Chapter 1: Introduction

Creag Riabhach Wind Farm Extension

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Contents

1 Introduction

1.1 Background

Creag Riabhach Wind Farm Limited (the applicant) is proposing to construct a three-turbine extension and battery energy storage system (BESS) (the proposed development) at Creag Riabhach Wind Farm (CRWF). CRWF is currently under construction; first energisation was in November 2022 and full energisation was completed in February 2023. The candidate extension turbines would have an indicative capacity of 12.6MW and the BESS would have an indicative capacity of 37.3MW. The combined export capacity would be up to 50MW. Both the extension turbines and the BESS will export power through the existing grid network and no works are required for the offsite grid connection. This is a significant benefit, allowing good use to be made of existing infrastructure capacity and for the extension turbines and BESS to make a timeous contribution to emission reduction targets. A full description of the proposed development is included in **Chapter 3: Description of Development**.

The applicant will be seeking consent under Section 36 of the Electricity Act 1989 (the 1989 Act) to construct and operate the proposed development (more detail regarding the statutory framework is included in **Chapter 4: Statutory and Policy Framework**). The proposed development requires an Environmental Impact Assessment (EIA) Report to accompany a Section 36 Application under the terms of the Electricity Works (Environmental Impact Assessment) (Scotland) Regulations 2017 ("the EIA Regulations").

The proposed development is located on land in the ownership of Altnaharra Estate immediately adjacent to the east and partly within CRWF. The application site is located approximately 6.5 km south of the settlement of Altnaharra on the A836 and approximately 21.5 km north of the village of Lairg in central Sutherland (see **Figure 1.1: Location Plan**).

1.2 Context in Relation to Creag Riabhach Wind Farm

CRWF was granted Section 36 consent and deemed planning permission under Section 57(2) of the Town and Country Planning (Scotland) Act 1997 on 17 October 2016. The consent is for 22 wind turbines with a generating capacity exceeding 50MW. The consent also included two anemometer masts, a borrow pit and ancillary development. The wind farm operational life from commissioning is 25 years with a decommissioning period of a further three years thereafter. The consented layout is illustrated on **Figure 1.2: Consented Development**.

CRWF consists of 22 Enercon E-115 turbines with a capacity of 4.2MW each giving an overall wind farm capacity of 92.4MW. The turbines have a base to tip height of 125m with a rotor diameter of 115m and a hub height of 67.5m.

The applicant has submitted a variation application under Section 36(C) of the Electricity Act 1989 (the '1989 Act') for the CRWF to amend Condition 1 of the Section 36 consent to extend the duration of the operational lifespan from 25 years (current) by 15 years to 40 years (proposed), from the Date of Final Commissioning of

CRWF (there are consequential changes required to conditions 22 and 23, which require variations in terms of the 25-year period which they refer, in consequence of the proposed variation to Condition 1).

It is intended that the operational life of the proposed development will be for up to 40 years. If both the S36 proposed extension development application and the S36C operational life extension application for CRWF are consented, it is the intention of the applicant to decommission the proposed development with CRWF resulting in an overall operational life of the proposed development turbines (functioning as a single generating station) of approximately 37 years.

1.3 The Applicant

Creag Riabhach Wind Farm Limited is a wholly owned subsidiary of ERG UK Holding Ltd (ERG). ERG Group is a European renewable power producer, with an office in Edinburgh, which has been operating successfully in the energy sector for 80 years.

In recent years ERG has transformed itself from one of Italy's leading oil and refining companies to one focussed wholly on green power. With assets in nine different countries, ERG owns and operates wind farms with a total capacity of more than 2.2 GW across Europe, including in the UK, France, Germany, Poland, Romania, Bulgaria, Sweden, Spain and Italy. ERG has a development pipeline spread across Europe with more than 2 GW of both wind and solar across the different geographies. ERG currently has operational wind farms in Northern Ireland and Scotland generating *c*.250 MW of green energy.

The applicant is committed to investing in Scotland through renewable energy projects, with the community benefits and additional outcomes that renewable energy development can bring (including construction and post construction employment).

The Applicant has appointed RSK Environment Ltd (RSK), an experienced environmental consultancy, as lead consultant to carry out an Environmental Impact Assessment (EIA) and related assessments to accompany a Section 36 Application to the Scottish Ministers.

RSK is a fully integrated, environmental, health, safety and engineering consultancy with extensive experience of providing environmental, health, safety and engineering services to the renewable energy onshore sector.

