

# CULACHY WIND FARM

Environmental Statement 2014



Volume I - Non-Technical Summary







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## PREFACE

An Environmental Statement (ES) has been prepared in support of a planning application by RES Limited (RES). The application seeks planning permission from The Highland Council to construct a wind farm comprising 13 wind turbines and associated elements on the Culachy estate approximately 6 km south of Fort Augustus.

The application has been prepared in accordance with the Town and Country Planning (Environmental Impact Assessment) (Scotland) Regulations 2011 (as amended). The ES contains the information from the Environmental Impact Assessment of the proposed development and it comprises three volumes:

- Volume II: Main Report, containing assessment chapters and figures;
- Volume III: Landscape and Visual Assessment Figures; and
- Volume IV: Technical Appendices.

This Non-Technical Summary (NTS), Volume I, sets out the key messages and findings of the ES.

Associated documentation that has also been submitted with the planning application and ES includes:

- Planning Statement;
- Design and Access Statement; and
- Pre-application Consultation Report.

Further information is also available on the project website (<http://www.culachy-windfarm.co.uk/>) and hard copies of the ES and other documentation can be viewed at the following locations:

The Highland Council  
Planning & Development Services  
Glenurquhart Road  
Inverness  
IV3 5NX

Fort Augustus Service Point  
Memorial Hall  
Fort Augustus  
PH32 4DJ

Copies can also be purchased at a cost of £350 for a paper copy of all documents or £15 for an electronic version of all documents on CD, from:

RES Ltd  
3rd Floor  
STV  
Pacific Quay  
Glasgow  
G51 1PQ

Paper copies of this NTS are available free of charge.

# INTRODUCTION

## Overview

This Non-Technical Summary (NTS) provides an overview of the Environmental Statement (ES). It summarises the key elements and findings of the Environmental Impact Assessment (EIA) carried out by RES to assess the construction, operation and decommissioning of the proposed Culachy Wind Farm.

RES is proposing a 13 turbine project at Culachy Wind Farm. The turbines will have a maximum height of up to 149.5 metres to the highest point of the blade tip. The proposal includes a network of site tracks and hardstandings, permanent and temporary wind monitoring masts, electrical connection works, a control building and substation, and associated temporary construction infrastructure.



Gruig Wind Farm, Co. Antrim, Northern Ireland, height to tip 100m



Hill of Towie Wind Farm, Moray, height to tip 100m





Beaufort Court Turbine, at RES' Headquarters, height to tip 50m



RES' low-carbon headquarters in Hertfordshire

## INTRODUCING RES

### About the Developer

RES is one of the world's leading independent renewable energy developers with operations across Europe, North America and Asia-Pacific. RES, a British company, has been at the forefront of wind energy development since the 1970s and has developed and/or built over 100 wind farms (or more than 8 Gigawatts (GW) of wind capacity) worldwide.

In the UK alone RES currently has more than 1,000 Megawatts (MW) of onshore wind energy constructed, under construction or consented. In Scotland, RES has developed and/or built eleven wind farms with a total generation capacity of nearly 215 MW, including Hill of Towie Wind Farm in Moray. In 2013, RES completed construction of Meikle Carewe Wind Farm in Aberdeenshire.

### Power for Good

RES is active in a range of renewable energy and low carbon technologies. From its Glasgow office RES has been developing, constructing and operating wind farms in Scotland since 1993. RES has a growing team of over 117 staff in Scotland working across a range of disciplines.

## SITE LOCATION

### Site Selection

RES uses a sophisticated software system using an objective scoring system to find sites that are favourable for wind farm development. Once a site is located, detailed feasibility assessments are undertaken to identify what scale of development is appropriate.

