

CASE STUDY

A55 NORTH WALES

Long term solution for troublesome A55 manhole covers



The A55 North Wales from Chester to Caernarvon is a very busy trunk road, which takes a constant stream of heavy goods vehicles to and from the sea port of Holyhead, as well as local and industrial traffic. At weekends and during the summer months, the A55 also carries a considerable amount of holiday traffic making for the Welsh coast.

The government's Design Manual for Roads and Bridges HA104/02 recently indicated that the premature failure of chamber and gully ironworks installation currently placed in the UK's highways network is a major contributory factor to the annual maintenance budget. Some £250m is swallowed up in this area alone.

Road surfaces around ironworks are subject to immense stresses and this makes them particularly vulnerable to damage. The high levels of traffic had led to the A55 road experiencing degradation of its ironworks. A series of manholes were therefore in urgent need of reinstatement as the existing internal metal frames were worn out.

Part of this major highway including three major road tunnels, the Conwy, Pen Y Clip and the Penmaenbach, is the responsibility of the Conwy County Borough Highways Department. These ironwork repairs had to be carried out about every two years; with some repairs only lasting 18 months and this was proving costly.

Clearly this issue had to be addressed using the most advanced method of ironwork bedding compounds. Conwy have tried several proprietary systems such as Polyester, Epoxy and Polyurethane Resins, all with limited success to date.

The client required new manholes to be installed and insisted on a product that would have a long life expectancy. The solution was found in IKO's Permatrack ironworks reinstatement system.

Permatrack is a versatile waterproof road repair system. It provides high bond strength to a variety of materials, and installation

Project Sector: Public Sector

Client: Conwy County Borough Highways
Dept.

System: Permatrack Ironwork Reinstatement

Main Contractor: RAB Associates

IKO Contact: Wayne Perrin

techniques that suit working in small sections. The ability to accommodate differential movement makes Permatrack an ideal material for the reinstatement highway iron works.

IKO approved contractor and highway repair specialist, RAB Associates (UK) Ltd, removed the cast iron cover and frames, and removed residual material such as loosened brickwork. The surrounding distressed road surfacing was also removed. Then, using Permatrack Compounds, the re-bedding to match adjacent levels of the previous items was quickly completed. The repair was finished using Permatrack and pre-coated high PSV chippings to fill the surrounding void to match the existing road levels.

The highways engineer and his inspectors liked IKO's Permatrack Highway Ironwork Repair system because it was quick to install, with shorter shut down periods than planned. The peace of mind of a five-year guarantee and BBA HAPAS certification for Inlaid Crack Repairs, were also important to them.

Andrew Skipper, Director of RAB Associates said, "We believe that Permatrack provided the most cost effective and long term solution available on the market offering local authorities and Highways Agencies an unparalleled combination of whole-life-costing and long term structural integrity."



IKO PLC, Water Lane, Grangemill, Matlock, Derbyshire DE4 4BW. T: 01257 255771 F: 01257 256889

Website: www.ikogroup.co.uk