

CONCRETE REMEDIATION SERVICES

Keeping infrastructure assets at optimal structural condition and capacity



● ACCESS ●

We have a team of highly trained experts accustomed to working safely in the most challenging environments, and have developed numerous technologies and techniques to do so efficiently.



● INSPECT ●

We know how to access infrastructure underground, at height and in confined spaces. As well as our technicians, we also use highly specialised drones and all-terrain pipeline robots for remote video and 3D mapping.



● REPAIR ●

We offer a full range of repair and remediation services to ensure the longevity of your infrastructure. This document looks at our concrete remediation activities.





CONCRETE REMEDIATION

35 years' experience repairing concrete structures to ensure integrity and functionality

Metrocorp remediation services address common structural and non-structural defects such as cracks, spalling (flaking or peeling of concrete surface), and other damage. Our services include but are not limited to concrete repair, waterproofing, spalling repair, corroded reinforcing steel repair and the rectification of other structural defects.

A number of our techniques can maintain properties equal to or greater than the original concrete itself.

- **Concrete Cancer:** Also known as Alkali-Silica Reaction, this occurs when water or moisture infiltrates the concrete structure, leading to a destructive chain reaction. Corroding steel reinforcement is often the culprit, causing rust to swell over time and eventually crack the slab, potentially leading to collapse.
- **Chemical Damage:** Accidental chemical spills or regular exposure to substances like petroleum or acids can cause permanent damage to concrete surfaces. Industries dealing with chemicals face this issue.
- **Structural Damage:** Factors such as ground settlement, tectonic movement, extreme temperature fluctuations, and poor de-shuttering practices can lead to structural damage. From minor hairline cracks to unexpected collapse, the consequences vary.
- **Fire and Blast Damage:** While concrete itself doesn't burn, the trapped air inside does. In intense fires, superheated air in tiny bubbles expands, resulting in chaotic cracking and damage.
- **Joint Failure:** Concrete's expansive and contractive properties necessitate the inclusion of expansion joints in significant designs. Joint failure can lead to aesthetic displeasure or even structural problems.
- **Weather Damage:** Freeze-thaw cycles, exposure to the elements, or general wear and tear can degrade concrete over time
- **Cracks:** Cracks provide pathways for water and other substances to penetrate, accelerating deterioration

METROCORP CONCRETE REMEDICATION SERVICES:

- **Access and inspect:** we know how to access challenging environments and have the expertise to assess repair requirements
- **Demolition and Rebuilding:** removal and replacement of damaged concrete
- **Crack Repairs:** injecting epoxy or polyurethane resins, restoring structural integrity
- **Surface Repairs:** Addressing surface damage eg scaling or spalling through patching and resurfacing
- **Concrete patching:** Repairing spalled or damaged areas by removing loose concrete and applying new concrete or repair mortars
- **Corrosion protection:** Treating corroded reinforcing steel and applying protective coatings or cathodic protection systems to prevent further corrosion
- **Structural strengthening:** Installing additional reinforcement or external reinforcement systems (e.g., carbon fibre wraps) to improve the structural capacity of the concrete element

INDUSTRIES WE SUPPORT

Metrocorp works across all sectors of these industries, providing Access, Inspection and Repair services:

- Water, Wastewater, Stormwater
- Transport – Rail, Roads and Maritime
- Defence



A HISTORY OF INNOVATION

Innovation has been our key to solving many of our clients most challenging asset maintenance problems. In a number of cases, we have only been able to undertake projects because of the innovative solutions we developed that met specific project requirements in safety, productivity, and cost efficiencies.

Wherever possible we deploy technologies and engineering solutions to reduce the number of workers required, or even in the case of drone and all-terrain pipeline robot inspections, remove personnel altogether.

HSEQ ACCREDITATION

Our certifications demonstrate our commitment to delivering complex projects to the highest standards.

ISO 45001 Work Health and Safety

ISO 14001 Environmental

ISO 9001 Quality Management Systems



Talk to us about accessing, inspecting and repairing your infrastructure assets to extend their operational life. No matter where, no matter how hard.

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