Chapter 1 Introduction

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List of Abbreviations

Abbreviation	Description
AOD	Above Ordnance Datum
BNG	British National Grid
EIA	Environmental Impact Assessment
GW	Gigawatt
ha	Hectares
km	Kilometres
kV	Kilovolt
m	Metres
MW	Megawatt
NTS	Non-Technical Summary
PAC	Pre-Application Consultation
SAC	Special Area of Conservation
SSSI	Site of Special Scientific Interest
S36	Section 36 Electricity Act 1989
THC	The Highland Council

1. Introduction

1.1. Introduction

1.1.1. Fred. Olsen Renewables Limited (hereafter referred to as "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"), at site centre British National Grid (BNG) 237813 801506, near Fort Augustus, in the area of the Highland Council

1.1.2. The application is supported by this Environmental Impact Assessment Report (EIA Report) as required by *The Electricity Works (Environmental Impact Assessment) (Scotland) Regulations 2017* (the 'EIA Regulations'). This EIA Report has been prepared to assess the environmental impacts of the Proposed Development and accompanies the S36 Application submitted to the Scottish Ministers.

1.1.3. This chapter provides an introduction to the Proposed Development and the background of its proposal, as well as providing an overview of the purpose of the EIA Report, its structure and the EIA project team.

1.2. The Applicant

1.2.1. The Applicant is a leading developer, owner and operator of renewable energy assets, primarily onshore wind farms. The Applicant has been developing and operating wind farms in Scotland and the UK since the mid 1990's demonstrating long term commitment to the renewable energy generation market in Scotland and the UK.

1.2.2. With over twenty-five years' experience in consenting, developing and operating wind farms, Fred. Olsen Renewables is one of very few developers that take a project all the way from initiation and development, through to operation and ultimately decommissioning.

1.2.3. The company continues to operate Scotland's first consented wind farm, Windy Standard Wind Farm in Dumfries and Galloway.

1.2.4. In the UK, Fred. Olsen Renewables' operational portfolio comprises over 500 MW across nine wind farms. Internationally Fred. Olsen Renewables operates over 780 MW of renewable energy projects.

1.2.5. Fred. Olsen Renewables was the first developer to bring forward community benefit in Scotland. To date, Fred. Olsen Renewables has made available over £6 million to eligible communities surrounding its wind farms and is substantially increasing this investment as new projects come online.

1.2.6. Fred. Olsen Renewables is committed to maximising opportunities for the local supply chain. This will require all main contractors where possible to spend at least 30% of the contract value locally and incentivising all contractors to use local content.

1.2.7. Fred. Olsen Renewables is a wholly owned subsidiary of Bonheur ASA and is responsible for the group's renewable energy activities.

1.3. Site and Proposed Development Description

Site Description

1.3.1. The Proposed Development site ("the site") is located within the Culachy Estate, hereby referred to as 'the Estate' which is primarily a stalking estate. The Estate is in the process of implementing a number of carbon sector and conservation projects (refer to **Figure 1.1**).

1.3.2. The site is located approximately 900 m south of Fort Augustus, with the closest turbine located 6.5 km south of Forth Augustus, (refer to **Figure 1.1**) in The Highland Council (THC) area in close proximity to Loch Ness and the Great Glen. The site is located across two wards within THC. The proposed turbines are located within Ward 11: Caol and Mallaig, whilst the site access and some of the associated infrastructure is located within Ward 12: Aird and Loch Ness.

1.3.3. The site area is approximately 682 ha and is on rolling upland moorland and elevation varies from 200 m to 650 m Above Ordnance Datum (AOD).

1.3.4. A number of tributaries to the Black Burn intersect the site in the north, and the water courses Allt Lagan a Bhainne and Allt Coire Uchdachan intersect the site in the south.

1.3.5. There are sixteen Scheduled Monuments within 5 km of the site, including 5 designated sections, approximately 9 km, of the Corrieyairack Pass which runs through the Estate.

1.3.6. The site lies partially 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.

1.3.7. The Beauly-Denny 400 kilovolt (kV) overhead line runs broadly north-south across the site to the west of the Corrieyairack Pass.

Overview of Proposed Development

1.3.8. The Proposed Development will comprise eight three bladed horizontal axis wind turbines up to 200 m blade tip height with a rotor diameter of 162 m, and each with a generating capacity of approximately 7.2 MW. A confirmed turbine model has not yet been selected and this will be subject to a tendering process following consent. The power rating and specific turbine dimensions are therefore unknown at this stage, and the EIA has been undertaken on the basis of a design envelope, namely a maximum tip height of 200 m.

1.3.9. Based on the site specific capacity factor, the total generating capacity of the Proposed Development is anticipated to be up to approximately 57.6 MW, with additional energy storage provision of 10 MW. The associated infrastructure will include: site access, access tracks, crane hardstandings, underground cabling, on-site substation and maintenance building, energy storage facility, external transformers, temporary construction compounds, laydown area, batching plant and potential excavations/borrow workings.

