



direct  
Inject

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# CAPABILITY STATEMENT

Specialists in concrete remediation, carbon fibre Reinforced Polymer strengthening systems, complex injection solutions and robotic hydro-demolition.

# ABOUT US.

Direct Inject is an Australian specialist concrete contractor delivering remediation, strengthening, complex injection and robotic hydro-demolition services across the transport, water, defence, marine and industrial sectors.

Founded in New South Wales, we are now delivering projects across Australia and continue to expand our presence interstate, supporting Tier 1 contractors, government agencies and asset owners with specialist solutions throughout the lifecycle of critical concrete infrastructure.

By combining experienced personnel with industry-leading equipment and strong relationships with leading material manufacturers, we deliver technically challenging projects safely, efficiently and to the highest standard.



**BACKED BY A TEAM OF EXPERIENCED PROFESSIONALS AND INDUSTRY-LEADING TECHNOLOGY, DIRECT INJECT IS COMMITTED TO DELIVERING QUALITY OUTCOMES AND LONG-TERM VALUE ON EVERY PROJECT.**



## OUR MISSION.

Our mission is to support owners and constructors of critical concrete infrastructure throughout the entire asset lifecycle.

From defect inspection and mapping leading to repair, strengthening and modification works, to end-of-life asset renewal and decommissioning, we deliver specialist solutions that improve durability, restore structural integrity and extend service life.

## OUR COMMITMENT.

We are committed to delivering safer, smarter and more sustainable solutions for the construction industry.

By investing in specialist equipment, innovative repair techniques and robotic technologies, we improve quality, reduce project risk, minimise disruption and help create safer working environments for our people and our clients.



# WHY DIRECT INJECT.



High retention of highly trained and experienced technicians.

## SPECIALIST WORKFORCE



Rapid mobilisation across Australia.

## NATIONAL DELIVERY



Robotic hydro-demolition, mobile water filtration systems and specialist injection equipment.

## INDUSTRY LEADING EQUIPMENT



Supporting projects from new construction through to asset renewal

## TECHNICAL CAPABILITY AND SCOPE OF SERVICES

# TRAINING AND COMPETENCY.

Direct Injects workforce are fully trained and certified in accordance with Australian legal and safety standards, including but not limited to:

- **RIIWH204E** – Work Safely at Heights
- **RIIHAN301E** – Operate Elevating Work Platform
- **High Risk Work Licence (WP)** – Boom-Type Elevating Work Platform (Over 11 m)
- **RIIWH202E** – Enter and Work in Confined Spaces
- **MSMWH216** – Operate Breathing Apparatus
- **PUASAR022** – Participate in a Confined Space Rescue
- **MSMWH217** – Gas Test Atmospheres
- **HLTAID009** – Provide Cardiopulmonary Resuscitation (CPR)
- **HLTAID010** – Provide basic emergency life support
- **HLTAID011** – Provide First Aid (if held)
- **MSMPER200** – Work in Accordance with an Issued Permit
- **MSMSS00017** – Use High Pressure Water Jetting Equipment
- **MSMSS00018** – Operate a High-Pressure Water Jetting System
- **High Risk Work Licence (C6)** – Slewing Mobile Crane (Up to 60 Tonnes)
- **HR Licence** – Heavy Rigid Vehicle
- **HC Licence** – Heavy Combination Vehicle
- **MC Licence** – Multi Combination Vehicle
- **Verification of Competency (VoC)** – Plant and Task-Specific Operations

**DIRECT INJECTS REPUTATION AS EXPERTS AT REPAIRING LEAKS IN UNDERGROUND STRUCTURES IS WELL DESERVED.**

**I HAVE WORKED WITH THEM ON MULTIPLE TUNNELLING PROJECTS, AND HAVE CONSISTENTLY BEEN IMPRESSED WITH THEIR RESULTS.**

Project Manager – Acciona 2025

## / OUR SERVICES

# CONCRETE REPAIR.

Concrete defects can occur at any stage of an asset's lifecycle, from newly constructed infrastructure requiring remediation before handover through to ageing structures affected by deterioration, corrosion and damage. Direct Inject delivers specialist concrete repair solutions that restore structural integrity, durability and long-term performance while minimising disruption to construction and operational activities



