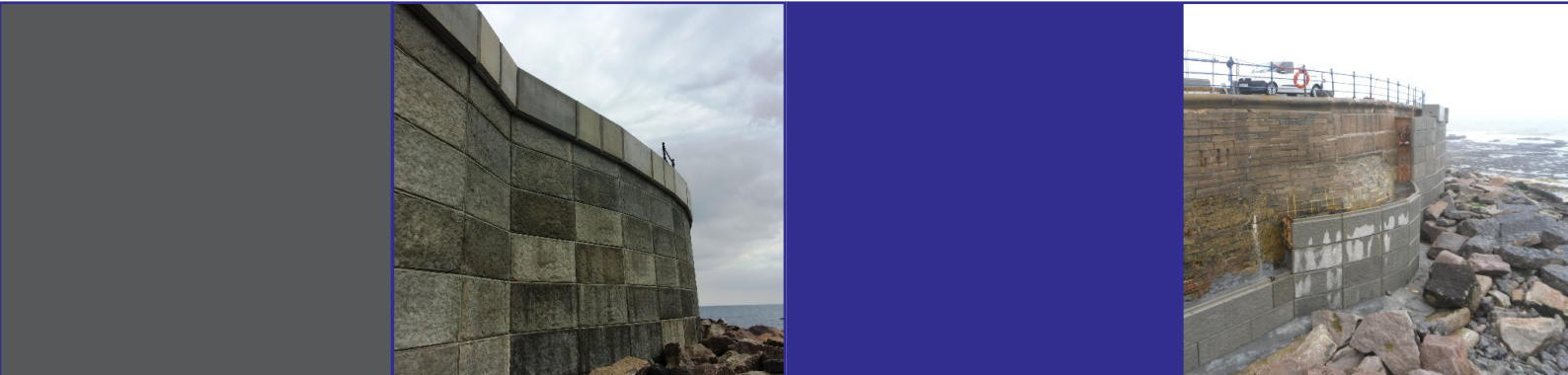


Hartlepool Sea Defence Wall



Engineered Composites

Location	Hartlepool, County Durham, UK
Description	Sea defence wall, £9million, five-year coastal erosion programme.
Partners	Hall Construction Services, Poundfield Products Ltd & Engineered Composites Ltd (Supplier), Hartlepool Borough Council (Client).
The challenge	Construct a new sea wall to protect and strengthen the existing 100-year-old sea wall.
The solution	The wall was built using precast concrete decorated panels with glass reinforced polymer (GRP) rebar reinforcement. GRP was used because of its resistance to salt water corrosion. 4000 concrete panels were used to construct over 2km of new sea defence wall.
Material used	Concrete and 10mm GRP Rebar in mesh panels with 200mm centres. The concrete panels were 200mm thick and installed to heights of up to 6m. They were anchored into the existing wall prior to back-filling with concrete. This results in a new wall of 450mm thickness. Over 1000 capping beams were then installed along the top together with a safety handrail system.
Benefits of using fibre polymer composites	GRP rebar was chosen over the traditional steel reinforcement mesh due to its many advantages, but particularly because of its resistance against salt water corrosion. The sea wall has a life expectancy of 200 years, and the use of GRP should help to meet this expectation.
Further details	www.engineered-composites.co.uk