



# Chapter 1

## Introduction

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# Chapter 1

## Introduction

### 1.1 Introduction

1. ScottishPower Renewables (UK) Ltd, trading as ScottishPower Renewables, (The Applicant) is applying to the Scottish Government's Energy Consents Unit (ECU) under Section 36 of the Electricity Act 1989 (as amended), seeking consent and deemed planning permission to construct and operate an extension to the operational Harestanes Windfarm in Dumfries and Galloway (hereinafter referred to as the 'Proposed Development'). The Proposed Development is located approximately 13 kilometres (km) north of Dumfries, as shown on **Figure 1.1 Site Location**. This Environmental Impact Assessment (EIA) Report has been prepared in support of the application to the ECU.
2. This chapter provides an introduction and background to the Proposed Development, as well as providing an overview of the purpose of the EIA Report, its structure, the project team producing it, and where further copies of this report can be obtained.

### 1.2 The Applicant

3. 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<sup>1</sup> 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.
4. 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.
5. With over 40 operational windfarms, ScottishPower Renewables manages all its sites through its world leading Control Centre at Whitelee Windfarm, near Glasgow.
6. In addition to the operational Harestanes Windfarm, ScottishPower Renewables currently has three operational windfarms within the Dumfries and Galloway Council; Kilgallioch, Wether Hill and Ewe Hill.

<sup>1</sup> \* between 2018-2022

## 1.3 Background and Site Description

### 1.3.1 Site Description

7. The Proposed Development is located within the Dumfries and Galloway Council area, on land approximately 13km north of Dumfries within the southern extent of the Forest of Ae and immediately north of Ae. **Figure 1.2 Application Boundary** illustrates the planning Application Boundary as well as the terrain and land use of the Site and immediate surrounding area.
8. The area encompassed by the Application Boundary (also referred to as Site Boundary) is hereafter referred to as 'the Site' and covers an area of approximately 1036 hectares (ha). The Site is an existing commercial forest owned and managed by Forestry and Land Scotland (FLS) and is predominantly covered by Sitka spruce plantations. The topography rises to a high point of 344 metres (m) at Knockespen with further high points including Wood Hill to the south and Brownmoor to the north of the Site. The western extent of the Site is characterised by a steep valley through which the Water of Ae runs north to south, whereas the eastern extent of the Site has a gentle sloping relief to a low of approximately 210m. The Forest of Ae hosts one of the 7Stanes mountain biking trail centres and two mountain biking trails are located near to the south west of the Site. There are multiple other forest tracks throughout the Site, including a section of the Romans and Reivers long-distance walking path.
9. The main transport link in the vicinity of the Site is the A701, which is adjacent to the Site access (discussed further in **Chapter 4: Development Description**) to the south east and links to the A74(M) at Beattock approximately 11km north east of the Site. There are also minor roads from the A701 westwards through to Ae and beyond.
10. The closest groups of properties to the Site are Ae approximately 2.2km to the south west and Parkgate approximately 2.6km to the south. In addition, around the south of the Site are several hamlets, dwellings and farmsteads as shown in **Figures 1.1 Site Location** and **1.2 Application Boundary**.
11. The Proposed Development forms an extension to the operational Harestanes Windfarm, located to the north, which has been operational since 2014, consisting of 68 turbines with an electricity generating output of 136 megawatts (MW). The operational Harestanes Windfarm access road will be used to access the Site.

### 1.3.2 The Proposed Development

12. The Proposed Development comprises up to eight turbines, with a blade tip height of up to 200m and rotor diameter of up to 150m, and associated infrastructure. For the purpose of assessment, a currently available turbine model is being used which fits these parameters and has an electricity generating output of around 5.6MW, giving a combined generating output of approximately 45MW. The Proposed Development would contribute towards international and national targets for the generation of renewable energy and reduction in greenhouse gas emissions (further information is provided in **Chapter 13: Other Issues**). The Proposed Development is fully described in **Chapter 4: Development Description** and is shown on **Figure 4.1**.
- ### 1.3.3 Need for Development
13. Onshore windfarm developments are viewed as key contributors to achieving the UK Government's renewable energy targets and the drive to reduce UK carbon emissions in line with current targets. The need for such development is underpinned by the Government's plans to restrict the use of all coal-fired power stations by 2023 and to cease operation by 2025, resulting in the need for over a quarter of the UK's energy generation to be replaced in this period. The UK's climate change ambitions are amongst the highest in Europe and require an 80% reduction in carbon dioxide emissions by 2050.
  14. In 2019, the Scottish Government was the first government in the world to formally declare a climate emergency. As part of the plan to address this, the Scottish Government has an ambitious energy strategy and has set targets to generate the equivalent of 100% of Scotland's electricity demand and 11% of non-electrical heat demand to be generated from renewable sources by 2020 (Annual Energy Statement, 2019). Furthermore, the Climate Change

