



bringing materials to *life*

Windfarm powers ahead with Lafarge Cement

Lafarge Cement is playing a vital role in the construction of Europe's largest wind farm – which, when complete, will provide enough green energy to power 180,000 homes.

Whitelee wind farm, near Glasgow, is being developed by ScottishPower through principal contractors Morrison Balfour Kilpatrick. Lafarge's Phoenix[®] Cement was seen as the leading cementitious material for the construction of the foundations and bases of the 140 wind turbines, which are due for completion in 2008 and span a 55 km sq site.

Ian Smart, managing materials engineer, Morrison Construction, says: "We had the choice of using several ordinary Portland cements for this project – but Phoenix Cement stood out, for ticking both technical and environmental considerations. Most importantly, a wind farm is a sustainable development, within a sensitive habitat – so using a sustainable building product like Phoenix was an obvious choice."

Lafarge's Phoenix Cement is made using low carbon fly ash. The blend of the materials reduces the amount of primary aggregate used and therefore CO₂ expended during production - making it a greener alternative to ordinary Portland cement products. On the Whitelee wind farm project, Phoenix lower heat generation also provides considerable benefits, as the fly ash keeps heat levels in the concrete turbine bases low during the concrete pours, reducing risk of early-age thermal cracking.

Colin Cooper, Lafarge Cement bulk sales manager, Scotland, says: "Lafarge Cement has worked with ScottishPower for many years, through our joint venture ScotAsh – blending fly ash with cement to produce greener alternatives for the construction

industry, which require lower energy in production. Use of Phoenix at Whitelee wind farm is an obvious partnership – specifying an environmentally-friendly material to produce a renewable energy source. Sustainable meets Renewable."



The base for a new wind turbine under construction at Whitelee wind farm