

1 Introduction

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1 Introduction

1.1 Background and Site Description

1.1.1 Nisthill Wind Farm Limited (hereafter referred to as “the Applicant”) is applying to Orkney Islands Council (OIC) for consent and deemed planning permission, under the terms of the Town and Country Planning (Scotland) Act 1997, for permission to construct and operate Nisthill Wind Farm (hereafter referred to as the ‘Proposed Development’), at site centre British National Grid (BNG) HY 30393 27104.

1.1.2 The planning application is supported by this Environmental Impact Assessment Report (EIA Report) as required by the Town and Country Planning (Environmental Impact Assessment) (Scotland) Regulations 2017 (hereafter referred to as the ‘EIA Regulations’).

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.

Site Description

1.1.4 The Proposed Development is located approximately 5 km west of Birsay and immediately west of Loch of Swannay (refer to **Figure 1.1**) in OIC area.

1.1.5 The site comprises of an area of approximately 120 hectares (ha). The site is predominately grassland with gently sloping topography up to 106 m Above Ordnance Datum (AOD). The surrounding area is rural with the land predominantly used for agriculture.

Overview of Proposed Development

1.1.6 The Proposed Development will comprise four wind turbines up to 180 m blade tip height. The associated infrastructure would include site access, internal access tracks, crane hardstanding, underground cabling, on-site substation and maintenance building, temporary construction compound(s) and borrow pit search area (refer to **Figure 1.2**)

1.1.7 The total generating capacity of the Proposed Development is anticipated to be up to approximately 26.4 MW.

1.1.8 Based on the Proposed Development’s location and estimated capacity factor, the annual indicative total electricity output for the site would be an estimated 92.5 GWh per annum, depending on the turbine selected¹. The Proposed Development would generate enough electricity to power approximately 26,200 average Scottish households (based on average electricity consumption per household in Scotland). The Proposed Development would contribute towards national targets for the generation of renewable energy and reduction in greenhouse gas emissions, including the Scottish Government’s legally-binding target to achieve net zero emissions by 2045.

1.1.9 The electricity proposed will be exported to the electricity network at distribution level. The proposed point of connection to the wider electricity network is currently under assessment.

1.2 The Applicant

1.2.1 The Applicant ‘Nisthill Wind Farm Limited’, is a partnership between farmers Mr Adrian Breck of Ludenhill, Mr Paul Archibald of Nisthouse and Infinergy Ltd.

1.2.2 Mr Breck and Mr Archibald are multigenerational Orcadian farmers and landowners of the Proposed Development site. Already Ludenhill Farm has contributed towards tackling climate change with the

¹ Calculated from 26.4 x 8760 (number of hours per year) x 0.40 (Expected onshore wind load factor for Orkney).

instalment of a 500 kW wind turbine in 2016. Together the landowners hope to generate significantly more renewable energy with this Proposed Development.

- 1.2.3 Infinergy Limited is a renewable energy company developing onshore wind farms throughout the United Kingdom. The Applicant has expertise and experience needed to design, develop, build and operate wind energy developments. The Applicant is committed to helping meet the United Kingdom's renewable energy targets, whilst developing responsibly and putting the right sized wind farm in the right place. Infinergy is a member of trade organisations RenewableUK and Scottish Renewables. For more information please visit: <http://www.infinergy.co.uk>.

1.3 Purpose of the EIA Report

- 1.3.1 ITP Energised was appointed by the Applicant to undertake an Environmental Impact Assessment (EIA) of the Proposed Development in accordance with The Town and Country Planning (Environmental Impact Assessment) (Scotland) Regulations 2017 ('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.
- 1.3.2 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.
- 1.3.3 This EIA Report and NTS accompany the application for deemed planning permission, being submitted to the Orkney Islands Council.

1.4 Structure of the EIA Report

- 1.4.1 The EIA Report is split into five volumes, with the NTS forming a separate document. Volume 1 of this EIA Report 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 process, 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 ecology and nature conservation;
 - Chapter 8 assesses the effects on ornithology;
 - Chapter 9 assesses the effects on the historic environment;
 - Chapter 10 assesses the effects of noise;
 - Chapter 11 assesses the effects of traffic and transport;
 - Chapter 12 assesses the effects on hydrology, geology, hydrogeology and peat;

