Document history

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A	04/04/2024	Initial Draft
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Chapter 1.

Introduction

Contents

Glossary

Term	Definition
Environmental Impact Assessment	Environmental Impact Assessment (EIA) is a means of carrying out, in a systematic way, an assessment of the likely significant environmental effects from a development.
Environmental Impact Assessment Regulations	The Electricity Works (Environmental Impact Assessment) (Scotland) Regulations 2017 (EIA Regulations)
Environmental Impact Assessment Report	A document reporting the findings of the EIA and produced in accordance with the EIA Regulations
Proposed Development	The South Kyle II Wind Farm development as detailed in section 1.3.2
Proposed Development Area	The area within the “Site boundary” as illustrated on Figure 1.1 which the Proposed Development will be located

List of Abbreviations

Abbreviation	Description
Applicant	Vattenfall Wind Power Ltd, the Applicant
Natural Power	Natural Power Consultants Limited, the lead EIA Co-ordinator
ECU	Energy Consents Unit
EIA	Environmental Impact Assessment
EIAR	Environmental Impact Assessment Report
LVIA	Landscape and Visual Impact Assessment
MW	Mega Watt

1.1. Introduction

1.1.1. This Environmental Impact Assessment Report (EIAR) has been prepared in support of an application submitted under Section 36 of the Electricity Act 1989 to construct and operate South Kyle II Wind Farm (the Proposed Development).

1.1.2. The Proposed Development is situated south-east of the B741, south of Dalmellington and south-west of New Cumnock, in East Ayrshire. It covers an area of approximately 2,262 hectares. The maximum Above Ordnance Datum of the site is 516 m.

1.1.3. The EIAR describes the natural and human environment of the area within which the Proposed Development would be situated (if consented). The EIAR describes the details of the construction, operational and decommissioning phases of the Proposed Development. The EIAR also assesses the potentially significant effects that the Proposed Development could have on the biological environment, the physical environment and on human health and population, as well as on material assets, cultural heritage and the landscape. The EIAR also cites the policy context in relation to the Proposed Development for renewable energy within East Ayrshire, Dumfries and Galloway, Scotland and the UK, the overall policy context as set out in international agreements to reduce emissions of climate change gases, and the targets set for the growth of renewable energy generation.

1.2. Structure of the EIAR

1.2.1. The EIAR has been prepared in accordance with the EIA Regulations and follows the structure presented in Table 1.1 below. Each EIAR topic chapter considers the baseline environment, the likely significant effects for each phase of the development and cumulative impacts.

Table 1.1: EIAR Structure

Volume	*Heading*	*Description*
1	EIAR Chapter 1: Introduction	Introduces the Proposed Development and provides a brief overview of the Applicant and the EIAR.
1	EIAR Chapter 2: Site Selection and Design Evolution	Explains the site selection and the design evolution process that has resulted in the Proposed Development.
1	EIAR Chapter 3: Project Description	Provides a detailed description of the infrastructure associated with the Proposed Development.
1	EIAR Chapter 4: Climate Change, Legislative and Policy Context	Identifies the energy and land use policies and outlines the need for the Proposed Development and its benefits within the context of international climate change agreements and European, UK and Scottish renewable energy policy.
1	EIAR Chapter 5: Landscape and Visual Impact Assessment (LVIA)	Provides an assessment of the Landscape and Visual Impacts of the Proposed Development including Residential Visual Amenity and Night-time effects.
1	EIAR Chapter 6: Ecology and Biodiversity	Provides an assessment of the habitats and (non-avian) fauna present within the Proposed Development area and immediate surrounding environment.
1	EIAR Chapter 7: Ornithology	Provides an assessment of the potential effects upon avian species.
1	EIAR Chapter 8: Hydrology, Geology & Hydrogeology	Assesses the potential effects on the hydrological, geological and hydrogeological environment by the Proposed Development, including private water supplies and peat.
1	EIAR Chapter 9: Cultural Heritage	Provides an assessment of the potential effects of the Proposed Development upon cultural heritage assets.
1	EIAR Chapter 10: Noise	Provides an assessment of the potential noise effects of the Proposed Development.
1	EIAR Chapter 11: Traffic and Transport	Provides an indicative construction programme, load requirements and assesses the potential effects upon the transport network resulting from the Proposed Development.
1	EIAR Chapter 12: Forestry	Assesses how the Proposed Development will affect the existing plans for felling, restocking, and proposes suitable amendments to forestry design plan(s) to accommodate the Proposed Development.
1	EIAR Chapter 13: Aviation and Other Issues	Provides an assessment of the potential effects upon aviation, Ministry of Defence (MoD) interests, communication operations and existing site infrastructure.
1	EIAR Chapter 14: Socioeconomics	Provides an assessment of the potential socioeconomic and tourism effects of the Proposed Development.
1	EIAR Chapter 15: Synergistic effects, Summary of Mitigation and Residual Effects	Assesses the potential synergistic effects created by effects from different subject areas in combination and summarises the proposed mitigation and residual effects of the Proposed Development.
2a	Figures	EIAR Figures except for LVIA
2b	Figures	LVIA Figures only
2c	Figures	LVIA and Cultural Heritage Visualisations
3	Technical Appendices	Provide additional supporting documents and data which inform the EIA.
4	Non-Technical Summary	Provides a high-level summary of the EIA's results in terms that can be understood by a layperson.

