

Get Involved!

You can send us your feedback, comments or support via our online Planning Portal:



You can also contact us by phone or email. If you would prefer to write to us the traditional way, please get in touch and we will happily send you a pre-paid envelope.

We are still gathering information from our detailed wildlife and landscape assessments in order to refine our designs. So it will be several weeks before we submit a formal planning application. Before we do, we would welcome any feedback or suggestions you may have.

We are keen to hear from wildlife enthusiasts and local schools who may be interested in getting involved with the on-going monitoring of wildlife on the site. If you would like to be involved in the project, please get in touch, or come and introduce yourself at our information event. We would also encourage anyone who can't attend the community event to visit our website where the plans can be viewed and suggestions for the proposals can be put forward.

The Planning Team

T: +353 (0)1 685 6263
E: enquiries@lightsource-re.ie
www.lightsource-re.ie

Community Engagement



Local knowledge and input is greatly encouraged to ensure our proposals integrate within activities and aspirations of the local community. But opportunities for community involvement don't end once a solar farm has been installed. The technology on a solar project is passive and easily accessible, with no emissions or harmful chemicals, unlike more complex energy generation methods. As such, our projects can provide an excellent educational resource for communities wanting to learn more about the solar power on their doorstep. We are keen to involve communities and facilitate educational activities as much as possible. As well as opening up our solar farms for regular open day events, we have also assisted local schools, higher education students and ecologists with biodiversity research projects by providing access to our sites.

We also work alongside and consult local interest groups such as farming and beekeeping associations to continually review and improve our sites into the future.

If you would like to find out more, please get in touch via the contact details below...

Find out more...



Visit our YouTube channel 'Lightsource Solar' to watch the video!



www.youtube.com/LightsourceSolar

Community Information Pack

PROPOSED SOLAR FARM AT BALLYVATTA-CLASH, KNOCKRAHA, CO. CORK



Benefits

7,652 homes powered by clean, locally produced electricity

Designed to accommodate sheep grazing throughout the solar farm

Biodiversity enhancements to enrich wildlife habitats around the boundaries

Opportunities for local residents, students and wildlife groups to get involved in our plans



Solar farms provide great opportunities for biodiversity enhancement

Lightsource Renewable Energy is working on a proposal for a solar farm on approximately 125 acres of land at the townlands of Ballyvatta and Clash, Knockraha, Co. Cork. Lightsource develops and operates solar farms and rooftop installations in Britain and Ireland.

The proposed fields have been chosen for the project because they are well-screened by existing hedgerows and trees and benefit from flat topography, so there are very few views from the surrounding area. The solar farm will be designed to accommodate the grazing of sheep to allow the land to be kept in agricultural production. The wide field margins and boundary hedgerows will be managed to create and enhance habitats for local birds and wildlife. We are currently undertaking a range of site studies which will be submitted with the planning application – more information will be available at our community event.

Generating energy locally means that Ireland can reduce its reliance on imported fossil fuel supplies. We work with local communities throughout the life of the solar farm to ensure our projects are the best fit for the local area. If you would like to see how you can get involved in the project, please get in touch with our team, or come and meet us in person at Knockraha Community Centre on Thursday 9th February 2017.

Get involved!

COMMUNITY INFORMATION EVENING



Thursday 9th February 2017

Knockraha Community Centre
Knockraha
Co. Cork
Ireland, T56 AC92

Drop in any time between
4.00pm – 8.00pm



Lightsource Renewable Energy Holdings Limited
Suite 27, 20 Harcourt Street
Dublin 2, Ireland

T: +353 (0)1 685 6263
E: enquiries@lightsource-re.ie
www.lightsource-re.ie



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Who are we?



We are Lightsource, Europe's leading solar energy company. We fund, develop and operate solar installations across the UK and Ireland – working with local communities, businesses and landowners to develop projects generating green energy locally and sustainably. The solar power produced by our projects in Ireland will provide a source of clean, renewable power to the Grid to be used locally by businesses and communities. Our commitment to Ireland is long term and we believe we can help make Ireland's energy mix more sustainable now and into the future.

Lightsource has offices in Dublin, Belfast, London & Bath – with regional operations & maintenance offices close to our existing sites.

Why solar?

