12th October 2022

Ref: Information on the Proposed Castlegarden / Raheenroche Wind Farm

Dear Resident,

Firstly, I would like to thank everyone who has submitted feedback and questions during the public consultations conducted to date. The purpose of this communication is to provide you with an update on the proposed Castlegarden Wind Farm and to provide some further information in relation to a number of those queries that we have received in recent months.

During our recent consultation we met with over 80 residents at their homes. We have had meetings with community representatives and a number of other individual residents. We have had a number of questions and concerns put to us in writing and by email as well as receiving many telephone calls and the questions people are generally asking are as follows:

- Will there be a decrease in property values around the proposed wind farm?
- I have concerns about construction noise.
- I have concerns about construction and operational noise.
- Potential for shadow flicker and the process for managing it?
- Impact on residential planning in the area.
- Impact on water quality of our wells.
- Impact on local wildlife.
- Potential for electromagnetic interference to satellite and mobile signals.
- Detrimental effect on an area of natural beauty.
- What about health issues?
- When can we access the detailed impact assessments?
- Why was the area in Castlegarden / Raheenroche chosen for a wind farm?
- Why are such large marine turbines proposed for this site?
- What about the visual aspects of the proposed wind farm on our local area?
- Where will the turbines and access points be positioned?

A summary of these answers is provided below. The website (www.rwe.com/castlegarden) will also be updated regularly as we go through the process.

We need all of our renewable resources up and running (onshore wind, offshore wind and solar) as soon as possible to provide clean, secure and affordable energy. The Irish Government intends to double the onshore wind capacity in the country by 2030 and increase the proportion of renewable electricity to 80% by that time. This proposed development could generate renewable energy for use in the national grid helping to displace thousands of tonnes of carbon dioxide over its lifetime. It will lead to cheaper electricity, energy security and help Ireland meet its climate change and decarbonisation targets and also help reduce our dependence on imported fossil fuels.

I would be delighted to hear from you as we continue to progress through this engagement process. If you have any questions about the project at any stage, please feel free to contact

me on my mobile 087 151 9219 or by email at castlegarden@rwe.com or you can write to me at RWE Renewables Ireland Limited, Desart House, Lower New Street, Co. Kilkenny R95 H488.

Many thanks for your time and I look forward to meeting you in person in the near future.

Kind regards,

Kieran

Kieran O'Byrne
Stakeholder Engagement / Communications – Onshore
RWE Renewables Ireland

Question - Decrease in Property Values

Answer

For most people their family home is the biggest investment they will ever make and it is understandable that property owners may have concerns about the effects of having a wind farm in their neighbourhood might have on their property.

In Ireland there are no known empirical studies carried out on the impacts of wind farms on property prices. A number of studies have been carried out in the UK that conclude that a consistent negative effect was not found on house prices, when sited near to wind turbines or wind farms when averaging across the entire sample. The following are three key pieces of research undertaken in the UK with reference to house prices.

Research was published by Renewable UK and the Centre for Economics and Business research which looked at more than a million house sales from 1995 to 2013 and compared the 82,000 which took place within five kilometres of a wind farm with the others. It found no indication that the presence of a wind farm had any effect on house prices.

https://cdn.ymaws.com/www.renewableuk.com/resource/resmgr/publications/reports/ruk-cebr-study.pdf

In April 2014, the London School of Economics Spatial Economic Research Centre published a report based on 125,000 house sales in England and Wales between 2000 and 2012. The study found an average reduction in the value of the house of between 5 and 6 per cent within 2 km of very large wind farms.

http://eprints.lse.ac.uk/62880/1/__lse.ac.uk_storage_LIBRARY_Secondary_libfile_shared_repository_Content_Gibbons%2C%20S_Gone%20with%20wind_Gibbons_Gone%20with%20wind_2015.

This study obviously disagrees substantially with the findings from Renewable UK and the Centre for Economic and Business Research and so this led to further research by the Scottish Climate Exchange which was published in Scotland in 2016. This Scottish research looked to estimate the impact on house prices from wind farm development. The study included the analysis of over 500,000 property sales in Scotland between 1990 and 2014.

