Newsletter February 2025

Greenhills Renewable Energy Development

About Ørsted

Ørsted is a world leading renewable energy company and our vision is a world that runs entirely on green energy.

In Ireland, Ørsted employs over 100 people in our Cork office and across our renewable energy projects nationwide. We have invested over €700m in Ireland to date and operate 21 wind farms, powering the equivalent of 250,000 homes and we have begun the construction of our first solar farm located in County Carlow. Our development pipeline is multi technology, including onshore and offshore wind, solar, hybrid, repower and storage.

Ørsted is recognised on the CDP Climate Change A-List as a global leader on climate action and was the first energy company in the world to have its science-based net-zero emissions target validated by the Science Based Targets initiative (SBTi). Headquartered in Denmark, Ørsted employs approx. 8,000 people globally.

Ørsted

Ørsted

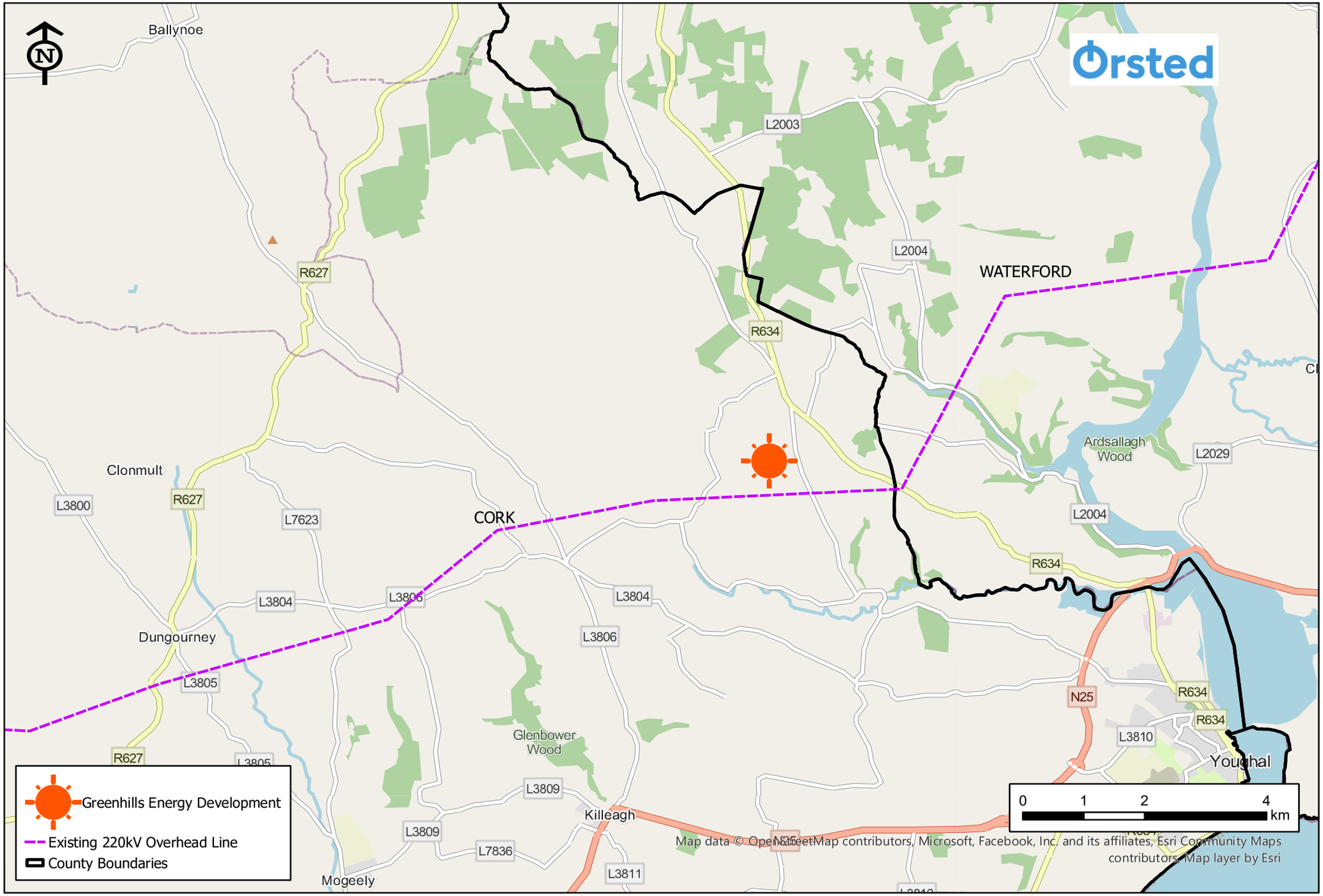
The Greenhills Project

The Greenhills solar site is situated adjacent to the R364 road approx. 7km north-west of Youghal and 6.5km north-east of Killeagh, Co. Cork, within a number of local townlands, including Knocknagappagh, Barnaviddane, Ballyneague and Ballydaniel. There will be several elements proposed that will collectively form the Greenhills Renewable Energy Development.

Solar Farm: The solar farm will comprise an estimated 250MW export capacity of solar panels on ground-mounted frames. The frames are fixed to the ground using sheet piles, securing them in place and helping to minimise any impacts on the existing local ground conditions. The solar farm will include multiple inverters and transformers throughout the array, which are typically hidden from sight, with underground cabling connecting it all together. This part of the development will include significant native hedgerow planting around the periphery, to shield it from view and improve local biodiversity.

Energy Storage: The proposed development will also include some grid stability services, comprising of a battery energy storage system. This will be located beside the substation and provides an important service to the national grid, helping to prevent blackouts and ensure a more reliable, secure and consistent power supply. By charging at times of high supply/low demand and discharging at times of low supply/high demand, this storage system brings a whole range of stability benefits to the grid, helping to balance supply and demand.