1.4 Site Description

The extension turbines would be located immediately to the east of CRWF, to the south of turbine (T) 13 and the east of T3, T6 and T8. The BESS would be located within the area currently being used as a temporary construction compound to the west of the substation and within the consented CRWF site. Access to the site would be taken from the A836, using the existing CRWF entrance immediately south of Vagastie Bridge.

The existing landform for the proposed development is the eastern shoulder of the main Creag Riabhach whaleback ridge with the topography falling eastwards to Strath Vagastie and the A836. The ground cover in the proposed area for the extension turbines is generally rough grassland and heather moorland with the area proposed for extension turbines (EXT) 02 and EXT-03 currently designated as low density, juvenile forest and planted in conifer and broadleaf.

The closest residential property to the proposed development is The Crask Inn, which is approximately 2km to the south and visually screened from the proposed development by The Crask hill and the shelterbelt planting along both sides of the A836.

1.5 Need for Development

In 2019, the UK and Scottish governments declared a climate emergency and set ambitious climate change targets with a Net-Zero Carbon Dioxide (CO_2) target for 2045 in Scotland and an interim target of 75% reduction in emissions by 2030[1][2].

To achieve these targets, growth in the renewable energy sector is vital. Several UK level policy documents advocate a large increase in the deployment of renewable energy technology, including the latest UK Energy White Paper (2020)[3] and Net Zero Strategy (2021)[4]. Scottish Government policy commitments are also clear, onshore wind will play a crucial role in response to the climate crisis.

National Planning Framework 4 (NPF4) came into effect on 13 February 2023. Part 1 of NPF4 recognises that:

"The world is facing unprecedented challenges. The global climate emergency means that we need to reduce greenhouse gas emissions and adapt to the future impacts of climate change."

Part 6 outlines the national spatial strategy and states:

"Every decision on our future development must contribute to making Scotland a more sustainable place. We will encourage low and zero carbon design and energy efficiency, development that is accessible by sustainable travel, and expansion of renewable energy generation."

NPF4 identifies six national developments to support the delivery of sustainable places, including 'Strategic Renewable Electricity Generation and Transmission Infrastructure', which is described as follows:

[1] Scottish Government (2019), The Climate Change (Emissions Reduction Targets) (Scotland) Act 2019.
[2] The UK Government (2019), The Climate Change Act 2008 (2050 Target Amendment).
[3] Department for Business, Energy and Industrial Strategy (BEIS) (2020), Energy White Paper: Powering our net zero future, Department for Business, Energy and Industrial Strategy.
[4] Department for Business, Energy and Industrial Strategy (BEIS) (2021), Net Zero Strategy, Build Back Greener.

"Supports electricity generation and associated grid infrastructure throughout Scotland, providing employment and opportunities for community benefit, helping to reduce emissions and improve security of supply…"

"A large and rapid increase in electricity generation from renewable sources will be essential for Scotland to meet its net zero emissions targets. Certain types of renewable electricity generation will also be required, which will include energy storage technology and capacity, to provide the vital services, including flexible response, that a zero carbon network will require. Generation is for domestic consumption as well as for export to the UK and beyond, with new capacity helping to decarbonise heat, transport and industrial energy demand. This has the potential to support jobs and business investment, with wider economic benefits."

The Scottish Government published an updated Onshore Wind Policy Statement (OWPS) on 21 December 2022. It replaces the version published in November 2017.

The Ministerial Foreword makes it explicitly clear that seeking greater security of supply and lower cost electricity generation are now key drivers alongside the need to deal with the climate emergency. In this regard, the Cabinet Secretary for Net Zero, Energy and Transport states (page 3):

"that is why we must accelerate our transition towards a net zero society. Scotland already has some of the most ambitious targets in the world to meet net zero but we must go further and faster to protect future generations from the spectre of irreversible climate damage".

"Scotland has been a frontrunner in onshore wind and, while other renewable technologies are starting to reach commercial maturity, continued deployment of onshore wind will be key to ensuring our 2030 targets are met".

The Foreword states that onshore wind has the ability to be deployed quickly, is good value for consumers and is also widely supported by the public. The Minister further states that:

"This Statement, which is the culmination of an extensive consultative process with industry, our statutory consultees and the public, sets an overall ambition of 20 GW of installed onshore wind capacity in Scotland by 2030."

The Scottish Government has also published a new Draft 'Energy Strategy and Just Transition Plan' entitled 'Delivering a fair and secure zero carbon energy system for Scotland' on 10 January 2023. The new Strategy is to replace the one previously published in 2017. The Ministerial Foreword states:

"The imperative is clear: in this decisive decade, we must deliver an energy system that meets the challenge of becoming a net zero nation by 2045, supply safe and secure energy for all, generate economic opportunities, and build a just transition…

The delivery of this draft Energy Strategy and Just Transition Plan will reduce energy costs in the long term and reduce the likelihood of future energy cost crises.

