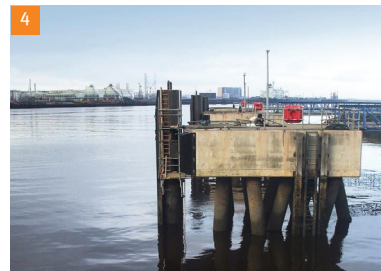




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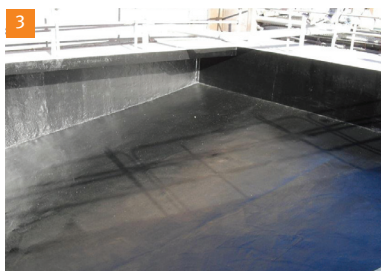
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## Industrial & Civil



From road bridges, car parks, embankments, pedestrian and transport tunnels, to factories, industrial facilities, culverts, water retaining structures and sea defences we undertake specialist repair, upgrading and repurposing services to ensure clients continue to benefit from the built assets under their control.

### 1 A69 Bridges

St Astier undertook the thorough cleaning, coating and protection of steel reinforcement, the replacement of defective concrete, waterproofing of joints and the application of an anti-chloride coating to a series of road bridges spanning the A69 in Northumberland. Several of the bridges saw works being carried out overnight with the benefit of lane closures.

### 2 Hartlepool Sea Wall

In-situ concrete repairs to the coping detail of a 5m high vertical concrete block sea wall located along the Headland, Hartlepool. Damaged concrete was removed and proprietary repair mortars were applied to fill voids in the coping detail with both shuttered and non-shuttered repairs required complete with steel reinforcement as necessary.

### 3 Berwick STW Storage Tank

The repair and protection of an Alum storage tank to address damage caused by aggressive chemicals. Hydrodemolition was used to remove damaged concrete before steel reinforcement was cleaned and protected. A flowable, cementitious, micro-concrete repair system was used to form the walls and a protective coat for submerged structures was then applied.

### 4 RO-RO Terminal

Work comprised the erection of a hanging scaffold over the dockside to provide access to impact damaged concrete to carry out repairs. Concrete was fully broken out and the steel reinforcement was exposed, cleaned and treated with a protective coating. Proprietary concrete repair materials were used to re-profile the concrete.

### 5 Liverton Mill Bank

Ground stabilisation works using high yield-strength soil nails and geotextile erosion matting, placed over an area of some 450m<sup>2</sup> to address minor land slippage in the Cleveland Hills. A total of 203 Ischebeck-Titan soil nails, varying in length from 6.0 to 13.0m were installed via a 40 tonne tracked machine excavator with a long reach 21m dipper arm.

### 6 Refresco Tanker Access Area

Twelve week project to improve the approach and turning space at factory discharge points for tankers bringing in essential concentrates for use in beverage manufacturing. St Astier's brief was to excavate and remove approx 1000 tonne of spoil, install new drainage and lay 1800m<sup>2</sup> of new concrete to form an access road and parking area.