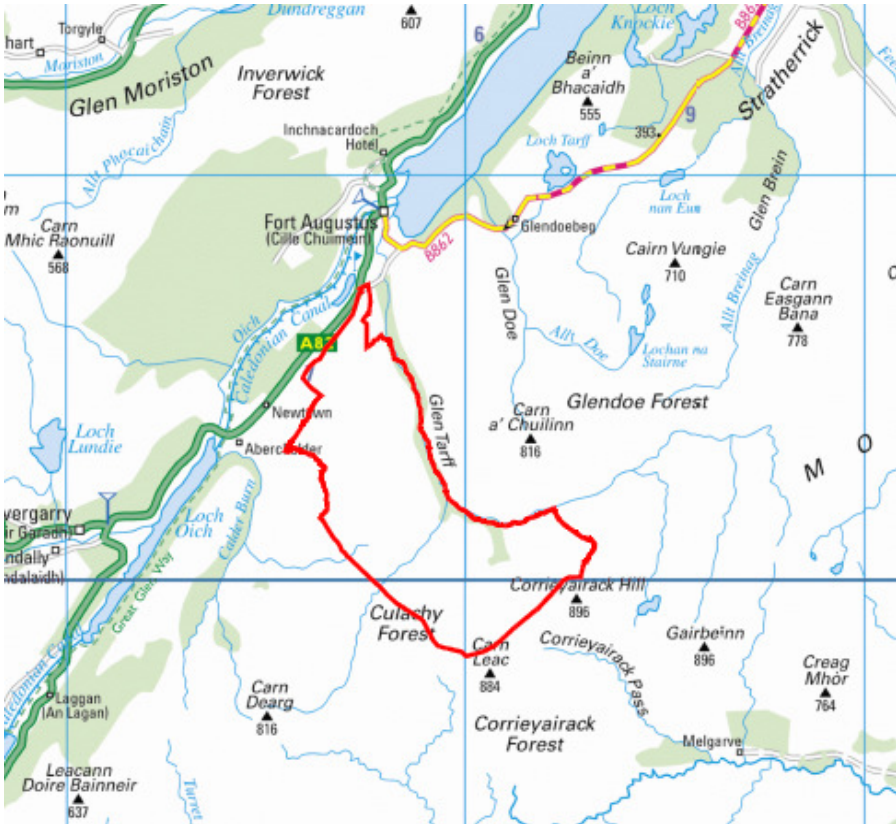
The proposed Culachy Wind Farm is situated in the Monadhliath Mountains between Glen Buck and Glen Tarff and is approximately 6 km south of Fort Augustus. The Culachy Estate runs a game and deer stalking sporting business on a large part of the Estate.

The old Beauly - Denny overhead transmission line (BDOHL) and associated access track runs through the development site from north to south. The BDOHL is currently being replaced with a new line and will run in a north to south direction through the development site positioned further west of the existing line.

The site covers an area of approximately 29 km<sup>2</sup> and comprises extensive areas of natural grassland, with localized areas of bare ground and peat. Several watercourses run through the site and drain towards Loch Ness and Loch Oich to the north.

The A82 trunk road is west of the site and runs approximately 400 metres from the proposed site entrance, which is connected by an unclassified road (U1667, known locally as the Ardachy Road) to the Culachy Estate. Renewable energy projects close to Culachy include Millennium wind farm approximately 8 km northwest and Glendoe Hydro Scheme approximately 7 km northeast.

## Culachy Wind Farm Location Plan



## Project Design Evolution

The project design is the product of an iterative process ensuring that the proposal not only optimises the potential of the site but also minimises the potential effects on the environment. From the outset the following design principles have been employed:

- reduction of potential environmental effects has been fundamental to the design;
- the new BDOHL has been used as an eastern design buffer to preserve the setting of the Corrieyairack Pass;
- visibility into the Great Glen, Fort Augustus and Wild Land Area 19 has been minimised where possible by avoiding siting turbines on the higher ground in the northern part of the development site;
- use of existing infrastructure, such as the BDOHL access track, has been sought to reduce potential effects; and
- rock shall be won on site where practicable to reduce traffic.

At the scoping stage, an initial layout of 25 turbines with a tip height of 135 m was produced to show the maximum potential extent of development within the space available.