1.3.10. Based on the Proposed Development's location and estimated capacity factor, the annual indicative total electricity output for the site would be an estimated 199,307 megawatt-hours (MWh), per annum[1]. The Proposed Development would generate enough electricity to power approximately 60,487 average Scottish households[2] and would contribute towards international and national targets for the generation of renewable energy and reduction in greenhouse gas emissions. The Proposed Development is described in detail in **Chapter 3**. The proposed layout is illustrated on **Figure 1.2**.

1.3.11. The electricity produced will be exported to the electricity network. The proposed point of connection to the wider electricity network is currently under assessment.

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[1] Calculated from 57.6 x 8760 (number of hours per year) x 0.395 (Expected onshore wind load factor for the Proposed Development).

[2] Based on average annual Scottish household electricity consumption of 3.295 MWh, from BEIS Subnational Electricity and Gas Consumption Statistics, Regional and Local Authority, Great Britain, 2021 (UK Government, December 2022)

1.4. Purpose of the EIA Report

1.4.1. ITPEnergised was appointed by the Applicant to undertake an Environmental Impact Assessment (EIA) of the Proposed Development and produce an EIA Report in accordance with the EIA Regulations. The EIA process is the systematic process of identifying, predicting, and evaluating the environmental impacts of a proposed development. Where appropriate, it also sets out mitigation measures designed to prevent, reduce and, if at all reasonably possible, offset potential significant adverse environmental effects. An assessment of residual effects, those expected to remain following implementation of mitigation measures, is also presented.

1.4.2. The main findings and conclusions of this EIA Report are summarised in a Non-Technical Summary (NTS), as required by the EIA Regulations. The NTS, provided as a stand-alone document, summarises the key findings of the EIA in easily accessible, non-technical language, ensuring everyone with an interest in the project can understand and access information on its predicted environmental effects.

1.4.3. This EIA Report and its NTS accompany the application for S36 consent, being submitted to the Scottish Ministers.

1.5. Structure of the EIA Report

1.5.1. The EIA Report is split into five volumes, with the NTS forming a further separate document. This document is Volume 1 of the EIA Report and it is structured as follows:

- Chapter 1 provides an introduction to the EIA Report and its authors;
- Chapter 2 provides a description of the design iteration process, detailing how the Proposed Development evolved through the course of the assessment process and the elimination of alternative development options;
- Chapter 3 provides a description of the existing site, details of the Proposed Development, the construction, operation and maintenance processes, decommissioning process, need for the development and carbon considerations;
- Chapter 4 describes the methodology of the EIA process including the scope of the assessments, justification for topics scoped out of the EIA, and details of the public consultation process;
- Chapter 5 outlines the planning and energy policy context;
- Chapter 6 assesses the effects on landscape and visual amenity;
- Chapter 7 assesses the effects on ornithology;
- Chapter 8 assesses the effects on ecology;
- Chapter 9 assesses the effects on hydrology, geology, hydrogeology and peat;
- Chapter 10 assesses the effects on the historic environment;
- Chapter 11 assesses the effects of noise;
- Chapter 12 assesses the effects on traffic and transport;
- Chapter 13 assesses the effects on socio-economics, tourism and recreation;
- Chapter 14 assesses the effects on aviation and radar;
- Chapter 15 is the Schedule of Mitigation, which summarises all of the mitigation measures presented in this EIA Report; and
- Chapter 16 provides summary tables of all predicted residual and cumulative effects.

1.5.2. Volume 2 contains the figures that inform the EIA Report.

1.5.3. Volume 3 contains the landscape and visual impact assessment visualisations and photomontages that inform Chapter 6.

1.5.4. Volume 4 contains supporting information and technical appendices for each of the technical chapters, and additional studies that have been prepared to inform the relevant assessments as reported in the EIA Report.

1.5.5. Volume 5 contains Highland Council format of the landscape and visual impact assessment visualisations and photomontages that inform Chapter 6.

1.5.6. Additional supporting documents which form part of the application submission include a Non-Technical Summary of the EIA Report, a Planning Statement, and a Pre-Application Consultation (PAC) Report.

1.6. Assessment Team

1.6.1. The assessment was undertaken by ITPEnergised's environmental teams supported by external consultants. **Table 1.1** outlines the full EIA team and their experience.