It is also clear that as part of our response to the climate crisis we must reduce our dependence on oil and gas as that Scotland is well positioned to do so in a way that ensures we have sufficient, secure and affordable energy to meet our needs, to support economic growth and to capture sustainable export opportunities.

For all these reasons, this draft Strategy and Plan supports the fastest possible just transition for the oil and gas sector in order to secure a bright future for a revitalised North Sea energy sector focused on renewables."

The draft Strategy states (page 7, Executive Summary) that the vision for Scotland's energy system is:

"That by 2045 Scotland will have a flourishing, climate friendly energy system that delivers affordable, resilient and clean energy supplies for Scotland's households, communities and business. This will deliver maximum benefit for Scotland, enabling us to achieve a wider climate and environmental ambitions, drive the development of a wellbeing economy and deliver a just transition for our workers, businesses, communities and regions."

A fundamental part of the Strategy is expanding the energy generation sector. The Executive Summary states (page 8) that Scotland's renewable resources mean that:

"we can not only generate enough cheap green electricity to power Scotland's economy, but also export electricity to our neighbours, supporting jobs here in Scotland and the decarbonisation ambitions of our partners.

An additional 20 GW of renewable generation will more than double our existing renewable generation capacity by 2030……"

Chapter 4: Statutory and Policy Framework provides further detail of the ambitious targets, the renewable energy policy framework and Scotland's current progress towards Net-Zero.

1.6 Purpose of the EIA Report

EIA is a process for identifying the likely consequences on the existing biological, physical and human environment arising from development progression.

The process is undertaken to ensure that the environmental effects of certain types of development proposal are fully investigated, understood and taken account of in the consenting and authorisation process.

Under the terms of the EIA Regulations, the proposed development is *"a generating station, the construction of which (or the operation of which) will require a Section 36 consent but which is not Schedule 1 development"*. In this regard, the proposed development is of a type falling within Schedule 2 of the EIA

Regulations, meaning that an EIA will be required if it is deemed the development is likely to have significant effects on the environment by virtue of factors such as its nature, size and location.

Screening procedures exist within the EIA Regulations to assist determination of whether a development proposal qualifies for EIA. However, in this case, in recognition of the proposed development's potential effects, the applicant has decided to volunteer to undertake an EIA in support of the application. Therefore, it was not considered necessary to seek a Screening Opinion and this EIA Report is submitted voluntarily, in accordance with the Scottish Government Energy Consents Unit (ECU) Guidance[5].

Furthermore, there are provisions under the EIA Regulations which facilitate the definition of the scope of the EIA, in consultation with Stakeholders. Although such provisions are not mandatory, the applicant requested a Scoping Opinion from the ECU in July 2022. A Scoping Report was issued, providing a brief description of the proposed development, the approach to the EIA, the potential for significant environmental effects and a proposed methodology to assess such effects. The Scoping Report was issued to a list of statutory and non-statutory consultees, as agreed with the ECU, who issued a Scoping Opinion in October 2022 (Reference: ECU00004487)[6]. The EIA Report takes into account all consultee responses and further details regarding scoping are presented in **Chapter 2: EIA Approach and Methodology.**

This EIA Report is presented to the ECU in the determination of the application for consent under Section 36 of the 1989 Act and for deemed planning permission in terms of Section 57 of The Town and Country Planning (Scotland) Act 1997, as amended for the proposed development. The purpose of the EIA Report is to present the proposed development, and its predicted environmental effects, in a concise, objective and non-promotional manner to provide the ECU, THC, statutory consultation bodies, interested bodies and the general public with sufficient information to assess its likely environmental effects. This report presents the findings of the EIA process by describing the proposed development, the current conditions at the site and any likely significant effects which may result from the proposed development. Where appropriate, mitigation and enhancement measures are proposed, and any residual effects are reported. Regulation 3 of the EIA Regulations prohibits the ECU from granting Section 36 consent for EIA development without consideration of the environmental information provided in the EIA Report.

This EIA Report has been prepared under the supervision of, and reviewed by, persons having suitable competency in environmental impact assessment. This is also a requirement of RSK's continued registration on IEMA's 'EIA Quality Mark' scheme. RSK defines 'suitable competency' as sufficient relevant qualifications and experience in working on EIA projects and suitable professional standing as recognised by, for instance, accreditation as a Chartered Environmentalist, or equivalent. This is illustrated in **Table 1.1**.