The Key findings of the report are as follows:

1. No evidence of a consistent negative effect on house prices: Across a very wide range of analyses, we do not find a consistent negative effect of wind turbines or wind farms when averaging across the entire sample of Scottish wind turbines and their surrounding houses. Most results either show no significant effect on the change in price of properties within 2km or 3km, or find the effect to be positive.
2. Results vary across areas: The results vary across different regions of Scotland. Our data do not provide sufficient information to enable us to rigorously measure and test the underlying causes of these differences, which may be interconnected and complex.
3. The results persist under a variety of assumptions:
    - whether or not we account for the visibility of turbines;
    - whether we base the analysis on individual turbines or entire wind farms;
    - whether we account for building heights or use only the natural terrain when estimating turbine visibility;
    - whether we follow individual dwellings over time or use postcode averages.
4. The complexity of the findings may be due to:
    - attitudes towards wind farms and their benefits potentially varying across regions and different social and economic groups
    - Scotland having a higher proportion of its turbines located in remote areas
    - the fact that some wind farms provide economic or leisure benefits (e.g. community funds or increasing access to rural landscapes through providing tracks for cycling, walking or horse riding)
5. Additionally these factors are not mutually exclusive. It is likely that they affect house prices simultaneously, and to varying degrees in different locations

https://www.climatexchange.org.uk/media/1359/cxc_wind_farms_impact_on_house_prices_final_17_oct_2016.pdf

Question - Concerns about construction and operational noise

Answer 1. Construction noise.

It takes approximately 18 months to construct a wind farm. During this time RWE will ensure that construction operations will take place as per the planning conditions, inclusive of any conditions relating to construction noise.

Subject to good working practice, it is not expected that there will be any significant noise impacts associated with the construction phase and the likely noise from construction activity at the nearest residential properties is expected to be well below recommended significance threshold values.

Answer 2. Operational noise

It will be the duty of RWE Renewables to demonstrate during the planning process that noise levels from our proposed development will not adversely affect local residents. The noise studies that will be completed over the coming months will be used to design the project so that noise levels at nearby residential homes do not exceed national planning guidelines.

The '**Wind Energy Development Guidelines for Planning Authorities' (Department of the Environment, Heritage and Local Government, 2006)** set out strict limits for the control of noise from wind energy developments to prevent undue noise pollution and to prevent any impacts on health. The 2006 Wind Energy Development Guidelines are based on the principle that: 'in low noise environments where background noise is less than 30 dB(A), it is recommended that the daytime level of the LA90, 10min of the wind energy development noise be limited to an absolute level within the range of 35-40 dB(A)' (40dB is approximately the noise from a fridge).

The Department of Housing, Planning and Local Government (DHPLG) published **"Draft Revised Wind Energy Development Guidelines"** in December 2019 and these draft guidelines were under public consultation until 19th February 2020.

The design of the proposed development will take account of the provisions of the 2019 "Draft Revised Wind Energy Development Guidelines". At the time of writing, the 2019 Draft Revised Wind Energy Development Guidelines are not yet finalised and may be subject to further change on foot of completion of the public consultation process, so the relevant guidelines remain those published in 2006.

Question - Potential for Flicker and the process for managing it

Answer

Shadow flicker is the name given to the phenomenon that could be caused when the sun is behind a rotating turbine blade and casts a moving shadow over an opening in a building such as a window or glass door, creating a flickering effect within the building as sunlight is being blocked and unblocked every couple of seconds by the rotating blade.

Modern turbine technology allows for constant monitoring of the conditions that cause shadow flicker to occur and can therefore control the operation of the turbine to eliminate any impact. Specialist software will be installed in each turbine to ensure that the potential is removed completely. This software will identify when shadow flicker could occur and will enable wind turbines to be shut down at the appropriate time, in order to ensure that residents will not experience shadow flicker, as a result of this development.

The 2019 Draft Revised Wind Energy Development Guidelines propose that future projects should be conditioned to prohibit any shadow flicker from occurring. The proposed wind farm will be designed to utilise these advancements in turbine technology to ensure that the effect of shadow flicker is eliminated and will not affect any inhabited properties.

