



**SCOTTISHPOWER
RENEWABLES**

Rigged Hill Windfarm Repowering

Welcome

ScottishPower Renewables (SPR) has owned and operated Rigged Hill Windfarm since 1994. The site consists of ten 500 kilowatt (kW) wind turbines, at 57 metres (m) to blade tip, producing up to 5 Megawatts (MW) of clean renewable power. The Site makes an important contribution to Northern Ireland's Renewable Energy targets and low carbon objectives.

The site has been operating for over 20 years, and SPR is now investigating the possibility to 'repower' the site with larger, more efficient modern wind turbines. SPR has commissioned extensive environmental survey and monitoring work to assess the feasibility of repowering the site, which would involve the removal of existing wind turbines and replacing them with fewer, larger turbines, increasing the overall generating capacity and output, as well as reducing the total number of turbines.

As a responsible developer, SPR believes in open and early consultation with local communities. We are hosting this event to provide information on the progress so far and to seek your feedback on the current proposals.

Staff members from our Development, and Community Liaison Teams are on hand today to answer any queries you may have or to discuss any aspects of building and operating windfarms that may interest you.

ScottishPower Renewables

SPR is part of the Iberdrola Group, a world leader in clean energy with an installed capacity of over 28,000 MW and the leading wind energy producer worldwide. SPR is one of the UK's leading operators of renewable energy developments. By the end of 2017 we will have 40 operational windfarms, producing over 2,500 MW of cleaner power. We are at the forefront of the development of the renewables industry, through pioneering ideas, forward thinking, and outstanding innovation which in turn drive economic success.



www.scottishpowerrenewables.com

Rigged Hill Windfarm Repowering

Key FAQs

What are the benefits of repowering an existing windfarm site?

- The site will be more efficient, increasing the overall generating capacity and output.
- In most cases the number of turbines is reduced.
- Repowering uses an existing site and minimises environmental effects, with an ability to reuse existing infrastructure where possible.

How many turbines?

There are likely to be up to seven turbines proposed as part of the Rigged Hill Windfarm Repowering.

What size will they be?

Up to 135 metres in height from the turbine base to the tip of the blade.

What is the proposed generating capacity?

Depending on the size and number of turbines, the generating capacity of the Rigged Hill Windfarm Repowering will be in the region of 21 – 25 MW, over five times the capacity of the existing windfarm.

How will the wind turbines be transported?

We are working on the identification of transport routes which utilise trunk and major roads as far as possible, with a focus on minimising any effects on local communities. A Traffic Management Plan will help manage the traffic associated with construction, controlling the routing, timing and frequency of transport movements, including for the movement of the larger vehicles which will carry the turbine components. We will discuss and agree this in consultation with stakeholders such as the Department for Infrastructure Roads and Causeway Coast and Glens Borough Council. We will also seek to utilise construction material, such as aggregate, from local sources where possible.

What opportunities does the co-location of energy storage technology provide?

- By storing and redistributing energy quickly, in response to when that energy is needed, storage helps stabilise the grid network.
- It makes grid networks more resilient, efficient, and cleaner than ever before by supporting the greater integration of renewable energy generation.
- It can be used during emergencies like power outages during storms, or equipment failures.
- It makes sense to co-locate this technology with a windfarm as this offers the opportunity to share the grid connection.

What is the next step in developing the project?

Environmental surveys are ongoing. The site layout requires to be finalised. Following completion of all environmental survey work and assessments, a planning application will be submitted to Causeway Coast and Glens Borough Council in 2018. We intend to hold a second round of public consultation events at which point a final planning application layout will be presented.

Tell us what you think.

All of the latest updates regarding the project can be found at:

www.scottishpowerrenewables.com

Or you can send your questions to the project development team by sending an email to:

riggedhillwindfarmrepower@scottishpower.com

www.scottishpowerrenewables.com



Rigged Hill Windfarm Repowering

Site Comparison

The existing turbines at Rigged Hill Windfarm are more than 20 years old, and whilst they currently perform well and have planning permission in perpetuity, newer more powerful, efficient modern generation and energy storage technology are available.

This means we can reuse the site meaning the benefits are maximised without the need to develop a new greenfield site.

A single, modern onshore wind turbine can have the capacity of seven of the existing operational turbines. Technology advancements over the years include using longer blades to capture more wind at greater heights, where wind speeds are faster. Improvements in aerodynamics,

