



# Chapter 1

## Introduction

# Table of contents

1.1	Introduction	3
1.2	The Applicant	3
1.3	Background and Site Description	3
1.3.1	Site Description	3
1.3.2	The Proposed Development	4
1.3.3	Need for Development	4
1.4	Community Benefit and Investment	4
1.5	Purpose of the EIAR	5
1.6	Structure of the EIAR	5
1.7	EIA Project Team and Competency	5
1.8	Availability of the EIAR	6
1.8.1	Representations to the Application	6
1.9	Key Terms	6
1.10	References	6

# List of Appendices

Appendix 1.1	Community Investment Leaflet
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# List of Figures

Figure 1.1 Site Location  
Figure 1.2 Site Boundary



# Chapter 1

## 1 Introduction

### 1.1 Introduction

1. ScottishPower Renewables (UK) Ltd, trading as ScottishPower Renewables ('The Applicant') is applying to the Scottish Ministers under Section 36 of the Electricity Act 1989 (as amended), seeking consent and deemed planning permission to construct and operate Carrick Windfarm in South Ayrshire (hereinafter referred to as the 'Proposed Development'). The Proposed Development is located at a site centred on British National Grid (BNG) reference BNG (237186, 598381), as shown on **Figure 1.1 Site Location**. This Environmental Impact Assessment Report (EIAR) has been prepared in support of the application to the Energy Consents Unit (ECU).
  2. This chapter provides an introduction and background to the Proposed Development, as well as providing an overview of the purpose of the EIAR, its structure, the project team producing it, and where further copies of this report can be obtained.
- ### 1.2 The Applicant
3. The application for consent for the Proposed Development will be submitted by ScottishPower Renewables, which is part of the ScottishPower group of companies operating in the UK under the Iberdrola Group. The Iberdrola Group is one of the world's largest integrated utility companies and a world leader in wind energy. ScottishPower, the first integrated energy utility in the UK to generate 100% green energy, is already investing a total of £10bn over five years - £6million Renewables 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 £4 million every working day in 2020 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 for everyone.
  4. SPR 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, SPR manages all its sites through its world leading Control Centre at Whitelee Windfarm, near Glasgow.
  6. SPR has made substantial investment in south west Scotland and currently owns and operates five windfarms in the South Ayrshire region (Arecleoch, Dersalloch, Glen App, Kilgallioch and Mark Hill) as well as a number in the

<sup>1</sup> Timber Transport Forum (2020). Available at: <https://timbertf.maps.arcgis.com/apps/webappviewer/index.html?id=4a23d4910e604b71872956441113c83c>

<sup>2</sup> 'Consultation route' are defined as key routes extract timber. 'Severely restricted routes' are defined as routes which are not normally used for timber transport in their present condition. 'Excluded routes' are defined as routes which should not be used for timber extraction in their present condition.

<sup>3</sup> SNH (2017). Merrick Wild Land Area. Available at: <https://www.nature.scot/sites/default/files/2017-11/Consultation-response-Description-of-Wild-Land-Merrick-July-2016-01.pdf>.

nearby Dumfries and Galloway region. SPR currently operates in excess of 2 gigawatt (GW) of windfarm generating capacity in Scotland.