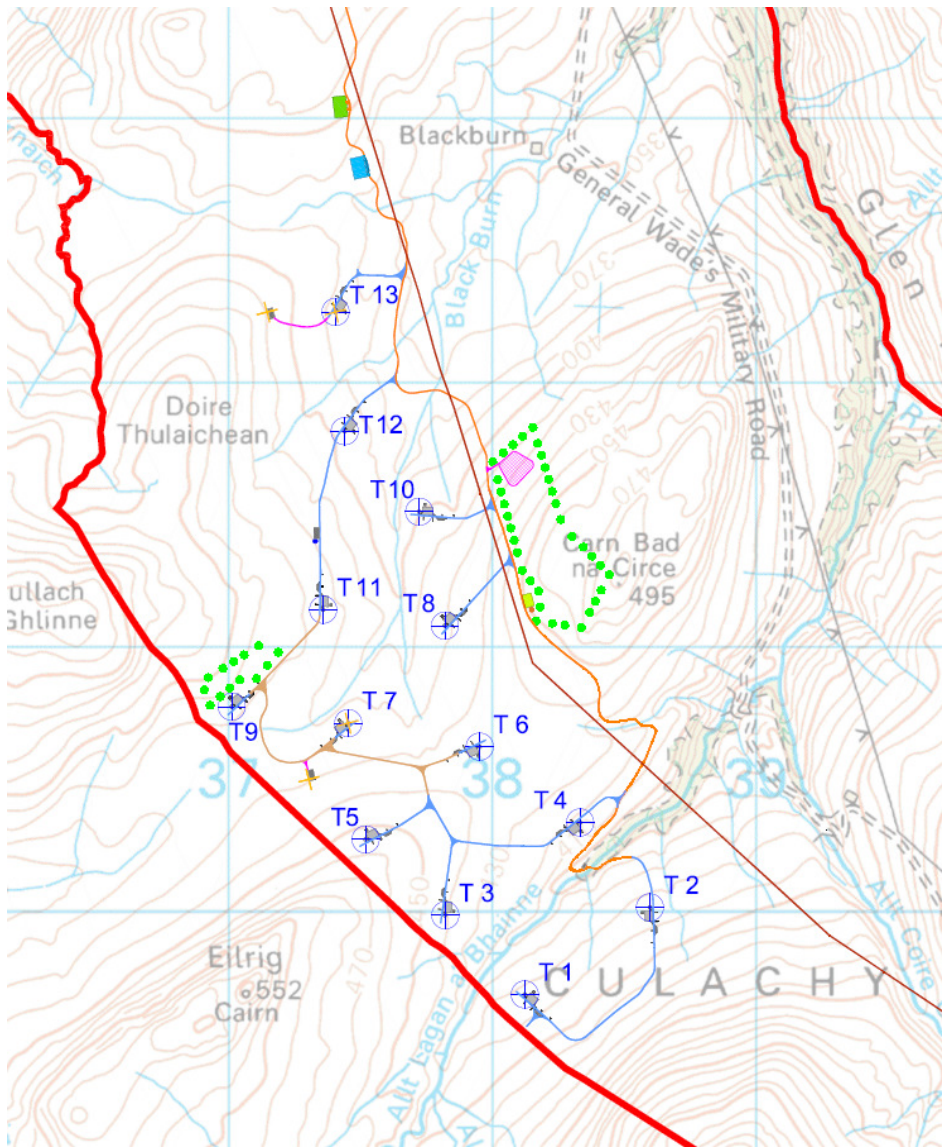
The final turbine layout of 13 turbines represents the optimal design when balancing the baseline environmental data, technical and engineering considerations; furthermore, this preferred layout also takes cognisance of the feedback received from the local community, stakeholders and consultees throughout the consultation process.

An increase in tip height to a maximum of 149.5 m ensures that the potential energy yield is maximised and that the wind resource is being used as efficiently as possible.

Wind Turbine 130m tall to tip (St Seine Wind Farm, France)



### Proposed Culachy Wind Farm Infrastructure Layout



## DEVELOPMENT PLAN POLICY

The importance of renewable energy is underlined by support shown in energy and climate change policy at international, national and local levels.

The proposed Culachy Wind Farm will be considered by The Highland Council and the key land use planning policies that they will consider in determining the application includes:

- The Highland-wide Local Development Plan (HwLDP) adopted April 2012;
- The Inverness Local Plan 2006(as continued in force, April 2012);
- Highland Renewable Energy Strategy & Planning Guidelines
- Interim Supplementary Guidance Onshore Wind Energy

In addition, the Council will consider a number of other documents, policies and guidance that will include the Highland Renewable Energy Strategy, Interim Supplementary Guidance for Onshore Wind Energy, the Scottish Government's Scottish Planning Policy, Planning Advice Notes, national policy statements and advice on renewable energy.



Kelburn Wind Farm, Ayrshire, height to tip 100m



## ENVIRONMENTAL SENSITIVITY

There are two ecological designations within the planning application boundary: Ness Woods Special Area of Conservation (SAC) and Glen Tarff Site of Specific Scientific Interest (SSSI). There are also areas of woodland within the development site, running along the watercourses of Allt na Leitire, Connachie Burn and along the lower reaches of Allt Lagan a' Bhainne, that are designated as Ancient Woodland. Within 5 km from the proposed wind farm are the designated sites of Easter Ness Forest SSSI, Loch Knockie and Nearby lochs SPA and Glendoe Lochans SSSI.

The development site comprises typical upland habitats with the majority of the site dominated by blanket bog. A range of habitats, including blanket bog, wet heath, acid grassland and wet modified bog were recorded. Water vole, bats, lizards and brown trout were recorded on site.

Few bird species make regular use of the site however golden eagle, merlin, peregrine and black grouse have been recorded.

Onsite watercourses include the River Tarff and the Calder Burn. The River Tarff is associated with Ness Woods SAC and flows along the eastern site boundary north into Loch Ness. The Calder Burn flows north into Loch Oich to the west of the site. Both watercourses have several tributaries across the site.

