



PROJECT: North Wall Power Station Dublin
CLIENT: ESB
CONTRACTOR: Heggarty Demolition

A new temporary reserve power plant at North Wall Dublin Port will be powered by 6 gas turbines delivering a combined capacity of up to 200 megawatts to help meet the electricity demand and help ensure the stability of electricity supply in Ireland.

Included in the project was the installation of six high voltage transformer foundation slabs. The steel reinforcement in the slabs needed to be isolated against stray currents which could cause various issues and potential hazards. When stray currents flow through the steel bars, they can initiate electrochemical reactions that accelerate the corrosion process. Corrosion weakens the structural integrity of the reinforcement, compromising the overall stability of the foundation.

stray currents flowing through the steel reinforcement can also induce electromagnetic fields that interfere with the transformer's operation, leading to malfunctions or reduced efficiency.

DURABLE-RESISTANT TO CORROSION, ALKALI & ACIDS-DIELECTRIC-LOW EMBODIED CARBON

Moreover, stray currents can pose safety risks, if the steel reinforcement is not properly insulated, there is a potential for electric shock hazards. Stray currents can inadvertently flow into the ground and pose a danger to personnel working in the vicinity of the transformer or anyone in contact with the structure.

Orlitech mesh was chosen by ESB to physically separate the steel reinforcement by providing a barrier between the stray currents and the steel, the use of Orlitech mesh which is non-magnetic and dielectric prevents corrosion, minimizes electrical interference, and enhances the overall safety of the transformer installation.

In addition, Orlitech mesh has a tensile strength more than twice that of steel and is four times lighter than steel with the added benefit of a lower embodied carbon. Contractor Hegarty Demolition praised the ease of use and on-site continuity tests proved the success of the product.

Orlitech is a basalt based fibre reinforced polymer reinforcement which can be supplied in preformed mesh sheets with a bar size of up to 12mm and can be used to replace the steel in reinforced concrete foundations.



Standard requirement for isolation of steel which is time consuming and not always 100% effective



Orlitech BFRP 6mm 200x200 mesh – easy to use and 100% effective

Orlitech mesh was supplied by Devco Ventures Ireland devcoproducts@yahoo.com

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Composite systems

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