



Concrete Repair & Cathodic Protection

M1 Aerodrome Road Bridge, London

Client
Highways Agency
HA Area 5 Manager
Connect Plus
Principle Contractor
Jackson Civil Engineering
Consulting Engineer
Atkins
Value
£130,000
Works Commenced
June 2011
Works Completed
September 2011

Freyssinet Limited were appointed by Jackson Civil Engineering to complete concrete repair and minor cathodic protection works on the bridge which carries the M1 motorway over Aerodrome Road in Barnet, London.

The maintenance work was contracted by Connect Plus, area managers for the Highways Agency, in order to ensure the continued safety of the bridge and reduce the need for emergency repair work in the future.

The works were carried out to the under bridge section of Aerodrome Road Bridge, following a design and method of work set by Atkins.

The existing defective concrete was broken out utilising High Pressure Water Jetting, by Freyssinet's in-house hydrodemolition team. In comparison to conventional methods of removing concrete, such as by jack hammer, hydrodemolition has a number of benefits. These include; no cracking in the structure due to no vibrations, no damage to reinforcing steel, dust and debris is eliminated, the potential for hand arm vibration is removed and surfaces are ideally prepared to key in new concrete.

A total of 25m³ of defective concrete was removed from the structure. A galvanic anode cathodic protection system was then installed to prevent corrosion to the exposed reinforcement steel within the repair areas.

Concrete was then reinstated by two methods; Areas requiring a plain concrete finish were reinstated by sprayed concrete application, and flowable concrete repair techniques were used in areas requiring a profiled finish. Pressure pumping utilising specialised plant and equipment and gravity feed methods were applied.

The works were completed on schedule and within budget, to the satisfaction of both Jackson Civil Engineering and Connect Plus.



Freyssinet Ltd. Innovation House, Euston Way, Town Centre, Telford, Shropshire, TF3 4LT
Phone +44 (0) 1952 201901 Fax +44 (0) 1952 201753 Email info@freyssinet.co.uk