## / OUR SERVICES

# CONCRETE STRENGTHENING.

Changing operational requirements, increased loading demands and evolving design standards often require existing structures to perform beyond their original capacity. Direct Inject delivers engineered concrete strengthening solutions that increase structural capacity, improve resilience and extend service life, helping clients adapt infrastructure for future demands



## CONCRETE REMEDIATION

- Specialist concrete repair systems to restore the geometry, functionality, durability and long-term performance of damaged concrete structures.

## DRY CRACK INJECTION

- Injection systems to restore structural integrity and permanently repair dry cracks within reinforced concrete structures.

## WET CRACK INJECTION

- Advanced injection systems to permanently seal active water-bearing cracks and protect concrete structures from groundwater ingress

## CARBON FIBRE STRENGTHENING

- Engineered carbon fibre systems to increase structural capacity, accommodate changing operational requirements and extend asset service life.

## FRP STRENGTHENING

- Engineered FRP strengthening systems to increase or modify structural capacity while extending the service life of existing concrete assets.

/ OUR SERVICES

# CONCRETE REMOVAL.

Whether facilitating repairs, accommodating new construction, modifying existing assets or supporting end-of-life decommissioning, controlled concrete removal requires precision and planning. Direct Inject combines robotic hydro-demolition, ultra-high-pressure water jetting and specialist cutting techniques to remove concrete safely while protecting surrounding structures and maintaining operational continuity wherever possible.

## SERVICES

→ **Surface Preparation**

High-pressure water jetting to prepare concrete surfaces for repairs, strengthening systems, construction joints and protective coatings.

→ **Non-Structural Hydro-demolition**

Precision concrete removal for refurbishment, maintenance and asset modifications while preserving reinforcement and surrounding structures

→ **Structural Hydro-demolition**

Controlled structural concrete removal, delivered with trusted demolition partners, to support major upgrades, expansion and asset decommissioning

→ **Saw cutting & Coring**

Precision concrete cutting and diamond coring to create penetrations, structural modifications and openings for new services and asset upgrade.

## FLEET

→ **2 x AquaJet 750V Robots**

For precision concrete removal.

→ **3 x Aquajet Ergo units**

Rail guided robot offering flexibility in confined or complex workspaces.

→ **Aquajet Ecoclear**

20ft containerised mobile water treatment plant purpose-built for treating high-solids hydro-demolition wastewater. Utilises CO<sub>2</sub> for pH neutralisation and chemical dosing with lamella clarification to remove total suspended solids (TSS) down to 5 microns, processing up to 20 m<sup>3</sup>/hr.

→ **Osmoflo Water Treatment Plant**

20ft containerised mobile water treatment plant purpose-built for treating large volumes of hydro-demolition wastewater with moderate suspended solids. Utilises CO<sub>2</sub> for pH neutralisation and membrane filtration to remove total suspended solids (TSS) down to 1 micron, processing up to 80 m<sup>3</sup>/hr.