It also allows for increased usage of renewable energy on the grid, which has been shown to decrease electricity prices for the consumer, while offsetting the use of coal, oil and gas. Reports have shown that wind and solar farms have collectively saved electricity customers €840million since 2000 [1].


Ballynoe
Clonmult
Dungourney
CORK
WATERFORD
Ardsallagh Wood
Glenbower Wood
Killeagh
Youghal
Mogeely
L2003
L2004
L2029
L3800
L7623
L3804
L3806
L3805
L3809
L7836
L3811
L3810
R627
R634
N25
0 1 2 4 km
Greenhills Energy Development
Existing 220kV Overhead Line
County Boundaries
Map data © OpenStreetMap contributors, Microsoft, Facebook, Inc. and its affiliates, Esri Community Maps contributors, Map layer by Esri

Substation and Grid Connection:

The existing Knockraha-Cullenagh 220kV overhead line runs through the middle of the site and it is expected that this will facilitate connection to the grid via an on-site loop-in substation. This onsite 220kV substation will form an important part of the national electricity grid and would qualify as a Strategic Infrastructure Development under the planning regulations. Having a potential onsite connection like this removes the need for grid connection cabling within the local road network, helping to significantly reduce any potential traffic disruptions during construction.

The Planning Process

Surveys have commenced on site as a part of the pre-planning process. These surveys are undertaken by a range of specialists, looking at the existing site and ensuring that the development avoids harming any existing sensitive and valuable plants and animals, archaeological sites or protected views. The locations of houses are mapped, to ensure that the development is suitably set back from residences and that there are no noise impacts on people's daily lives. Once all the background information is collected, reports are drafted and designs are completed, before planning applications are finalised.

The current plan is for two separate planning applications for this development. One will cover the solar farm, grid stability services and all related supporting infrastructure and will be submitted to Cork County Council.

The second application will cover the substation and associated grid connection and will be made to An Bord Pleanála as a Strategic Infrastructure Development.

