

WIND ENERGY AND FARMING



WIND FARMS & farming

Wind turbines and farmland can work together, without impacting on farming activities. Our turbines, wherever possible, are located adjacent to existing access tracks or field boundaries to minimise land take. The tracks and hard standing areas adjacent to the turbines generally remain in situ for the lifetime of the wind farm, while other areas are restored after construction is completed. Taking into account access tracks and associated infrastructure such as the control building, a wind farm typically takes up less than 2% of the available land.

There is typically a short exclusivity period during which the landowner will receive a payment whilst we negotiate the Option to Lease terms. RES bears all land agent and legal fees throughout the wind farms development and operational lifetime.

Once the terms have been agreed, we will enter the Option period where the landowner will receive an annual payment until the lease is exercised when we start construction. Typically this can take 4-6 years.

During the Option period RES will install a met mast to measure the wind, which will require planning permission. We will put up a met mast typically at the same hub height as the turbine. This will enable RES to thoroughly understand the wind regime for the site.

As part of an Environmental Impact Assessment (EIA) for a wind farm, we are required to undertake wildlife and habitat surveys. This can be complementary to existing Environmental Stewardship Schemes, Biodiversity Action Plans, Woodland Grant Schemes etc. RES compensates for loss of income received under these schemes. Once consented, a wind farm takes approximately 12 months to construct. RES pays full compensation for any crop loss during the construction period.

Once a wind farm is up and running, livestock and arable farming can continue as normal, right up to the base of each turbine. Sheep, cattle and other livestock will happily graze under turbines, and crop harvesting continues unaffected. The wind farm will provide the landowner with a stable and regular income for 25 years.

At the end of the life of the wind farm, all of the wind turbines and associated infrastructure are removed, including any underground structures or cables to ploughing depth. Concrete foundations below one metre would normally be left in place, the ground surface would be fully restored and all visible signs of the wind farm would be removed.



ASSESSMENT of site potential

Our sophisticated mapping software enables us to identify suitable wind farm sites in the UK, and we have designed our own software which allows us to plan turbine locations according to a number of constraints. This software approach is coupled with site visits by the project team, which helps to ensure a detailed understanding of any site before the project plans progress.

Building on the considerable in-house expertise we have acquired over the last 25 years, we ensure all the information needed to design the project is obtained as early as possible.

Choosing a site involves the consideration of a whole range of technical issues such as:

- » Wind speed
- » Suitable grid connection close to the site
- » Good transport access

There are also environmental constraints which need to be considered:

- » Nature designations
- » Ecology and archaeology issues
- » Proximity to houses
- » Hydrology
- » Aviation interests
- » Landscape and visual impact assesment

RES takes great care to ensure that each wind farm and the individual turbines are sensitively located to reduce their effect on wildlife, people and the landscape. Environmental Impact Assessments are a compulsory part of the planning process for wind farms.

RES' in-house team of environmental specialists includes some of the leading experts in the industry on specific issues such as noise and aviation.



TIMELINE



CASE studies

BLACK HILL WIND FARM



This Scottish project consists of 22 Siemens 1.3MW turbines with an overall installed capacity of 28.6MW. It became operational in February 2007. RES coordinated the environmental studies that were needed including surveys for birds, protected species, cultural heritage, hydrology, noise, traffic and landscape and visual receptors.

RES in-house technical experts also conducted studies on the site constraints to identify where turbines would be most sensitively placed. We determined the best method for exporting the electricity onto the grid and mitigated the potential television interference from the project.

The construction phase of Black Hill involved the detailed site investigation, design and construction of the foundations of the 1.3MW (78 metres high) wind turbines.

RES also designed, specified, procured, installed, tested and energised the electrical connection of the wind turbines to the local distribution network.

An annual community fund, managed by local representatives, provides support for local projects and organisations.

GRUIG WIND FARM



The 25 MW project, situated in County Antrim, was managed in-house by RES's development and construction teams. RES used best practice construction methods to ensure the wind farm was completed on time and to the highest environmental standards.

RES implemented a Habitat Management Plan at Gruig, which incorporates both the wind farm site itself and additional land outside the wind farm development area. In areas of ecological sensitivity, the on-site tracks used to transport the 10 Nordex N80 2.5MW turbines were floated.

This method was used to minimise the environmental impact on those habitats. Foundations for each of the 10 turbines were constructed using gravity-based foundations, with gravel and weathered rock providing a suitable formation. Each component was deposited within metres of the turbine foundations to ensure ease of transit and a quick, efficient and safe installation process.

Each year Gruig will generate enough clean, renewable electricity to meet the needs of an estimated 14,000 households.

ABOUT RES

what we do

RES is a leading independent renewable energy project developer. Drawing on decades of experience in the renewable energy and construction industries, RES has the expertise to develop, construct and operate wind farms of outstanding quality. Our track record has given us a reputation for excellence that is second to none.

RES is one of the only companies in the UK with the capability to manage the entire process of constructing a wind farm from start to finish. Our in-house skills and expertise encompass all aspects of project delivery:

- » site prospecting and assessment
- » wind farm design
- » environmental impact assessment
- » financial and legal
- » turbine procurement
- » construction
- » operation & maintenance

RES has been at the forefront of the wind energy industry for more than 25 years and has played a central role in the development of the renewable energy market in the UK and internationally.

Working with RES means that you will only ever have one company to deal with throughout the development process. We handle all aspects of the project development, including liaising with consultants, the planning authority, the public, media and the construction contractors.

Respecting the landowner's wishes and minimising disturbance to existing farming activities is one of our core principles and the Project Manager will remain in close contact with you throughout the development process.

RES won the 2005 Queen's Award for Enterprise in the Sustainable Development category, recognising our 'comprehensive approach to the environmental and social impact assessment prior to the commencement of every wind farm project'.

We take our commitment to quality and the environment very seriously and we are certified under ISO9001 and ISO14001.



TO FIND OUT MORE:

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