



Chapter 1

Introduction

Table of contents

1.1	Introduction	2
1.2	Key terms	2
1.3	Purpose of the EIA Report	2
1.4	The Applicant	2
1.5	EIA project team and competency	3
1.6	Structure of the EIA Report	3
1.7	Publicity of the EIA Report	4
1.7.1	Statutory requirements	4
1.7.2	Voluntary publicity	4
1.8	References	4

List of Figures

- Figure 1.1: Site Context
- Figure 1.2: Application Boundary
- Figure 1.3: Site Aerial Context



Chapter 1

Introduction

1.1 Introduction

1. ScottishPower Renewables (UK) Ltd (SPR) propose to install and operate a windfarm comprising 13 turbines with associated infrastructure (the proposed Development) on land (the Site) located approximately 3 km south west of Barrhill in South Ayrshire, centred on NGR NX 19194 80689, as shown on **Figure 1.1**. The proposed Development would be known as the Arcleoch Windfarm Extension. The application boundary covers the area shown on **Figure 1.2**. An aerial photograph of the Site is contained in **Figure 1.3**. This shows the terrain and land use of the Site and the immediately surrounding area.
2. The maximum height of the proposed turbines would be up to 200m to the tip of the blade in an upright position. It is expected that each wind turbine would be rated up to an approximate capacity of 5.6 megawatts (MW) giving a total installed capacity in the region of 72.8 MW. The proposed Development would produce between approximately 200 GWh and 230 GWh of electricity annually (based on an average capacity factor of between 31-36 % estimated for the Site based on a 5.6 MW turbine). This equates to the annual power consumed by approximately 53,000 average UK households¹ (depending on the actual turbines installed), which is more than the number of homes in South Ayrshire (based on National Records of Scotland 2016).
3. The majority of the Site is located within South Ayrshire Council (SAC). The entrance to the Site is within the Dumfries and Galloway Council (D&GC) area.
4. The proposed Development is described in further detail in **Chapter 3**.
5. The proposed application is an extension to a windfarm which was granted consent under Section 36 of the Electricity Act 1989 (the 1989 Act). It is the intention of SPR to submit an application under Section 36 the 1989 Act and the applicant also seeks a direction that deemed planning permission is granted. The proposed Development will constitute a Schedule 2 development as provided for by the Electricity Works (Environmental Impact Assessment) (Scotland) Regulations 2017 (the EIA Regulations).
6. SLR Consulting Ltd (SLR) has been appointed to undertake an Environmental Impact Assessment (EIA) to determine and evaluate the potential effects of the proposed Development. The results are presented in this document, which comprises the EIA Report.

1.2 Key terms

7. To ensure clarity in the EIA, the following terms are used:

- Proposed Development: The proposed Arcleoch Windfarm Extension, an extension to Arcleoch Windfarm, as assessed and reported in this EIA Report comprises 13 wind turbines of up to 200 m in height to blade tip, with an installed capacity of in the region of 72.8 MW, together with associated infrastructure.
- Arcleoch Windfarm: The existing Arcleoch Windfarm, as consented in 2008 and whose construction was completed in 2011. Arcleoch Windfarm consists of 60 turbines with a height to blade tip of 118 m.

¹ Calculated using the most recent statistics from the Department of Business, Energy and Industrial Strategy (BEIS) showing that annual UK average domestic household consumption is 3,781kWh (RenewableUK, 2018).

- Site: The area within the application boundary within which the proposed Development lies.
- 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. The study area is therefore explained within the approach and method section of the relevant Chapters.

1.3 Purpose of the EIA Report

8. This EIA Report has been prepared in accordance with The Electricity Works (Environmental Impact Assessment) (Scotland) Regulations 2017.
9. 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 2000 and therefore requires to be screened as to whether or not it constitutes EIA development as envisaged by Regulation 8 of the EIA Regulations.
10. It was acknowledged at an early stage in the consideration of the proposed Development that given the nature, location and characteristics of the intended proposed Development that an EIA would be required. It was therefore not considered necessary to seek a screening opinion and this EIA Report is submitted voluntarily as required by Section 3.3.3 of the Scottish Government Energy Consents EIA Guidance (Scottish Government, 2000).
11. Additionally, as the proposed development is partially located within a commercial forestry plantation and would require felling of trees, the assessment also considers the Forestry (Environmental Impact Assessment) (Scotland) Regulations 2017.
12. Regulation 3 of the EIA Regulations prohibits the Scottish Ministers from granting Section 36 consent for EIA development unless they have first taken the environmental information provided in the EIA Report into consideration.
13. 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.
14. This EIA Report presents the findings of the EIA process by describing the proposed Development, the current conditions at the Site and the likely impacts which may result from the proposed Development. Where appropriate, mitigation is proposed, and any residual impacts are reported.

