

Harestanes West

Windfarm

**Environmental Impact Assessment
Report**

Volume 2

Chapter 1: Introduction

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Abbreviations

DGC	Dumfries and Galloway Council
ECU	Energy Consents Unit
EIA	Environmental Impact Assessment
EIA Report	Environmental Impact Assessment Report
FLS	Forestry and Land Scotland
km	Kilometres
GW	Gigawatts
IEMA	Institute of Environmental Management and Assessment
m	metres
MW	Megawatts
NTS	Non-Technical Summary
RSK	RSK Environment Limited
SCCP	Scottish Climate Change Plan
SPR	ScottishPower Renewables
UK	United Kingdom



1. Introduction

1.1. Executive Summary

1. The UK and Scottish governments have declared a climate emergency and set ambitious climate change targets with a net zero CO₂ target for 2045 in Scotland and an interim target of 75% reduction in emissions by 2030. ScottishPower Renewables (SPR) is helping to lead the fight against climate change by developing renewable energy projects such as this fully integrated renewable scheme known as Harestanes West Windfarm (hereafter the 'proposed Development').
2. ScottishPower Renewables (hereafter 'the Applicant') 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.
3. The proposed Development is situated north-west of the village of Ae, approximately 1.3 kilometres (km) to the Site and 2.2 km to the nearest proposed turbine, and approximately 13 km north of Dumfries. It would comprise up to 12 wind turbines, with associated infrastructure. It would have a generating capacity in excess of 50 MW.
4. The Applicant intends to submit an application for the proposed Development under Section 36 of the 1989 Electricity Act. To inform the application, the Applicant has undertaken an Environmental Impact Assessment (EIA) and produced its findings in this EIA Report. The EIA Report informs readers of the nature of the proposed Development, and likely Significant environmental effects and measures proposed to protect the environment, during site preparation, construction, and operation.
5. The EIA Report has been prepared by RSK Environment Limited (RSK) with assistance from the following organisations:
 - Stephenson Haliday (Renewable Energy and Planning Policy, Landscape and Visual Assessment)
 - Hayes McKenzie (Noise and Vibration);
 - WSP (Ornithology);
 - Pager Power (Telecommunications);
 - Cyrrus (Aviation and Radar) and
 - Scurrah Associates (Forestry).
6. BiGGAR Economics has also prepared a Socio-Economics and Tourism report which will accompany the application for consent;
7. The EIA Report is being made available to local communities for their review and comment as part of the application process for consent.

1.2. Introduction

8. ScottishPower Renewables (UK) Limited (SPR) is applying for consent to Scottish Ministers under Section 36 of the Electricity Act 1989 (as amended), seeking consent and deemed



planning permission to construct and operate the proposed Harestanes West Windfarm (hereafter referred to as the ‘proposed Development’). This Environmental Impact Assessment (EIA) Report has been prepared in support of this application for consent.

9. This Chapter introduces the proposed Development and the need for the development, as well as providing an overview of the purpose of the EIA Report, its structure and technical experts who prepared it. It also identifies where copies of this EIA Report can be viewed and obtained if required.
10. This Chapter of the EIA Report is supported by the following figures provided in **Volume 3: EIA Report Figures**:
 - Figure 1.1: Site Context;
 - Figure 1.2: Application Boundary;
 - Figure 1.3: Site Aerial Context; and
 - Figure 1.4: Site Boundaries.

1.3. Key Terms

11. To ensure clarity in the EIA, the following terms and descriptions presented in **Table 1.1** below are used.

Table 1.1 Key terms and descriptions

Term	Description
access track to the turbine area	The proposed access track leading from the A701 public road to the turbine area within the Site.
Application Boundary	The red line planning boundary of the proposed Development site as shown on the site location plan. The Application Boundary encompasses the proposed wind turbines and associated infrastructure as part of the proposed Development.
proposed Development	The proposed Development refers to all components of the Harestanes West Windfarm. The proposed Development, 12 wind turbines, six with a maximum height of 220 m and six with a maximum height of 200 m, with associated infrastructure, with an installed capacity of approximately 84 MW.
Site	The Site refers to the area defined by 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 (Chapters 7 to 15)
turbine area	The portion of the Site within the Application Boundary in which the proposed Development turbines are located.