[5] Scottish Government (2023), Guidance on Energy Consents. Available at: https://www.gov.scot/policies/energy-infrastructure/energy-consents/, [accessed April 2023].
[6] Pre-Application for 'Creag Riabhach Wind Farm Extension and Battery Storage' on the ECU portal, available at: https://www.energyconsents.scot/ApplicationDetails.aspx?cr=ECU00004487.

Table 1.1: EIA Team Responsibilities and Capabilities

Name	Company	Qualifications	Years of Experience	Role and Expertise
EIA Project Management Team				
Joe Somerville	RSK	MA(Hons), MSc MCIfA FSA Scot PIEMA	15 years	EIA Project Director
David Hoare	RSK	CEnv, MCIEEM, PIEMA	22 years	EIA Technical Director
Adam Paterson	RSK	BSc, MSc GIEMA	3 years	EIA Project Manager
EIA Technical Specialists				
David Bell	DB Planning	BSc (Hons) DipUD MCIHT MRTPI	30+ years	Technical Lead - Planning
Rohan Sinha	WSP	B.Arch (Hons), MLA, CMLI, AIEMA	17+ years	Technical Lead – Landscape and Visual
Chris Catherine	Caledonian Conservation Limited	BSc(Hons), MCIEEM, FLS, FRES, FRSA	18	Technical Lead – Terrestrial Ecology and Ornithology
Euan Murray	Caledonian Conservation Limited	BSc (Hons) MSc	10 years	Technical Support – Terrestrial Ecology
Tommy McDermott	Trex Ecology	BSc (Hons), M.Res, MIFM	20 years	Technical Lead – Freshwater Ecology
Diane O'Leary	Trex Ecology	BSc (Hons), PIEMA	20+ years	Technical Support – Freshwater Ecology
Lynne McKeggie	Highland Archeology Services Limited	BA(hons), MLitt, PCIfA	11 years	Technical Lead - Cultural Heritage
Christopher Laing	Natural Power	BSc (Hons), AMIEnvSc	5 years	Technical Support – Hydrology, Hydrogeology and Soils
Sam Wainwright	Natural Power	BSc (Hons), MSc	9 years	Technical Support – Hydrology, Hydrogeology and Soils
Gordon Buchan	Pell Frischmann	BEng, MSc	27 years	Technical Lead – Transport and Access
Stephen Cochrane	Pell Frischmann	BSc (Hons), HND	21 years	Technical Support – Transport and Access
Andy McKenzie	Hayes McKenzie	PhD, BSc, FIOA	30+ years	Technical Lead - Noise
Aedan Mansfield	Hayes Mckenzie	BEng, AMIOA	2 years	Technical Support - Noise
Adam Paterson	RSK	BSc, MSc GIEMA	3 years	Technical Lead – Socio-Economics, Recreation and Tourism

Name	Company	Qualifications	Years of Experience	Role and Expertise
Emily Gerrard	RTS Forestry	HND Student (Scottish School of Forestry UHI)	2	Technical Support - Forestry
Norman O'Neil	RTS Forestry	BSc.For, MICF, CEnv.	35	Technical Lead – Forestry
Adam Paterson	RSK	BSc, MSc GIEMA	3 years	Technical Lead - Carbon
Pieter Bakker	Altnaharra Estate Ltd	DMQ 1 and 2	35 years	Technical Lead – Deer Management Plan

1.7 Structure of the EIA Report

The EIA Report is presented in four volumes:

- **Volume 1:** Non-Technical Summary
- **Volume 2:** Environmental Impact Assessment Report;
- **Volume 3a:** Figures;
- **Volume 3b:** NatureScot Landscape Visualisations;
- **Volume 3c:**The Highland Council Visualisations; and
- **Volume 4:** Technical Appendices.

A Planning Statement and a Pre-Application Consultation (PAC) Report have been prepared as separate documents and supplement the EIA Report in accordance with the requirements of the EIA Regulations.

1.7.1 Volume 1

The Non-Technical Summary (NTS) is provided in Volume 1 describes the proposed development in non-technical language, identifying the likely effects it may have on people and the receiving environment. It also describes the mitigation measures proposed by the applicant to avoid or reduce potential adverse effects that have been identified. It will also discuss how environmental issues would be managed during the construction, operation and decommissioning of the proposed development.

