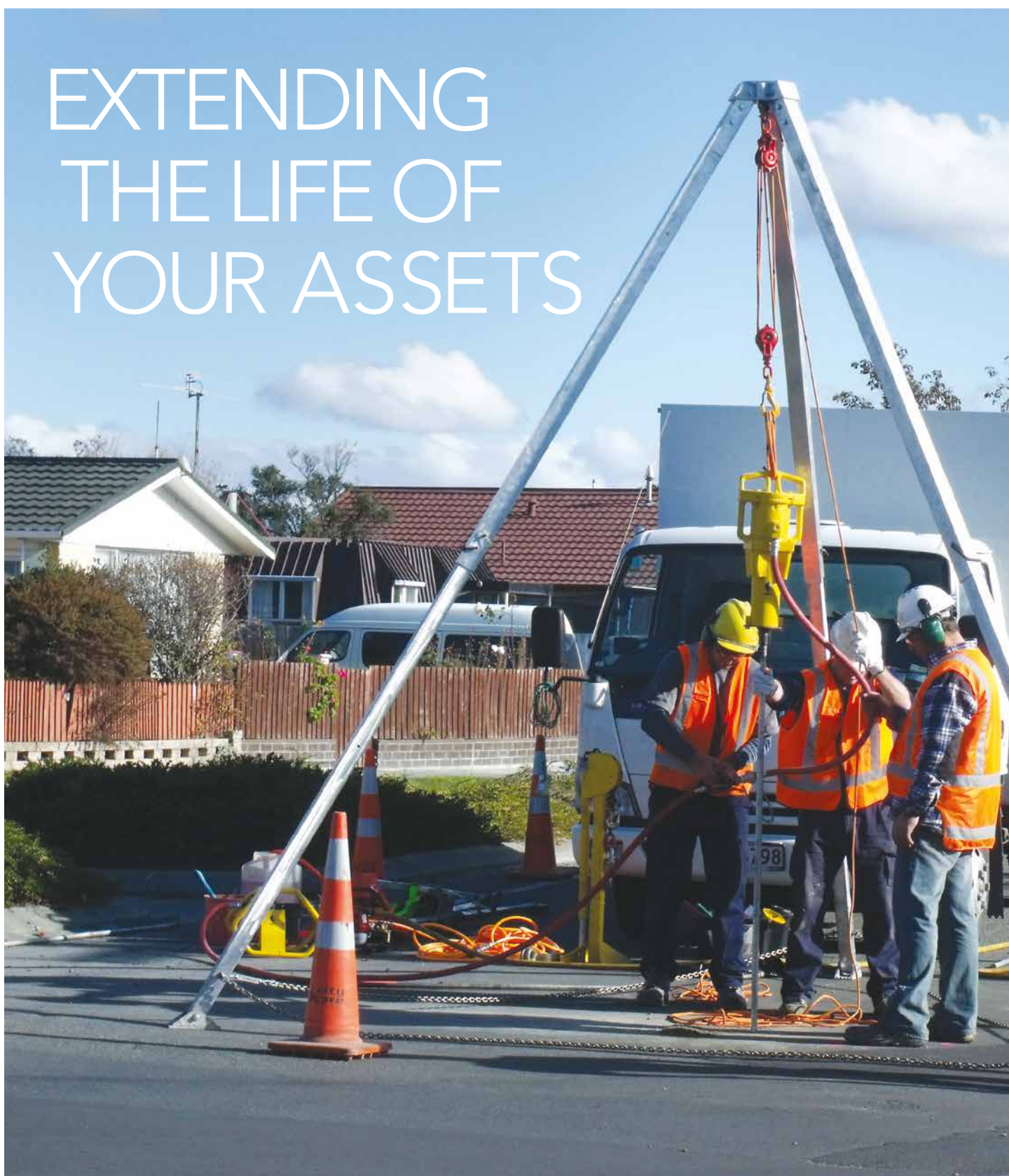


concrete
treatments.nz

EXTENDING THE LIFE OF YOUR ASSETS



Concrete
Treatments are
dedicated to
extending the life
of existing
infrastructure and
providing
protection to
new assets.