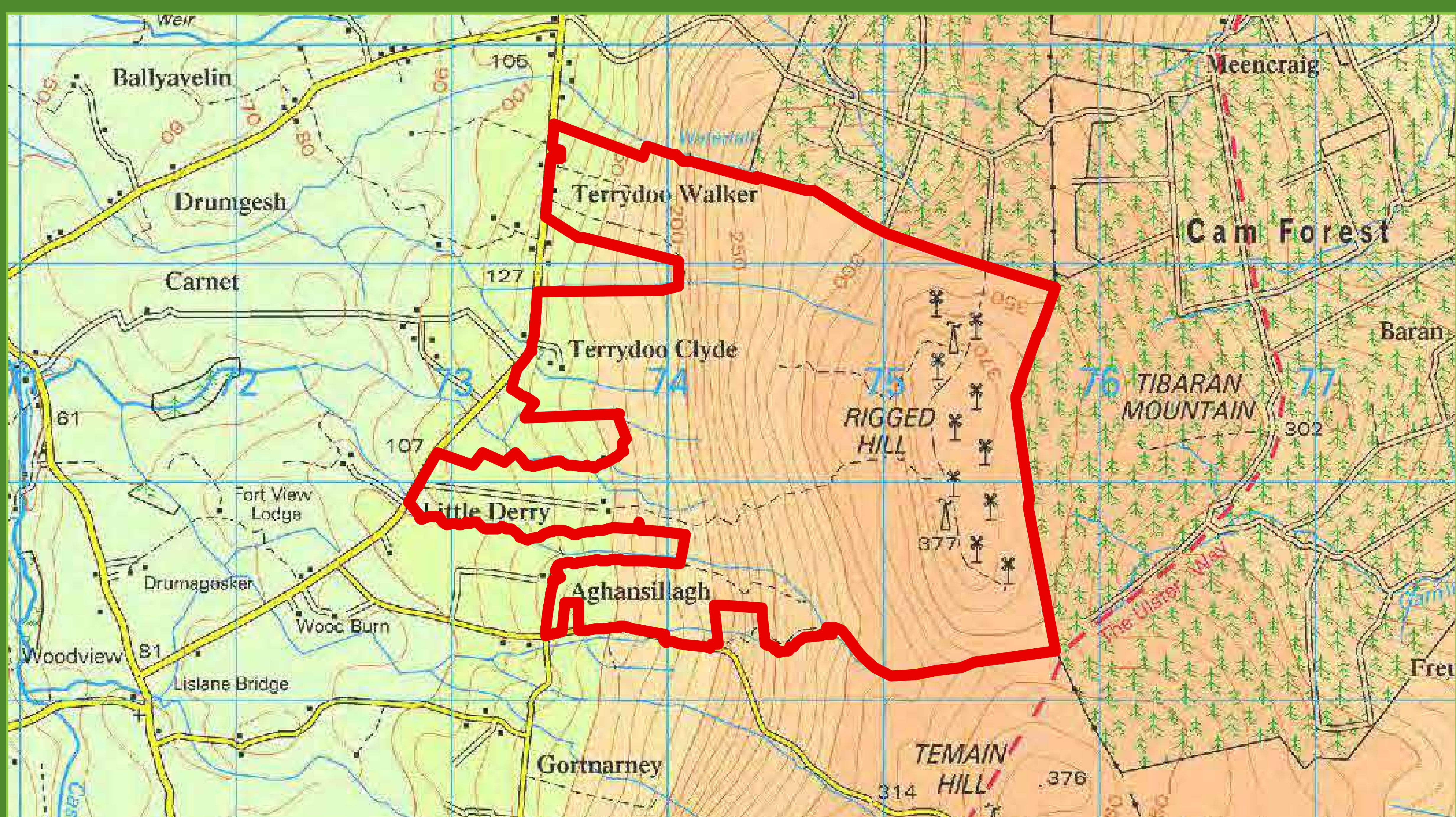
electrical and mechanical systems have also increased efficiency.

These factors combine to lower the costs of renewable energy making onshore wind the cheapest form of renewable energy generation available

Lots more clean green energy!

	Existing site	Repowered Site
Number of turbines	10	Up to 7
Tip Height	57 m	Up to 135 m
Turbine Max Power	0.5 MW	Approx. 3.6 MW
Site capacity	5 MW	Approx. 21 - 25 MW
Energy Storage	No	Yes

Site Location



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Rigged Hill Windfarm Repowering

Development Timeline



Rigged Hill Windfarm Repowering

Environmental Impact Assessment (EIA) and Development Strategy

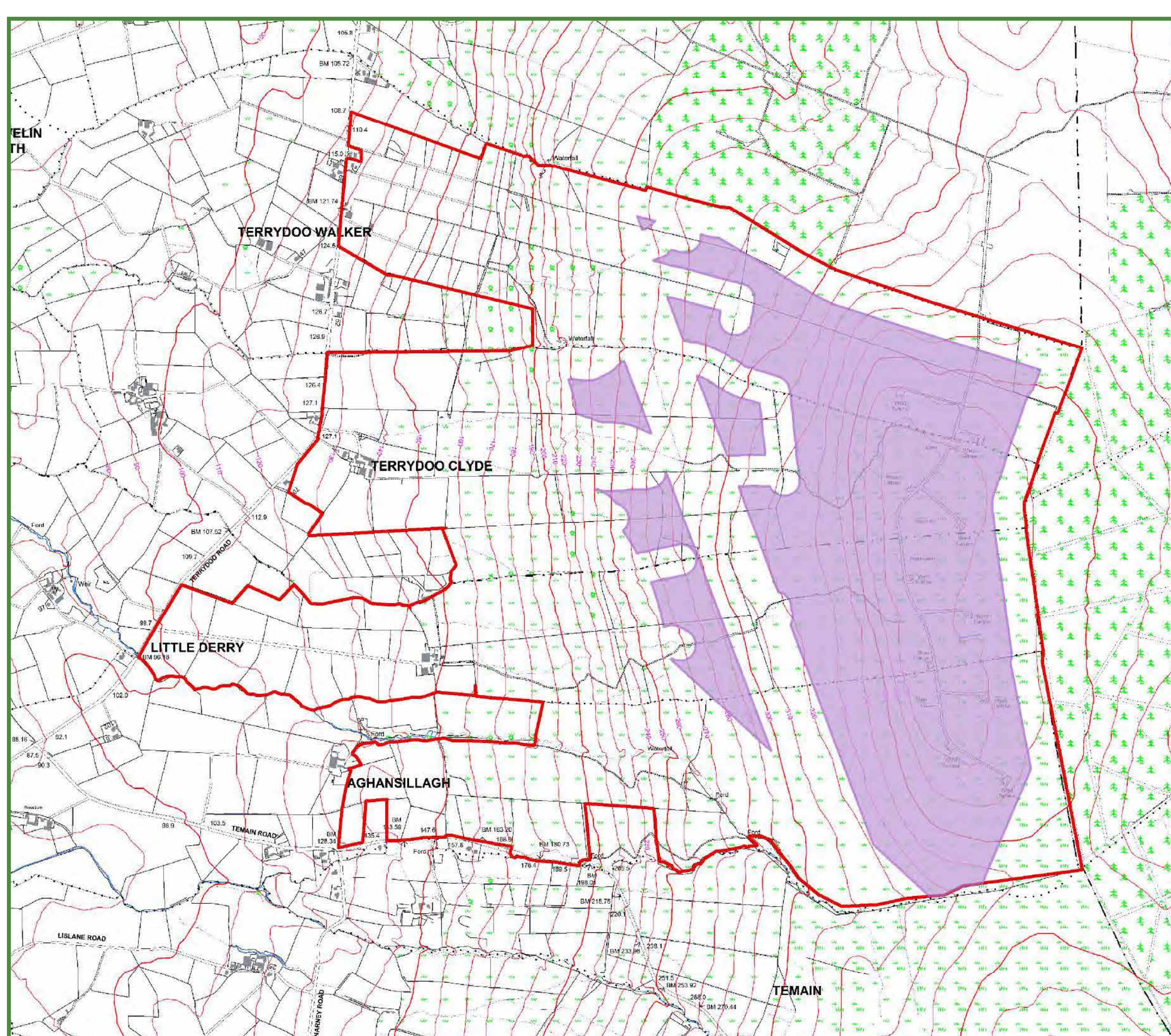
Arcus Consultancy Services Ltd, alongside a team of independent specialist consultants, has been tasked with undertaking extensive environmental surveys of the site and surrounding area. The site consists of grassland and wet heath habitats within the west of the site on the lower slopes of the hills. The crest of the hills and the land dropping away to the forestry east of the site where the existing wind turbines are sited supports mire and bog habitats. These habitats have been influenced by man-made drainage, grazing and peat cutting as well as the development associated with the existing wind turbines.

