

Drumduff Extension Wind Farm

Welcome

Welcome to the project information sheets on proposed amendments to the consented Drumduff Extension Wind Farm in West Lothian.

GreenPower, alongside our partners Thrive Renewables, are pleased to introduce our plan to increase the height of the consented turbines which are located adjacent to GreenPower's existing wind farm at Drumduff, near Blackridge.

This application will not constitute any additional turbines or infrastructure to those already consented.

At a time when the climate emergency demands new green energy sources, this project is proposed to increase the power output of the consented wind farm to increase its contribution to renewable energy generation.

About the Site

The Drumduff Extension Wind Farm is located within a forestry area predominantly populated by coniferous plantation woodland, along with areas of marshy grassland and some broadleaved trees.

The site boundary of the Drumduff Extension Wind Farm will remain the same as the consented Wind Farm Extension.

What Stage is the Project at?

In April 2024, West Lothian Council granted consent to the Drumduff Extension Wind Farm planning application. The granted application consists of 2 turbines at up to 149.9m tip height and 1 turbine at up to 135m tip height, together with access tracks and supporting infrastructure.

The proposal to increase the height of the turbines is currently at the pre-application phase with the intention of progressing submission of a planning application towards the end of 2024.



Access

The access route is not proposed to change however some minor alterations may need to be made to accommodate delivery of the larger turbines.

GreenPower

GreenPower is a leading, Scottish-owned, independent developer, owner and operator of renewable energy projects. Renewable energy technologies include onshore wind, hydro, green 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

The Consented Drumduff Extension Wind Farm

The Development

The consented 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 of the consented development is detailed in the map below.

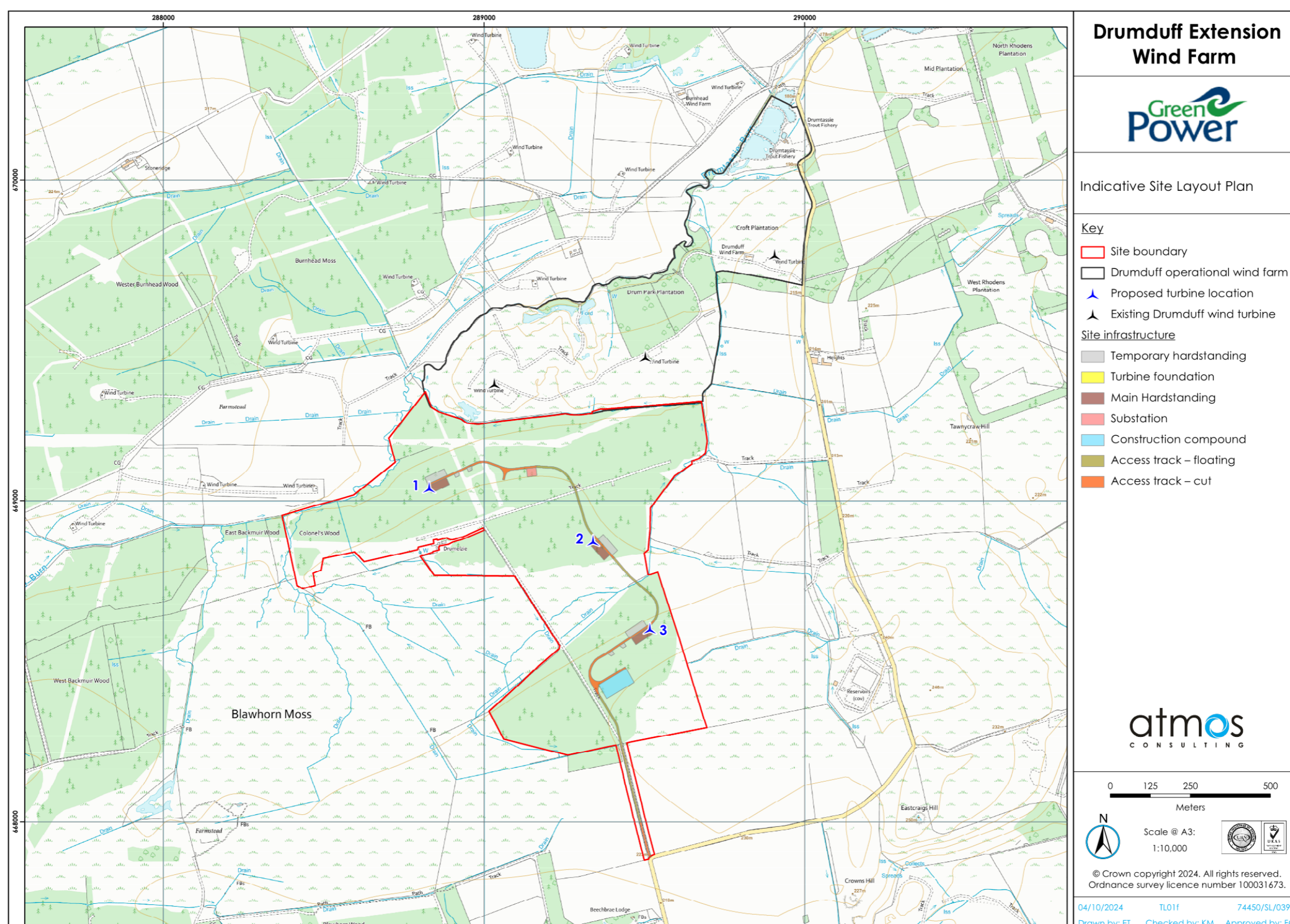
This development has not been built yet, and if the updated proposal was consented, it would replace the plans for the existing version of the Extension, as shown below.