Our team use specialist products from around the world to meet the requirements of your project.

These products generally outlast the lifespan of the assets we are repairing.

Our services

We employ a team of skilled personnel who are specifically trained in the application of these products and will look after your project from start to finish. We have a track record of ensuring a professional outcome for all projects we work on and we are committed to completing them on time and on budget.

While the manufacturing of the products we use is a science, we believe the ability to apply them is more of an art. Choosing the appropriate product and using the correct application technique is equally important in achieving a successful outcome.

REFURBISHMENT OF CORRODED CONCRETE



BEFORE

DURING

AFTER

Concrete Treatments refurbish any infrastructure assets that have been subject to degradation, such as pump stations, treatment plants, storage chambers and bunded areas, including damage caused by acid or gas attack. We are specialists in working within confined spaces.

Our process generally is to prepare surfaces by cleaning them with high pressure water, rebuild them to their original profiles and then coat the surfaces with product that provides long term protection.

INFRASTRUCTURE REHABILITATION



No matter whether they are made of corrugated metal, brick, or concrete, eventually pipes, tanks, manholes, wells, and other structures age and need repair or rehabilitation. That's where Concrete Treatments can help. Our line of products enables you to select the correct product for the application. Whether it be structural rehabilitation or providing a protective coating, we are able to provide a solution to aging and damaged infrastructure assets.

LEAK REPAIR

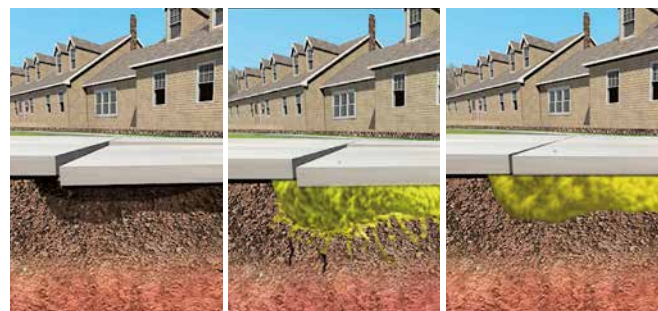


BEFORE

AFTER

We use Prime Resins' polyurethane products to stop leaks without digging. They are optimally formulated to stop leaks and extend the life of the structure by sealing out water, eliminating damaging effects to concrete walls, and reducing groundwater infiltration. The resins remain flexible enough to accommodate thermal expansion and contraction and minor movement of the structure. These resins are more cost efficient than replacement, effective in both tight cracks and wide joints, react with moisture to form a watertight seal and last for decades in most cases.

VOID FILLING



BEFORE

DURING

AFTER

To prevent settlement and underground collapse, we use resins or foamcrete (lightweight aerated grout) to fill large voids which can range from small such as the annulus around the outside of a tunnelled pipe, to large voids such as abandoned stormwater and sewer lines, storage chambers and excavated trenches.

Foamcrete has a very low viscosity, good thermal properties and a fire rating making it suitable for a variety of uses.



On site providing soil stabilisation inside a tunnel in Hamilton's running sands.



One of our technicians putting on their full face mask prior to repairing a leak in a manhole.



Technician fixing a leak by injecting through a manhole wall using a 'Quick Mix' cartridge system.

Concrete
Treatments
have successfully
completed a
diverse range of
infrastructure
projects throughout
New Zealand.

Infrastructure projects

CHRISTCHURCH INFRASTRUCTURE REPAIRS

Christchurch City Council

We are involved with repairing damaged infrastructure across the city, repairing leaks to over 2 kilometres of sewer pipelines and eliminating infiltration into sewer manholes. We use CCTV equipment for locating leaks and monitoring repairs.

ASCOT TUNNEL REPAIRS

Auckland Council

We worked inside a 400 metre long, 2m diameter tunnel with access via an 18m deep shaft. Primeflex 900XLV and Hydrogel SX were used to eliminate water infiltration through the pipe joints on the curved section of the tunnel.