→ **2 x circular pile trimming units**

→ **2 x containerised HP pumps**

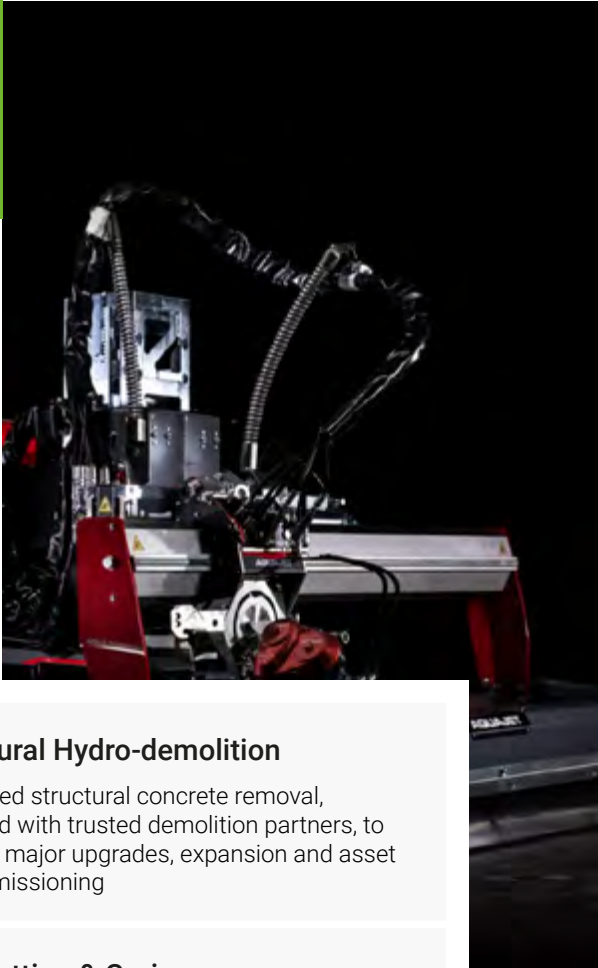
Capable of operating at up to 1000 bar and 261 l/min.

→ **2 x UHP trailer pumps and hand lancing equipment**

Capable of 2500 bar @ 32l/min

→ **1 x Brokk 200 fitted with a UHP lance**

For remote detailed excavation in rock or reprofiling of shotcrete linings in underground structures without excessive vibration or structural damage. This machine ideal for applications where traditional rock and concrete breaking methods are too aggressive, imprecise, or pose safety & environmental risk.



/ OUR SERVICES

# COMPLEX SOLUTIONS.

Some challenges require more than a standard repair methodology. Direct Inject is often engaged early to help contractors and asset owners work through technically complex construction and asset management challenges, developing practical strategies that can be safely delivered in the field. Whether supporting planned works or responding to emergency situations where programme, safety or asset integrity are at risk, we combine specialist equipment, technical expertise and practical experience to rapidly develop and execute solutions that minimise disruption and keep critical projects moving



## HIGH-FLOW GROUNDWATER CONTROL

- Specialist injection solutions to control significant groundwater ingress during trench, shaft and basement excavation, Tunnel Boring Machine (TBM) launch, open face tunnel excavation, ground anchor installation and at failed construction joints.

## SPECIALIST GROUND TREATMENT

- Engineered chemical grouting solutions to improve ground conditions, reduce permeability and stabilise soils for complex underground construction.

## RE-INJECTABLE HOSES

- Targeted injection of re-injectable hose systems to seal stubborn localised leaks, damp areas and failed waterproofing interfaces within concrete structures.

## CONTACT GROUTING

- Specialist grouting solutions to fill voids, stabilise surrounding ground and restore support beneath and around concrete structures.





## / PROJECTS

# UNIVERSITY OF SYDNEY - F20 PEDESTRIAN FOOTBRIDGE.

### Client

Baseline Projects

### Scope

Replacement of damaged concrete restraint blocks and concrete remediation of footbridge

### Location

University of Sydney

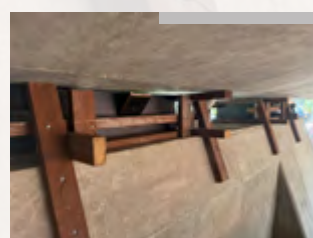
### Scope

Direct Inject was engaged by Baseline Projects to replace six damaged reinforced concrete restraint blocks across three piers supporting the pedestrian footbridge connecting the Life, Earth and Environmental Sciences Building with the SciTech Library. The bridge spans City Road, requiring works to be carefully planned while maintaining operation of the surrounding university precinct and road network.

The existing restraint blocks were removed using specialist hand-lance hydro-demolition, allowing concrete to be selectively removed without damaging the existing reinforcement or bridge structure. Due to the noise associated with hydro-demolition, the works were completed during night shifts under road lane closures following extensive community consultation and stakeholder notification.

