

Hornsea Project one

Product

PowerCrete

Volume

2000 cubic metres

Overview

Hornsea Project One is the world's largest offshore wind farms, located off the Lincolnshire coast, delivering low-carbon power to over one million homes. Heidelberg Materials supplied more than 2,000m³ of PowerCrete, a heat-conducting concrete, to ensure efficient electricity transmission from the turbines to the National Grid via underground cables.

Project description

Heidelberg Materials supplied PowerCrete to Hornsea Project One, the world's first gigawatt offshore windfarm located off the Lincolnshire coast in the north of England. On completion in 2020, Hornsea's 240 wind turbines, covering 407 square kilometres of the North Sea, will also be the world's largest offshore wind farm and provide low carbon power to over one million homes.

Ensuring the safe and effective transmission of wind turbine generated electricity is a key part of the project's delivery. PowerCrete, with its high thermal conductivity, is ideal for use in the construction of the new onshore substation – where the electricity generated offshore will be transmitted to the National Grid. Over 2000m³ of PowerCrete has been specified as a bedding and infill material for underground cables, providing a complete heat-conducting solution with the same ease of placement as normally delivered concrete.

“It's vital that as much of the wind turbine generated electricity as possible is delivered to the National Grid. PowerCrete was chosen for Hornsea Project One to solve capacity loss associated with increased resistance due to overheating in underground cables. Using PowerCrete allows you to increase power capacity, reduce conductor cross-sectioning or switch to aluminium conductors.

It serves to reduce magnetic field strength for alternating current and mitigate hotspots.

PowerCrete allows us to maximise the harvesting of natural energies, increase power capacity and provide a sustainable, long-lasting solution.”

Adam Birkinshaw, technical development and major projects manager, Heidelberg Materials