The diversification of farmland by introducing solar energy generation is a tried and tested solution and we believe that when implemented responsibly, solar farms are a revolutionary way to generate clean, locally produced energy whilst retaining the land's agricultural use.

So why choose solar?

Agricultural use

About 70% of a solar farm is open grassland. So, where appropriate, the land can remain in agricultural use with smaller livestock such as chickens or sheep grazing comfortably around the panels. The infrastructure is raised so that livestock can also graze and take shelter beneath the panels, so stocking densities are hardly affected.

Boosting biodiversity

Solar farms can provide havens for local wildlife habitats to flourish undisturbed and biodiversity levels to increase, meaning our declining native species can repopulate and find food throughout the seasons.

Bridging the energy gap

Compared with traditional power plants, solar farms are quick to deploy. A solar farm capable of generating power for thousands of homes can be operational in a matter of months.

Supporting farmers

Renting land to Lightsource for the generation of renewable energy can provide rural businesses with a predictable, steady income stream which can support the rest of the farming business and keep Ireland's food production going.

Meeting targets

Ireland has binding targets to increase electricity from renewable sources to 40% by 2020, the majority of which will be from onshore wind. If Ireland doesn't meet these targets, the Sustainable Energy Authority Ireland believe annual fines of between €100-€150m will have to be paid by the Irish taxpayer in some form. By adding solar to Ireland's already varied energy mix, we can reduce the likelihood of missing these targets.

What is a solar farm?

Components of a solar farm:

Our solar panels don't move or produce anything except clean electricity. So how do they work?

Each solar panel is made up of silicon-based photovoltaic (PV) cells which convert the light energy from daylight into electrical energy. Daylight from the sun hits a negatively doped silicon layer which 'excites' electrons, effectively 'removing' them from their atoms. This creates a potential difference between the two layers of silicon and stimulates a flow of electrons. The flow generates Direct Current (DC) electricity. As there are no moving parts, the process happens silently.



Solar panels

Module cells convert the energy from daylight directly into Direct Current (DC) electricity.



Cabling

All cabling is weather proofed and securely attached to the structure or buried underground.



Inverters

The solar modules feed electricity into inverters, which convert the DC power into the AC (Alternating Current) flowing on the local grid network.



Local consumption

The electricity is distributed by the local Distribution System Operator (DSO) and EirGrid. Local energy consumption take-off will consume some, if not the majority, of the energy generated.



Substation

The substation is the on-site point of connection to the grid. From here, a high voltage cable, buried underground, connects the solar farm to the existing overhead line grid network.



Transformer

From the inverters, the electricity flows to a transformer which 'steps-up' the voltage of the electricity to match that of the existing overhead line network.

What are our solar panels made of?



Glass & Cells: Silicon (Si)

Silicon is the largest component on a solar farm, forming both the photovoltaic cells and the anti-reflective glass which protects them. To make the cells, sand is melted using electricity. It is then purified and distilled, formed into 'wafers' and given an anti-reflective silicon nitride coating to maximise light absorption.



Framing & Conductors: Aluminium (Al)

The horizontal and vertical lines across the panels are screen-printed aluminium conductors. They conduct the electricity produced by the silicon cells to the cabling.



Conductors: Silver (Ag)

The aluminium conductors are plated with silver to protect them from the elements.



Why blue?

The cell coating is blue in order to absorb the light most efficiently. Black would be even more absorbent, but it gets hotter and the technology works best at cooler temperatures.

More details of these components will be available at our community event

Our initial thoughts...

Proposed solar farm at Ballyvatta-Clash, Knockraha, Co. Cork

Our plans are in the early stages, so our design and planting proposals will evolve as we gather local input and the results of our ecological, landscape and heritage assessments. These are our current thoughts. For further details, please join us at our community info event on Thursday 9th of February.

NB – Provisional solar farm layout illustrated

How much energy?