## 1.3 Background and Site Description

### 1.3.1 Site Description

7. The Proposed Development is located within Carrick Forest in the South Ayrshire Council administrative area. Carrick Forest is a commercial forest which is part of the National Forest Estate and is owned and managed by Forestry and Land Scotland (FLS).
8. The area encompassed by the Site Boundary is hereinafter referred to as 'the Site'. The Site occupies an area of approximately 827.28hectares (ha) and the land use is predominantly commercial forest and rough grazing. As with most commercial forestry sites there is a comprehensive network of internal forestry roads connecting to the wider public road network on the eastern boundary of the Site. There are a number of roads surrounding the Site used for the transport of timber but have been identified by the Timber Transport Forum<sup>1</sup> as 'consultation routes', 'severely restricted routes' or 'excluded routes'<sup>2</sup>. The surrounding area is rural with land largely being used for forestry, recreation and agriculture. **Figure 1.2 Site Boundary** represents the area for which the Applicant is seeking consent as well as the terrain and land use of the Site and immediate surrounding area.
9. The Site lies between 243 – 430 metres (m) above ordnance datum (AOD). The highest point is Garleffin Fell, the summit of which lies within the western part of the Site (430m AOD).
10. A Wild Land Area (WLA)<sup>3</sup> lies approximately three kilometres (km) to the south east of the Site. It consists of a range of steep hills, including Merrick which at 843m is the highest mainland hill in the south of Scotland. Together, with several other hills over 600m in height, these steep hills form a ridge with spurs between the tops of Shalloch on Minnoch and Benyellary, collectively known as 'The Range of the Awful Hand'.
11. As shown on **Figure 3.1 Environmental Designations**, a 275 kilovolt (kV) overhead ScottishPower transmission line passes through the south eastern corner of the Site. There is also a Scottish Water pipeline which runs directly adjacent to the south eastern edge of the Site, the pipeline starts around Aldinna Burn and connects to Loch Bradan, a public water supply to the east of the Site.
12. The Site lies within the north of Galloway Forest Park<sup>4</sup>, which provides a range of recreational opportunities and which includes the Galloway Dark Skies Park<sup>5</sup>. Linn Loch, owned by a third party, is located directly to the south of the Site.
13. The majority of the Site is within the Palmullan Burn catchment (a sub-catchment of the Water of Girvan), encompassing much of the central and western parts of the Site. Tairlaw Burn catchment, another sub-catchment of the Water of Girvan encompasses the north-eastern part of the Site. The southern part of the Site is within the River Stinchar catchment with the south-western corner sitting within the Dalquhairn Burn subcatchment. There are a number of small watercourses which are situated within or border the Site. Linn Loch is also located directly to the south of the Site (outwith the Site Boundary). Peat is notable in open areas, such as forestry rides, clearings and in the vicinity of surface water bodies. FLS undertook bog restoration (The Eldrick Hill Blanket Bog Restoration) to the south of the Site in 2014 which was funded by the Peatland Action Fund.

<sup>4</sup> Galloway Forest Park is a forest park operated by FLS. Available at: <https://forestryandland.gov.scot/visit/forest-parks/galloway-forest-park>.

<sup>5</sup> Dark Sky Park – a place with exceptionally dark night skies and a place where people have committed to keeping these

skies dark, by controlling light pollution. Available at: <https://forestryandland.gov.scot/visit/forest-parks/galloway-forestpark/dark-skies>.

14. The Site is within the United Nations Educational, Scientific and Cultural Organisation (UNESCO) Galloway and Southern Ayrshire Biosphere (GSAB) transition area and buffer area but it is out with the core area. The designated site of Auchalton Site of Special Scientific Interest (SSSI), cited for lowland grassland is approximately 4km north of the Site. Knockgardner SSSI (approximately 4km north of the Site) and Blair Farm SSSI (approximately 3km north west of the Site) are cited for geological features.
15. There are no residential properties within the Site, however there are a number of residential properties in proximity to the Site. The nearest settlement is Straiton, approximately 6km to the north of the Site.

16. There are two core paths which cross the Site, SA 47 and SA 49 (which crosses the very edge of the Site). Old road through Straiton Heritage Path passes through the north west part of the Site. The Scottish Hill Track also passes through the north western and south eastern parts of the Site. These are shown on **Figure 12.1 Socio-economics, Tourism and Recreation Receptors**.

### 1.3.2 The Proposed Development

17. The Proposed Development comprises up to 13 wind turbines with a blade tip height of up to 200m, an Energy Storage Facility (i.e. battery)<sup>6</sup> and associated infrastructure. For the purpose of the assessments, currently available wind turbine models are being considered which fit this height parameter and which have an assumed electricity generating capacity of around 6.6MW, giving a total generating capacity for the Site of around 86MW. The Energy Storage Facility will have a storage capacity of around 20MW and will provide flexible management of energy delivery and ancillary support services to the national grid. 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 Site Layout**.
18. The Proposed Development will require a new grid connection. The grid connection does not form part of the Proposed Development and is not the subject of the current application to which this EIAR relates. The grid connection will be developed by SPR, the Transmission System Operator, and is likely to be subject to consideration under a separate consent under section 37 of the Electricity Act 1989.
19. Road upgrade works will be required along the C46W in order to accommodate Abnormal loads during the construction phase of the Proposed Development. This work will be subject to a separate consent from the Proposed Development and is not the subject of the current application to which this EIAR relates.

### 1.3.3 Need for Development

20. 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 with a target of 'net zero' emissions by 2050.
21. 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 50% of Scotland's overall energy consumption from renewable sources by 2030 and makes a commitment to securing between 8-12 GW of installed onshore wind in the same timeframe. (Greener, Fairer Scotland, 2021). Furthermore, the Climate Change (Emissions Reduction Targets) (Scotland) Act 2019 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 have to 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 (BVG Associates,

<sup>6</sup> This is subject to landowner agreement.