Peat of varying depths has been recorded across the site but is predominantly less than 1.5m. Thick peat accumulations (>2m) have

developed in areas where the terrain is relatively flat, particularly around the centre of the site.

There are no landscape designations within the site. However, there are local designations (Scenic Local Areas - SLA) present within 6 km of the proposed wind farm such as Loch Lochy and Loch Oich SLA and Loch Ness and Duntelchaig SLA. Culachy lies on the northern periphery of the Braeroy, Glenshirra and Creag Meagaidh wild land area as defined by the SNH 2014 new map of Wild Land Areas.

The site and surrounding area contain a number of cultural heritage assets. Designated heritage assets within the site boundary comprise the Corrieyairack Pass Military Road, four consecutive sections of which are designated as Scheduled Monuments, and a Category B Listed bridge on the military road. A further 13 Scheduled Monuments and 34 listed buildings are located within 5km of the proposed wind farm. In addition, there are a 21 non-designated archaeological assets situated within the development site these are predominantly shielings which are seasonal dwellings used during the summer months when livestock was moved up to higher grounds.

The nearest property is over 3 km from the proposed wind farm and there are a number of sparsely distributed dwellings and agricultural buildings within the surrounding area as a result there will be no shadow flicker effects on properties.

The technical assessments that have been conducted to determine the effects of the proposal are reported in full in Vol. II of the ES.

## **SITE CONSTRUCTION & DECOMMISSIONING**

### **Typical Construction Sequence**

Construction of the proposed wind farm is expected to last approximately 16 months. During this time a range of tasks will be undertaken on site. When construction starts, the site entrance, which is currently being used as the access route for part of the BDOHL, will be prepared to ensure safe access; the Ardachy road will also be subject to minor upgrades to enable access to the site.

The on-site access track layout has been designed to utilise as much as is practical of the existing BDOHL access track to reduce the extent of any new track required and minimise potential environmental impacts. During this period there will be a temporary construction compound containing the site office. The turbines' concrete foundations will be prepared and the electrical infrastructure such as cables and sub-station buildings installed.

The wind turbines will be delivered in parts on special heavy goods vehicles and assembled on site using a crane. Once the turbines are installed there will be a period of testing and commissioning.

It is proposed that normal construction hours will be restricted to Monday to Saturday from 6.00am to 8.00pm with no working on a Sunday. However, working hours will be agreed with THC prior to the commencement of works and these will also be refined as necessary to take account of identified environmental and community interests and (with prior agreement) critical operational requirements.



Callagheen Wind Farm, Co. Fermanagh, height to tip 83m



Wadlow Wind Farm, Cambridgeshire, height to tip 120m

## **Construction Quality Assurance**

The proposed wind farm will be constructed by an experienced construction contractor with a proven track record of working on similar projects in accordance with international and UK standards in respect of quality, health, safety and environmental conservation.

The appointed construction contractor will be obliged to adopt the environmental working practices as approved by The Highland Council.

## **Decommissioning**

The expected operational life of the wind farm is 25 years from the date of commissioning. At the end of this period turbines could be refurbished, removed, or replaced. Refurbishment or replacement would require relevant new permissions.

Decommissioning a wind farm entails the removal of the turbine components, transformers, the sub-station and associated buildings. Some access tracks could however be left on site to maintain improved site access for the landowner and wider community.

Concrete foundations are not normally removed in decommissioning. The exposed portion of the concrete plinth would be removed and the entire foundation would be covered over with soil and reseeded appropriately. Impacts from construction and decommissioning are temporary and appropriate mitigation can be employed to avoid permanent impacts.

## Environmental Impact Assessment (EIA)

Assessing the project's environmental impacts enables stakeholders to understand the potential environmental effects of a project.