Direct Inject established an independent water supply and removed all demolition wastewater and concrete spoil using vacuum trucks before each lane closure was lifted, ensuring the roadway was reopened to traffic at the end of every shift.

The restraint blocks were reconstructed by installing and welding additional reinforcement in accordance with the revised design before erecting formwork and placing high-flow micro-concrete. The project was completed safely while maintaining full operation of the bridge, university facilities and City Road.



## / PROJECTS

# ALKIMOS SEAWATER DESALINATION PLANT - WA.

### Client

Alkimos Sea Water Alliance

### Scope

High flow water stopping, ground improvement and tunnel leak injection

### Location

Outfall tunnel portal

### Scope

During tunnelling works, failure of the steel keeper plate seal at the tunnel portal caused significant seawater ingress, forcing tunnelling operations to be temporarily suspended. Direct Inject carried out targeted injection works to seal the tunnel annulus and stop the active water inflow, allowing tunnelling to safely resume.

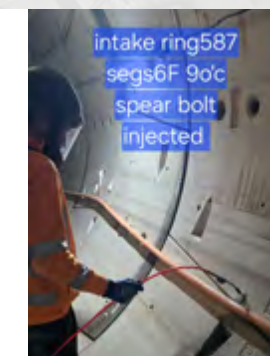


### Location

Tunnel wide

### Scope

Completed tunnel leak injection across the 6km of intake and outfall tunnel.