We have gathered and continue to gather wind data for the site. Based on the data collected from the existing turbines, and via an onsite meteorological mast, we know this is a high performing, windy site.

The proposed windfarm layout and associated infrastructure, will evolve and respond to the results of the surveys undertaken, and the feedback received from the consultation process, whilst taking account of the advice of the environmental consultants.

We have used the survey data gathered to date to inform an Indicative Developable Area plan, with a focus on avoiding, through the sensitive siting of infrastructure, any potential significant effects in the first instance, where this is possible.

Indicative Developable Area



Where necessary, mitigation measures will then be identified to eliminate or further reduce any remaining potential significant effects.

In building up this baseline information, and to inform an understanding of any environmental and technical sensitivities, the following surveys are underway:

Ecology – with a focus on avoiding any sensitive locations and habitats through sensitive design as far as practicable.

Ornithology – with a focus on ensuring that we understand which species of bird are on the site, and how they use the site. We can then use this data to avoid any sensitive locations, through careful design, as far as possible.

Hydrology and Peat – with a focus on ensuring that we avoid any areas of active peatland, and minimise any impacts to water resources, including any surface and groundwater features.

Noise – with a focus on ensuring that the turbines and associated infrastructure can be built out, and operated within acceptable noise limits.

Cultural Heritage – with a focus on avoiding any recorded onsite archaeology and ensuring, through careful design, that we avoid any unacceptable indirect effects on any offsite cultural heritage features.

Access, Traffic & Transport – with a focus on identifying potential transport routes that utilise trunk and major roads, as far as possible, and via the introduction of traffic management measures which focus on minimising effects on local communities.

This list is not exhaustive, other studies will be undertaken such as gathering data on television and telecommunications links, and consultation with aviation stakeholders in order to ensure the continued safe and uninterrupted operation of these assets.

Rigged Hill Windfarm Repowering

What Will The Development Look Like?

Professional landscape consultants have been tasked with helping us create a carefully designed windfarm. There will be several design iterations before we will agree a final layout.

An objective approach which follows recognised guidance and methods approved by the Landscape Institute, is used to minimise any potential effects on the surrounding landscape and visual resource, and on the people who experience these views.

The existing Rigged Hill Windfarm has been a feature of the landscape since 1994. The repowering of the site would bring about changes, due to the use of fewer, but larger, more efficient wind turbines.

A number of site visits have already been undertaken to inform a selection of viewpoints, which will be discussed and agreed with Causeway Coast and Glens Borough Council. Field surveys, alongside visualisations produced from these viewpoint locations, will help shape and inform the ongoing design of the layout.