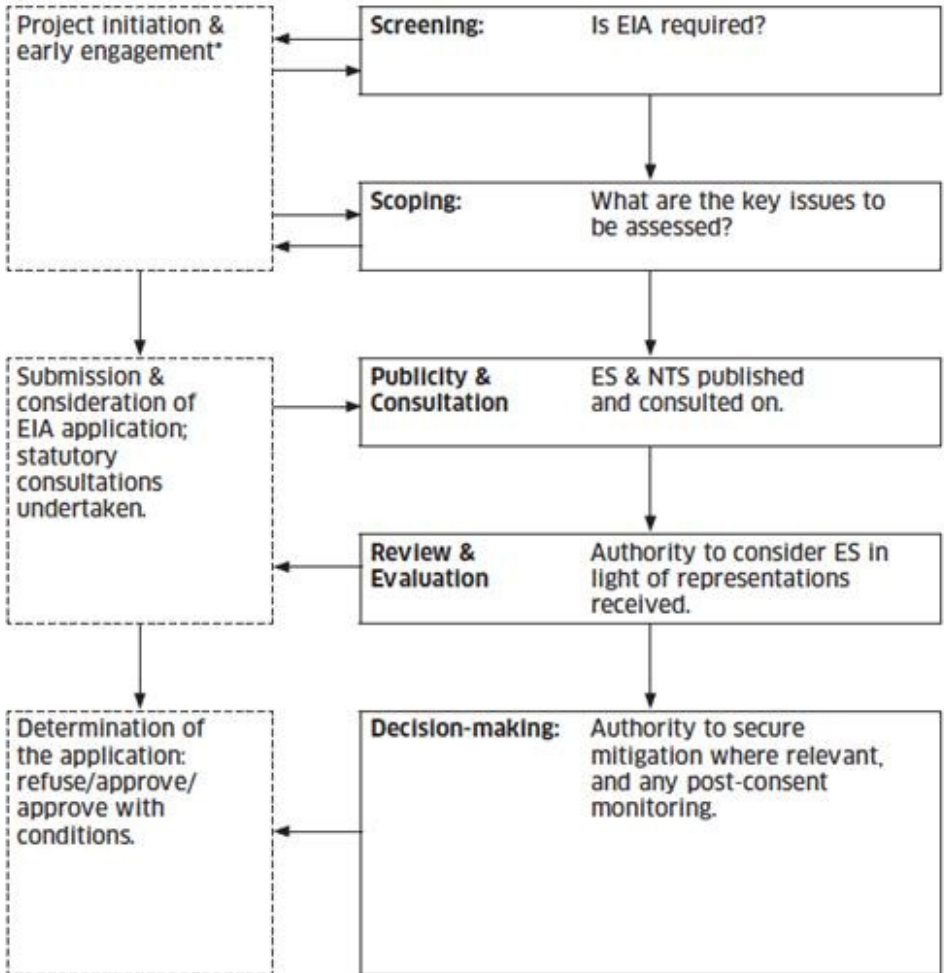
The EIA identifies and assesses the potential effects associated with the construction, operation and decommissioning of the proposed wind farm. By understanding the site's sensitivity and combining this with the magnitude of change from the project, taking account of any potential mitigation, the likely residual effect can be assessed.

The assessment is recorded in the Environmental Statement (ES). For each potential development effect, the 'worst case' scenario is considered. This ensures that the environmental scenarios likely to cause the greatest environmental effect are taken into account in the design of the project. The assessment covers:

- Landscape and Visual;
- Cultural Heritage;
- Ornithology;
- Ecology;
- Hydrology (Geology and Hydrogeology);
- Transport and Traffic;
- Noise; and
- Electromagnetic Interference, Aviation and Shadow Flicker.

## The EIA Process

<http://www.scotland.gov.uk/resource/0043/00432582.gif>





## Landscape and Visual

The landscape and visual impact assessment (LVIA) considered a 35 km radius study area (extending from the outermost turbines of the proposed wind farm) and involved a desk study, field survey and computer modelling.

Following an analysis of the existing landscape and visual context of the site and elements of the proposed wind farm that could generate significant landscape and/or visual effects, mitigation measures were devised to minimise potential significant effects.

Based on the existing landscape and visual context and the final design for the proposed wind farm a final assessment of the residual landscape and visual effects was undertaken with particular regard to the potential for significant effects on:

- the landscape character of the site and the adjoining landscape within the study area;
- Glen Affric National Scenic Area (NSA);
- Strathconon - Monar and Mullardoch SLA, Loch Ness and Duntelchaig SLA, Loch Lochy and Loch Oich SLA, and the Moidart, Morar and Glen Sheil SLA;
- sensitive receptors, including tourist and residential receptors, within the Great Glen and adjacent glens and straths;
- General Wade's Road, Corrieyairack Pass;
- summits and long range trails including the Great Glen Way; and
- the Braeroy - Glenshirra - Creag Meagaidh Wild Land Area.

Havsnäs Wind Farm, Sweden, height to tip 140m



Black Hill Wind Farm, Scottish Borders, height to tip 78m



In assessing the effect on these and other landscape and visual receptors consideration was given to cumulative effects arising from concurrent and/ or consecutive (concurrent) visibility (where the observer is able to see two or more developments from one viewpoint location), and sequential effects (where a number of similar developments would be visible individually or simultaneously over a sequence of connected viewpoints, such as would be found along a road or footpath).

