

APA CONCRETE REPAIRS LTD MULTI-DISCIPLINED SPECIALIST STRUCTURAL REPAIR & REFURBISHMENT CONTRACTORS

COMPANY PROFILE



Structures - Cathodic Protection



Building - Refurbishment



Crack Injection & Waterstop



Car Parks – Refurbishment



Bridges – Strengthening

APA Concrete Repairs Ltd is one of the most progressive & innovative specialist repair & refurbishment contractors in the country.

The company's in-house teams of highly trained operatives and management carry out repair, refurbishment and strengthening projects through out the country from offices in the North and South.

APA Concrete Repairs Ltd carries out work to repair and refurbish all types of building components including concrete steel brickwork and masonry and on many different structures including buildings, car parks, bridges, jetties and tunnels.

The company has built up expertise in such specialisms as concrete repair, cathodic protection, hydro-demolition, sprayed concrete, grouting, brick stitching and anchoring, carbon fibre structural strengthening and steel plate bonding, pressure and vacuum resin injection, waterproofing, car park decking systems and surface coatings.

APA Concrete Repairs Ltd is able to work both as principal contractor and as a specialist sub-contractor for a wide range of organisations including local authorities, main contractors, developers and private clients. The company has a close mix of management and operatives, with over 30 years experience in repair and refurbishment that allows it to propose and deliver technically demanding solutions, not only safely but also on time and to budget.

The company holds accreditation with ISO 9001, ISO 14001, CHAS and Investors In People. The directors also play an active role within specialist industry associations, being involved in a number of technical committees.

APA Concrete Repairs Ltd acknowledges the importance of developing relationships with preferred clients and suppliers and the company benefits from significant levels of repeat business from sources that appreciate our expertise, quality and levels of safety.

To receive more information about APA Concrete Repairs Ltd please use the fax-back form on the reverse side or contact one of our directors at the following offices:-

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Project: New York Road Tunnel, A64 Leeds City Centre Inner Ring Road

Client: Leeds City Council



New York Road Tunnel carries the A64 Inner Ring Road out of Leeds City Centre towards York.

A section of the tunnel had been propped and partially closed to traffic for some time due to fears that the bearings that supported the tunnel roof beams where in a poor state of repair. Leeds City Council put the tunnel repair scheme out to tender in 2007 and **APA Concrete Repairs Ltd** were successful in winning the subcontract package for the full project.

The works involved mosaic tile removal, hydro-demolition, concrete repairs, phased bearing shelf replacement and the installation of an Impressed Current Cathodic Protection System that had been designed by the Council's Consulting Engineers.

Over 2500m² of 'mesh and overlay' type Cathodic Protection was installed working nights and weekends throughout the winter of 2007-08.

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concrete repairs

limited

Project: NTC South Junction Structures - Cathodic Protection

Client: TT2 Limited



concrete repairs limited



Major alterations were required to the layout of the southern approach to connect the New Tyne Crossing to the existing road network, the A19 & A185 roads.

The alterations were based around retaining and modifying the elevated roundabout structures which had already been in use for over 40 years as part of the original Tyne Crossing infrastructure.

The roundabout's supporting reinforced concrete structures were showing signs of deterioration caused by expansive corrosion of the reinforcement, due to water and chloride ingress from leaking deck joints and years of de-icing salt use on the roads above.

APA Concrete Repairs Ltd were selected to undertake the structural refurbishment works to the supporting structures which involved confined space working, breakout by hydrodemolition, steel fixing, dry sprayed concrete repairs, and installation of a hybrid cathodic protection system.

The scheme was designed to extend the life of the structures in order to maintain their function for years to come.

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Project: M1 Jct 41-42, Lofthouse Interchange

Client: Birse Civils Limited



concrete repairs limited



Lofthouse Interchange connects two of the UK's busiest motorways, the M1 (J42) with the M62 (J29), initial construction of the interchange and it's supporting structures was completed in 1970.

In 2011 the majority of the reinforced concrete supporting structures were showing signs of 'corrosion attack', most likely from 41 years of de-icing of the road decks above and the adjacent running surfaces of the M1. Typically, sections of Reinforced Concrete had delaminated and spalled away significantly in splash zones and areas where deck joints were leaking on to the faces of the piers.

APA Concrete Repairs Ltd were involved in refurbishing the supporting structures as part of a central barrier replacement scheme on the M1 section. **APA** completed an extensive programme of concrete repairs during limited night and weekend road possessions. Works included hydrodemolition of concrete, reinforcement replacement, installation of galvanic anodes and scaffolding access. The works were completed to the satisfaction of the Highways Agency.





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Project:Shire Lane and Calow Lane Bridges**Client:**Derbyshire County Council

concrete repairs limited

APA



APA Concrete Repairs Ltd were selected by **Derbyshire County Council** to carry out the repair and refurbishment of two of their bridge structures that spanned the busy A617 Chesterfield to Mansfield road.