(Emissions Reduction Targets) (Scotland) Act 2019, through amendments to the Climate Change (Scotland) Act 2009, commits the Scottish Government to achieving 'net zero' emissions by 2045. The interim targets intensify the need to increase the reduction in harmful emissions. This is reflected in the reductions that must be achieved within the current decade. The UK Energy Roadmap and The UK Low Carbon Transition Plan highlight onshore wind as a key contributor to achieving the UK Government's renewable energy targets and transition to a low carbon energy system. Onshore wind is also the cheapest form of low carbon electricity generation in the UK (The Power of Onshore Wind. BVG Associates. June 2018) and is shown to have local and national economic benefits; over the lifetime of the Applicant's eight operational onshore windfarms commissioned in 2016-2017 in south west Scotland<sup>2</sup>, £1,276 million gross value will be added in the UK and £297 million local value will be added (Economic benefits from onshore wind farms. BVG Associates. 2017).

15. The Scottish Government's commitment to 'green recovery' includes plans to "*end our contribution to climate change*". Wind energy would be a key contributor to achieving the aims of a green recovery though the replacement of fossil fuels in electricity production.

## 1.4 Community Benefit and Investment

16. The Applicant is committed to sharing the benefits from its operational windfarms with local communities and has made substantial investment in south west Scotland. Through its established presence in Dumfries and Galloway, ScottishPower Renewables has to-date contributed over £7,800,000 in community benefits. This includes over £2,300,000 paid as part of the operational Harestanes Windfarm, almost £3,500,000 paid as part of the Kilgallioch Windfarm, over £700,000 paid as part of our Wether Hill Windfarm and over £1,000,000 paid in association with the Ewe Hill 6 and Ewe Hill 16 windfarms. Although located out with Dumfries and Galloway Glen App Windfarm (South Ayrshire) has also contributed more than £200,000 to communities in Dumfries and Galloway. These funds contribute to a variety of groups and organisations to assist them in delivering projects which ScottishPower Renewables has identified as having benefit to those living, working or visiting the surrounding area. This includes projects such as installing solar panels for Glencairn Green Bowling, contributing towards the development of Nith Valley Leaf Trust affordable environmentally friendly homes and contributing towards the purchase of a new Galloway Mountain Rescue vehicle.
17. The Applicant will hold discussions with local stakeholders to decide which communities would be appropriate to participate in any benefits delivered from the operational windfarm. This could include a community benefit fund to deliver local initiatives, benefits in kind and the opportunity to invest in the operational windfarm should the community choose to do so.
18. The Applicant is committed to keeping local communities informed as the project progresses and, in line with Scottish Government guidance, will provide information in a timely manner so the communities are able to fully assess the opportunity.
19. The Applicant is committed to maximising employment opportunities for those local to their projects by making sure that local people and businesses have the opportunity to be part of the industry's success. As a major infrastructure development, the Proposed Development has the potential to create employment opportunities. If consent is granted, jobs would be created both during construction and after completion, in support, operation and maintenance activities. Further details on the socio-economic benefits of the Proposed Development are further discussed in **Chapter 12: Socio-economics, Tourism and Recreation**.
20. New development can bring increased opportunities for local companies to gain new business. The Applicant will work with local businesses that are able to provide a variety of skills and services during the construction phase and the operational lifetime of the windfarm extension. This may include services such as ground and road maintenance, catering, building trades and plant hire. The Applicant will host 'Meet the Contractor' events prior to

construction, aimed specifically at small to medium businesses, to provide an opportunity for them to discuss the types of contracts being let during construction and operation.

21. A number of recreational enhancements are also being proposed which include electric vehicle charging points in the Ae Forest carpark; financial support to facilitate the purchase of E bikes for rental at the recreational centre; promotion of new electric bike routes within Forest of Ae; promotion of family friendly / beginner biking routes or horse-riding routes around the proposed windfarm using existing and upgraded forest tracks; provision of a shelter with tools for bike maintenance and a place to shelter / picnic area within the windfarm; provision of information boards regarding the Proposed Development; and support for the employment of seasonal ranger to assist with the management of core footpaths in the area. Some of the above are subject to agreement with third parties.