Table 1.1 EIA Project Team

CONSULTANT	INPUT TO EIA	COMPANY	EXPERIENCE
Gavin Spowage	EIA Project Director	ITPEnergised	BSc (Hons) Environmental and Management Sciences, MSc Environmental Management, PIEMA. 19 years' experience in environmental consultancy.
Niamh Hurley	EIA Project Manager	ITPEnergised	BSc (Hons) Zoology & Ecology, MSc Environmental Sustainability, AIEMA. 2 years' experience in environmental consultancy.
Charlotte Kenyon	EIA Assistant Project Manager	ITPEnergised	MA (Hons) History, MSc Environmental Sustainability. Over 1 years' experience in environmental consultancy.
Simon Heriot	Planning Policy Context	Savills	BSc (Hons) Town & Regional Planning. 20 years' experience in planning and development.
Stuart Cargill	Landscape and Visual Impact Assessment	Optimised Environments (OPEN)	MLA Landscape Architecture. Over 15 years' experience in landscape architecture.
Sarah Sanders	Ornithology Assessment	MacArthur Green	BSc (Hons) Zoology. 11 years' experience as an ornithologist.
Eleanor Stacey	Ecology Assessment	MacArthur Green	BSc (Hons) Marine Biology with Oceanography. 10 years' experience as an ecologist.
Kate Hobbs	Ecology Assessment	MacArthur Green	BSc (Hons) Zoology. 7 years' experience as an ecologist.

Joanna Cassidy	Hydrology, Geology and Hydrogeology Assessment	ITPEnergised	BSc (Hons) Geology and Earth Science, CIWEM. 5 years' experience in environmental consultancy.
Jenni Cunningham	Hydrology, Geology and Hydrogeology Assessment	MacArthur Green	MSc Environmental Engineering. 6 years' experience in environmental consultancy.
Alasdair Baxter	Noise and Vibration Assessment	ITPEnergised	BSc (Hons) Natural Science, MSc Environmental Management. Over 20 years' experience in environmental noise assessment
Fraser McFarlane	Cultural Heritage Assessment	Headland Archaeology	MA (Hons) Archaeology/Classics, MLitt Professional Archaeology, ACIfA. Over 12 years' experience working in the heritage sector.
Gordon Buchan	Traffic and Transport Assessment	Pell Frischmann	MSc Transport Engineering, BEng (Hons) Civil & Transportation Engineering, CMILT, MCIHT. 26 years' experience as a transport consultant.
Stephen Cochrane	Traffic and Transport Assessment	Pell Frischmann	BSc (Hons) Construction and Project Management, MCIHT. 21 years' experience as a transport consultant.
Simon Cleary	Socio-economics, Tourism and Recreation Assessment	BiGGAR	MA (Hons) Economics and Mathematics. Over 10 years' consultancy experience in the renewable energy sector.
Ian Fletcher	Aviation and Radar Assessment	Wind Business Support (WBS)	BEng Mechanical Engineering. Over 20 years' experience as an aviation consultant.
Hazel Boyd	Forestry and Woodland Assessment	Bidwells	BSc Sustainable Forest Management and Member of Institute of Charted Foresters (MICFor). 20 years' experience working in the forest industry.
Tim Barratt	Forestry and Woodland Assessment	Bidwells	BSc (Hons) Environmental Science, MSc in GIS, MICFor, Member of Royal Institution of Chartered Surveyors & Registered Valuer. 20 years' forestry experience across NGO, Civil Service, and private sectors.

1.7. Availability of the EIA Report

1.7.1. In accordance with Section 18 of the EIA Regulations, copies of the EIA Report are available for inspection by the public, notice of which is published on the application website, in the Edinburgh Gazette, The Herald and the Inverness Courier.

1.7.2. Copies of the EIA Report are available by request from:

Fred. Olsen Renewables Ltd.
Ochil House
Springkerse Business Park
Stirling
FK7 7XE

Email: communities@fredolsen.com

Website: https://culachywind.co.uk/

1.7.3. A printed copy of the EIA Report is available to view during opening hours at the following locations subject to agreement with THC and local communities:

Invergarry Community Hall Invergarry Inverness-shire PH35 4HE	Fort Augustus Village Hall Church Road Fort Augustus PH32 4DG

1.7.4. Electronic copies of the EIA Report, including all figures, appendices and accompanying documents are available to view on the project website http://www.culachywind.co.uk and can be accessed at https://www.energyconsents.scot/.

1.7.5. For anyone who has difficulty accessing the documentation online, a USB copy can be made available on request by emailing communities@fredolsen.co.uk.

1.8. Representations to the Application

1.8.1. Any representations to the application should be made directly to the Scottish Government at:

Energy Consents Unit
5 Atlantic Quay
150 Broomielaw
Glasgow
G2 8LU

Email: representations@gov.scot Online: http://www.energyconsents.scot/

References

Scottish Government (2017). The Electricity Works (Environmental Impact Assessment) (Scotland) Regulations 2017. Available at: https://www.legislation.gov.uk/ssi/2017/101/regulation/18/made

UK Government Department of Business, Enterprise and Industrial Strategy (BEIS) (2022). Subnational Electricity and Gas Consumption Statistics, Regional and Local Authority, Great Britain, 2021. Available at: https://www.gov.uk/government/statistics/subnational-electricity-and-gas-consumption-summary-report-2021 Accessed: May 2023

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