 **27.67** Megawatts Peak (MWp)

 **7,652** households powered

 **13,055** tonnes of carbon emissions saved, every year

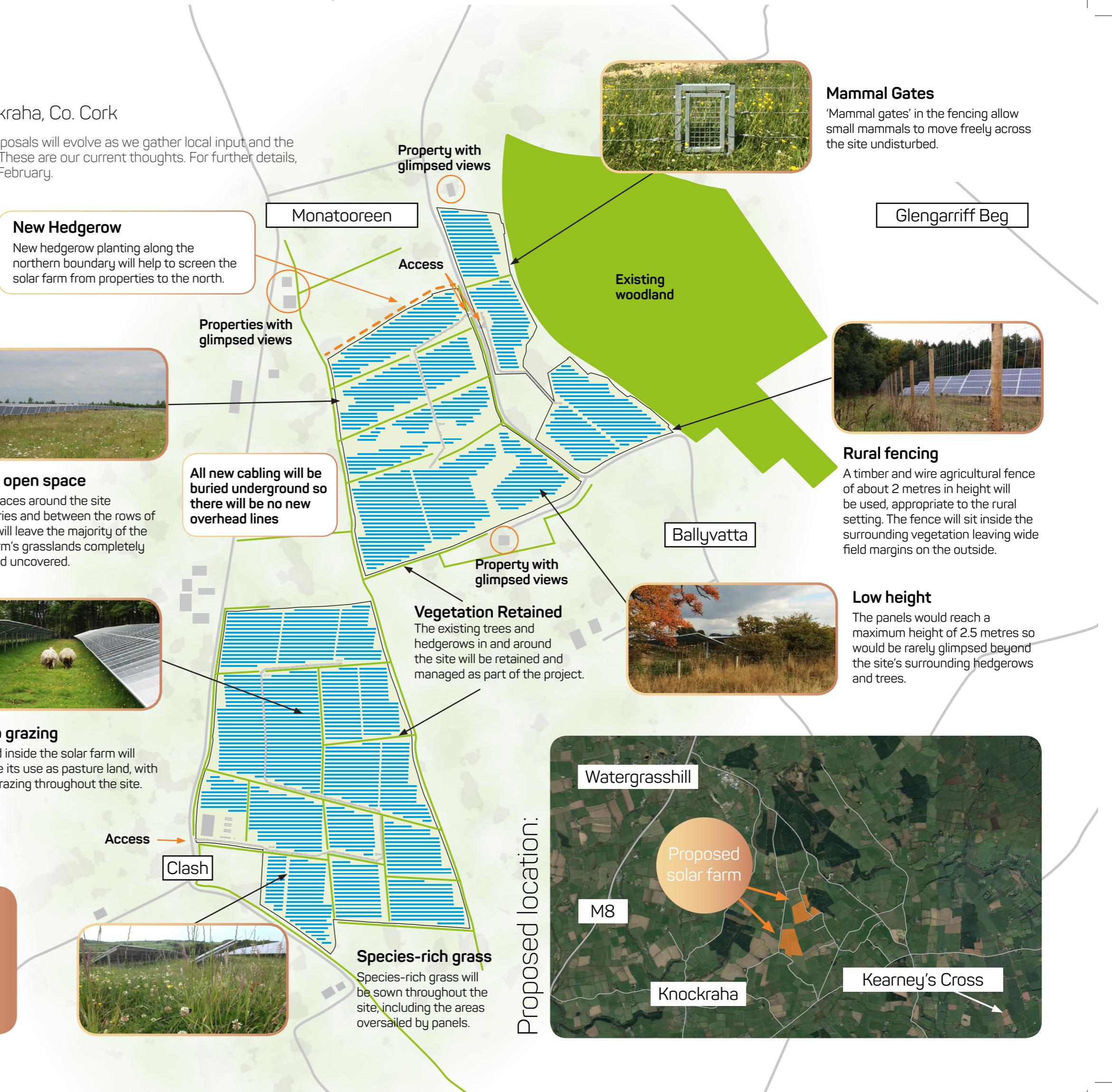
 ...Equivalent to taking **2901** large family cars off the road



Biodiversity enhancement

The design avoids using areas shaded by boundary vegetation by leaving wide field margins around the site perimeter. These spaces can be utilised to improve prospects for wildlife by sowing wild flowers or installing hibernacula. The specific enhancements we propose here will be decided using the results of our ecological surveys as well as local input and ideas. If you would like to help shape our plans, please get in touch.