1.4. The Applicant

12. Harestanes West Windfarm is being proposed by SPR (hereafter ‘the Applicant’).
13. SPR 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 only produces 100% green electricity – focusing on wind



energy, smart grids and driving the change to a cleaner, electric future. The company has committed to investing over £8m every working day to make this happen, and to speed up the transition to cleaner electric transport, improving air quality and over time, driving down bills to deliver a better future, quicker for everyone. 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.

14. With over 40 operational windfarms, ScottishPower Renewables manages all its sites through its world leading Control Centre at Whitelee Windfarm, near Glasgow.
15. The proposed Development is a result of SPR's partnership with Forestry and Land Scotland (FLS), where SPR was awarded exclusive rights to investigate the feasibility of onshore renewable energy projects within the National Forest Estate in the west of Scotland.
16. SPR is already well established in the west of Scotland and currently owns and operates 4 onshore windfarms in the Dumfries & Galloway region (Kilgallioch, Harestanes, Ewe Hill and Wether Hill). SPR currently operate in excess of 3 gigawatts (GW) of windfarm generating capacity in Scotland.

1.5. Background and Description

1.5.1. Site Description

17. The area within the Application Boundary, hereafter referred to as 'the Site' is situated north-west of the village of Ae, approximately 1.3 km to the Site, 2.2 km to the nearest proposed turbine, and approximately 13 km north of Dumfries., entirely within the Dumfries and Galloway administrative area. The Site location is shown in **Figure 1.1** and the Application Boundary covers the area shown on **Figure 1.2**. Further context of the site is provided by **Figures 1.2 and 1.3**.
18. The Site is comprised of two principal components. The main component is described as the 'turbine area', and comprises the proposed turbines, crane hardstandings, substation, meteorological mast, network of connecting tracks and associated infrastructure. The centre of the turbine area is at NX 95993 91814. The 'access track to the turbine area' consists of the proposed access track leading from the A701 public road to the turbine area within the Site. Separate to these, there is also a proposed area for habitat improvement located to the east of the access track to the turbine area. The turbine area and access track to the turbine area are shown in **Figure 1.4**.
19. The turbine area lies to the west of the Water of Ae and the Windy Hill Burn runs through the centre of the turbine area from north-west to south-east. The turbine area is made up of undulating hills that form part of the upland plateau or range of hills between Annandale to the east and Nithsdale to the West.



1.5.2. The Proposed Development

20. The proposed Development comprises up to 12 wind turbines, six with a maximum tip height of 220 metres (m) and six with a maximum tip height of 200 m, with associated ancillary infrastructure.
21. It is expected that each wind turbine would have a rated capacity of around 7 MW giving a total installed capacity of around 84 MW.
22. The proposed Development is described in further detail in **Chapter 3: Proposed Development**.

1.5.3. Need for Development

23. The UK and Scotland's current climate change ambitions are amongst the highest in Europe. The Scottish Government declared a climate emergency in May 2019.
24. The UK government set a net zero CO₂ emissions target by 2050 under The Climate Change Act 2008 (2050 Target Amendment) Order 2019. In Scotland, The Climate Change (Emissions Reduction Targets) (Scotland) Act 2019, which amended the Climate Change (Scotland) Act 2009, sets out a legally binding net zero target by 2045, with interim targets in 2020, 2030 and 2040 alongside annual targets. The Scottish Climate Change Plan (SCCP) (2020) includes a target of 50% of Scotland's energy needs across heat, transport and electricity demand to be met by renewable energy in 2032. The SCCP acknowledges that the goal for 100% of Scotland's electricity to be generated by renewables by 2020 has been met; however, if Scotland is to continue to decarbonise its energy usage and meet the 2032 target, then there will be increasing demand for electricity from renewable sources, and it is therefore important to accelerate growth in the renewable energy sector. The Scottish Government's Onshore Wind Policy Statement (OWPS) (December 2022) further reinforced the importance of rapid deployment of wind energy projects to just transition to Net Zero.
25. In light of the ambitious targets set by the UK and Scottish Government, the Dumfries and Galloway Council (DGC) set out its climate change actions in the Dumfries and Galloway Council Climate Emergency Declaration. The key actions detailed in the plan include:
 - Seek to achieve a regional net zero carbon status by the year 2025, and wherever possible embrace opportunities to accelerate this target date;
 - Embrace innovative measures and respond as a priority to technological advances which can reduce the region's impact on climate change; and
 - Work closely with the public and private sector organisation and within the community to achieve carbon reduction outcomes and will seek to identify and share best practice.
26. The Applicant is leading the UK in the operation and development of renewable technologies and fully supports the fight against climate change, and therefore proposes to develop Harestanes West Windfarm within the Forest Estate of Ae in the Dumfries DGC administrative area. This would be a fully integrated renewable energy solution in direct response to meeting national and international climate change targets. The proposed Development would be able to regulate output and provide clean power to people's homes when they need it most and would provide a state of the art development for this



