

Drumduff Wind Farm Extension

Welcome

Welcome to the project website and information sheets on the proposed extension to the Drumduff Wind Farm in West Lothian.

GreenPower, alongside our partners Thrive Renewables, are pleased to introduce our plans for the Drumduff Wind Farm Extension located adjacent to GreenPower's existing wind farm at Drumduff, near Blackridge, in West Lothian. The Drumduff Wind Farm is an award-winning project, built on an abandoned open cast mine site, demonstrating the shift from fossil fuels to clean energy sources.

At a time when the climate emergency demands new green energy sources, this project is proposed in a great location, building on an existing wind farm located in a well-established area of existing wind developments, and for a small number of turbines with high energy yield.

About the Site

The area of land known as Drumelzie Forest already has consent for a single turbine, which GreenPower and Thrive Renewables acquired in 2021. The proposed development will be located within a forestry area predominantly populated by coniferous plantation woodland, along with areas of marshy grassland and some broadleaved trees. The wind farm will be constructed sensitively, with opportunities to restore degraded peatland. Best practice construction techniques and a comprehensive Environmental Impact Assessment (EIA) will be carried out to finalise the proposal.

What Stage is the Project at?

The project is currently within the pre-application phase with the intention of progressing towards submission of a planning application. A number of site surveys are being completed alongside public consultation sessions. The findings of these surveys and input from the public consultations will be used to inform the final design, layout and most sensitive approach to delivering the proposed development.



Access

As part of the ongoing development process, GreenPower is exploring a range of options for access to support turbine component deliveries to the Drumduff Extension site. The outcome of the current assessment will be confirmed prior to finalisation of the project design.

GreenPower

GreenPower is a leading, Scottish-owned, independent developer, owner and operator of renewable energy projects including onshore wind, hydro, hydrogen and solar.

It was founded in 2000, and has a specialist team leading development, construction, acquisitions and operation of renewable energy projects, such as the existing Drumduff Wind Farm near Blackridge, and the Carraig Gheal Wind Farm in Argyll & Bute.

GreenPower's objective is to play our part in tackling the climate emergency by developing and operating projects that directly reduce carbon emissions and deliver economic and social benefits to local communities and the wider Scottish economy.

For more information see www.greenpowerinternational.com or contact the team to discuss further at enquiries@greenpowerinternational.com

Drumduff Wind Farm Extension

Proposed Development

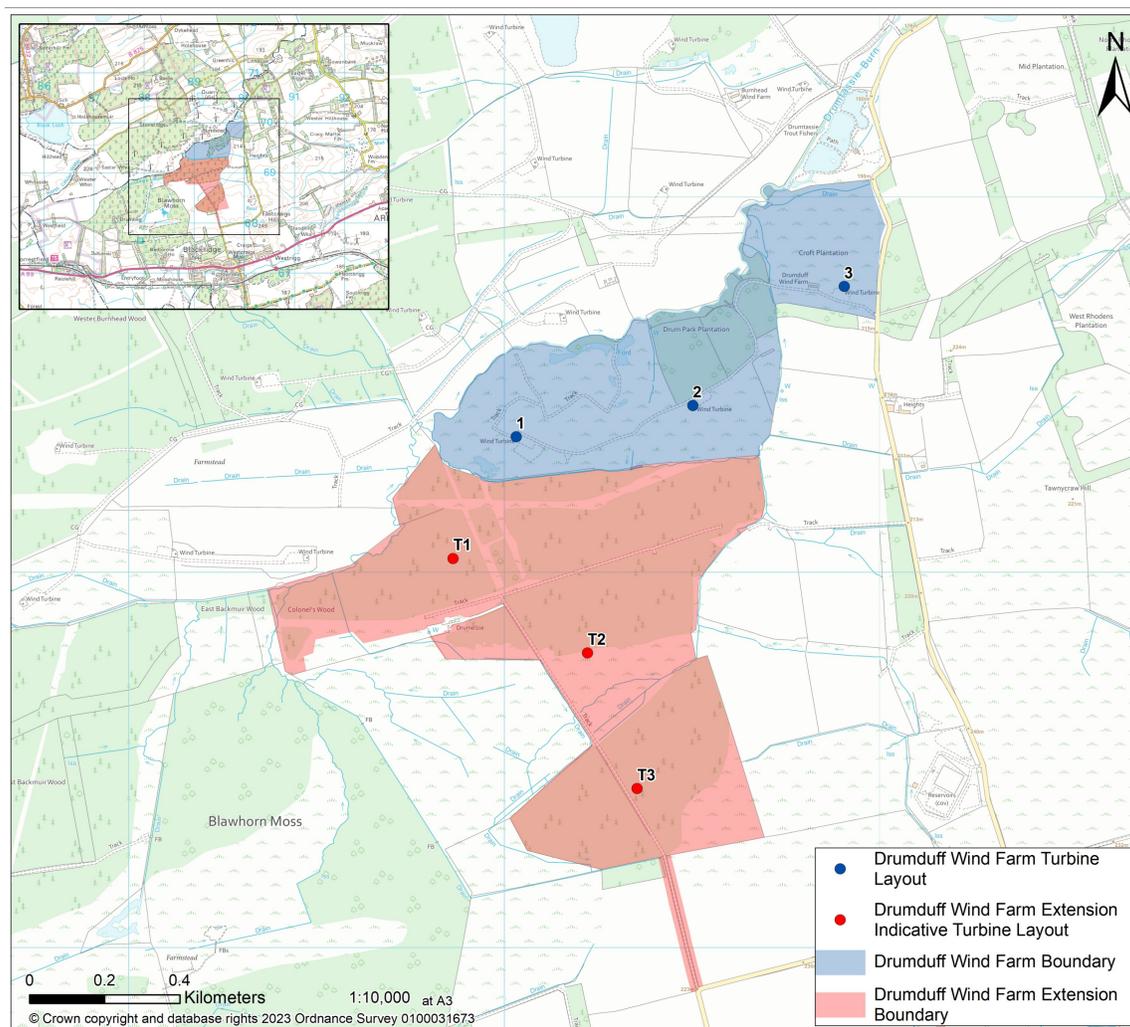
The proposed Drumduff Extension Wind Farm is located in the small coniferous plantation forestry area north of Blackridge in West Lothian, with the closest turbine approximately 1.4 km from the centre of Blackridge. The site location and boundary is detailed in the map below.