SILVERSTREAM PUMPSTATION REPAIRS ON THE TAIERI RIVER

Otago Regional Council

The pipes of the Silverstream drainage pump station were leaking, causing the Taieri River stopbank to erode and flood the surrounding paddocks. Concrete Treatments repaired the leaks with the internal sealing of three 765mm diameter concrete discharge pipes and the injection grouting of external voids through the pipe walls.

MANHOLE AND PUMPSTATION LEAK REPAIRS

South Wairarapa District Council

We effected repairs at the Featherston pump station and 12 of the feeder manholes to minimise the groundwater infiltration to the sewer system. The repairs substantially reduced the Council's overall sewer pumping load.

MILLISCREEN CONCRETE CHANNEL REFURBISHMENT

Timaru District Council



BEFORE

AFTER

The areas for repair were located in the confined space underneath and inside the milliscreen sewerage treatment plant. This required the use of breathing apparatus and forced air ventilation due to the presence of high levels of hydrogen sulphide gas. The corroded concrete surfaces were rebuilt and then lined to provide long-term protection.

VAUXHALL WASTEWATER PUMPING STATION REPAIRS

Dunedin City Council

We undertook repairs to the 3m diameter x 6m deep pump station and 2.2m diameter x 15m long storage chamber, including the leaking manhole joints and pipe penetrations.

The repairs were undertaken using confined space entry equipment while the pump station remained operational. The corroded concrete surfaces were rebuilt with high strength mortar prior to the application of the lining to provide long term protection of the structures.

COLLAPSED STORMWATER STRUCTURE REPAIRS

Timaru District Council

Concrete Treatments undertook repairs to an existing collapsed stormwater system below an occupied commercial building.

We installed temporary support to the building to allow the required repairs to be undertaken safely. The work involved excavation under the building to gain access to repair the collapsed section of pipeline, replacement of the lateral and re-connection to the building, and backfill of the void areas using foamcrete to avoid further settlement of the ground and provide long term support to the building.

BURKES WASTEWATER PUMP STATION

Dunedin City Council

This pump station, constructed 14 years ago, was on the verge of collapse as the concrete structure was severely corroded and the reinforcing steel had been compromised. We repaired the reinforcing steel and rebuilt the corroded concrete surfaces in the pump well and storage chamber.

The repairs provided the Council a cost effective alternative compared to replacement of the structures.



Hydro Demolition

We are excited to introduce you to a hydro demolition robot called the Aqua Cutter 410A Evolution. It's suitable for all types of operations; it's small but extremely capable, it is designed for quick set up and safely enables high productivity on small to large hydro-demolition and scabbling projects. It has an articulated telescoping arm which enables a full range of movement. This flexibility allows the robot to reach horizontal, vertical and overhead areas in many challenging work spaces including round pipe and tunnels.

The robot is supported by a 380HP power pac (water blaster) capable of delivering up to 40,000 psi. It is currently configured to produce up to 20,000 psi at 95 litres per minute or up to 10,000 psi at 180 litres per minute.

Our personnel are trained and certified IFAP operators and are equipped to ensure your job is completed safely and efficiently.



Some of the robots features include:

- Significant increase in H&S, being able to operate the crawler from a safe distance via a remote control unit removes the operator from the immediate work zone
- Designed for working on wharves, bridges, roads, buildings, confined spaces, tanks, tunnels, pipes, treatment plants, shafts, earthquake strengthening and repairs
- Increased productivity through precise control of the water lance at higher pressures and flows than can be safely managed by hand lance operations
- Efficiently and safely replaces hand lance work in most situations
- Computer programmable to maximise production and minimise over break
- Totally repetitive hydro-demolition results 24/7
- Weighing less than 1.2 tonnes and at only 780mm wide (tracks in) the robot is small and light, so can pass through and operate in narrow passages, doorways and small tunnels
- Operate from scaffolding
- Be positioned easily
- The hydraulic arm has two rotating joints and three extensions and can reach as far/high as 3 metres (4 metres with an additional extension)
- Ability to remove corner areas with only one overpass



The Evolution control system is the most reliable, sophisticated and flexible on the market. It's possible to program geometrical figures such as circles, triangles; squares and rhomboids. The patented ISC system (Intelligent Sensing Control), means there are no cables or electronic sensors outside the enclosed engine hood.