area of the DGC. As well as contributing to targets for Renewable Energy, the proposed Development would provide opportunities for community investment and create further economic benefits including employment opportunities, in the local area.

27. The Applicant has to date contributed more than £65 million in benefit funds to support initiatives and projects for those communities local to their onshore windfarm sites, with over £16 million of this going directly to DGC communities. Further information on the need for and benefits of the proposed Development are provided in **Chapter 14: Other Issues** and the **Planning Statement** which accompanies this application.

1.6. Purpose of the EIA Report

28. EIA is a process for identifying the likely consequences on the existing biological, physical and human environment arising from development progression.
29. The process is undertaken to ensure that the environmental effects of certain types of development proposal are fully investigated, understood and taken account of in the consenting and authorisation process.
30. This EIA Report has been prepared in accordance with The Electricity Works (Environmental Impact Assessment) (Scotland) Regulations 2017 (the EIA Regulations). Additionally, as the proposed Development is located within a commercial forest and would require some felling of trees, the assessment also considers the Forestry (Environmental Impact Assessment) (Scotland) Regulations 2017.
31. Under the terms of the EIA Regulations, 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, meaning that an EIA will be required if it is deemed the development is likely to have Significant effects on the environment by virtue of factors such as its nature, size and location. There are also provisions under the EIA Regulations that facilitate the definition of the scope of the EIA, in consultation with Stakeholders. Such provisions are not, however, mandatory. In light of comments received in the scoping responses and after subsequent design iterations, further consultation was arranged with key consultees to address concerns and agree on an appropriate assessment scope. This EIA Report takes into account all consultation responses. Further details on the Scoping approach are provided in **Chapter 6: Scoping and Consultation**.
32. This EIA Report is presented to the Scottish Ministers via the Energy Consents Unit (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. Its purpose is to present the proposed Development and its predicted environmental effects in a concise, objective and non-promotional manner in order to provide the Scottish Ministers, Local Authority, consultation bodies, interested bodies and the general public with sufficient information to assess its likely environmental effects. This EIA Report presents the findings of the EIA process by describing the proposed Development, and the current conditions at the Site and likely Significant impacts which may result from the proposed Development. Where appropriate, mitigation is proposed, and any residual impacts are reported. Regulation 3



of the EIA Regulations prohibits Scottish Ministers for EIA development unless have the first taken the environmental information provided in the EIA Report into consideration.

1.7. Structure of the EIA Report

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

- Volume 1: Non-Technical Summary (NTS) - describes in non-technical language the proposed Development and the likely effects it may have on people in the local area and the receiving environment. It also describes the measures that the Applicant proposes to use to avoid or reduce any potential negative effects that have been identified, including how environmental issues would be managed during and after construction;
- Volume 2: Environmental Impact Assessment Report (EIA Report)- presents the complete findings of the EIA and is the main document accompanying the application for consent;
 - a. The EIA Report written text is structured as follows:
 - i. Chapter 1: Introduction;
 - ii. Chapter 2: Site Description and Design Evolution;
 - iii. Chapter 3: Proposed Development;
 - iv. Chapter 4: Renewable Energy and Planning Policy;
 - v. Chapter 5: EIA Approach and Methodology;
 - vi. Chapter 6: Scoping and Consultation;
 - vii. Chapter 7: Landscape and Visual Impact Assessment;
 - viii. Chapter 8: Ecology and Biodiversity;
 - ix. Chapter 9: Ornithology;
 - x. Chapter 10: Hydrology, Hydrogeology, Geology and Soils;
 - xi. Chapter 11: Archaeology and Cultural Heritage;
 - xii. Chapter 12: Access, Traffic and Transport;
 - xiii. Chapter 13: Noise;
 - xiv. Chapter 14: Other Issues; and
 - xv. Chapter 15: Schedule of Commitments.
- Volume 3: EIA Report Figures - contains all relevant Figures referred to throughout Volume 2 of the EIA Report; and
- Volume 4: EIA Report Technical Appendices - referenced in each EIA Chapter. They are numbered sequentially for each Chapter that they are mentioned in.