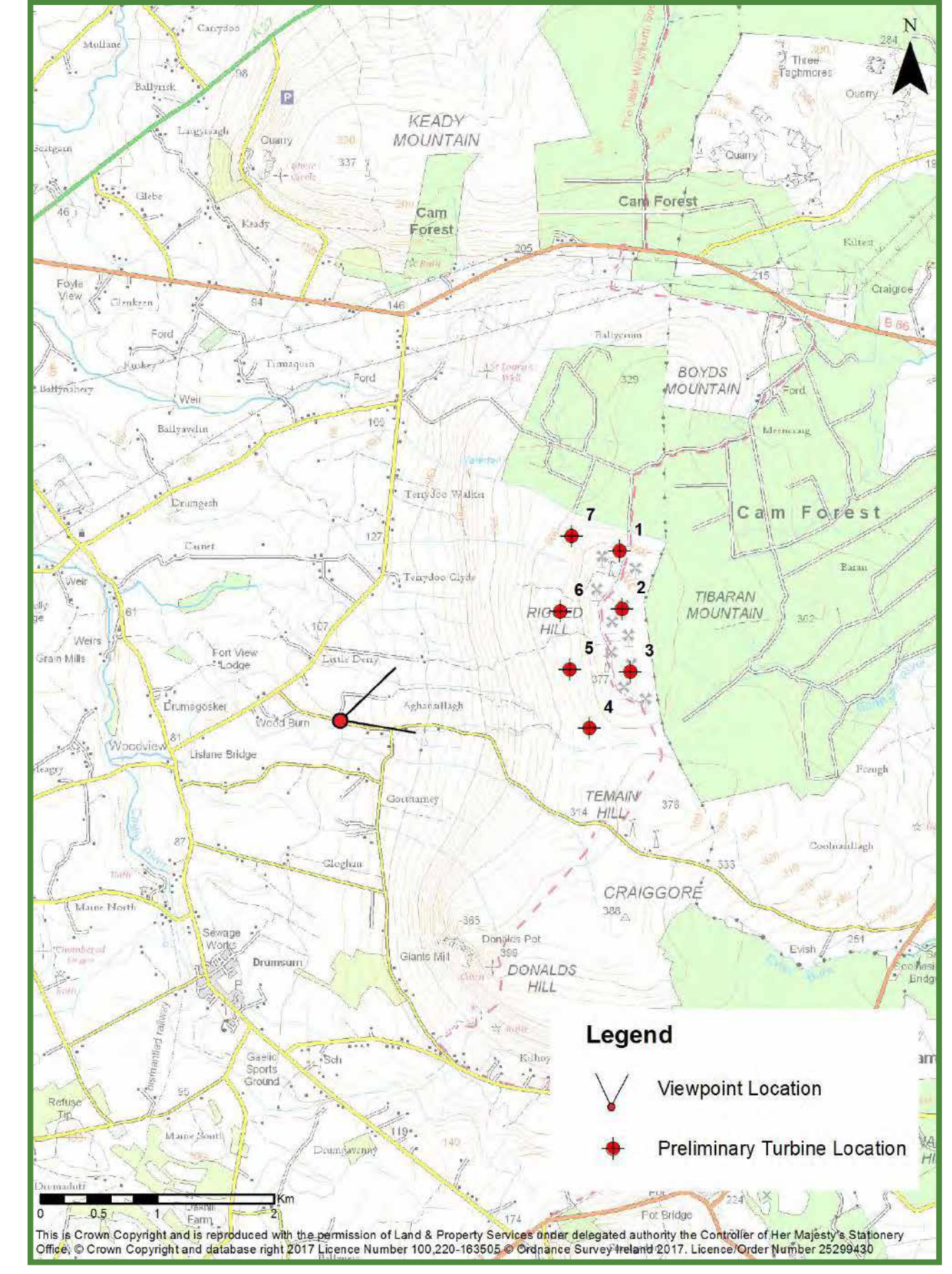
Consideration will be given to the views from settlements and routes throughout the local area when forming the turbine layout and design.



Harestanes Windfarm, turbine tip height up to 121.5m

Rigged Hill Windfarm Repowering

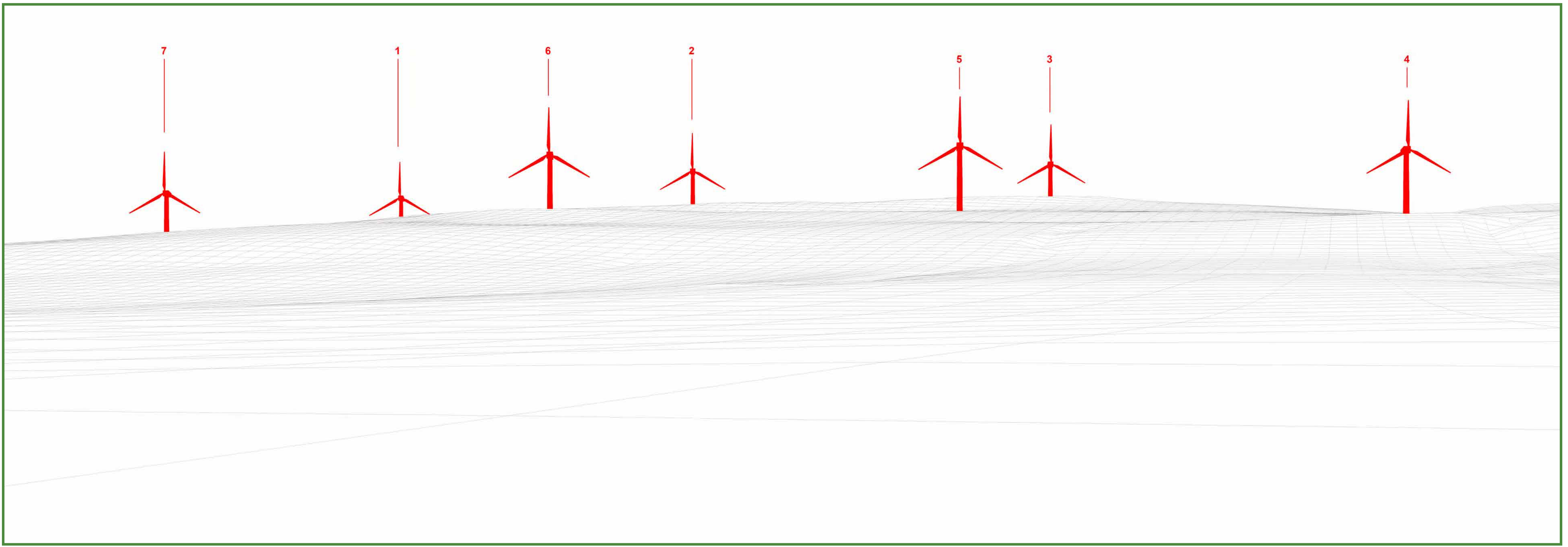
What Will The Development Look Like? Viewpoint 1 - Temain Road