### **Landscape Assessment**

During the construction phase, construction activities would give rise to temporary landscape impacts through the construction activities. These would be relatively short term, minimised by careful construction management, and would reduce/be removed at the end of construction activities.

During the operational life of the proposed wind farm, the presence of turbines and infrastructure would have no on-going significant effects on the landscape fabric of the site. However, significant effects, including cumulative effects were predicted in parts of the following landscape character types (LCTs):

- Broad Forested Straths (LCT LBR4);
- Smooth Moorland Ridges (LCT LBR5);
- Rocky Moorland (LCT LBR6);
- Interlocking Sweeping Peaks (LCT LBR8);
- Rugged Massifs (LCT INV1);

- Rolling Uplands (LCT INV2);
- Broad Steep Sided Glen (LCT INV7).

It was noted, however, that such significant effects would be localised and of limited geographical extent and the character of the LCTs affected would not be undermined.

No significant effects on the integrity of landscape designations such as the NSA or SLAs were predicted. Similarly, no significant effects on the Braeroy - Glenshirra - Creag Meagaidh Wild Land Area were identified.

### **Visual Assessment**

The LVIA identified a number of significant effects on visual receptors within the study area, including potential effects on the visual amenity of:

- road users on the A87 in Glen Garry;
- Walkers and cyclists on General Wade's Military Road between Meallan Odhar Beag and Creag Dhubh; and
- Hill walkers at Ben Tee Carn Dearg (north of Glen Eachach), Carn Dearg (south of Glen Eachach), and Carn a Chuillin.

No significant effects were identified in respect of residential properties or settlements in the area.

Viewpoint 1: Fort Augustus Car Park by the A82 - photomontage for illustrative purposes only  
(see Figure 4.16 of the ES)



Viewpoint 6: Corrieyairack Hill - photomontage for illustrative purposes only  
(see Figure 4.21 of the ES)



## Ecology

A desk based study and a series of field surveys were undertaken to establish the baseline conditions of the site. The site overlaps with the Ness Woods Special Area of Conservation (SAC) and the Glen Tarff Site of Special Scientific Interest (SSSI) along the north-east boundary and extending into Allt Lagan a’Bhainne. The site comprises typical upland habitats, with a peat-based substrate vegetated with blanket bog and wet heath communities dominating. Potential Ground Water Dependent Terrestrial Ecosystems (GWDTEs) were also identified.

Bat activity on the site is considered to be low. A single tree roost along the banks of Allt lagan a’Bhainne was confirmed. Otter were not recorded within the survey area but are expected to be present along Glen Tarff to the north-east. There is a large population of water voles over the main plateau of the site. Due to a number of barriers to fish migration Atlantic salmon were not present on the watercourses surveyed. Brown/sea trout were recorded along Allt Lagan a’Bhainne and Connachie Burn. Three common lizards were recorded within the survey area. No other protected species were recorded in the survey area.

The ecological receptors present were considered during the design of the proposed wind farm. Design mitigation measures included a stand-off distance of 50m from watercourses and no new watercourse crossings are required. Key habitats (including GWDTEs) have been avoided where possible.

Pollution prevention measures and a Species Protection Plan would be in place throughout the life time of the proposed development, and would be detailed in the Construction and Decommissioning Method Statement (CDMS). An Ecological Clerk of Works would be present during the construction phase to monitor construction works to ensure the requirements of the CDMS are met.

A Habitat Management Plan (HMP) would be implemented post construction to restore and enhance key habitats on the development site, including blanket bog and wet heath. This would also benefit bird species, such as golden eagle and ground nesting waders.

With the implementation of the mitigation and enhancement measures as described, it is considered that all effects would be reduced to either Minor or Negligible and would be therefore be Not Significant under the terms of the EIA Regulations.



*Image included for illustrative purposes only*



## Ornithology

A range of baseline ornithological surveys were carried out within the development site and wider survey-specific study areas of up to 6km from October 2012 to August 2014, and were generally consistent with the recommended methods in current Scottish Natural Heritage guidance (SNH, 2014), although when baseline surveys commenced, previous (SNH, 2010) guidance was followed. The survey programme comprised: flight activity (vantage point) surveys; upland breeding bird surveys; scarce breeding bird surveys; black grouse surveys; winter walkover surveys; and golden eagle prey surveys. A desk study was undertaken to inform the scope of field surveys, and an assessment of the designated sites within and surrounding the development site (up to 20km).