## 1.5 Purpose of the EIA Report

22. This EIA Report has been prepared in accordance with The Electricity Works (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. The EIA process is reported in this EIA Report, which identifies the methodologies used to assess the environmental effects predicted to result from the construction and operation of the Proposed Development. Where appropriate, it also sets out mitigation measures designed to prevent, reduce and, if possible, offset potential significant adverse environmental effects. An assessment of residual effects, those expected to remain following implementation of mitigation measures, is also presented.
23. The main findings and conclusions of the EIA are summarised in a Non-Technical Summary (NTS), as required by the EIA Regulations. The NTS is a stand-alone document, summarising the key findings of the EIA in easily accessible, non-technical language, ensuring everyone with an interest in the Proposed Development can understand and access information on its predicted environmental effects.
24. This EIA Report and NTS, comprise documentation in support of an application for consent under the terms of Section 36 of the Electricity Act 1989 (as amended) and for a direction for planning permission under Section 57 of the Town and Country Planning (Scotland) Act 1997, submitted to the ECU.

## 1.6 Structure of the EIA Report

25. This EIA Report is split into four volumes, with the NTS forming a separate document.

**Volume 1: Main Report** is structured as follows:

- **Chapter 1: Introduction**
- **Chapter 2: EIA Process and Methodology**
- **Chapter 3: Site Selection and Design**
- **Chapter 4: Development Description**
- **Chapter 5: Landscape and Visual**
- **Chapter 6: Hydrology, Hydrogeology, Geology and Soils**
- **Chapter 7: Ecology and Biodiversity**
- **Chapter 8: Ornithology**
- **Chapter 9: Noise**
- **Chapter 10: Archaeology and Cultural Heritage**
- **Chapter 11: Access, Traffic and Transport**

<sup>2</sup> Black Law Extension (a), Black Law Extension (b), Dersalloch, Ewe Hill 1, Ewe Hill 2, Glen App, Hare Hill Extension, Killgallioch.



- **Chapter 12: Socio-economics, Tourism and Recreation**
- **Chapter 13: Other Issues** (Forestry and Land Use, Aviation and Radar, Carbon Balance, Telecommunications, Shadow Flicker, Eskdalemuir Seismic Array, Cumulative Effect Interactions)
- **Chapter 14: Summary of Residual Effects**

**Volume 2: Figures** contains the EIA Report figures except for the Landscape and Visual visualisations.

**Volume 3: Visualisations** contains the Landscape and Visual visualisations.

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

## 1.7 EIA Project Team and Competency

26. In line with Regulation 5 (5) of the EIA Regulations, the EIA Report and technical assessments which inform it have been undertaken by a suitably qualified project team. **Table 1.1** presents the EIA Project Team, their associated roles and expertise. The EIA Project Team are responsible for the scope, content and assessment of likely significant effects of their respective technical chapters (where relevant).
27. WSP is responsible for the coordination, compilation and procedural review of the EIA Report. WSP is registered under the EIA Quality Mark operated by the Institute of Environmental Management and Assessment (IEMA) which recognises our commitment to excellence in EIA activities.

Organisation	Project Role	Technical Lead	Competency
WSP	EIA Project Management	Sarah McMonagle	MSc, MIEMA, MIEEnvS, CEnv, APM PMQ and 16 years' experience.
WSP	Landscape and Visual	Joanna Patton	MA, CMLI and 15 years' experience.
Stephenson Halliday	Landscape and Visual Technical Reviewer	Mary Fisher	MA, CMLI and 20 years' experience.
WSP	Hydrology, Hydrogeology, Geology and Soils	Phil Jenn	BSc (Hons) and MSc, MCIWEM and 8 years' experience.
WSP	Ecology and Biodiversity	Greg Chamberlain	BSc (Hons) and MSc, MCIEEM, CEnv and 15 years' experience.
WSP	Ornithology	Thomas Goater	BSc (Hons) and MSc, MCIEEM and 13 years' experience.
WSP	Noise	James Powlson	BA (Hons), MIOA and 20 years' experience.
WSP	Archaeology and Cultural Heritage	Kevin Mooney	BSc, MCIfA, FSA Scot and 15 years' experience.
WSP	Access, Traffic and Transport	Stephen Cochrane	BSc (Hons), HND Civil Engineering, MCIHT and 9 years' experience.
WSP	Socio-economics, Tourism and Recreation	Lowri McCann	BSc (Hons), MSc, PIEMA and 6 years' experience.
WSP	Engineering Design / Shadow Flicker	Richard Hunter	BSc (Hons), APM PMQ and 8 years' experience