The operation of the solar farm would be of no disturbance to farm animals, wildlife or motorists. There will be no flood lighting, the solar panels will not move, and as they are designed specifically to absorb daylight, an anti-reflective surface ensures any reflection of light is dull and minimal. The site is well screened from roads and properties due to the flat nature of the site and the natural vegetation surrounding the proposed solar farm.



Case Studies



NEWLANDS SOLAR FARM

Sheep Grazing

The Lightsource solar farm at Newlands Farm, Devon, was installed on agricultural land used for sheep grazing. With the solar farm in place, sheep continue to graze the entire solar farm area, allowing the land to produce both food and energy.

As well as continuing the land's traditionally agricultural use, sheep grazing also reduces the need for grass cutting on site. The hedgerows around the solar farm at Newlands Farm have been planted with Holly, Beech and Hawthorn to provide year-round screening, as well as food sources and nesting opportunities for local birds.



PITCHFORD SOLAR FARMS

Livery Yard and Sheep Grazing

Pitchford, in Shropshire, is home to two neighbouring solar farms totalling more than 21MW. Berriewood Farm is home to a family-run riding school and livery yard with over 100 acres of grass and woodland. Berriewood Farm hosts several shows and events every year using the tracks which run alongside the solar farm.

Nearby Stockbatch Farm is home to 200 ewes which graze within the solar farm site. The sheep are used for their milk which is sold to local cheese makers. The sheep keep the grass short, whilst the solar panels provide year-round partial shelter which helps to protect the sheep from strong winds, hot sun and freezing temperatures.



CROOKEDSTONE SOLAR FARM

Power Purchase Agreement

Crookedstone, in Antrim, Northern Ireland is the first ever large-scale solar farm on the island of Ireland. The project was completed in partnership with Belfast International Airport and the solar farm connects directly into the Airport's electricity supply – providing 27% of their annual demand and saving 2,345 tonnes of carbon emission each year.

In addition, the site will also help to increase local biodiversity levels. Lightsource worked closely with ecologists throughout the planning stages to create a tailored plan for the new solar farm.



WILBURTON SOLAR FARM

Biodiversity & Bee Keeping

Wilburton Solar Farm in Cambridgeshire was installed in 2011 and has now been generating clean energy for 5 years. This solar farm receives widespread support from the local community, primarily due to noticeable improvements to biodiversity. Wilburton has become a 35-acre pollen, brood seed and wild bird seed paradise. In 2015, with the encouragement from the farm's landowner, Lightsource partnered with a local bee farmer and installed 10 hives along the site's southern boundary - producing honey which is sold in the local community.

Recently, Lightsource has successfully been granted planning permission for a 19MW ground mount solar farm in Tipperary and recently completed as community consultation for a 70MW solar farm in Co. Meath

Frequently asked questions

Why harvest energy instead of food?

It isn't a choice - solar farms can do both. The solar farm at Ballyvatta-Clash is being designed for the grazing of sheep, enabling us to generate energy whilst continuing an agricultural use of the land.



Will the solar farm impact historical features in the area?

No – we conduct thorough heritage assessments and ensure we avoid areas containing significant buried remains, as well as avoiding sites which would adversely impact views from historical monuments. This site is well-screened from the surrounding area and the proposed panels reach a maximum height of 2.5 metres.

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

No - solar panels are designed to absorb light rather than reflect it. It is generally accepted that solar farms are not dangerous to aircraft. In fact, many airports have solar installations on their premises – Lightsource has also completed a large-scale solar project with Belfast International Airport.

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 aside from the buzz of insects in the grass. The inverters (and the fans which keep them cool) do make some noise, but they are positioned in cabins towards the centre of the site so you would not expect to hear any noise from beyond the site boundary.



How are the panels kept clean?

Typically, in the UK and Ireland, rainfall helps to clean the panels. But occasionally they will need to be cleaned manually using water and a brush. Lightsource uses a tractor-mounted system which we call the "Clean Machine". It is able to clean 10x more panels per day than hand washing.



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. Whilst the solar farm is being installed, a traffic management plan will be in place, including organising off-peak daytime deliveries. It would take about 3-4 months to install the solar farm, averaging about 6 deliveries per day.

If you have a question we haven't answered here, please send us an email and we'll ask one of our experts and get back to you.