Proposed View:



Wireline:

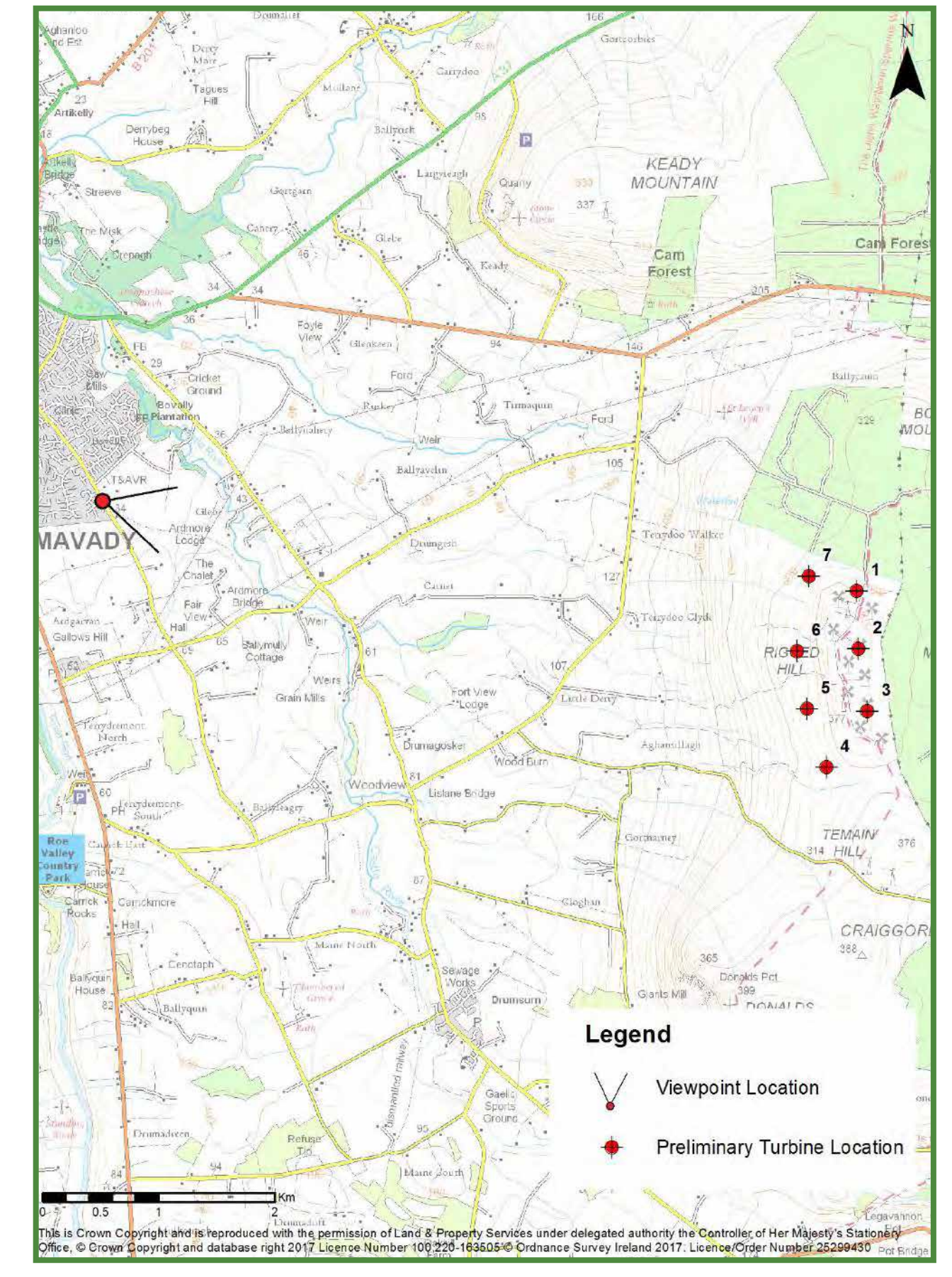


Existing View:



Rigged Hill Windfarm Repowering

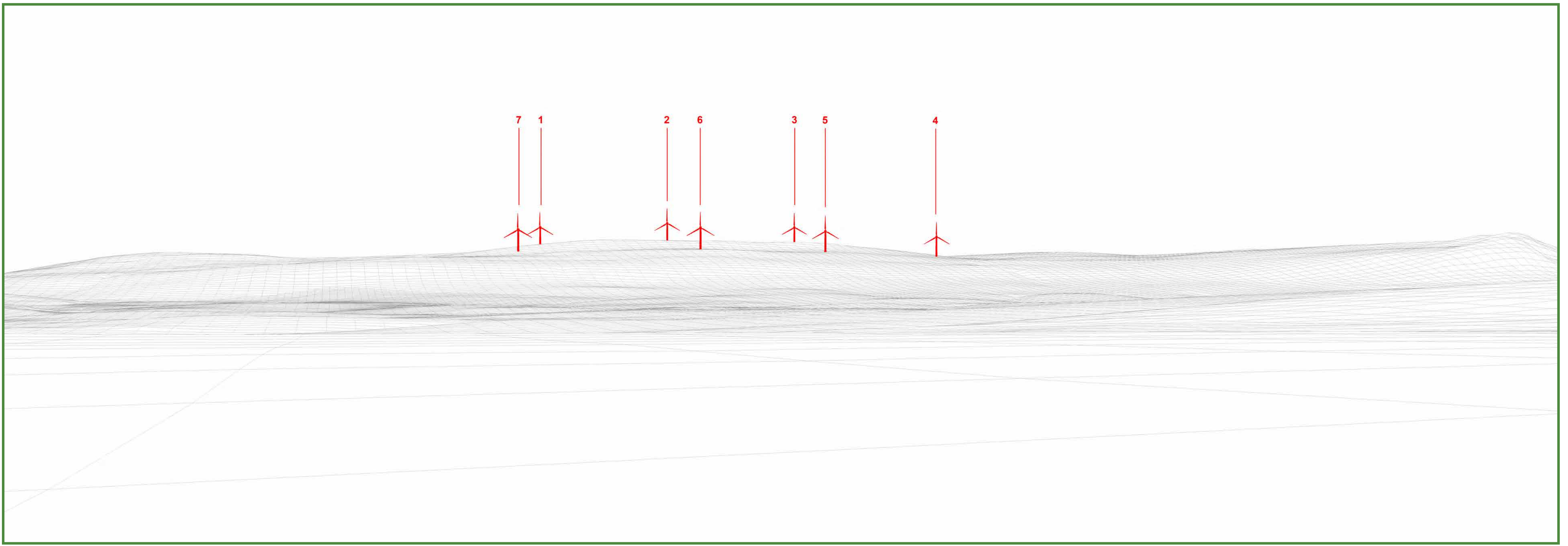
What Will The Development Look Like?
Viewpoint 2 - Limavady