Our hydro demolition system and team are ready to work for you.
Please contact us for more information and to discuss your project needs.

Our products



Prime Resins produce a range of polyurethane grouts, epoxy injection resins and polyurea coatings, optimally formulated for both permeation and compaction grouting operations. These products are unique in that they eliminate water ingress through below ground structures and provide long term protection for concrete from corrosive environments.

These low viscosity injection resins are long-lasting solutions that can be used in a wide range of environments, including:

manholes, chambers, meter boxes, tunnels, tanks, clarifiers, aeration basins, pump stations, elevator pits, below-grade walls, equipment pits, lateral connections, pipelines, dams, channels, flumes, swimming pools, concrete basements, other areas requiring waterproofing

We offer a range of grouts, including hydrophobic, hydrophilic and compaction resins to repair leaks.

HYDROPHILIC GROUTS (PRIMEFLEX 910 & PRIMEFLEX 900XLV)

Hydrophilic grouts readily mix with water and seek out water to get an excellent 'bite' into the pores of wet concrete and stop leaks through cracks and joints in underground structures. It reacts quickly, expands to a large size and shuts down the gushing leak. When cracks or joints open and close with temperature changes, a tight water seal and bond is maintained due to the flexibility of the hydrophilic grout.

HYDROPHOBIC GROUTS (PRIMEFLEX 920)

Hydrophobic grouts repel water and are used to fill voids and stabilise soils due to their low viscosity, high expansion rate and ability to set up under wet conditions without diluting. When injected into loose soil or voids, it expands and replaces any water present. Because rigid hydrophobic material is not affected by fluctuation in the moisture content of soil, it is virtually unaffected by the water table. It retains its strength, size, and impermeability under almost all soil conditions.

Hydrophobic grouts are used when water is moving too quickly to give a hydrophilic resin time to react before being washed away.

COMPACTION GROUTS (PRIMEFLEX 985 SERIES)

Compaction grouts are a two component, rapid set, highly expansive structural foam which fills voids and compacts soil by its expansive pressure.

Our team primarily uses, PrimeFlex 900XLV, PrimeFlex 920 and Hydrogel SX for leak repairs, PrimeFlex 910 for soil stabilisation and Precision Lift for lifting of concrete slabs.



Milliken Infrastructure
Solutions, LLC

We are the distributor and approved applicator of the Milliken GeoPolymer Mortar Solutions, a range of high quality contractor friendly next generation products that improve the efficiency and quality of installations, extend the life of infrastructure and lower the total cost of ownership.

GeoSpray, is a high strength, ultra-low porosity, micro-fibre reinforced, ultra-dense nano-ceramic geopolymer designed for ease of mechanical pumping, spraying and spin casting.

It has been designed for both structural rehabilitation and providing a protective lining, and it is made from natural mineral polymers and recycled industrial waste streams. It has been designed to produce a liner with improved compressive and flexural strength, has high adhesion to damp surfaces, lower permeability and increased resistance to aggressive chemical attack.

This fibre reinforced liner is engineered to improve hydraulic abrasion resistance, provide dimensional stability and protect against penetration by substances such as fats, oils, gases, chloride ions found in marine applications, and where high corrosion exists, such as within sewer environments.



We are the New Zealand distributors for the extensive range of Drainchem products available for use in the construction, maintenance and testing of pipelines. The range of products we can provide include Plug It (inflatable drainage plugs and joint testers), wireless radio remote controls, Vacjet vacuum loaders and jetters, Vaporooter sewer root inhibitor, Grease Release sewer degreasing agent, Aquateq pipe cleaning nozzles, Indus vacuum hoses, Poly Hose sewer jetting hose, Kroy industrial vacuum fittings, Troglotech, PIC and Wohler closed circuit television, Pratisoli pumps, Stoneage waterjet tools, Mustang nozzles and the Aussie Cobra Drain cleaning jetters.

Drainchem drain and pipe maintenance and testing equipment is used in a broad cross-section of markets such as plumbing, water supply, sewerage and wastewater, stormwater and drainage, pipelines, industrial, rural, irrigation and gas.



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