Surveys and design work indicated that the site has potential to accommodate in the region of three turbines, with a predicted output of around 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 consented Extension alone is sufficient to generate renewable electricity equivalent to the consumption of up to approximately 9,500 homes¹.

Main Components of the Development are:

- 2 turbines consented with a tip height up to 149.9m, and 1 turbine up to 135m
- Turbine foundations, crane hardstandings and temporary construction area
- New and upgraded access tracks
- External electrical housing units
- Transformers, cable connections and an onsite substation



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Consented Drumduff Extension Wind Farm (2023 Application)

In April 2024, West Lothian Council issued a Planning Consent for Drumduff Extension Wind Farm with the following description:

- Turbine 1 and Turbine 2 up to 149.9m blade tip height
- Turbine 3 up to 135m blade tip height

This consented wind farm has a renewable electricity generating capacity of approximately 12 - 15MW.

Proposed Drumduff Extension Wind Farm (2024 Application)

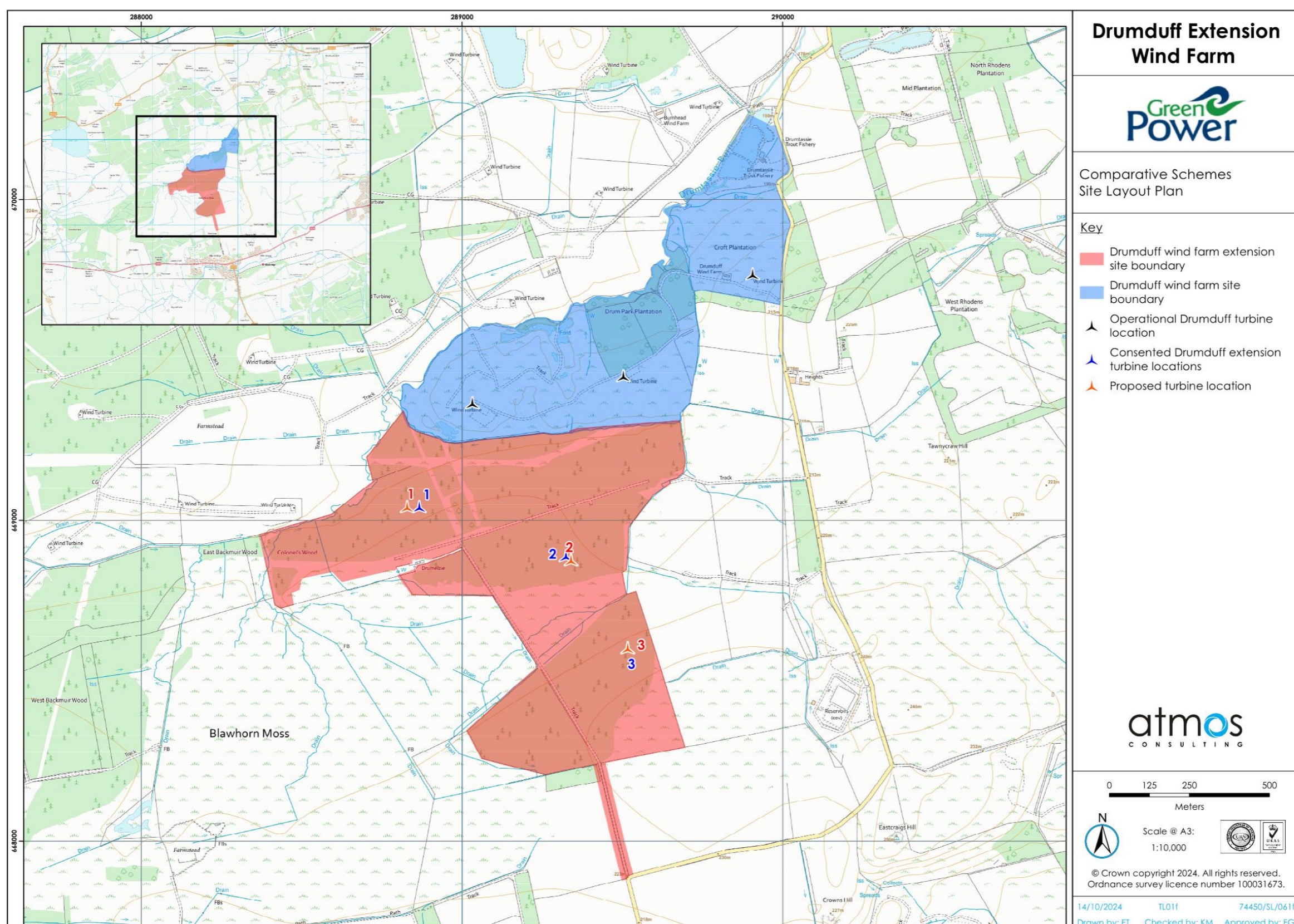
GreenPower intends to submit a new Planning Application to increase the turbine height of Drumduff Extension Wind Farm, to the following:

- Turbine 1 and Turbine 2 up to 180m blade tip height
- Turbine 3 up to 149.9m blade tip height

If consented, the proposed wind farm would have a renewable electricity generating capacity of approximately 15 - 17MW.

The turbines are proposed to be located in the same locations as the consented wind farm, with some minor adjustments. The map below illustrates the changes between the consented locations and the proposed turbine locations.

We are now in the pre-application consultation process 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 changes from the consented layout, which are detailed below.



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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 is currently underway to let them know about the proposed changes.

Public Consultation (current stage)

- The public are invited to attend drop-in sessions to provide feedback on the proposed design changes 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 likely significant environmental effects are minimised, mitigated or appropriately managed as a result of the Development. 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.

Design Freeze

- Once the project design has been refined using the inputs from consultees 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 EIA Report.
- This is considered by the planning authority, who then issue a decision on the Development.
- The target submission date for this application is December 2024.

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)

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Assessing the Effects

An Environmental Impact Assessment (EIA) is undertaken to identify and assess the potential significant environmental effects of a proposed development.

The updated proposal will carefully consider if changes from the consented project require additional surveys to be completed. Once complete, findings of these new studies will be combined with the previous application's assessments and detailed within the updated EIA report, which will be submitted with the new planning application.

The EIA 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.

A Zone of Theoretical Visibility (ZTV) plan indicates the tip height visibility of turbines. The ZTV does not include potential screening of the turbines from buildings or vegetation.

Ornithology:

A full year of ornithology surveys on the potential effect of the Development on local and migratory birds, including raptors and black grouse, has been undertaken. All surveys were carried out in accordance with best practice guidance and in consultation with NatureScot.



Ecology:

The EIA will assess the potential effects of the Development on habitats, as well as bats, otter, badger, red squirrel, pine marten, water vole, and other protected species.

Mitigation to avoid, minimise or compensate for negative effects to biodiversity are embedded within the Development design such as buffers to ecological features.

Guidelines and good practice measures will also be followed through the construction, operation, and decommissioning phases of the Development.



Cultural Heritage:

The EIA Report will include an assessment of the potential significant effects of the Development on any cultural heritage assets in the vicinity and wider area. Direct effects will be assessed as well as effects to a heritage assets' wider setting.



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Assessing the Effects

Noise:

This EIA Report will assess both the construction and operational noise effects on nearby sensitive receptors, including cumulative impacts with other neighbouring wind farms.

The assessment 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

Shadowflicker:

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 Development site and includes sensitive areas and buffers within the layout design.

Peat probing has been carried out to identify peat depth and characteristics. The site includes areas of peat that have been degraded over time through tree plantation and associated drainage works.

Peat restoration activities have been proposed to enhance the onsite hydrological conditions as part of the Development.

Aviation and Telecommunications:

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

As two turbines will exceed a height of 150m, aviation lighting will be required as part of the Development. The effects of this will be included in the Landscape and Visual Assessment.

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 includes consideration of the socioeconomic effects that the Development will have within a local, regional and national level.

This includes the economic and supply chain benefits during the construction and operational period of the 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 potential effects on traffic and the local road network during the construction, operation and decommissioning phases of the Development.

Mitigation will be embedded throughout these periods with good practice guidelines followed.

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Community Benefits

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

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 Wind Farm and the proposed Drumduff Extension Wind Farm. A further extension to the boardwalk was funded by GreenPower and completed in 2023, and was received positively by the local community.



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

GreenPower is committed to delivering a community benefit fund at £5,000 per MW of generating export capacity, which will be index-linked from the date of construction. We will consult with the local community on how to most effectively manage and target the new funds during 2025.

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 are also welcome.

Local Jobs and Services

Wherever we work we look to build genuine long-standing relationships with our neighbours and to invest in their 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.