Organisation	Project Role	Technical Lead	Competency
WSP	Engineering Design / Shadow Flicker	Kimberly Dewhirst	MA Meng (Hons), CEng, MIMechE and 11 years' experience.
DGA Forestry LLP	Forestry	Sandy Anderson	BSc (Hons), MBA, MICFor and over 40 years' experience
DGA Forestry LLP	Forestry	James Anderson	BArch   DipArch   PgD and 19 years' experience
Cyrrus Limited	Aviation and Radar	Simon McPherson	BEng and over 20 years' experience

Table 1.1: EIA Project Team – Competent Experts

## 1.8 Availability of the EIA Report

28. In accordance with the EIA Regulations Section 18, copies of the EIA Report will be available for inspection by the public, notice of which will be published in the Edinburgh Gazette, and in a relevant newspaper in the locality of the Proposed Development.
29. Copies of the EIA Report are available by request from:  
  
Harestanes South Windfarm Extension Project Team  
ScottishPower Renewables  
9th Floor ScottishPower House  
320 St Vincent Street,  
Glasgow  
G2 5AD  
  
Email: [harestanessouthwindfarm@scottishpower.com](mailto:harestanessouthwindfarm@scottishpower.com)  
  
Website: [https://www.scottishpowerrenewables.com/pages/harestanes\\_south\\_windfarm\\_extension.aspx](https://www.scottishpowerrenewables.com/pages/harestanes_south_windfarm_extension.aspx)
30. Electronic copies of the EIA Report can be accessed at <http://www.energyconsents.scot/>.
31. Hard copies of the NTS are available free of charge from the Applicant. The cost of a hard copy of the EIA Report Volumes One to Four is £1,000. In addition, all documents are available (as a PDF for screen viewing) on a DVD for £15. The price of a hard copy reflects the cost of producing all of the Landscape and Visual photographs at the recommended size. As such, a DVD version is recommended.

### 1.8.1 Representations to the Application

32. Any representations to the application should be made directly to the Scottish Government via the Energy Consents Unit website at [www.energyconsents.scot/Register.aspx](http://www.energyconsents.scot/Register.aspx) or by email to the Scottish Government, Energy Consents Unit mailbox at [representations@gov.scot](mailto:representations@gov.scot).
33. Representations can also be sent by post to:  
  
Scottish Government  
Energy Consents Unit  
4<sup>th</sup> Floor  
5 Atlantic Quay  
150 Broomielaw  
Glasgow  
G2 8LU

## 1.9 Key Terms

34. To ensure clarity and consistency throughout the EIA Report, the following terms are used:

- **Proposed Development** – The proposed Harestanes South Windfarm Extension, an extension to the operational Harestanes Windfarm.
- **Operational Harestanes Windfarm** – The existing Harestanes Windfarm, operational since 2014 and consisting of 68 turbines with an electricity generating output of 136MW.
- **The Application Boundary** – the extent of the area relating to the application, denoted as the ‘redline boundary’. Also referred to as the Site Boundary.
- **The Site** – the area within the Application Boundary within which the Proposed Development lies.
- **Study Area** – The area for which the respective assessment or study is concerned.
- **The Applicant** – ScottishPower Renewables (UK) Ltd.

## 1.10 References

BVG Associates (2017). Economic benefits from onshore wind farms. ScottishPower Renewables, Glasgow.

BVG Associates (2018). The Power of Onshore Wind. <https://bvgassociates.com/the-power-of-onshore-wind/>.

Scottish Government (1997). Town and Country Planning (Scotland) Act 1997. Available online at: <https://www.legislation.gov.uk/ukpga/1997/8/contents>.

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Scottish Government (2017). Electricity Works Act (Environmental Impact Assessment) (Scotland) Regulations 2017. Available online at: <http://www.legislation.gov.uk/ssi/2017/101/contents/made>.

Scottish Government (2019a). Climate Change (Emissions Reduction Targets) (Scotland) Act 2019. Available online at: <http://www.legislation.gov.uk/asp/2019/15/enacted>.

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UK Government (2013). The UK Renewable Energy Roadmap. Available online at: <https://www.gov.uk/government/collections/uk-renewable-energy-roadmap>.

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