



“Royal HaskoningDHV is an experienced consultancy and I have enjoyed working with them. For Wear Point Wind Farm, a layout was designed that would be sustainable in the long term. Milford Haven will be able to generate a plentiful supply of renewable energy as well as assisting the global battle against accelerated climate change.”

Lorraine Dallmeier, Project Director, Infinergy

Wind energy powers Pembrokeshire

Harnessing energy from the wind is fast becoming a solution to the nation's fight to reduce carbon emissions, and the recent approval of a new wind farm development in Pembrokeshire is another milestone towards a future of clean, renewable electricity.

Located at Wear Point, near Milford Haven, the £12.5 million onshore wind farm is due to be operational by the end of 2013. Its four turbines will be connected to the national electricity network and will generate enough energy to power over 4,500 households each year, the equivalent of 11 per cent of homes in Pembrokeshire.

As industry leaders in both the onshore and offshore wind farm sectors, Royal HaskoningDHV was commissioned by wind farm development company Infinergy in March 2008 to complete an Environmental Impact Assessment, and Environmental Statement, to gain approval for the scheme. The process involved considerable research and consultation, as well as extensive design reviews, to take into account the ecology of the area as well as the noise impacts, potential health and safety issues, and visual implications of the development.

Rufus Howard, Project Manager for Royal HaskoningDHV, said: “Royal HaskoningDHV has vast experience in this field and was able to use its long-established relationship with Infinergy to work closely together to ensure a successful, sustainable outcome. The site itself posed unique challenges, but its ideal location and excellent average wind speeds will ensure the success of the development. We were delighted that the proposal was approved and that we were given a green light to proceed.”

When complete, the four turbines on the wind farm will have a total generating capacity of up to 10MW, replacing power previously produced by gas or coal fired power stations and saving the emissions of thousands of tonnes of CO₂ every year. Wind energy does not produce any pollutants and its energy can be harnessed without causing any damage to the environment.

Selecting a suitable site for the development was the first step for the team and involved assessing technical, commercial and environmental factors as well as negotiating planning legislation. The site at Milford Haven was an ex-oil refinery site and this industrial setting, as well as an absence of conservation areas on the site itself, made it an ideal location for such a large-scale development.



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However, the site also had a number of challenges which Royal HaskoningDHV worked to overcome throughout the approvals process.

It was important that the wind farm did not impact on nearby habitats and protected species such as badgers and bats. Adjacent to the development site is the Pembrokeshire Marine Special Area of Conservation (SAC) and Milford Haven Waterway Site of Special Scientific Interest (SSSI). It was essential that these areas were not impacted by the new development. As part of the consultation process, Royal HaskoningDHV gathered detailed ecological information for the area and implemented reviews of the existing designs, eventually altering the layout of the wind farm to ensure these species and habitats were not affected.

Royal HaskoningDHV also worked with stakeholders and key consultees throughout the planning period to ensure that the impact of potential noise from the turbines was minimised. After modelling the turbine layout, modifications were made to ensure that noise levels would be within accepted guidelines at nearby residential areas. The consultation group also concluded that, even though the turbines will each stand 105 metres tall, the location of the wind farm in an industrial area means they will not have an adverse visual impact on the surrounding area.

All potential health and safety risks, from the construction stages of the scheme to the operation, maintenance and eventual decommissioning of the turbines, were also evaluated. An independent Safety Justification Report was commissioned and discussions were held with the operators of neighbouring facilities, as well as the Health and Safety Executive, to ensure that any potential issues were addressed.

Approval for the new wind farm was granted in June 2010 and was a considerable boost for Pembrokeshire's economy. Milford Haven is already a national energy hub, processing oil and LNG (liquefied natural gas), and the addition of wind energy ensures its transition towards green energy from traditional energy sources. As well as future-proofing the energy requirements of the surrounding area it will also contribute to national and regional targets for renewable energy.

Wind energy is the world's fastest growing energy source. The cost of producing electricity from wind is now as cost competitive as conventional methods – and is the cheapest form of renewable energy. The UK is fortunate to have the potential to generate enough energy from wind to satisfy all its energy needs and the excellent average wind speeds at Milford Haven will ensure the success of this development. Wear Point wind farm is currently under construction and is due to be operational by the end of 2013.

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