

ULTIMATE EXPERIENCE

PENDENNIS DOCK, FALMOUTH



**LAFARGE
TARMAC**

CEMENT

Product: ECO PHOENIX POZZOLANIC CEMENT CEM IV/B-V 32,5N-LH

Client: PENDENNIS SHIPYARD

Main Contractor: RAYMOND BROWN CONSTRUCTION

Location: PENDENNIS DOCK, FALMOUTH

Completion: DUE 2015

SUMMARY

Located in Falmouth, Cornwall, Falmouth docks has been home to one of Europe's premier super yacht builders, Pendennis, for over 25 years. It is a site of maritime beauty and history, and, as one of Cornwall's most important places of employment, a valuable asset to the local economy.

THE CHALLENGE

In 2012 an expansion plan for Falmouth's Pendennis shipyard was approved. The development included creation of 2 new wet docks, 3 construction halls and a four-storey office complex. Contractor Raymond Brown Construction was employed to create a non-tidal wet basin. The expansion involved the creation of a new sea wall, which required a cementitious solution with low heat of hydration, high early strength, good long-term strength gain and, because of the aggressive marine conditions, enhanced resistance to sulfate and chloride ingress.

OUR SOLUTION

Raymond Brown Construction came to Lafarge Tarmac with this exciting project and it didn't take our Technical and Commercial teams long to find the perfect solution. Eco Phoenix® is a certified low heat, Pozzolanic cement that contains more than 40% siliceous fly ash – a by-product of power generation at coal fired power stations – which reduces the risk of thermal cracking on large pours, is suitable for marine applications and gives a more workable and durable concrete making it ideal for this project. Eco Phoenix is CE marked, conforms fully to BS EN 197-1 and is the UK's only certified low-heat cement. Produced in Aberthaw, Wales, Lafarge Tarmac arranged for a dedicated pig-silo to be placed at our cement depot in Liskeard to ensure continuity of supply and flexible deliveries.

RESULTS AND BENEFITS

Inherently more resistant to ingress of chlorides and highly sulfate resisting, the use of Eco Phoenix enabled Raymond Brown Construction to meet the challenging marine conditions of this project while delivering a pumpable yet highly durable concrete ideal for tremie placement. With less than 70% of the embodied CO₂ of conventional Portland cement, Eco Phoenix offered a sustainable solution to a demanding venture, which will ensure Falmouth continues building on its local maritime heritage for many more years to come.



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