Community Engagement and the Community Benefit Fund

At Ørsted, we place a strong emphasis on community engagement. Local input is important at all stages of the project. We are keen to reach out and involve communities as much as possible. We hold regular open day events and we have also assisted local schools and students and have contributed to many community projects across Ireland. We also work alongside and consult local communities and welcome ideas on how our projects can benefit them.

If the project receives planning consent, Ørsted will apply for the government's Renewable Energy Support Scheme (RESS). This requires that a community benefit fund be put in place once the solar farm is operating.

The fund must comply with the government's Renewable Energy Support Scheme policy. Decision making on the fund will be the responsibility of the local residents who live in proximity to the project. A project of this size would result in a substantial community benefit fund being available, should it receive planning and qualify for RESS.

Sustainability and Biodiversity Net-Gain

At Ørsted, we support biodiversity initiatives in environments where we build and operate renewable energy projects, bringing together environmental organisations, local communities, research institutions, and the energy industry in taking action on the twin crises of biodiversity loss and climate change. Some of our key sustainability targets include:

- 40 % reduction in freshwater withdrawal intensity (m^3 per GWh) by the end of 2025.
- Net-positive biodiversity impact from all new renewable energy projects commissioned from 2030 at the latest
- Zero wind turbine blade waste directed to landfill
- Zero end-of-life solar PV modules directed to landfill

Our natural world is under increasing pressure. The consequences of human consumption, pollution, and climate change are taking a massive toll. If done right, the green energy build-out has huge potential to help unlock a lasting positive impact for nature. We're determined to leave nature in a better state than we found it. That's why we've committed to delivering a net-positive biodiversity impact from all new renewable energy projects we commission, including here at Greenhills.

How Solar Farms can help pollinators and biodiversity:

There are over 100 different types of bees and 180 hoverflies on the island of Ireland. Along with other creatures like moths, they provide important pollination services, helping fertilise many of our flowers, crops, and wild plants – playing an integral role in the health of our environment and production of our food. More than half of Ireland's bee species have undergone substantial declines in their numbers since 1980. The distribution of 42 bee species has declined by more than 50%, while 30% of Irish bee species are threatened with extinction.

The National Biodiversity Data Centre established the All-Ireland Pollinator Plan in 2015 in response to the significant declines in pollinator numbers. This valuable resource, which can be accessed at pollinators.ie, shares evidence-based recommendations to help pollinators, with the aim of guiding people to collectively take positive steps towards restoring pollinator populations to healthy levels. As a part of this good work, the All-Ireland Pollinator Plan published a series of guidelines in 2023, in conjunction with The Heritage Council, National Parks and Wildlife Service, Irish Solar Energy Association and the Department of Agriculture, Food and the Marine, specifically relevant to the pollinator-friendly management of solar farms. These guidelines align with Ørsted's commitments around providing biodiversity net-gain as a part of our developments.

Studies suggest that if solar farms are managed strategically, particularly on land that was previously managed intensively for agriculture, they can have positive impacts on local biodiversity. Furthermore, research has shown that managing vegetation on solar farms less intensively does not hinder the efficiency of energy production and can even increase local biodiversity. This management includes a number of measures, from avoiding the use of any pesticides and herbicides, to planting networks of native hedgerow and encouraging native wildflower meadow growth in field margins and between rows of panels. By strategically managing the Greenhills Solar site for pollinators, we can:

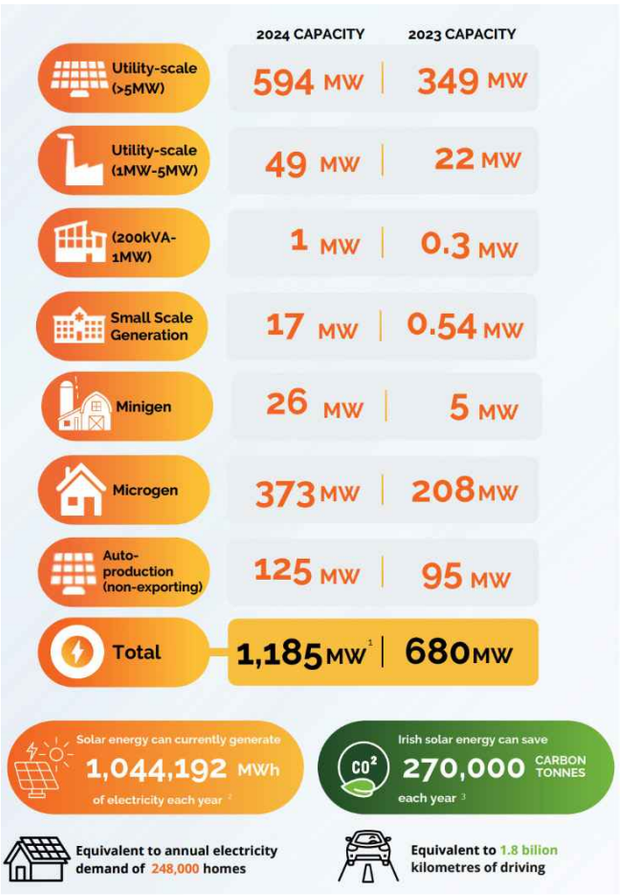
- Provide food and habitat for bees, hoverflies, moths, and other insects that provide important ecological and agricultural services such as crop pollination and natural pest control.

- Provide food, cover, and nesting habitat for some species of mammals, birds, reptiles, and amphibians.
- Significantly reduce wind and surface water erosion.
- Improve water quality by significantly reducing the use of fertilisers, herbicides, and pesticides.
- Reduce flooding by increasing organic matter and the water-holding capacity of soils.
- Improve the aesthetics of the solar farm. [3]

The Need For Solar

Ireland is committed to achieving climate neutrality no later than 2050, with a 51% reduction in greenhouse gas (GHG) emissions by 2030. These legally binding objectives are set out in the Climate Action and Low Carbon Development (Amendment) Act 2021, which establishes a framework with clear targets and commitments, to ensure the means are in place to deliver our national, EU and international climate goals and obligations in the near and long term. Failure to achieve these targets could result in fines being imposed on the Irish state estimated at over €8billion.

Climate Action Plan 2024 sets out the roadmap to deliver on Ireland's climate ambition and aligns with the legally-binding economy-wide 2030 GHG emission targets. One of the key relevant targets is the commitment to increase renewable electricity generation to supply 80% of demand by 2030, through the development of wind and solar energy generation.
To achieve the solar aspect of this, the government have set a target of 8000MW of solar to be installed by 2030, which is broken down as 5500MW of utility-scale solar (which would include Greenhills solar) and 2500MW of non-utility solar (which would include rooftop installations). This infographic from the Irish Solar Energy Association displays the current figures for solar generation installed in the country and highlights the substantial increase that needs to take place between now and 2030 to achieve the government targets [2][3][5].



Current Project Timelines & Next Steps

We are here

Q4 2024

Commence Detailed Environmental Surveys

Q1 2025

Introductory Newsletter

Q2 2025

Site Layout and Further Info Newsletter

Q2 2025

Public Information Event in Local Venue

Q2 2025

Target for Planning Application Submission

Q2 2025

Submit ECP-GSS Grid Application

Q2 2025

Planning Decisions from Cork Co. Co. and An Bord Pleanála

Ørsted

Frequently asked questions

Why not install the solar panels on rooftops instead?

Small-scale rooftop solar and large-scale ground-mounted solar serve different purposes. Where rooftop solar is typically intended to supplement the electricity usage of the adjacent building, solar farms like the Greenhills project seek to export large quantities of electricity onto the national grid, helping Ireland to reach its legally binding renewable energy targets. Additionally, ground-mounted solar panels are typically more efficient than rooftop solar, as they can be positioned to capture the maximum amount of sunlight throughout the day, with optimal orientation and tilt angles.