There are a number of Special Protection Areas (SPAs) and Sites of Special Scientific Interest (SSSIs) 3-10km from the site. All designated sites were scoped out of the impact assessment due to a lack of connectivity, with the exception of Loch Knockie and Nearby Lochs SPA (Slavonian grebe population), and the West Inverness-shire Lochs SPA (common scoter population). These species were assessed as a theoretical risk upon request from SNH despite no observations during baseline surveys. The impact assessment provided evidence that was considered sufficient to conclude that there will be no Likely Significant Effects on any designated sites.

Baseline results showed that few species made regular use of the development site, with the valued ornithological receptors identified as: golden eagle, merlin, peregrine and black grouse. Although likely to breed in the wider area, the development site appears to be of low

importance for merlin and peregrine, and Negligible to Minor adverse effects were predicted, even prior to consideration of mitigation measures. Black grouse were recorded most commonly near the north access route, but also in smaller numbers to the south. Three lek sites were recorded within 500m of proposed infrastructure, with up to 12 males present. Identified disturbance-displacement risks during construction and operation were mitigated to Minor adverse and not significant through controls on construction activity, plus habitat enhancement in the Outline Habitat Management Plan (OHMP).



*Image included for illustrative purposes only*

Two golden eagle territories were recorded within 6km of the site. Territory modelling has shown that one territory is likely to overlap with the site, although birds from the other territory may also make occasional usage of the site. Potentially significant disturbance-displacement effects during construction and operation were mitigated to non-significant levels by restricting activity within 2km of nest sites during the breeding season, and creation of an OHMP to include habitat, deer and red grouse management within specific areas of the wider Culachy Estate to increase suitability for eagle prey away from the turbines. Collision risk modelling predicted a potentially significant level of mortality which was mitigated by the OHMP, plus a supplementary feeding, deer carcass removal within the turbine area and 500 m buffer, and cooperation with a monitoring and wardening scheme to reduce persecution risk and improve survival rates of the population within the wider region. Cumulatively, collision risk was predicted via population modelling to result in a possibly significant level of additional mortality at a regional level under worst-case conditions, although if mitigation and monitoring plans are carried out successfully at other wind farm projects as well as Culachy, then a residual non-significant effect would likely result.



*Images are included for illustrative purposes only*

## Cultural Heritage & Archaeology

The cultural heritage assessment has considered potential impacts of the proposed development upon the physical fabric of heritage assets within the site, and potential impacts on the settings of assets within the wider landscape.

A desk-based study, walkover survey and site visits have been carried out in order to identify assets that may be affected by the proposed development and establish their current condition. The desk-based study has also informed an assessment of the potential for currently unknown archaeological remains within the construction footprint. Photomontages and wireline visualisations have been prepared to inform the assessment of impacts on the settings of heritage assets.

A total of 23 heritage assets have been identified within the site boundary, all of which are post-medieval. These include part of the Corrieyairack Pass military road, the majority of which is designated as a series of Scheduled Monuments; and a Category B Listed bridge on the line of the military road. The remaining 21 assets, which are not designated, include historic farmsteads, shielings, bridges and other structures relating to the post-medieval hill-farming economy. While there is some potential for undiscovered archaeological remains, particularly of prehistoric date, this is largely restricted to the lower ground crossed by the main access route, while most of the infrastructure of the proposed wind farm is at higher altitude where archaeological remains are unlikely to be present.

Assets outwith the development site have been assessed for potential effects on their settings, and are included in the assessment based on their importance and distance from the development. There are 13 Scheduled Monuments within 5km, which include an Iron Age fort, a crannog on Loch Ness, a late medieval tower house, the site of a barracks in Fort Augustus, two more sections of the Corrieyairack Pass military road, and seven Schedulings relating to the Caledonian Canal. There are 34 Listed Buildings within 5km: ten of these are located in Fort Augustus, including two Category A Listed buildings at Fort Augustus Abbey; there is another group of Listed Buildings in Invergarry; and other Listed Buildings are associated with the Caledonian Canal. Culachy House, located just outside the north end of the development site, is one of several Listed country houses and farmhouses in the area. The assessment has also considered the Conservation Area at Fort Augustus and a 16<sup>th</sup> century battlefield at the south end of Loch Oich.



*Image included for illustrative purposes only*

The main access route for the development will use an existing track which follows the line of the Corrieyairack Pass military road, and which will require upgrading. The section of the military road to be upgraded is not Scheduled, and little of the original 18<sup>th</sup> century fabric is thought to survive. Therefore the effect on the military road from construction works is predicted to be of negligible magnitude and minor significance. No effects are predicted on other known heritage assets within the development site boundary; assets which are close to construction works will be marked with a visible boundary during construction to prevent accidental damage. There is also a small risk of construction impacts on unknown heritage assets. Construction effects on the military road and any unknown assets will be mitigated by a programme of archaeological works, principally comprising archaeological monitoring of groundworks in selected areas.