1.4 The Applicant

15. The windfarm is being proposed by ScottishPower Renewables (UK) Ltd (SPR).
16. ScottishPower Renewables is part of the ScottishPower group of companies operating in the UK under the Iberdrola Group, one of the world’s largest integrated utility companies and a world leader in wind energy. ScottishPower now only produces 100 % green electricity – focusing on wind energy, smart grids and driving the change to a cleaner, electric future. The company is investing over £4m every working day in 2019 to make this happen and is committed to speeding up the transition to cleaner electric transport, improving air quality and over time, driving down bills to deliver a better future, quicker for everyone.
17. ScottishPower Renewables is at the forefront of the development of the renewables industry through pioneering ideas, forward thinking and outstanding innovation. Its ambitious growth plans include expansion of its existing onshore wind portfolio, investment in new large scale solar deployment and innovative grid storage systems including batteries. The company is also delivering the Iberdrola Group’s offshore windfarms in the Southern North Sea off East Anglia as part of an international pipeline of projects across Europe and the USA.

18. With over 40 operational windfarms, SPR manages all its sites through its world leading Control Centre at Whitelee Windfarm, near Glasgow.

1.5 EIA project team and competency

19. The EIA team is led by SLR with assistance from specialist consultants.

20. SLR is one of the UK's fastest growing multi-disciplinary environmental consultancies. Within the energy sector, SLR provides a wide range of planning, environmental and technical services relating to the design and development of windfarms and other renewable energy projects. The company becomes involved in all aspects of facility development, from initial concept design, through planning and permitting to the detailed design, construction management and closure stages.

21. SLR is a registered Environmental Impact Assessor, Member of the Institute of Environmental Management and Assessment (IEMA) and holder of the IEMA EIA Quality Mark. The company has significant experience in the preparation of planning applications and undertaking EIA for a wide variety of projects, including renewable energy, minerals, waste and infrastructure developments.

22. Further information on SLR Consulting Limited can be found on its corporate website at www.slrconsulting.com.

23. For this project, SLR is responsible for the following technical disciplines:

- Hydrology, Hydrogeology, Geology and Soils;
- Archaeology and Cultural Heritage;
- Access, Traffic and Transport; and
- Socio-Economics, Recreation and Land-Use.

24. SLR is supported by a number of technical specialists from other organisations:

- Optimised Environments Ltd (OPEN) (Landscape & Visual)*;
- Hoare Lea Acoustics (Noise);
- MacArthur Green (Peat & Ecology);
- Natural Research (Projects) Ltd. (Ornithology); and
- DGA Forestry (Forestry).

*The Landscape & Visual assessment of the proposed Development was commenced by SLR's own technical specialists prior to OPEN taking over mid-way through the design evolution and assessment process.

25. SPR confirm that the specialist organisations, including SLR, that have carried out the EIA and produced the EIA Report have the skills and relevant competency, expertise and qualifications to undertake EIA for the proposed Development. **Table 1.1** demonstrates the relevant competency for each technical discipline covered in this EIA Report.

Discipline	Specialist Assessor	Qualifications	Years of Experience
Renewable Energy and Planning Policy	Alison Sidgwick, SLR Consulting Ltd.	BSoc Sc (Hons), MURP, RTPi	20 years
	Susie Playford, SLR Consulting Ltd.	BSc (Hons), MSc, PIEMA	12 years
Landscape and Visual Amenity	James Welch, OPEN	BA Hons, FLI	32 years
	Stuart Cargill, OPEN	BA Hons, MLA, CMLi	13 years
	Lindsey Guthrie, SLR Consulting Ltd.	MA Hons, MPhil, CMLi	35 years
Ornithology	Fiona Leckie, NRP Ltd.	BSc (Hons)	26 years
Ecology	David MacArthur, MacArthur Green	BSc, MSc	20 years
	Brian Henry, MacArthur	MA, MSc	7 years

	Green		
	Claudia Gebhardt	Dipl.-Biol. (equiv. MSc), MCIEEM	12 years
Soils, Geology and the Water Environment	Gordon Robb, SLR Consulting Ltd.	BSc (Hons), MSc, MBA, C.WEM, FCIWEM	27 years
	Colin Duncan, SLR Consulting Ltd.	BSc (Hons), MSc	37 years
Cultural Heritage and Archaeology	Steve Lancaster, SLR Consulting Ltd.	BA, FSA, MIFA	16 years
Noise	Matthew Cand, Hoare Lea Acoustics	Dipl Eng, PhD, MIOA	12 years
Access, Traffic and Transport	Joanna Read, SLR Consulting Ltd.	BSc, MSc, CMIHT	16 years
Aviation	Anne Mackenzie, ScottishPower Renewables	MSc, BCL, BA (Hons), LLB (Hons)	13 years
Socio-Economics and Land Use	Anne Dugdale, SLR Consulting Ltd.	BSc (Hons), MA, MRTPI	35 years
	Clare Anthony, SLR Consulting Ltd.	BSc	3 years
	Steve Lucas, Development Economics.	MA	27 years
Forestry	Sandy Anderson, DGA Forestry	BSc (Hons), MBA	18 years
	James Anderson, DGA Forestry	BArch, PgD Forestry	7 years
Shadow Flicker	Scott Pritchard, SLR Consulting Ltd.	SVQ, NC, HNC	24 years
Carbon Emissions	Colin Duncan, SLR Consulting Ltd.	BSc (Hons), MSc	37 years
Telecommunications	Alison Sidgwick, SLR Consulting Ltd.	BSoc Sc (Hons), MURP, RTPi	20 years
GIS	Scott Pritchard, SLR Consulting Ltd.	SVQ, NC, HNC	24 years

