

# Lynemouth Power Station

## Case study

**Focus products:** Intercrete® 4844, Intercrete 4840, Intercrete 4875

**Location:** Northumberland, UK

**Client:** Sir Robert McAlpine

**Contractor:** CSC Services UK Ltd

**Summary:** Anti-corrosion protection of steel piling totalling 1,500m<sup>2</sup>



### Background

Originally constructed in 1972 to generate electricity from coal, Lynemouth Power Station is currently under conversion to a biomass-fuelled power plant. The Power Station is being converted from coal burn generation to biomass in order to supply the National Grid with up to 390 megawatts of low carbon electricity, supplying enough power for almost half a million residential homes. The biomass conversion will save 1.5 tonnes of carbon dioxide in comparison to coal.

Sir Robert McAlpine is constructing the Materials Handling Facility at the power plant and an anti-corrosion coating was needed for the sheet piling in the new rail offload areas. Intercrete 4840 cementitious coating was specified due to its enhanced chemical and abrasion resistance which will ensure that the 20 year design life of the steelwork will be achieved.

### The solution

CSC Services UK Ltd, a specialist repair and coatings contractor to the power and water industries, was appointed to carry out the application work. The interlocks between the sheet piles and any

voids were first filled with Intercrete 4844, a uniquely formulated cementitious material for sealing the surface gaps between piles prior to the application of a Intercrete cementitious anti-corrosion coating.

A 1mm stripe coat of Intercrete 4840 was then applied over welds, flanges, cut edges, plates and all fixings including nuts and bolt heads. Intercrete 4840 is a high performance, waterborne, epoxy and cementitious modified polymer coating which provides innovative stand-alone, anti-corrosion protection. It can be applied to damp substrates and achieves bond when just surface rusting has been removed. By comparison, alternative products require removal of all surface contaminants and corrosion by-products back to bright metal. With a water-based composition, it releases no strong odour or hazardous solvents during application and is non-toxic, so it can be applied in enclosed locations. Intercrete 4875 was embedded on all welds and cut edges before a 1mm coat was Intercrete 4840 was spray applied to the complete surface area of the sheet piles. Just 30-60 minutes later a second 1mm coat was applied to provide excellent anti-corrosion protection. Intercrete 4840 is CE-marked in compliance with the demands of BS EN 1504.