Source: Natural Power>

1.3. Key project facts

Figure 1.1 illustrates the site layout of the Proposed Development. The Proposed Development consists of up to 11 wind turbines, ancillary infrastructure and an energy storage system. The Proposed Development is expected to have an operational period of up to 40 years. Figure 1.2 illustrates the Proposed Development in a regional context and Figure 1.3 illustrates site constraints that were considered in the design evolution of the site layout.

1.3.1. The Proposed Development's generating capacity of renewable electricity is not fixed and will be subject to final wind turbine availability and procurement but is anticipated to be around 92.4 MW. An additional capacity of up to 50MW of battery/energy storage is also proposed within the substation compound. Therefore, the application is

made pursuant to Section 36 of the Electricity Act 1989 and the EIA has been undertaken in accordance with The Electricity Works (Environmental Impact Assessment) (Scotland) Regulations 2017.

1.3.2. The Proposed Development comprises the following main elements:

- Up to 11 wind turbines
- Turbine foundations
- External transformer housing
- Crane pads
- Substation, control building and compound
- Battery/energy storage infrastructure
- Upgraded and new access tracks
- Underground/ overhead cables
- Signage
- Temporary batching plant area(s)
- Temporary construction and storage compounds, laydown areas and ancillary infrastructure
- Drainage and drainage attenuation measures (as required).

1.3.3. Any of the public roads required to be utilised for site access up to the site entrance will be subject to upgrades where necessary.

1.3.4. Habitat management will be undertaken within the Proposed Development Area.

1.3.5. The land where turbines will be erected is partially forested. As such forest felling and replanting will be undertaken to facilitate the Proposed Development. It is highlighted that the areas of existing planting already on the site of the Proposed Development or areas of forestry planting to be completed will comprise commercial forestry plantations.

1.3.6. Full details of the infrastructure associated with the Proposed Development is provided in EIAR Chapter 3 Project Description. For the purpose of this EIA turbines have been considered to be a maximum of up to 200m in height from ground level to blade tip.

1.3.7. A Scoping Report was submitted to the ECU on 10 March 2022. A copy of this can be found in Volume 3 Technical Appendix 1.1 of the EIAR. The full Scoping Opinion was received from the ECU on 29 June 2022 and is provided in Volume 3 Technical Appendix 1.2 of the EIAR. The content of the Scoping Opinion informs the scope of the EIA undertaken for the Proposed Development. The Scoping Opinion was used to inform the design evolution along with other assessments commissioned to support the EIA. As a result, the Proposed Development was amended, reducing the number of turbines from 17 to 11 and tip heights from 220m to 200m in height to blade tip. The ECU was informed of the changes from the original scoping layout via email and meetings.

1.4. EIA project team

1.4.1. Vattenfall AB, the ultimate owner of the Applicant, Vattenfall Wind Power Ltd, is a leading European energy company owned by the Swedish state with approximately 20,000 employees. For more than 100 years Vattenfall has powered industries, supplied energy to people's homes and modernised the way its customers live through innovation and cooperation.