Question – Impact on residential planning in the area

Answer

Based on the review of the Kilkenny County Development Plan there will be no changes to current Local Authority planning policy with respect to new residential housing as a result of this wind farm proposal.

Should the proposed wind farm at Castlegarden/Raheenroche be granted planning approval by Kilkenny County Council, any future residential planning applications in proximity to the project would be assessed by the Planning Authority on its own merits. Any permitted wind farm does not preclude land for residential development in the vicinity of the wind turbines.

Question – Impact on water quality of our wells

Answer

As part of the Environmental Impact Assessment (EIA) process, a hydrological and hydrogeological consultant will carry out a comprehensive investigation and evaluation of the surface and ground water systems specific to the site and surrounding catchments.

From this investigation, mitigation strategies, if required, will be formulated to protect water quality. In general, irrespective of the direction of groundwater flow, the hydrological assessment for the EIA assumes that all properties located around the site have a groundwater well and the appropriate measures against any potential effects on these or any water supply will be proposed to be employed on this basis.

Question – Impact on local wildlife

Answer

A detailed and systematic assessment of potential impacts on Ecology as a result of the proposal is been undertaken as part of the Environmental Impact Assessment (EIA) for the proposed Development at Castlegarden. The potential effects of the proposed development

on avifauna, terrestrial and aquatic flora and fauna during the construction, operation and decommissioning phases are been assessed. The findings of this assessment and details of any necessary mitigation measures proposed in order to protect the surrounding environment from any potentially negative impacts on Ecology will be available for public viewing within the Environmental Impact Assessment Report (EIAR), which will be submitted as part of the Planning Application.

Under the European Habitats Directive, the proposed development is subject to the Article 6(3) Appropriate Assessment (AA) Process. An AA Screening and a Natura Impact Statement will be prepared in accordance with the European Commission guidance document Assessment of Plans and Projects Significantly affecting Natura 2000 Sites: Methodological Guidance on the provisions of Article 6(3) and 6(4) of the Habitats Directive 92/43/EEC (EC, 2001) and the Department of the Environment's Guidance on the Appropriate Assessment of Plans and Projects in Ireland (December 2009, amended February 2010).

Question - Potential for electromagnetic interference to satellite and mobile signals

Answer

Best practice dictates that windfarms be designed to avoid interference with signals from the equipment used by mobile telecommunications operators or with local television reception.

Scoping and consultation with national and regional broadcasters will be undertaken as part of the EIA process. This consultation, together with a robust assessment completed as part of the EIA ensures that the proposed layout does not propose turbines within areas requested to be left clear by consulted telecoms utilities and broadcasters.

Subject to planning approval and prior to the commencement of construction, a follow up pre-construction telecommunications survey would be conducted to assess communication infrastructure in further detail, including reception and coverage locally. This will ensure that any necessary mitigation measures as identified and proposed in the EIAR as part of the assessment are put in place to avoid any potentially negative impacts on telecommunications.

Question - Detrimental effect on an area of natural beauty

Answer

Visual impact is one of the key considerations associated with wind farm developments, and RWE Renewables will be required to demonstrate that the proposed development is compliant with the requirements of Kilkenny County Council's County Development Plan and does not adversely impact visual amenity of the area in a significant manner.

As part of the Environmental Impact Assessment, a zone of theoretical visibility (ZTV) will be produced to illustrate predicted turbine visibility from all lands surrounding the proposal. This

information will be publicly available before a planning application submission is made to Kilkenny County Council.

Photomontages will be available for review later in the year which will provide visualisations of the project from a variety of representative locations surrounding the site.

Question - Health issues

Answer

It is understandable that people may have concerns about any possible health issues that may arise because of any developments in the area.

According to the UK *Centre for Sustainable Energy Report in June 2017 "Common Concerns about Wind Power - 2nd ed"* "the theory that infrasound from wind turbines might be causing real, physiological effects on nearby residents has so far failed to produce any empirical evidence or, indeed, even a plausible mechanism."

https://www.cse.org.uk/downloads/reports-and-publications/planning/renewables/common_concerns_about_wind_power.pdf

Feedback from the Deputy Chief Medical Officer (CMO) of the Irish Department of Health (#1) on 11th November 2013 indicated that wind turbines do not represent a threat to public health. This was based on a 2009 literature review conducted by the Australian Government's National Health and Medical Research Council (NHMRC).