1.8. EIA Project Team and Competency

34. This EIA has been led by RSK Environment Ltd (RSK), part of the RSK Group Ltd with assistance from specialist consultants.
35. RSK Group Ltd is a fully integrated, environmental, health, safety and engineering consultancy with over 20 years of experience in the assessment of environmental impacts associated with the development of renewable energy infrastructure. RSK is a founding member of the Institute of Environmental Management and Assessment's (IEMA) EIA Quality Mark scheme, which recognises and accredits organisations that meet the required high-quality standard of environmental impact assessment on a consistent basis.
36. Further information on RSK can be found on its corporate website at <https://rskgroup.com/>.
37. For Harestanes West Windfarm, RSK were responsible for co-ordinating the production of the EIA Report and preparing the following technical discipline assessments:
- Access, Traffic and Transport;
 - Archaeology and Cultural Heritage;
 - Carbon Calculator;
 - Ecology and Biodiversity;
 - Hydrology, Hydrogeology, Geology and Soils;
 - Shadow Flicker;
 - Socio-Economic and Tourism;
 - Telecommunications; and
 - Aviation.
38. RSK were supported by a number of technical specialists from other organisations in support of specific technical assessments, as follows:
- Stephenson Haliday (Renewable Energy and Planning Policy, Landscape and Visual Assessment)
 - Hayes McKenzie (Noise and Vibration);
 - WSP (Ornithology);
 - Pager Power (Telecommunications);
 - BiGGAR Economics (Socio-Economics and Tourism);
 - Cyrrus (Aviation and Radar); and
 - Scurrah Associates (Forestry).
39. RSK confirms on behalf of the Applicant that the specialist organisations that have carried out the EIA and produced the EIA Report have the skills and relevant competency, expertise and qualifications to undertake an EIA for the proposed Development. The



relevant expertise and qualifications of the experts involved in the preparation of this EIA Report are detailed in **Table 1.2** below.

Table 1.2 EIA Team Competencies

Discipline	Specialist	Qualifications	Years of Experience
EIA Project Management team			
EIA Project Manager	Joe Somerville, RSK	MA(Hons) MSc MCifA FSA Scot PIEMA	16 Years
EIA Project Director	David Hoare, RSK	BSc (Hons), MSc, PIEMA, CIEEM	23 Years
EIA Project Support	Spyridonas Angeli, RSK	BSc (Hons), MSc	4 Years
EIA Project Support	Joshua Doh, RSK	MPlan	1 Year
EIA Technical Specialists			
Renewable Energy and Planning Policy	Lisa Russell, Stephenson Halliday	BSc (Hons), MRTPI, MEEC	20 years
	Pernille Thomson, Stephenson Halliday	BSc (Hons), MSc, MCIWM	18 years
	Sarah Sinclair, Stephenson Halliday	BSc (Hons), MRTPI	20 years
Landscape and Visual Impact Assessment	Kelly Anderson, Stephenson Halliday	BLA Virginia, CMLI	30 years
Ecology and Biodiversity	Ruth Morton, RSK Biocensus	BSc (Hons), MSc, CIEEM	17
	Nick Henson, RSK Biocensus	MEnvSci (Hons), CEnv, MCIEEM	19
Ornithology	Ian Ellis, WSP	BSc (Hons), MRes, MCIEEM	21
	Peter Clark, WSP	BSc (Hons), MSc, MCIEEM	13
	Martin Rann, WSP	BA Hons, BSc Hons, ACIEEM	7
	Daniel Flenley, WSP	BSc, MPhil, MCIEEM	12
Hydrology, Hydrogeology and Geology and Soils	Catherine Isherwood, WRc	BA (Hons) MSci MSc PhD CGeol MIMMM	24 Years
	Giles Exley, WRc	BSc (Hons), PhD	6 Years
Archaeology and Cultural Heritage	Fraser McFarlane, RSK Headland Archaeology	MA (Hons), MLitt	13 years
Access, Traffic and Transport	Jon Hassel, RSK Traffic and Transport	BEng (Hons) MCIHT MTPS	32 years
Noise and Vibration	Rob Shepherd, Hayes McKenzie	MEng MIOA	19 years
	Conor Tickner, Hayes McKenzie	BEng MIOA	10 years
Aviation and Radar	Simon McPherson, Cyrrus	BEng	10 Years
Carbon Calculator	Libby Robinson, RSK Nature Positive	BSc (Hons), PhD	7 Years
Telecommunications	Abdul Wadud, Page Power	BEng (Hons)	2 Years

