



Environmental Statement

Herds Hill Wind Farm

November 2023

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Preface and Contents

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Document History

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This document has been written and collated by Community Windpower Ltd who are acting as an agent, on behalf of Drumbuie Renewables. Where external consultants have been employed for assessment and report production, the chapters are clearly identified.

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This Environmental Statement supports an application to Dumfries and Galloway Council (DGC) by Drumbuie Renewables Limited ('the Applicant') for consent under the Town and Country Planning (Scotland) Act 1997 for the construction and operation of a Proposed Wind Farm and associated ancillary infrastructure (Hereafter referred to as the Proposed Development). The report has been prepared by Community Windpower Ltd (CWL) on behalf of the Applicant.

To obtain a copy of the full Environmental Statement, please contact Drumbuie Renewables via: Drumbuie Renewables, Drumbuie, Sanquhar DG4 6JX, or Email: info@drumbuie.com. The Environmental Statement is available at a cost of £250 per hard copy and free of charge on a USB.

The Environmental Statement and all the supporting documents can also be accessed for public inspection via our application website: www.drumbuie.com and via the Dumfries and Galloway Council Planning Portal website at eaccess.dumgal.gov.uk/online-applications.

This Environmental Statement and the associated documents can also be viewed at the following addresses during their stated opening hours.

Location	Opening Hours
Sanquhar Library 100 High St, Sanquhar DG4 6DZ 01659 50347	Tuesday: 09:00am – 12:00pm Wednesday: 09:00am – 12:00pm, 13:00pm – 17:00pm Friday: 09:00am – 12:00pm, 13:00pm – 17:00pm
Kirkconnel Library Greystone Ave, Kelloholm, Sanquhar DG4 6RA 01659 67191	Monday: 09:00am – 17:00pm Tuesday: 14:00pm – 17:00pm Thursday: 09:00am – 17:00pm Friday: 09:00am – 17:00pm
Dumfries and Galloway Council Office 109-115 English St, Dumfries DG1 2DD 0303 333 3000	Monday: 09:00am – 17:00pm Tuesday: 09:00am – 17:00pm Wednesday: 09:00am – 17:00pm Thursday: 09:00am – 17:00pm Friday: 09:00am – 17:00pm



Abstract

This document details the Environmental Statement (ES) undertaken for a wind farm proposal of up to 10.35MW situated in Dumfries and Galloway, approximately 5.06km west of Sanquhar and 2.68km south of Kirkconnel. It is the opinion of the Applicant that all environmental impacts have been thoroughly assessed and any residual impacts have been reduced to an acceptable level.

Given the predicted wind regime and turbine availability, Herds Hill wind Farm is anticipated to operate at a capacity factor of around 50%. Although these are realistic assumptions, for the purpose of this ES a more conservative capacity factor of 45% will be used. This means that the three-turbine wind farm is expected to produce around 40,800 MWh of electricity per annum, which will be enough electricity to power over 10,885 homes each year.

Herds Hill will generate clean, green electricity and thus will contribute towards the Scottish Government's ambitious target to become net zero by 2045, as well as playing an important role in the fight against climate change. In addition to this, the Scottish Draft Energy Strategy and Just Transition Plan (2023) outlines local energy projects that create opportunities for local energy employment as a priority. The proposed development falls in line with this plan by supplying renewable energy generated electricity to local commercial businesses such as Brown Brothers and Shaw Europe Ltd. Therefore helping them to reach their own personal Net Zero targets and green energy goals.

The Applicant is committed to creating long-standing relationships with Scottish companies to deliver Herds Hill Wind Farm. During the construction of the development, several jobs would be supported across the construction and supply industry, alongside supporting hundreds of jobs at the Brown Brothers factory and Shaw Europe Ltd. The development and construction of the proposed wind farm scheme will also bring in investment into both Scottish and local economies.

Once operational, the wind farm will require the employment of an operational manager to operate and maintain the Proposed Development. During its operational lifetime of 40 years, the wind farm would deliver direct and indirect significant benefits that will add value to the local area and its economy.

The site selection process has identified the Herds Hill Wind Farm site as an excellent location for a wind farm as it has high wind speeds; it is close to a good road network with an existing wind farm access track already in place from the operational Sanquhar Community Wind Farm; it is located a suitable distance away from residential properties and is located a good distance to potential end users for the energy generated (the Brown Brothers Shaw Europe Ltd factories).

The final layout of the turbines and site access tracks has been developed through an iterative design process based on technical, planning and environmental constraints, consultation with key stakeholders and following assessments. This has ensured that the proposal will have minimal impact on the local environment, biodiversity and landscape.

Community consultation has been undertaken for the proposal involving consultation with Dumfries and Galloway Council, Kirkconnel & Kelloholm and Sanquhar Community Councils, alongside two rounds of public exhibitions which were held locally. These events gave local residents the opportunity to view details about the proposal and raise any questions they had. This has taken place during the design stage of the project and will continue throughout all stages of the project development process.



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All comments and feedback provided during the consultation process have been carefully considered and used to inform the final design of the turbines and associated infrastructure.

