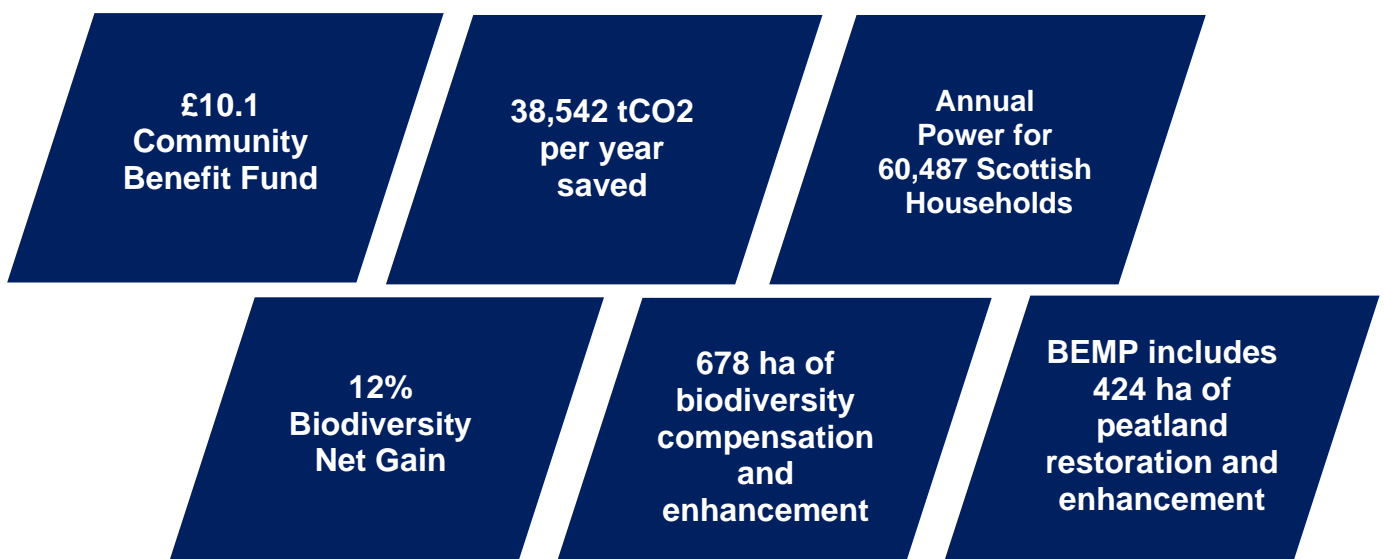
120. The full assessment of the effects on aviation and radar, including details of the reduced lighting scheme, is provided in **Volume 1, Chapter 14** of the EIA Report.
121. The Proposed Development is remote from all aerodromes. The nearest significant aerodrome is Inverness Airport over 63 km to the north-east.
122. No aviation impacts are anticipated for all phases of the Proposed Development: commissioning, operation and decommissioning.
123. The Aviation Stakeholders consulted as part of the EIA Report were National Air Traffic Services (NATS), Highlands and Islands Airport Limited (HIAL) and the Civil Aviation Authority (CAA). No concerns were raised during the scoping exercise or within further consultations. The Applicant has also independently assessed the potential effects, with no anticipated aviation impacts.
124. The site is beyond the limits of physical safeguarding surfaces for all aerodromes. There are also no potential impacts to key military or civil radar installations. The site lies within an area identified as of low priority for military low flying and is beyond the limits of safeguarding areas for any navigational aids or radio communication stations.
125. As there are structures over 150 m high there is a statutory requirement for aviation lighting on the Proposed Development. The CAA and all other aviation stakeholders have approved a reduced lighting scheme consisting of visible spectrum and infrared lighting. Visible lighting will only be fitted to four turbines. No further mitigation is required and there are no residual impacts.



Benefits of the Proposed Development

126. The Proposed Development will deliver the following key benefits:

- The Proposed Development would contribute to the achievement of UK and Scottish Government targets for renewable electricity generation. The Proposed Development, with a total overall capacity of approximately 57.6 MW with an additional approximately 10MW of BESS would make a valuable contribution to meeting such targets.
- The Proposed Development would produce 199,307 MWh annually, enough power to supply approximately 60,487 average Scottish households.
- The Proposed Development is expected to save approximately 38,542 tonnes of carbon dioxide per year, meaning a total of approximately 1.3 million tonnes over the 35-year operational lifetime of the Proposed Development, through displacement of carbon-emitting generation.
- Energy generated from renewable sources makes a significant contribution to Scotland and the UK's energy security. The Proposed Development will increase national production of renewable energy in Scotland while reducing the country's reliance on foreign fossil fuels, generating wealth from our own natural resources and improving the country's energy security. With increasing use of electricity, e.g. for electric vehicles, it is important that the additional generation capacity to meet that demand comes from renewable sources.
- The Proposed Development will deliver significant biodiversity enhancement through implementation of a BEMP. The BEMP includes a total of 678 ha for biodiversity compensation and enhancement activities. The implementation of the BEMP will result in a 12% biodiversity net gain from the baseline conditions.
- The BEMP includes restoration and enhancement of least 424 ha of degraded peatland habitats. This will provide benefit through improving bog habitat and hydrology, promoting carbon sequestration, and helping to support ground-nesting bird species. Through implementation of the BEMP additional ornithological enhancement measures will provide significant benefit to black grouse, golden plover and golden eagles.
- Expansion of Ancient Woodland and by virtue potential expansion of Ness Woods SAC and Glen Tarff SSSI by providing for 3.88 ha of natural regeneration.
- The Proposed Development will deliver up to £288,000 per annum in Community Benefit Funding, and £10.1 million over its 35-year lifespan (not including indexation).
- The Applicant is committed to a local supplier approach which aims to deliver a significant proportion of construction and operational contracts to local companies and has joined the Inverness Chamber of Commerce to engage the supply chain further.



Conclusion

127. This Non-Technical Summary provides an overview of the EIA Report prepared for the Proposed Development. Within **Chapter 15** of the EIA Report a schedule of commitments can be found which details the environmental mitigation and biodiversity compensation and enhancement measures, summarised above, which the Applicant has committed to implement.
128. **Chapter 16** of the EIA Report summarises the potential effects, the mitigation to be implemented and the resulting residual effects. It also provides a summary of the cumulative effects of the Proposed Development in combination with other proposed, consented and operational developments in the local area.
129. The final layout has been informed by a robust EIA and lengthy design iteration process, considering potential environmental impacts and their effects, physical constraints, and health and safety considerations. The information used to inform the design iteration process included consultation responses received, baseline data and the impact assessment undertaken.
130. Consideration has been given to a range of design issues as well as various environmental, ecological and technical requirements. Predicted environmental effects arising from the Proposed Development have been mitigated as far as possible, if not eliminated during the iterative design process.
131. Overall, the Proposed Development is an appropriately designed, and well located wind farm which is in line with policies in the local and strategic development plans and conforms to national policy. The Proposed Development has been designed to maximise energy production, within environmental limits which are considered to be acceptable for a development of this type and size. The Proposed Development will provide a valuable contribution towards the ambitious national targets for electricity generation from renewable sources and contribute towards sustainable economic growth of the local area, the Highlands and Scotland as a whole.





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