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>7</sup>, £1.276 million gross value will be added in the UK and £297 million local value will be added (BVG Associates, 2017).

22. Scotland's Fourth National Planning Framework (NPF4) draft: consultation (November 2021) sets out the Scottish Governments plan by 2050 and will aim to actively enable renewable energy, supporting repowering of existing wind farms and expansion of the grid.
23. The Scottish Government's Onshore wind - policy statement refresh 2021: consultative draft (October 2021) demonstrates the ambition for an additional 8 - 12 Gigawatts (GW) of installed onshore wind capacity in Scotland by 2030.

## 1.4 Community Benefit and Investment

24. The Applicant is committed to offering a package of community benefits to local communities that could include the opportunity for community benefit and to invest in the operational windfarm. The Applicant has already shared initial information with the community about an opportunity to invest and has provided an introductory leaflet which outlines a potential investment structure. See **Appendix 1.1 Community Investment Leaflet** for further details. To date, the Applicant has voluntarily contributed over £8 million in community benefit funding to South Ayrshire communities. A wide range of local projects and community initiatives have been supported by the funds including:
  - £180,000 towards outdoor learning activities for school pupils across Carrick;
  - £188,000 towards Net Zero initiatives including the installation of insulation, a biomass boiler, double glazing and other energy efficiency measures in a number of community halls;
  - £230,000 towards transport initiatives including the purchase of a community minibus, contributions towards a community rail partnership and a patient transport scheme to assist with rural connectivity and improve accessibility;
  - £252,000 towards the purchase, upkeep, maintenance and improvement of facilities at community halls; and
  - £132,000 towards COVID-19 initiatives to provide a counselling and wellbeing helpline for those self-isolating and to provide personal protective equipment (PPE) and vouchers to purchase essential items in local shops during lockdown.
25. The Applicant will hold discussions with local stakeholders and FLS to decide which communities would be appropriate to participate in any opportunity to invest. This could include a community fund to deliver local initiatives, benefits in kind and the opportunity to invest in the operational windfarm should the community choose to do so.
26. 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.
27. It is expected that any proposed income streams would provide a long-term, flexible revenue which could be used to support community projects within South Ayrshire. A range of options would be available to local communities who would have the flexibility to be able to choose how the money is spent and prioritise it on the things which matter most to them.
28. The Applicant is committed to maximising employment opportunities for those local to their projects by making sure that local people and businesses have the opportunities 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, and in support of, operation

<sup>7</sup> Black Law Extension (a), Black Law Extension (b), Dersalloch, Ewe Hill 1, Ewe Hill 2, Glen App, Hare Hill Extension, Killgallioch

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**.

29. 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. 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.

## 1.5 Purpose of the EIAR

30. This EIAR has been prepared in accordance with The Electricity Works (Environmental Impact Assessment) (EIA) (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 EIAR, 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.
31. 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.
32. This EIAR and NTS, comprise documentation to accompany the 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 EIAR

33. This EIAR 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: Traffic and Transport;**
- **Chapter 12: Socio-economics, Tourism and Recreation;**
- **Chapter 13: Other Issues** (Forestry and Land Use, Aviation and Radar, Climate and Carbon Balance, Telecommunications, Shadow Flicker); and
- **Chapter 14: Summary of Residual Effects.**

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

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

**Volume 4: 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 EIAR.

## 1.7 EIA Project Team and Competency

34. In line with Regulation 5 (5) of the EIA Regulations, the EIAR 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).
35. WSP is responsible for the coordination, compilation and procedural review of the EIAR. 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	Corey Simpson	BA (Hons), 13 years' experience.
WSP	Landscape and Visual	Joanna Patton	MA, CMLi and 16 years' experience.
WSP	Hydrology, Hydrogeology, Geology and Soils	Phil Jenn	BSc (Hons) and MSc, MCIWEM and 9 years' experience.
WSP	Ecology and Biodiversity	Thomas Goater	BSc (Hons), MSc, MCIEEM and 14 years' experience.
Arcus	Ornithology	Nicholas Wright Lisette Coiffait	BSc (Hons), MRes, CEnv, MCIEEM and 12 years' experience. BSc (Hons), PhD, MCIEEM and 11 years' experience.
Gavia Environmental	Bats	Alison Hannah	BSc (Hons), PhD, MCIEEM, licensed bat woker and over 20 years' experience.
WSP	Noise	James Powlson	BSc (Hons), MIOA and 20 years' experience.
WSP	Archaeology and Cultural Heritage	Kevin Mooney	BSc, MCIfA, FSA Scot and 16 years' experience.
WSP	Access, Traffic and Transport	Stephen Cochrane	BSc (Hons), HND Civil Engineering, MCIHT and 10 years' experience.
WSP	Socio-economics, Tourism and Recreation	Lowri McCann	BSc (Hons), MSc, IEMA and 4 years' experience.
WSP	Town Planning	Zoe Wilkinson	BA (Hons), RTPI and 13 years' experience.