Surveys and design work have indicated that the site has potential to accommodate in the region of three turbines, with a predicted output of 15 MW. When connected with the generation capacity of the existing Drumduff Wind Farm, the combined onsite capacity totals approximately 21.3 MW. The capacity of the extension alone would be sufficient to deliver renewable electricity to up to approximately 9,500 homes.

We are now in the pre-application consultation process to determine the number and precise locations of turbines, in order to ensure the proposed extension is designed sensitively. Consultation is an important part of the design process, so we would welcome feedback on the current layout as detailed below.

The main proposed components of the development are:

- Approximately 3 turbines, with a tip height up to 149.9m
- Turbine foundations, crane hardstandings and temporary construction area
- New and upgraded access tracks
- Energy conversion and storage facilities
- External electrical housing units
- Anemometry mast for wind monitoring
- Transformers, cable connections and an onsite substation
- Temporary borrow pits



Drumduff Wind Farm Extension

Drumduff Extension Timeline

Pre-Application Process

- Sets out which areas of environmental assessment are required under the Town and Country Planning (Scotland) Act.
- Consultation with key stakeholders and statutory consultees such as the Local Authority and NatureScot has been ongoing since summer 2022.

Public Consultations (current stage)

- The public are invited to attend drop-in sessions to provide feedback on project design and learn about the project from the development team.
- Anyone unable to attend in-person may submit feedback remotely via the website or post.
- Sessions, such as this one, are held before design freeze to gain input from the community, then after design freeze for the developers to show the refined design incorporating, where possible, the inputs provided by the public and other consultees.

Environmental Studies

- Multiple environmental studies are required to ensure potentially significant environmental effects are minimised, mitigated or appropriately managed. These include a 'carbon calculation' showing the net contribution made to reducing carbon emissions over the project's lifetime. These studies are detailed in other panels.
- Bird monitoring, peat probing, and a range of other surveys are currently underway, and we aim to complete the Environmental Impact Assessment process in 2023.

Design Freeze

- Once the project design has been refined using the inputs from consultees, surveys and the public, the project enters the design freeze.
- At this stage, the project design is kept largely the same for the remainder of the development and application process.

Planning Application Submission

- Once the design has been finalised and the second public consultation has been completed, the planning application is submitted along with all supporting documents, including the Environmental Statement.
- This is considered by the planning authority, who then issue a decision on the proposed development.

Electricity Grid Connection

- Potential grid connection date for this project has been secured for 2026.
- This relatively early connection date means that the renewable electricity generated will immediately start contributing towards West Lothian Council's 2030 decarbonisation targets (a 65% reduction in emissions relative to 1990 levels¹).

¹ 'Climate Change - what is West Lothian Council doing?' (West Lothian Council, 2022)

Drumduff Wind Farm Extension

Assessing the Effects

An Environmental Impact Assessment (EIA) is undertaken to identify and assess the potential significant environmental effects of the proposed development. This is used to shape the design and final layout along with any potential mitigation measures. This includes, amongst others:

Landscape and Visual:

A Landscape and Visual Impact Assessment (LVIA) is carried out to consider effects on visual amenity and the wider landscape, noting any changes in the landscape as a result of the proposed development.

The Zone of Theoretical Visibility (ZTV) indicates the tip height visibility for the current three turbine layout. The ZTV does not include potential screening of the turbines from buildings or vegetation.



Ornithology:

This assessment considers any potential effect on local and migratory birds, including raptors and black grouse. An additional full year of ornithology surveying has been completed at the site, to ensure data is collected during key ornithological periods such as nesting and migration. All surveys have been carried out in accordance with best practice guidance and consultation with NatureScot.