- Chapter 13 assesses the effects on aviation and radar;
 - Chapter 14 assesses the effects on socio-economics, tourism and recreation;
 - Chapter 15 reports on other issues arising including Shadow Flicker and Telecomms;
 - Chapter 16 is the Schedule of Mitigation, which summarises all of the mitigation measures presented in this EIA Report; and
 - Chapter 17 provides summary tables of all predicted residual and cumulative effects.
- 1.4.2 Volume 2 contains the figures that inform the EIA Report.
- 1.4.3 Volume 3 contains the landscape and visual impact assessment visualisations and photomontages that inform Chapter 6.
- 1.4.4 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.
- 1.4.5 Volume 5 contains confidential technical appendices.
- 1.4.6 Additional supporting documents which form part of the planning application submission include a Non-Technical Summary of the EIA Report, a Planning Statement, a Pre-Application Consultation (PAC) Report and a Design and Access Statement (DAS).

1.5 Assessment Team

- 1.5.1 The assessment was undertaken by ITP Energised’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 the EIA	Company	Experience
Jenny Hazzard	EIA Project Director	ITP Energised	BSc (Hons) Geological Engineering, MSc Engineering Geology, PIEMA. 20 years’ experience in environmental consultancy.
Emma Bathgate	EIA Project Manager	ITP Energised	BSc (Hons) Environmental Management, MSc Sustainability and Environmental Studies. 3 years’ experience in the renewable energy industry.
Yasmin Dennis	EIA Assistant Project Manager	ITP Energised	BSc (Hons) Marine Biology, MSc Climate Change: Managing the Marine Environment. 1 year experience in environmental consultancy.

Consultant	Input to the EIA	Company	Experience
David Bell	Planning and Energy Policy	David Bell Planning	BSc (Hons) Town & Country Planning, Diploma Urban Design, MCIHT, MRTPI. 30 years' experience in planning and development.
Jo Phillips	Landscape and Visual Impact Assessment	Optimised Environments (OPEN)	BA (Hons) Landscape Architecture, MSs Urban Design, PGC Climate Change Management Over 15 years' experience in landscape architecture.
Donna Black	Ecology and Nature Conservation Assessment	ITPEnergised	BSc (Hons) Zoology, MSc Environmental Protection and Management. Over 15 years' experience in ecology and conservation.
Allan Taylor	Ornithology Assessment	ITPEnergised	BSc (Hons) Geography, MSc Environmental Management. Over 7 years' experience in environmental consultancy.
Stuart Williams	Ornithologist	Stuart Williams Ecology Surveys and Research (Orkney)	Over 18 years' experience in Ornithology Surveys for renewable energy projects.
Tom Loveskin	Archaeology & Cultural Heritage Assessment	AOC Archaeology	BSc (Hons) English History and Landscape Archaeology, MA Landscape Archaeology and MA Town and Country Planning. 20 years' experience as an archaeologist.
Simon Waddell	Noise Assessment	ITPEnergised	BSc (Hons) Environmental Geoscience Over 10 year' experience as a noise consultant.
Gordon Buchan	Traffic and Transport Assessment and Engineering Design	Pell Frischmann	MSc Transport Engineering, BEng (Hons) Civil & Transportation Engineering, CMILT, MCIHT. 24 years' experience as a transport consultant.

Consultant	Input to the EIA	Company	Experience
David Nisbet	Hydrology, Geology and Hydrogeology Assessment	ITPEnergised	BSc (Hons) Earth Science. Over 10 years' experience as a geologist.
Ian Fletcher	Aviation and Radar Assessment	Wind Business Support	BEng Mechanical Engineering. Over 20 years' experience as an aviation consultant.
Graeme Blackett	Socio-economics, Tourism and Recreation Assessment	BiGGAR Economics	BA (Hons) Economics, MIED, MEDAS. 25 years' experience as an applied economist.

1.6 Availability of the EIA Report

- 1.6.1 Electronic copies of the EIA Report, including all figures, appendices and accompanying documents are available to view on the project website www.nisthillwindfarm.co.uk.
- 1.6.2 Electronic copies of the EIA Report can also be accessed at <https://www.orkney.gov.uk/> as required under the Town and Country Planning (Miscellaneous Temporary Modifications) (Coronavirus) (Scotland) Regulations 2022 (Scottish Government, 2022).
- 1.6.3 A physical copy of the EIA Report is available for viewing at Birsay Community Hall.
- 1.6.4 For anyone who has difficulty accessing the documentation online, a USB copy can be made available on request by emailing info@nisthillwindfarm.co.uk.

1.7 Representation of the Application

- 1.7.1 Any representations to the Town and Country Planning application should be made directly to OIC Development Management at planning@orkney.gov.uk.