1.9. Availability of the EIA Report

1.9.1. Statutory Requirements

40. When the Section 36 application for the proposed Development is lodged with the ECU, the Applicant will advertise the application in the following ways:

- On the Applicant's project website;
(https://www.scottishpowerrenewables.com/pages/harestanes_west_windfarm.aspx)
- In the Edinburgh Gazette;
- In The Herald;
- Dumfries Courier;
- Annandale Herald & Moffat News; and
- Annandale Observer/Galloway Gazette

41. The EIA Report can also be viewed at the Scottish Government Energy Consents Unit website: <https://www.energyconsents.scot>. The ECU will also invite formal representations on the application, which it will be taken into account before reaching a decision on the application.

42. The Environmental Impact Assessment Report (EIA Report) will, on submission of the Section 36 Application, be available for viewing to the public at a suitable location in the vicinity of the Site, as well as at the DGC Offices, Kirkbank House, English Street, Dumfries, DG1 2HS. The EIA Report and associated documentation will be available to view for several weeks, the length of which is to be confirmed with the Energy Consents Unit.

1.9.2. Voluntary Publicity

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

- Closeburn Community Council;
- Kirkmichael Community Council;
- Tinwald Parish Community Council;
- Kirkmahoe Community Council;
- Auldgirth and District Community Council;
- Ae Community Council;
- Lochmaben and District Community Council; and
- Keir Community Council.

44. Electronic copies of all application documents will be made available for download from the project website:

https://www.scottishpowerrenewables.com/pages/harestanes_west_windfarm.aspx.



45. They will also be available on the ECU Website: <https://www.energyconsents.scot/>
46. Copies of the NTS and EIA Report (including figures and appendices) may be obtained from:
- Harestanes West Windfarm Project Team
ScottishPower Renewables
9th Floor ScottishPower Headquarters
320 St Vincent Street
Glasgow
G2 5AD
Email: HarestanesWestWindfarm@scottishpower.com
47. The Non-Technical Summary is available free of charge, and a limited number of hard copies of the EIA Report are available for £1,000 per copy. The price of the hard copy reflects the costs of producing all of the volumes as well as the Landscape and Visual photography and photomontages at the recommended size and quality in order to view them properly.
48. Alternatively, a USB memory stick containing PDF files of the EIA Report are available for £15 per USB. Specific sections of the EIA Report are also available on request at a proportionate cost. These PDF files can also be downloaded for free from the Harestanes West Windfarm website detailed above.
49. In the interests of sustainability and in keeping with the renewable energy agenda, the paperless (USB) version is recommended.

1.9.3. Representations to the Application

Any representations to the application should be made directly to the Scottish Government by email to the Scottish Government, ECU mailbox at representations@gov.scot identifying the application and case reference number and specifying the grounds for representation.

50. Representations can also be sent by post to:

Scottish Government
Energy Consents Unit
4th Floor
5 Atlantic Quay
150 Broomielaw
Glasgow
G2 8LU



References

Climate Change Plan – the third report on policies and proposals 2018-2032: Scottish Government: 2018.

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<https://dumfriesgalloway.moderngov.co.uk/documents/s13855/Climate%20Emergency%20Declaration%20-%20appendix%201.pdf> [Accessed 9 August 2024].

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Onshore Wind Policy Statement: Scottish Government: 2022. Available at:
<https://www.gov.scot/publications/onshore-wind-policy-statement-2022/>

Scottish Government Guidance on Energy Consents. Available at: [Energy consents - Energy infrastructure - gov.scot \(www.gov.scot\)](#) [Accessed 9 August 2024].

The Climate Change (Emissions Reduction Targets) (Scotland) Act 2019.

The Climate Change Act 2008 (2050 Target Amendment) Order 2019.

The Electricity (Applications for Consent) Regulations 1990.

The Electricity Act 1989.

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

The Town and Country Planning (Scotland) Act 1997.