Table 1.1: EIA team competencies

1.6 Structure of the EIA Report

26. The EIA Report is presented in four volumes as follows:

- Volume 1: Non-Technical Summary (NTS);

The NTS provides a non-technical overview of the EIA Report and is intended for review by the general public. It includes a description of the proposed Development and a summary of the predicted environmental effects.

- Volume 2: Environmental Impact Assessment Report (EIA Report);

27. The EIA Report written text is structured as follows:

- Chapter 1: Introduction;

- Chapter 2: Site Description and Design Evolution;
- Chapter 3: Description of the Development;
- Chapter 4: Renewable Energy and Planning Policy;
- Chapter 5: Environmental Impact Assessment;
- Chapter 6: Scoping and Consultation;
- Chapter 7: Landscape and Visual;
- Chapter 8: Ecology;
- Chapter 9: Ornithology;
- Chapter 10: Hydrology, Hydrogeology, Geology and Soils;
- Chapter 11: Cultural Heritage and Archaeology;
- Chapter 12: Access, Traffic and Transport;
- Chapter 13: Noise;
- Chapter 14: Socio-economics and Land Use;
- Chapter 15: Other Issues; and
- Chapter 16: Schedule of Commitments.

- Volume 3: EIA Report Figures;

- Volume 4: EIA Report Technical Appendices (including Forestry);

28. The technical appendices that are referred to in each Chapter of the EIA Report are compiled separately in Volume 4. They are numbered sequentially for each Chapter in which they are principally referred to.

1.7 Publicity of the EIA Report

1.7.1 Statutory requirements

29. The EIA Report will be publicised in accordance with Part 5 of the 2017 Regulations and the Electricity (Applications for Consent) Regulations 1990 (as amended).

30. A notice will be published as follows:

- on the project website;
- in the Edinburgh Gazette;
- in The Herald;
- in the Galloway Gazette; and
- in the Ayrshire Post (which covers the area in which the proposed development would be located).

1.7.2 Voluntary publicity

31. In addition to the statutory requirements for publicising the EIA Report, SPR has advised the following local Community Councils of the EIA Report being available:

- Colmonell and Lendalfoot Community Council;
- Barrhill Community Council;
- Pinwherry and Pinmore Community Council;
- Ballantrae Community Council;
- New Luce Community Council; and
- Cree Valley Community Council.

32. A hard copy of the EIA Report can be viewed at the following locations:

- Barrhill Memorial Hall, Main Street, Barrhill, KA26 0PP;
- Colmonell CE Centre, Main Street, Colmonell, KA26 0RY;
- Dumfries & Galloway Council HQ, Kirkbank House, English Street, Dumfries, DG1 2HS;
- Scottish Government Library, Victoria Quay, Edinburgh, EH6 6QQ; and
- South Ayrshire Council, Burns House, Burns Statue Square, Ayr, KA7 1UT.

33. A copy of the NTS will be made available for download from the SPR corporate website at:

- https://www.scottishpowerrenewables.com/pages/arcleoch_windfarm_extension.aspx

34. Hard copies of the NTS are available free of charge from:

SLR Consulting Limited
Floor 2, 4/5 Lochside View, Edinburgh Park, Edinburgh, EH12 9DH
Tel: 0131 335 6830

35. Hard copies of the EIA Report may be purchased by arrangement from the above address for £1,000 per copy, or £15 per DVD/USB. Specific sections of the EIA Report are also available on request at appropriate cost. The price of the hard copy reflects the cost of producing all of the Landscape and Visual photographs at the recommended size. As such, a DVD/USB version is recommended.

1.8 References

Scottish Government (2000). Scottish Government Guidance on The Electricity Works (Environmental Impact Assessment) (Scotland) Regulations 2000. Available at: <http://www.gov.scot/Topics/Business-Industry/Energy/Infrastructure/Energy-Consents/Guidance/EIA-Guidance> [Accessed 21st February 2019].

The Electricity Act 1989.

The Electricity Works (Environmental Impact Assessment) (Scotland) Regulations 2017.