Vattenfall has over 50 wind farms, onshore and offshore, across five countries and pioneered co-locating wind with solar and batteries. Vattenfall owns the largest onshore wind farm in England and Wales, Pen y Cymoedd, and in Scotland operates wind farms on the Isle of Skye and in Aberdeenshire. At a local level, Vattenfall developed the consented South Kyle wind farm, near Dalmellington, lying within both East Ayrshire and Dumfries and Galloway, which began commercial operation in Q1 2023.

1.4.2. Vattenfall aims to make fossil-free living possible within a generation and is leading the transition to a more sustainable energy system through growth in renewables and climate-smart energy solutions for its customers. Since 2008, Vattenfall has been in the UK investing over £3.5 billion in enough wind to power nearly a million British homes. The Applicant has the necessary knowledge and experience in renewable energy to develop the Proposed Development.

Table 1.2: Details of the Applicant

Applicant	
Vattenfall Wind Power Ltd	5th Floor 70, St Mary Axe, London, EC3A 8BE

1.4.3. The Proposed Development has been designed by the Applicant (Table 1.2) in association with civil engineers RJ McLeod. Lead EIA consultants, Natural Power (Table 1.3) and the EIA chapter authors (Table 1.4) inputted into the design evolution in an iterative way to minimise environmental effects as much as possible. Natural Power has been appointed to coordinate and produce this EIAR and associated EIA documentation.

1.4.4. Natural Power has been providing expertise to the renewable energy industry since the company was formed in 1995 and is one of the UK's leading renewable energy consultants. Natural Power currently employs over 400 people working full time providing renewable energy services nationally and internationally. Testimony to Natural Power's experience and ongoing commitment to competency and continual improvement, its Planning & Environment Department is accredited by the Institute of Environmental Management and Assessment. In addition, Natural Power also operates in formally accredited health and safety (IOSAS 18001), environmental (14001) and quality (9001) management systems. As well as development and EIA services, Natural Power also provides expert advice and due diligence consultancy, site construction management and site operation and maintenance. Thus, Natural Power is a competent, experienced consultant to co-ordinate and undertake EIA and to prepare the EIAR. Natural Power is head quartered approximately 21km from the Proposed Development.

1.4.5. Contact details for Natural Power and other consultants involved in the production of the EIAR are provided in Tables 1.3 & 1.4. Competency statements for other consultants involved in the EIA are provided in their respective EIAR Chapters.

Table 1.3: Details of agent and lead consultancy

EIA Co-ordinator and Planning Consultancy	
Natural Power Consultants Limited	The Green House, Forrest Estate, St John's Town of Dalry, DG7 3XS

Table 1.4: Other consultants involved in the production of this EIAR

EIA Contributors	
Landscape and Visual Impact Assessment	
WSP Global Inc.	110 Queen Street Glasgow G1 3BX
Hydrology, Geology and Hydrogeology Assessment	
Natural Power Consultants Limited	The Green House, Forrest Estate, St John's Town of Dalry, DG7 3XS
Design	
R.J McLeod	2411 London Road, Glasgow, G32 8XT
Cultural Heritage Assessment	
GUARD Archaeology Limited	52 Elderpark Workspace 100 Elderpark Street Glasgow G51 3TR
Noise Assessment	
TNEI Service Limited	7th Floor 80 St. Vincent Street Glasgow G2 5UB
Ecology and Ornithology Assessment	
Natural Power Consultants Limited	The Green House, Forrest Estate, St John's Town of Dalry, DG7 3XS
Traffic and Transport Assessment	
Natural Power Consultants Limited	The Green House, Forrest Estate, St John's Town of Dalry, DG7 3XS
Collett & Sons Ltd Transport Consultants	Baltic House, Central Dock Road, Grangemouth, FK3 8TY
Aviation Assessment	
PagerPower	Stour Valley Business Centre Sudbury Suffolk CO10 7GB
Forestry Assessment	
DGA Forestry	40 Main Street, New Abbey, DG2 8BY.
Socioeconomics Assessment	
BiGGAR Economics	Shandwick House, 67 Shandwick Place, Edinburgh, EH2 4SD