Major maintenance works were successfully executed in 2008 including: -

- Implementation of Traffic Management Systems.
- Surveys to identify necessary repair works.
- Hydro-demolition and sprayed concrete repairs.
- Installation of Galvashield Sacrificial Anodes.
- Bridge Deck Expansion Joint replacement
- Abutments drainage systems
- Repairs and painting to structural steelwork.
- Installations of crack monitoring systems.
- Carriageway and footway resurfacing.

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Project: M275 Tipner Interchange Bridges, Portsmouth, Hampshire

Client: Portsmouth City Council

concrete repairs limited



Tipner Interchange Bridges are part of the main gateway to the city of Portsmouth, supporting the M275 motorway. The interchange was designed to accommodate a grade separated junction between the M275 & Tipner, an area that is earmarked to undergo major redevelopment to form the 'key gateway' to Portsmouth.

Principal Bridge Inspections highlighted leaking deck joints & patch defects in the supporting structures. Concrete testing confirmed the presence of high chloride ion concentrations.

The project team, headed by Portsmouth City Council, was formed with **APA Concrete Repairs Ltd** chosen as one of the preferred partners & a member of the Design Team for the Early Contractor Involvement (E.C.I.) phase of the Project. The team formed a repair & protect scheme to maintain the life of the bridges, avoiding the more costly option of demolition & rebuild.

A 'mesh & overlay' Impressed Current Cathodic Protection system was chosen by the team, installed by **APA**. Titanium mesh anode was fixed to the structure & overlaid with a 30mm thick layer of dry-sprayed concrete. The works were successfully completed with the CP System being commissioned and working well to protect the supporting structures from corrosion.

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Project: West Burton Power Station - Boom Stacker Repairs

Client: EDF Energy



concrete repairs limited



The Boom Stacker is part of the coal handling plant sited at West Burton Coal Fuelled Power Station. It is responsible for handling the majority of coal deliveries on the site, and does so using a system comprising of a slewing conveyor & boom.

Together, the Conveyor & Boom weigh in the region of 1000t, a considerable weight supported by a reinforced concrete table straddling a sub-surface coal storage hopper.

Having served the station for some 40 years the RC Support table required extensive repairs to its Legs & Soffit in order to maintain its life for a further 15 years. Working together with Atkins & EDF, **APA Concrete Repairs Ltd** aided with the development of the design & subsequently undertook extensive repairs works using their in-house resources. The repairs were split into phases & completed during night possessions so that the client could maintain use of the structure during the days without imposing significant restrictions or temporary propping.

Works included; Concrete Investigation, Hydro-demolition, Steel Fixing with Mechanical Couplers, Installation of Galvanic Anodes & Sprayed Concrete Reinstatement.

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Project: M1 Knowsthorpe Bridge, Metal Spray CP System

Client: Connect Roads



concrete repairs limited



Knowsthorpe Lane Bridge carries a section of the busy M1 Motorway past the Stourton area of Leeds. This section forms part of the M1-A1 Link Road (Lofthouse to Bramham) DBFO, operated and managed by Connect Roads, with Balfour Beatty CE as its Operator.

The bridge already had an Impressed Current Cathodic Protection (ICCP) system installed, based on proprietary impressed current discrete anodes. However due to the remote location and vulnerability of external components the system had been vandalised on numerous occasions.

BAC Corrosion Control's 'Prosion' CP System was chosen as an appropriate replacement for the existing system because it comprises of a surface applied metal sprayed anode and negates the requirement for surface mounted cables, making it less prone to vandalism.

APA Concrete Repairs Ltd applied the arc sprayed system from cherry pickers without the need to install scaffolding, which reduced the man-hours required working at height and reduced the overall duration of the programme.

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Project: Birmingham New St Station - Cathodic Protection

Client: Network Rail

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Birmingham New Street Station is said to facilitate the daily movements of around 140,000 passengers, over double the number the previous station redevelopment was designed to take. This was good enough reason alone to invest some \pounds 700m redeveloping the station to meet current demands.

On a site of this scale there are many challenges faced by the construction team, phasing and careful planning of the works allowed the station to remain functional throughout construction phase, to ensure minimal disruption to services.

APA Concrete Repairs Ltd were employed to design & install large scale cathodic protection (CP) to preserve the condition of the reinforced concrete frame supporting large sections of the station, spanning the railway lines and 12 platforms below.

Installing Cathodic Protection was 'value engineering' that meant the original structure could be retained rather than replacing it, a route that would have otherwise extended the programme, involved significantly greater expense and have a greater complexity. All this was avoided through engaging with the specialists, **APA Concrete Repairs Ltd** through Early Contractor Involvement (E.C.I).

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