An impact of minor significance on the setting of the Corrieyairack Pass military road is predicted to result from the operation of the wind farm. Although the turbines will be clearly visible from the military road, views and movement along the road will be uninterrupted. Operational impacts on all other heritage assets will be of negligible significance.

## Geology, Hydrology & Hydrogeology

The hydrology assessment involved a combination of desk study, site visit and consultation. The potential effects on the surface waters, groundwater, peat, designated sites and private water supplies that have been considered are:

- Pollution Incidents;
- Erosion and sedimentation;
- Changes to water resources i.e. private water supplies;
- Modification of surface water and groundwater flows;
- Modification of natural drainage patterns;
- Impediments to flow and flood risk;
- Peat instability;
- Minimisation and re-use of disturbed peat; and
- Compaction of soils.

Following the identification and assessment of the key features, a range of mitigation and best practice measures have been incorporated into the design, including the addition of extensive buffer areas of up to 50 metres around hydrological features.

During construction and operation, a site specific environmental management plan, as well as detailed design of infrastructure and associated mitigation, will be implemented to protect the groundwater and surface water resources from pollution and minimize changes to the hydrological environment to avoid adverse effects arising. No significant residual effects are predicted.



A peat slide risk assessment was also undertaken for the site, which found that the risk of peat slide events occurring within the site is classified as Very Low to Low.

### **Transport and Traffic**

The majority of traffic generated by the wind farm proposal would be limited to vehicle movements during the construction and decommissioning phases. During the operation of the wind farm, traffic would be minimal as much of the operation of the wind farm would be automatic and monitored remotely. Construction traffic falls into three broad categories namely Abnormal Indivisible Loads, Heavy Goods Vehicles and Light Goods Vehicles.

It is expected that the turbine components will be imported by sea before being delivered to site by road. The most likely port of entry for components would be Kyle of Lochalsh. Road alignments and limited storage space at this location means components would likely be delivered to and stored at Broadford Aerodrome on Skye before being transported along the A87 through Bun Loyne before joining the northbound A82 at Invergarry and then turning right onto Ardachy Road (U1667) for a short distance to the site entrance.

The construction traffic flows (predominantly light and heavy goods vehicles although also including cars) would have no discernible impact upon the A82 and construction traffic is expected to result in impacts of only slight significance on Ardachy Road. Nevertheless, mitigation is proposed in the form of a Transport Management Plan to be agreed in advance of the construction phase with both the Highland Council and Transport Scotland

Improvements such as minor widening are proposed to allow large vehicles to safely pass along Ardachy Road whilst elsewhere along the route works are likely to be limited to the temporary removal/relocation of street furniture.



*Image included for illustrative purposes only*

## Noise

An assessment of the acoustic impact from both the construction and operation of the proposed Culachy Wind Farm was undertaken taking into account the identified nearest residential properties.

As the nearest properties are over 3km from the proposed turbines there are no significant noise effects predicted for the proposed turbines either as a stand-alone project or in combination with other wind farms in the area.

A construction noise assessment, which has considered the impact from increased traffic noise, indicates that predicted noise levels likely to be experienced at the nearest residential properties exceed construction noise criteria for a short period of time at five locations, however appropriate mitigation measures have been identified.

## **Electromagnetic Interference**

Following consultation it was confirmed there will be no effect on microwave or radio links as none pass through the site.

## **Aviation**

There will be no effect on aviation interests with the MOD seeking specific mitigation in the form infrared lighting on the wind turbines (which will only be visible to pilots wearing night vision goggles).



Hill of Towie Wind Farm, Moray, height to tip 100m

## Summary

It is predicted that Culachy Wind Farm could generate electricity to supply the equivalent of approximately 31, 000 households with cleaner, greener, renewable energy for the 25 year operational lifetime of the project which will make a significant contribution to national renewable energy targets and reductions in CO<sub>2</sub> production.

The project will create new and support existing jobs in the local economy through direct employment in the construction and (albeit to a lesser extent) during operation of the wind farm as well as further indirect employment through suppliers and service providers to benefit the Highlands economy.

There are some significant adverse effects highlighted within the Environmental Statement, however the majority of these have been reduced to non significant effects through specific mitigation measures.

The accompanying Planning Statement and Design & Access Statement provide a more comprehensive analysis of the proposals and findings of the Environmental Statement against all relevant policies within the Highland Council Development Plan as well as other relevant local and national policy considerations. The accompanying Pre Application Consultation Report also details the measures taken to engage with the local community in the formulation of this application and their comments provided to the project team.



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