Subsequently the Deputy CMO on 11th April 2014 advised that Australia's NHMRC had recently updated its evidence in relation to this matter (#2). The Deputy CMO stated that "this review again supports previous advice that there is no reliable or consistent evidence that wind farms directly cause adverse health effects in humans".

Australia's NHMRC further released a statement on 11th February 2015 which stated that "after careful consideration and deliberation of the body of evidence NHMRC concludes that there is currently no consistent evidence that wind farms cause adverse health effects in humans".

[#1 https://www.oireachtas.ie/en/debates/question/2015-03-25/section/213/)]

[#2 https://www.nhmrc.gov.au/about-us/publications/nhmrc-statement-evidence-wind-farms-and-human-health]

The Health Service Executive (HSE); HSE Public Health Medicine Environment and Health Group published a position paper on wind turbines and public health in February 2017 (#3).

The summary statement of this paper states that "the international surge in wind farm development in recent years has led to concerns regarding potential public health impacts. Published scientific evidence is inconsistent and does not support adverse effects of wind

turbines on health. However, adequate setback distances and meaningful engagement with local communities are recommended in order to address public concern."

The paper also stated that "while a range of effects have been reported anecdotally, there is no published scientific evidence to support adverse effects of wind turbines on health."

[#3 https://www.lenus.ie/bitstream/handle/10147/621467/HSE%20PHMEHG%20Wind%20Final%20PP%20Feb%202017.pdf?sequence=3&isAllowed=y]

Question – When can we access the detailed impact assessments?

Answer

Completed, finalised and quality checked technical reports detailing the results and findings of all studies undertaken will be available for review when the Environmental Impact Assessment Report is completed (target of January 2023).

In line with the public planning process, once an application is submitted, Kilkenny County Council will publish all submitted documentation on their public planning portal, meaning that all interested parties will have the opportunity to review and comment on the same documents, results and findings at the same time. The physical documents will also be available to view at Kilkenny County Council Planning Offices. Should you so wish, you also have the right to make a written submission on the application within 5 weeks of date of receipt of the planning application by the Council. We will inform residents when we submit the planning application

Question - Why was the area in Castlegarden and Raheenroche chosen for a wind farm?

Answer

The area around Castlegarden and Raheenroche was chosen for a wind farm as it is in an area of appropriate wind speeds with suitable available land. It is in an area designated as Open to Consideration for wind farm development in the currently adopted Kilkenny City and County Development plan. The proposed site does not contain areas designated as European Protected Natura 2000 sites meaning that it is not a Special Area of Conservation (SAC) or a Special Protection Area (SPA) and also does not contain any nationally designated Natural Heritage Areas (NHA). There is also sufficient area of land to accommodate a wind farm while keeping an appropriate distance from dwellings in line with Government guidelines.

Question - Why are such large marine turbines proposed for this site?

Answer

RWE is not proposing marine turbines for this onshore site. RWE is proposing 5 turbines of up to 180 meters in height at the proposed Castlegarden Wind Farm. This is now a typical height

for modern onshore commercial turbines. In contrast, modern marine/offshore turbines can be up to 310m in height (e.g. Dublin Array Wind Farm - from 240m to 310m in height, ESB Celtic Offshore Wind Farm - from 250m to 300m in height, Oriel Wind Farm - up to 270m high, per their respective public web sites).

Question - What about the visual aspects of the proposed wind farm on our local area?

Answer

Visual impact is one of the key considerations associated with wind farm developments and RWE will be required to demonstrate that the proposed development is compliant with the requirements of Kilkenny County Council's County Development Plan and does not adversely impact visual amenity of the area in a significant manner.

Question - Where will the turbines and access points be positioned?

Answer

While we have indicative turbine locations and access points at present, as part of our ongoing consultation process and as the environmental studies advance, RWE will continue to update the community as regards proposed turbine locations as well as proposals for other on-site infrastructure (e.g. internal roads and access).

ENDS