The size and scale of the Herds Hill development has been carefully considered in order to stay in keeping with the surrounding wind farms and be sensitive to the current landscape. Given this, the original turbine tip height of 180m was reduced to 149m which also means that no night-time visible aviation lighting is required. The site itself was also selected as an infill site as, in plan form, Herds Hill Wind Farm appears to fill the gaps between Sanquhar Wind Farm, Sanquhar II Wind Farm, Sandy Knowe Extension and the in scoping Rowancraig. This results in an amalgamation of currently distinctly separate schemes of Sanquhar in the south, and Sandy Knowe in the north.

Two scenarios of cumulative wind turbines were assessed: Scenario 1 assumed a baseline including all operational, approved (as yet unbuilt) and in-planning schemes and Scenario 2 included the scoping schemes of Rowancraig and Cloud Hill as well as operational, approved and in-planning schemes within the study area.

For the cumulative visual amenity, the key viewpoints were assessed in relation to other turbines in the area, with the magnitude of change being between Low to Medium. There would not be any significant cumulative visual effect on visual amenity.

Through assessments, it is determined that the Proposed Development will not significantly impact the ecology of the site as any effects as a result of the construction or operation of the wind farm are assessed as either minor or negligible and of no significance. It is also anticipated that the wind farm will not have an adverse effect on bird populations located in the areas surrounding the site.

The Cultural Heritage Assessment has found that the cultural heritage assets located within the site boundary are of negligible archaeological potential. The assessment has determined that impacts on these assets and those in the wider area will be low or negligible and will not detract from their cultural significance.

There are no significant effects from the Proposed Development on the hydrological, geological and hydrogeological environment, and therefore no residual effects will take place.

The ES has also assessed the significance of the effects of noise on residential properties during the construction, operation and decommissioning of the proposed wind farm. This assessment has been carried out in line with national policy, which refers to ETSU-R-97, The Assessment and Rating of Noise from Wind Farms, and the Institute of Acoustics, A Good Practice Guide to the Application of ETSU-R-97 for the Assessment and Rating of Noise from Wind Turbines. The results indicate that the relevant noise limit will be met at all noise sensitive receptors in the vicinity of the development. Noise during the construction phase of the development was scoped out of detailed assessment due to the large separation distances between construction activities and noise sensitive receptors.

Herds Hill Wind Farm is an appropriate, well-designed development, sensibly located in an established and accepted wind farm landscape. The proposal is in line with policies in the local development plan and conforms to national policy.



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Approval of this proposed development would be a positive and progressive step in the fight to tackle climate change, achieve energy security, positively support local business and their employees as well as aiding Scotland with meeting its renewable energy and carbon emissions targets set for 2030 and 2045.



Electricity Measurements

1 kW x 1000 = 1 MW

1 MW x 1000 = 1 GW

1 GW x 1000 = 1 TW

Kilowatt (kW): Kilowatt-hour (kWh)

A kilowatt is a unit of power representing the rate at which energy is used or produced. One kilowatt-hour is a unit of energy and represents one hour of electricity consumption at a constant rate of 1 kW.

Megawatt (MW): Megawatt-hour (MWh)

A megawatt equals 1000 kW. One megawatt-hour represents one hour of electricity consumption at a constant rate of 1 MW.

Gigawatt (GW): gigawatt-hour (GWh)

A gigawatt equals 1000 MW. One gigawatt-hour represents one hour of electricity consumed at a constant rate of 1 GW.

Terawatt (TW): terawatt-hour (TWh)

One terawatt equals 1000 GW. One terawatt-hour represents one hour of electricity consumption at a constant rate of 1 TW.



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Wind Speed Conversion Table

Throughout this EIA wind speeds are designated in metres per second (m/s). The following table allows for conversion of wind speed from m/s into miles per hour (mph), knots, the Beaufort Scale and the World Meteorological Organisation Description.

1 m/s = 2.24 mph = 1.94 knots

m/s	mph	knots	Beaufort Scale	World Meteorological Organisation Description (1964)	Wind Turbine Status
1	2.2	1.9	1	Light breeze	Low Wind Speed Shutdown Mode
2	4.5	3.9	2	Light breeze	

3	6.7	5.8	2	Light breeze	Cut-In Wind Speed Range
4	8.9	7.8	3	Gentle breeze	

5	11.2	9.7	3	Gentle breeze	Power Generation Wind Speed Range
6	13.4	11.7	4	Moderate breeze	
7	15.7	13.6	4	Moderate breeze	
8	17.9	15.6	4	Moderate breeze	
9	20.1	17.5	5	Fresh breeze	
10	22.4	19.4	5	Fresh breeze	
11	24.6	21.4	6	Strong breeze	
12	26.8	23.3	6	Strong breeze	
15	33.6	29.2	7	Near gale	
17	38.0	33.0	7	Near gale	
20	44.7	38.9	8	Gale	
22	49.2	42.8	9	Strong gale	
23	51.5	44.7	9	Strong gale	
24	53.7	46.7	9	Strong gale	
25	55.9	48.6	10	Storm	

26	58.2	50.5	10	Storm	High Wind Speed Shutdown Protection Mode
27	60.4	52.5	10	Storm	
30	67.1	58.3	11	Violent storm	
40	89.5	77.8	12	Hurricane	
50	111.8	97.2	12	Hurricane	
60	134.2	116.6	12	Hurricane	