Organisation	Project Role	Technical Lead	Competency
WSP	Engineering Design	Richard Hunter	BSc (Hons), APM PMQ and 9 years' experience.
DGA Forestry LLP	Forestry	James Anderson	MSc, over 10 years' experience.
Cyrrus Limited	Aviation and Radar	John van Hoogstraten	MBCI, CBCP, SIIRSM and over 30 years' experience.

Table 1.1: EIA Team – Competent Experts

## 1.8 Availability of the EIAR

36. Due to COVID-19, the EIA Regulations have been temporarily modified and adjustments made as detailed in *The Electricity Works (Miscellaneous Temporary Modifications) (Coronavirus) (Scotland) Regulations 2020*, which will be in force until 31<sup>st</sup> March 2022. The requirement for the EIAR to be physically available for inspection by the public at a named place has been removed as part of these temporary modifications. Therefore, public viewing of the EIAR will take place online, with an electronic copy of the EIAR and other application documents being made available at the links provided below:

SPR Website: <http://www.scottishpowerrenewables.com/carrickwindfarm>

ECU Website: <http://www.energyconsents.scot/>

37. Copies of the EIAR are also available by request from:

Carrick Windfarm Project Team  
ScottishPower Renewables  
9th Floor ScottishPower House  
320 St Vincent Street  
Glasgow  
G2 5AD

Email: [carrickwindfarm@scottishpower.com](mailto:carrickwindfarm@scottishpower.com)

38. Hard copies of the Non-Technical Summary (NTS) are available free of charge, and a limited number of hard copies of the EIAR Volumes One to Four are available at a cost of £1,000 per copy. The price of a hard copy reflects the cost of producing all of the Landscape and Visual photographs at the recommended size.
39. Alternatively, a DVD or USB memory stick containing PDF files of the EIAR are available for £15 per item. The same PDF files can also be downloaded for free from the Carrick Windfarm project website detailed above.

### 1.8.1 Representations to the Application

40. Any representations to the application should be made directly to the Scottish Government via the ECU website at: <http://www.energyconsents.scot/register.aspx> or by email to the Scottish Government, ECU mailbox at [representations@gov.scot](mailto:representations@gov.scot).
41. Representations can also be sent by post to:

Scottish Government  
Energy Consents Unit  
5 Atlantic Quay  
150 Broomielaw

Glasgow  
G2 8LU

## 1.9 Key Terms

42. To ensure clarity and consistency throughout the EIAR, the following terms are used:

- **Proposed Development** – The proposed Carrick Windfarm and Energy Storage Facility (i.e. battery).
- **the Site Boundary** – The extent of the area relating to the application.
- **the Site** – The area within the Site 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. Available online at: <https://bvgassociates.com/the-power-of-onshore-wind/>.

Scottish Government (2021). Scotland 2045 – fourth National Planning Framework – draft: consultation. Available: <https://www.gov.scot/publications/scotland-2045-fourth-national-planning-framework-draft/>  
Scottish Government (1997). Town and Country Planning (Scotland) Act 1997. Available online at: <https://www.legislation.gov.uk/ukpga/1997/8/contents>.

Scottish Government (2009). Climate Change (Scotland) Act 2009. Available online at: [http://www.legislation.gov.uk/asp/2009/12/pdfs/asp\\_20090012\\_en.pdf](http://www.legislation.gov.uk/asp/2009/12/pdfs/asp_20090012_en.pdf).

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>.

Scottish Government (2020). Electricity Works Act (Miscellaneous Temporary Modifications) (Coronavirus) (Scotland) Regulations 2020. Available online at: <https://www.legislation.gov.uk/ssi/2020/123/contents/made>

Scottish Government (2021). A Fairer, Greener Scotland. Programme for Government 2021-22.

UK Government (1989). Electricity Act 1989 (as amended). Available online at: <https://www.legislation.gov.uk/ukpga/1989/29/introduction?view=extent>.

UK Government (2009). The UK Low Carbon Transition Plan, Available online at: [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/228752/9780108508394.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/228752/9780108508394.pdf).

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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