Is there a danger to motorists or aircraft because of reflection from the panels?

No - solar panels are designed to absorb light rather than reflect it. However, a glint and glare study will be completed to ensure no significant nuisance or hazard reflectance effects will be experienced along surrounding roads.

Are solar farms noisy?

Solar is a passive technology, the panels produce electricity silently, so the majority of a solar farm is generally very peaceful. Any equipment that generates noise will be located away from residential properties to ensure there will not be a noise nuisance to local residents.

Will the solar farm cause traffic disruption?

Once the solar farm is in place it requires very little maintenance and the occasional visits in regular cars or 4x4s would cause no traffic disruption. There will be a temporary increase in traffic during construction and this will be subject to assessment to ensure the local road network can accommodate the increase. Traffic management during construction will be agreed with the local authority in a construction management plan.

Do solar farms generate harmful electromagnetic fields?

Electricity from solar panels and transmission to the power grid emits extremely weak electromagnetic fields. Exposure to low-level electromagnetic fields has been studied extensively, and there is no evidence that it is harmful to human health, according to the World Health Organization. The solar panels used for the project are similar to domestic panels which are placed on the roofs of houses.

Do solar farms have a negative impact on the local environment?

Solar farms generally have a neutral/positive impact on the local environment depending on the existing land uses. For this solar farm, by allowing the site to remain fallow for the duration of the lifetime, it gives the soil an opportunity to recover and improve. In addition, there will be no fertilisers or pesticides used during the lifetime of the

solar farm meaning less risk to water bodies than from standard agricultural activities. Vegetation will be controlled via sheep grazing or mowing. There will be significant additional planting of native hedgerows which will support local wildlife.

Is there any risk to local archaeology from this solar farm?

Archaeology will be safeguarded during the development and operation of this project. Archaeological surveys have been carried out across the site and areas of archaeological interest have been excluded from the proposed project.

References

[1] Baringa. (2025). Good for your Pocket: How renewable energy helps Irish electricity consumers. Baringa.

[2] Government of Ireland. (2025, 01 15). Climate Action Plan 2024. Retrieved from gov.ie: https://www.gov.ie/pdf/?file=https://assets.gov.ie/296414/7a06bae1-4c1c-4cdc-ac36-978e3119362e.pdf#page=null

[3] Irish Solar Energy Association. (2025, 01 15). 2024 Report - Scale of Solar. Retrieved from irishsolarenergy.org: https://www.irishsolarenergy.org/_files/ugd/f7484d_13925c5011d3410e88b0857370b4abd2.pdf

[4] National Biodiversity Data Centre. (2023). Pollinator-friendly management of solar farms. All-Ireland Pollinator Plan.

[5] Sustainable Energy Authority of Ireland. (2025, 01 15). National Energy Projections 2024. Retrieved from seai.ie: https://www.seai.ie/sites/default/files/publications/National-Energy-Projections-Report-2024.pdf

Ørsted

Meet the Team

Aidan Stakelum
Community Engagement Lead

Aidan is the community liaison representatives for the project. He is responsible for developing community engagement strategies and stakeholder management plans to engage with communities on renewable energy projects. Aidan is available to discuss the proposed project with the local community.

Patrick McMorrough
Project Developer

Patrick is the project developer responsible for managing the Greenhills project from initial conception to the submission of the planning applications and throughout the subsequent planning process. Patrick manages a team of skilled specialists from a range of backgrounds in preparing the necessary reports and documents to inform the planning process.

Contact Us

You can contact us by email:

astak@orsted.com

or call a member of the project team on:

Aidan: 0861037437

Website: orsted.ie

Or write to us at:

Orsted Onshore Ireland Midco Limited,
Floor 5, One Albert Quay, T12 X8N6, Cork.

Ørsted