



Digging for a greener future

Robinson Quarry is a hard rock quarry in Glenwherry, east of Ballymena in County Antrim, Northern Ireland. It is operated by Robinson Quarry Masters Ltd, a family owned company supplying aggregates and concrete building products to companies in the construction, agriculture, concrete manufacture and civil engineering sectors since 1968.

The driving forces behind the business are brothers Stephen and Alex Robinson. Environmental awareness has been at the heart of their operation and when wind energy became commercially viable, investigating the opportunity for their own wind turbine made perfect sense to the brothers. Today, two wind turbines can be seen spinning at the edge of the quarry.

Director Stephen Robinson said: "As quarry operators we have always been keen on minimising the environmental impacts of our operations. Our annual demand for electricity is considerable, and sourcing it from our own wind turbines has decreased our carbon footprint significantly."

One of the wind turbines feeds into the onsite substation, generating zero-carbon electricity of which 45 per cent is used to power quarry operations. Electricity from the second turbine is exported directly to the local grid network.

Stephen added: "Taking everything into consideration, the two wind turbines have turned out to be a fantastic investment. We save on our electricity bill, sell electricity we don't need to the grid and meanwhile we are doing our bit for the planet and the green economy."



EWT Robinson Quarry Case Study

For the production of aggregates and concrete products, Robinson Quarry Masters need approximately 600,000 kilowatt hours (kWh) of electricity per year. Just under half (45 per cent) of the power generated by the two Robinson Quarry wind turbines is needed to meet that demand, and the rest is fed into the local grid network.

Both wind turbines have an installed capacity of 250kW. They were developed as single wind turbine projects; the first one was constructed in 2012 and the second one followed in 2016. Their hub height is 50m. Due to differences in turbulence on the site, one turbine has been fitted with a 52m rotor and the other one with a 54m rotor. The Robinson family managed development and construction themselves, getting the wind turbines fully operational over a period of seven months.

An operational quarry can be a challenging environment to build in, but through careful construction management and procedures, both wind turbines were safely delivered without incidents.

Director Stephen Robinson said: "The construction of the wind turbines hasn't hindered our daily activities at all. Our team feel that EWT has been an excellent company to work with. Overall it has been a tremendous success."

Benefits to the Company

- The two 250kW wind turbines are fully owned by the Robinson family.
- Combined, the wind turbines generate on average approximately 1,200,000 kilowatt hours per year.
- 45 per cent of this is used for quarry operations. All excess electricity is sold to the local grid network.
- The two wind turbines save Robinson Quarry Masters around £60,000 per year.
- Many of the materials required for construction of the wind turbines were sourced from the quarry itself.
- It is estimated that the turbines will pay back for themselves in seven years. They have an expected lifetime of twenty years.



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