1.7.2 Volume 2

EIA Report, Volume 1 comprises 14 chapters, which are structured as follows:

- **Chapter 1 – Introduction** introduces the proposed development and explains the underlying objectives of the proposals, describes the statutory basis for the EIA, outlines the structure adopted in this EIA Report and identifies the team of competent experts responsible for undertaking and reporting the EIA.
- **Chapter 2 – EIA Approach and Methodology** discusses the context of the EIA Report and summarises the stakeholder consultation undertaken during the EIA and the design development pre-application.

- **Chapter 3 – Description of Development** identifies the site location and establishes the need for the proposed development; summarises the reasonable alternatives that have been considered in the development of a preferred design solution; provides a detailed description of the key design components and characteristics of the proposed development and associated land take; and outlines the planned timescales for construction and implementation. Chapter 3 also details construction activities, the indicative construction programme, operation managements and maintenance, as well as decommissioning activities.
- **Chapter 4 – Statutory and Policy Framework** provides a summary of the legislative and policy framework relevant to the development including an overview on the climate emergency.
- **Chapters 5 to 14 – Technical Assessments** report the findings of the detailed environmental assessments and the residual effects on the environment predicted to occur as a result of the proposed development.

References of the documents used or considered during the EIA are provided at the end of each section, where relevant.

1.7.3 Volume 3a, b, c

Volume 3 comprises a series of plans, figures and photographs, which are referenced in Volume 2, to illustrate the relationship between the existing environment and the proposed development. Volume 3a consists of figures, Volume 3b is comprised of NatureScot Landscape Visualisations and Volume 3c contains The Highland Council Visualiations.

1.7.4 Volume 4

Volume 4 comprises technical appendices, as referred to in the technical chapters of Volume 2, which contain detailed reports of the individual environmental assessments and other relevant supporting documentation. Volume 4 includes **Technical Appendix 3.3: Schedule of Environmental Commitments**, which summarises the additional and embedded environment mitigation suggested in the technical chapters.

1.8 Terminology

To ensure clarity in the EIA Report, the following terms and descriptions presented in **Table 1.2** below are used.

Table 1.2: EIA Report Terminology

Term	Definition/description
application site	Area within the application boundary within which the proposed development lies. Also referred to as 'the site' (lowercase).
proposed development	The proposed development refers to the infrastructure and not the land footprint. The application site refers to the land footprint (see above). Therefore, the site, not the proposed development, would contain/not contain designated sites and the proposed development, not the site, would/would not impact on the local environment.

Term	Definition/description
site access	Refers to the route from the public road to the site to be used during construction.
site boundary	The red line planning boundary of the proposed development site, as shown on **Figure 3.1: Site Layout.** The site boundary encompasses the proposed wind turbines, BESS and associated infrastructure as part of the proposed development.
study area	The site, plus any additional area over which desk-based or field assessments have been extended. The study area varies depending on the nature of the potential effects for each environmental parameter, as informed by professional guidance and best practice regarding EIA. Therefore, the study area is explained within the approach and methods section of the relevant chapters (**Chapters 5 to 14**).

1.9 Publicity of the EIA Report

A copy of the application, with a plan showing the land to which it relates, together with a copy of the EIA Report discussing the Company's proposals in more detail and presenting an analysis of the environmental implications, will be available for public inspection, free of charge on the application website (https://www.erguk.energy/creag-riabhach/) and on the Scottish Government's Energy Consents website.

In addition, the requirements of the EIA Regulations include:

- An obligation to make EIA reports and associated documents physically available for inspection by the public at a named place;
- provide two hard copies of EIA reports and associated documents at the point of application relating to such applications to the Scottish Ministers; and
- send a copy of the EIA report to the planning authority [THC].

In this case, the applicant is proposing to make the EIA Report available for public inspection, free of charge at:

Location	Opening Hours	Address
Lairg Library	Monday: 10 am – 2 pm Tuesday: 12 – 3.30 pm, 4 – 7 pm Wednesday: Closed Thursday: 10 am – 2 pm Friday: 12 – 3 pm Saturday: Closed Sunday Closed	Lairg Community Centre, The Main St, Lairg IV27 4DD

The section 36 application for consent will be advertised in the Edinburgh Gazette, a national newspaper (the Herald) and a local paper (the Northern Times).

Hard copies of the full EIA Report are subject to a charge of £1500 and are available on request (email: ukdevelopment@erg.eu). A digital version of the EIA Report can also be obtained for £15 per copy on USB drive. Hard copies of the non-technical summary are available free of charge.

1.10 References

Department for Business, Energy and Industrial Strategy (BEIS) (2020), Energy White Paper: Powering our net zero future, Department for Business, Energy and Industrial Strategy.
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Scottish Government (2017), The Electricity Works (Environmental Impact Assessment) (Scotland) Regulations 2017.
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