Proposed View:



Wireline:

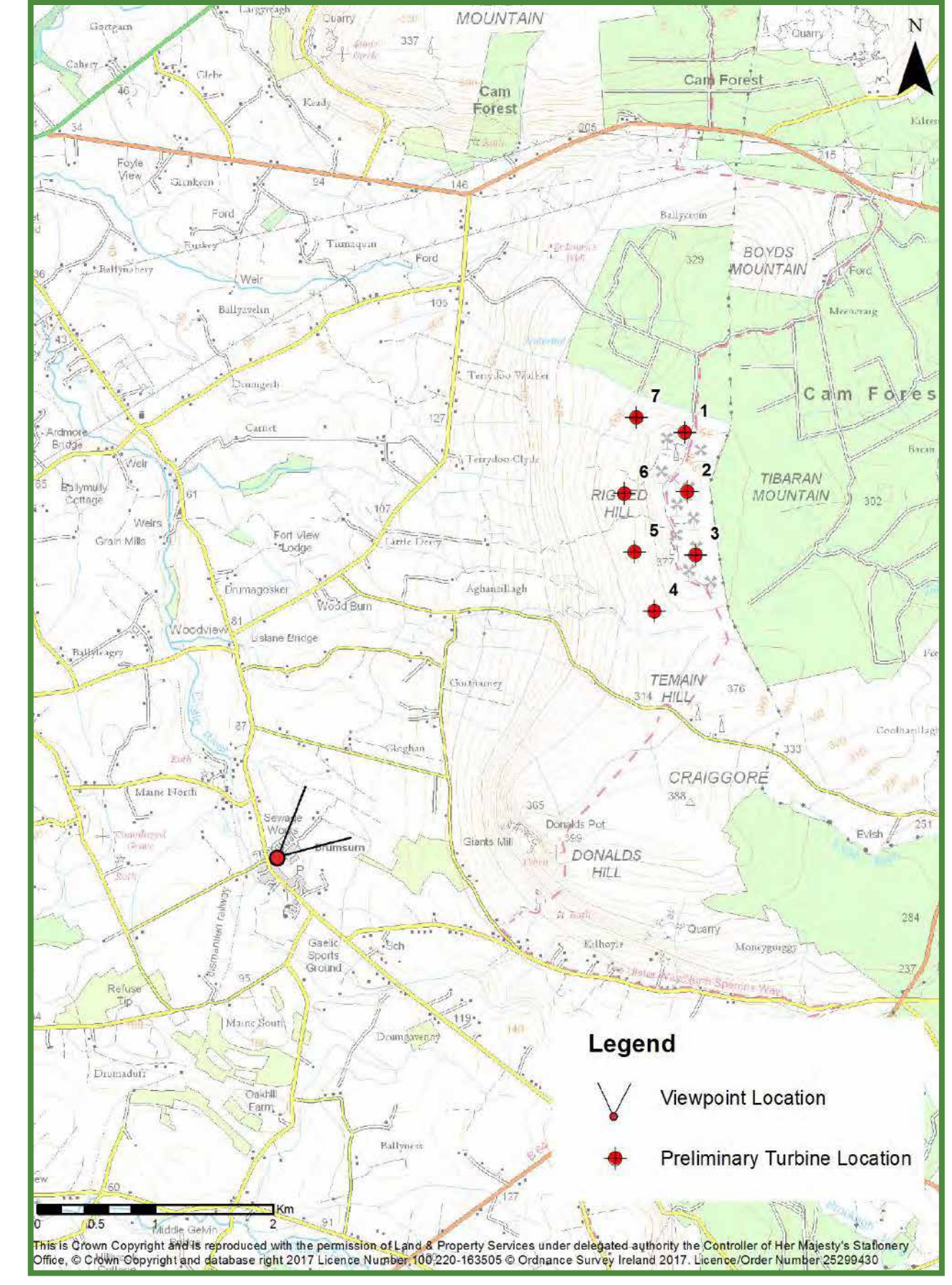


Existing View:



Rigged Hill Windfarm Repowering

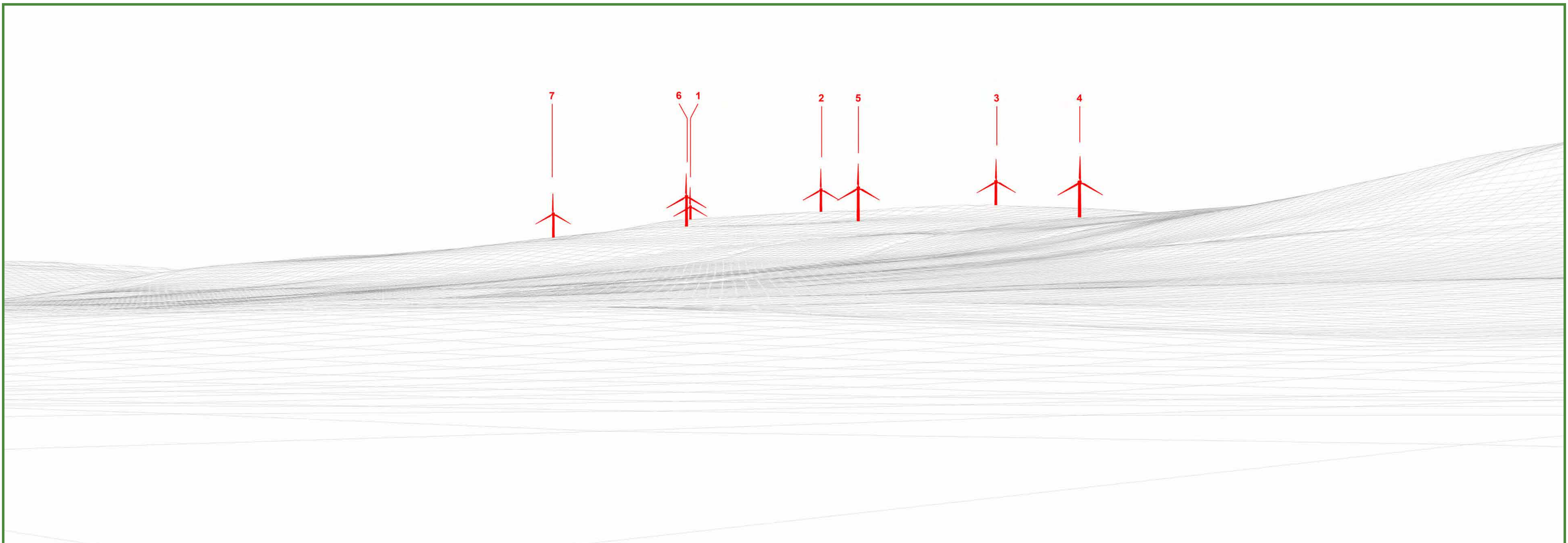
What Will The Development Look Like?
Viewpoint 3 - Drumsurn



Proposed View:



Wireline:



Existing View:

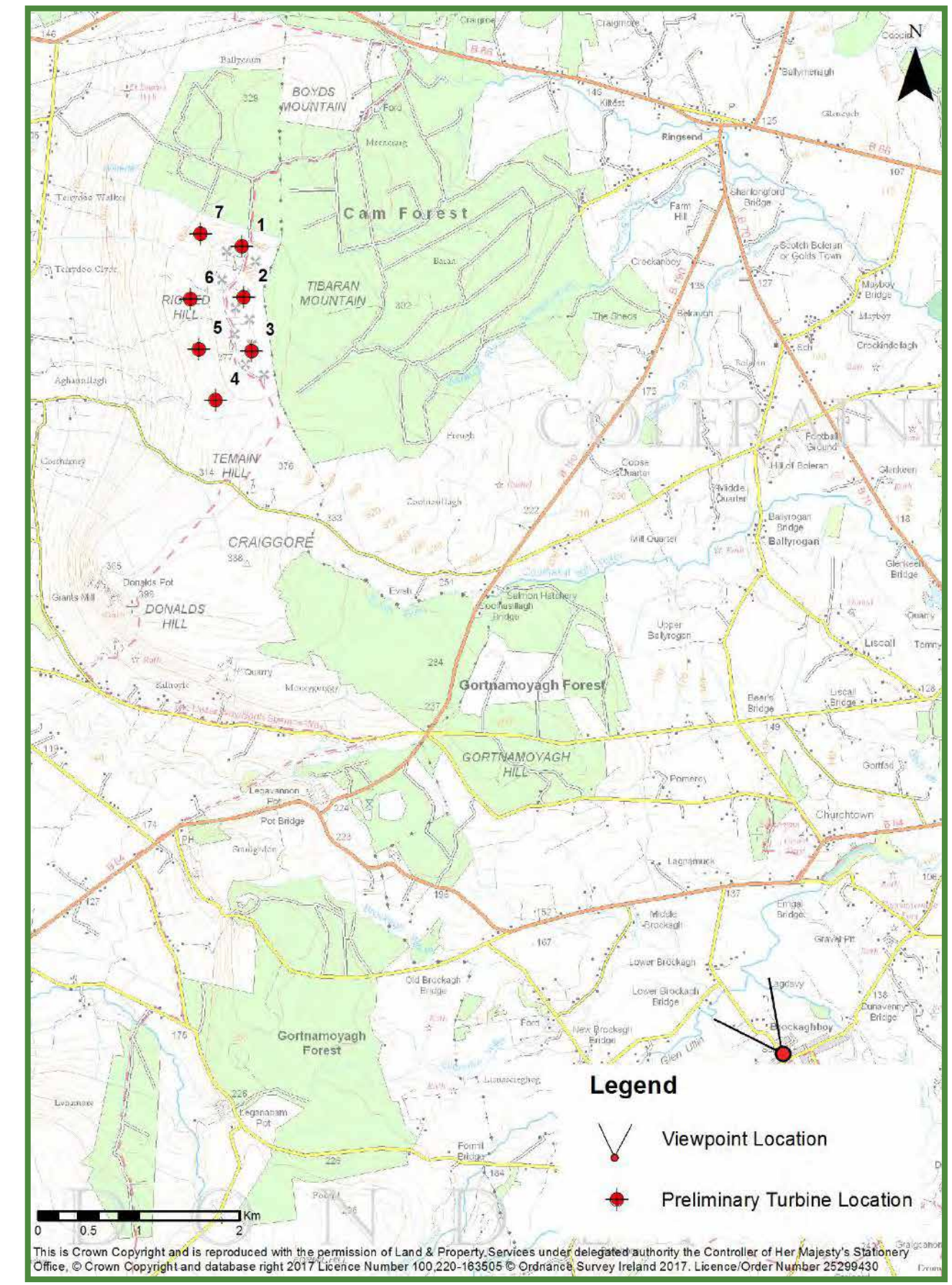




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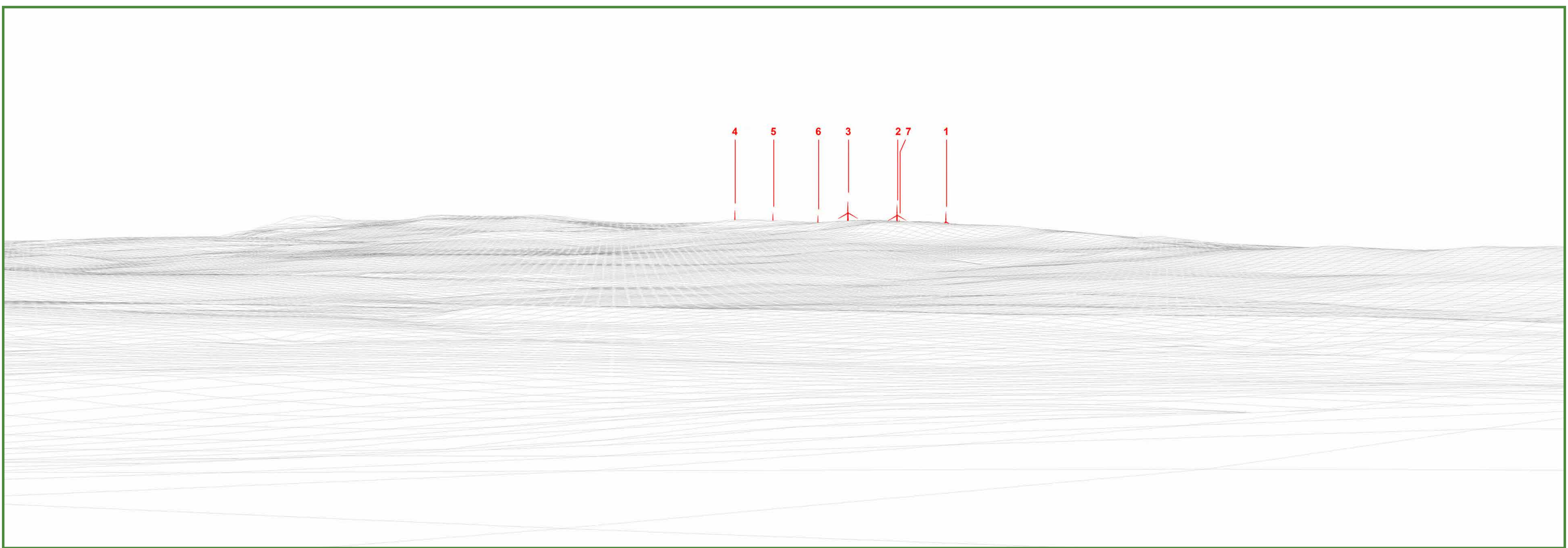
What Will The Development Look Like?
Viewpoint 4 - Brockaghboy



Proposed View:



Wireline:



Existing View:



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Community Benefit and Involvement

SPR, through the operation of the existing Rigged Hill Windfarm, has been present in the local community for over 20 years and the repowering project gives us the opportunity to integrate and contribute further to the local community.



In recent years SPR has voluntarily provided community benefit packages on all new development projects to enable the local communities hosting a windfarm to share in the benefits. If consented, it is proposed that the Rigged Hill Windfarm Repowering will offer an associated community benefit package.

SPR's operational windfarms have to date contributed more than £21 million of support towards community initiatives across the UK with the preferred approach to empower local communities to determine how the fund is used to the greatest benefit locally. This has resulted in a fantastic diversity of initiatives being delivered; from improving local amenities including town halls, cinemas and local youth clubs, to supporting work experience places, educational workshops and much more.

SPR would welcome contact from local community groups interested in registering to be part of community benefit discussions.

Economic Opportunities

Onshore wind is already an established industry worth £31.7 million (GVA) and supporting 532 jobs^[1] in the NI economy

across development, construction and operations. This momentum in the renewables industry has led on to offshore projects that have benefitted the NI economy with investments at Belfast Harbour and Harland & Wolff. Companies that have established a firm NI base in onshore wind have gone on to win work in other regions, SPR has employed several local firms such as Farrans (Construction) Ltd who have taken on large contracts as a civil contractor using staff based in their Belfast office.

Repowering this site will help to secure and sustain this established industry building upon the local skills base. During the many years of operation of the existing Rigged Hill Windfarm, SPR has employed the services of numerous local companies who support the operation and maintenance of the site and the repowering will provide further opportunities for local companies to tender for work on the project, with 'meet the developer days' to introduce local suppliers to the project team.

^[1] Onshore Wind: Economic Benefits In Northern Ireland, NIRIG