Ecology:

Ecology surveys have been ongoing since early 2022. The potential effects of the proposal on habitats, as well as bats, otter, badger, red squirrel, pine marten, water vole, and other protected species will be assessed in the EIAR.

Assessments to date have concluded that there will be no significant impacts and mitigation will be embedded to reduce any potential future impacts on ecological features. Guidelines and good practice measures will be followed through the construction, operation, and decommissioning period.



Cultural Heritage:

This assessment will consider potential effects of the proposal if there are cultural heritage assets in the vicinity and wider area. Currently, no direct impacts are anticipated, however mitigation will be implemented if any cultural heritage assets are identified during construction. Indirect impacts taking into consideration the setting of cultural heritage interests will also be assessed.



Drumduff Wind Farm Extension

Assessing the Effects

Noise and Shadowflicker:

This assessment will consider the effects of both construction and operational noise on nearby sensitive receptors, including cumulative impacts with other neighbouring wind farms.

Ongoing noise assessments will ensure turbines are adequately distanced from nearby sensitive receptors and where required mitigation will be in place to ensure that noise limits are not breached.

Source/Activity	Indicative Noise Level dB(A)
Threshold of hearing	0
Breathing	10
Leaves rustling	20
Whisper	30
Refrigerator humming	40
Normal conversation	60
Vacuum cleaner	80
Lawn mower	90
Chain saw	110
Threshold of pain	140

Modern turbines are very quiet, to respect maximum noise limits imposed at dwellings closest to wind farms. The typical limits proposed are between the levels of 35 to 40dB.

A shadowflicker assessment will be included within the EIA report. Mitigation will be embedded throughout the operational period to reduce any significant effects at nearby sensitive receptors.

Hydrology, Geology and Hydrogeology:

This assessment considers the hydrological, geological, and hydrogeological characteristics of the proposed development site and includes sensitive areas and buffers within the layout design. Peat probing is underway on site to identify peat depth and characteristics. The site is primarily plantation forestry with some sections of marshy grassland, with areas of peat which have been degraded through tree plantation and associated drainage works. Peat restoration activities are currently being investigated to enhance the onsite hydrological conditions.

Aviation and Telecommunications:

This assessment considers potential effects of the proposed development on aviation interests, both civil and military. These include consultation with the MoD, NATS and the CAA.

As turbines will not exceed a height of 150m, permanent aviation lighting will not be required at the site.

Telecommunications operations within the vicinity of the site have been explored and avoided where possible to ensure there are no direct impacts on existing operations.

Socioeconomics:

This assessment will consider socioeconomic benefits that the proposed development will have within a local, regional and national level. These include economic and supply chain benefits during the construction and operational period of the proposed development. Some of the potential areas in which the development may deliver local benefits are the use of local accommodation, contracting with local companies for plant hire and ground works, or creating apprenticeships.



Traffic and Transport:

This assessment considers the impact on the traffic and road network during construction, operation and decommissioning. Mitigation will be embedded throughout these periods with good practice guidelines followed.

Drumduff Wind Farm Extension

Community Benefits

GreenPower is committed to delivering ongoing community benefits within Blackridge and the surrounding area. Previously this has involved the provision of food vouchers and activity packs to families of all pupils at Blackridge Primary School and Nursery during the pandemic, and funding for the extension of the Blawhorn Moss boardwalk.

The Blawhorn Moss boardwalk extension, delivered in partnership with Thrive Renewables and NatureScot was opened in 2022. It improves access to this important National Nature Reserve situated near to both the existing Drumduff windfarm and the proposed extension site. GreenPower has also committed to funding a further extension, with works underway and estimated for completion in 2023.



In 2022 pupils from the local primary school joined representatives from NatureScot, GreenPower and Thrive Renewables to officially open the new boardwalk at Blawhorn Moss © David Cheskin

The Drumduff Extension project will provide an additional £5,000 per MW or equivalent of installed capacity to the community every year. This will provide an annual community payment of up to £75,000 per annum to fund whatever projects are deemed priorities by local people, including:

- Support for local groups and initiatives
- Investment in new or upgraded local facilities and equipment
- Opportunities to promote tourism and local services

As part of the planning application process GreenPower is required to analyse the potential social and economic benefits which can be achieved and commit to specific improvements or benefits. Feedback at this stage on what the community priorities would be should the development go ahead would be extremely useful.

Local Jobs and Services

Wherever we work we look to build genuine long-standing relationships with our neighbours and to invest in these communities. For example, GreenPower's original Drumduff Wind Farm used local contractors to provide turbine maintenance, survey work, tree felling, fencing, signage, tree planting and health and safety compliance and inspections, amongst others.

Ahead of construction we will work collaboratively with West Lothian Council, West Lothian Chamber of Commerce and other renewable developers and operators in the region to maximise local contract opportunities. We will hold 'meet the buyer' days and operate a services and contractor register for local businesses so they can be identified and encouraged to get involved.



Drumduff Wind Farm Open Day © David Cheskin

Community Investment

Although this is a small development, GreenPower would be open to discussing the opportunity for the local community to take a stake in the project, if there is appetite within the community to do so.