### Location

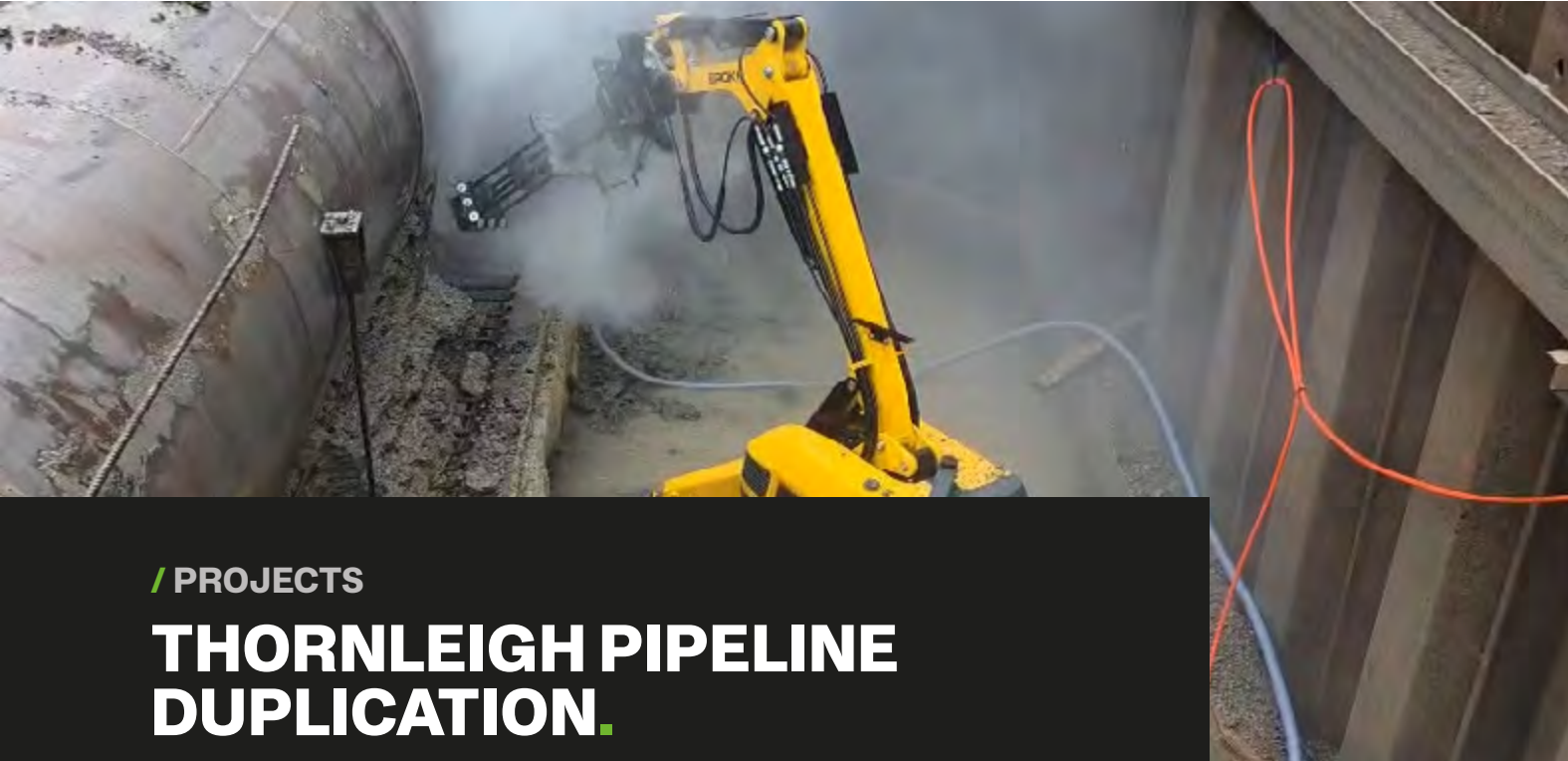
Intake tunnel riser connections

### Scope

Complete site trials testing various acrylate materials to identify the most suitable product. Carried out systematic acrylate injection at the tunnel to riser connections via ram injection lances to reduce permeability at the riser connection prior to breakout.







## / PROJECTS

# THORNLEIGH PIPELINE DUPLICATION.

### Client

Vaughan  
Infrastructure

### Scope

Removal of a concrete thrust  
block around a live water main  
via robotic hydro-demolition

### Equipment used

Aquajet 750v robots, Brokk 200 robot with UHP  
lance, WOMA HP pumps, Osmoflow WTP.

### Location

Thornleigh Reservoir - NSW

### Scope

Direct Inject recently completed  
robotic hydro-demolition works on the  
Thornleigh Pipeline Duplication Project in  
NSW, removing approximately 100m<sup>3</sup> of  
concrete from around a live water main.

The works were carried out using a  
combination of demolition robots from  
Aquajet and Brokk Australia, together  
with one of our mobile water treatment  
plants manufactured by Osmoflo. The  
treatment system continuously filtered  
the hydro-demolition wastewater,  
allowing it to be recirculated back to the  
hydro-demolition equipment throughout  
the works.



## / PROJECTS

# STACEY ST BRIDGE SHEAR STRENGTHENING.

### Client

Martinus Rail

### Scope

Additional shear strengthening of existing road bridge through the installation  
of the SikaWrap Carbon Fibre Polymer Reinforced wrap system.

### Location

Stacey Street Bridge - Bankstown

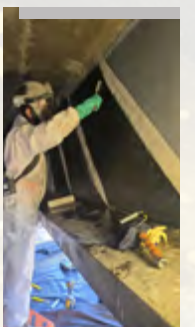
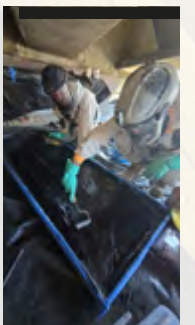
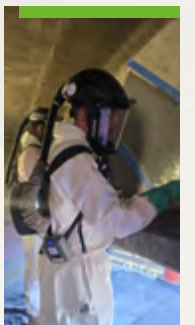
### Scope

Direct Inject was engaged to complete strengthening works using the SikaWrap  
carbon fibre strengthening system to increase the shear capacity of an existing  
road bridge to safely accommodate revised loading requirements while  
extending its operational service life.

Prior to commencing strengthening works, all concrete girders were thoroughly  
inspected for existing defects, with identified cracks repaired using Sikadur-31  
epoxy mortar and Sikadur-52 low-viscosity injection resin to restore substrate  
integrity and provide a suitable foundation for the strengthening system.

Following concrete repairs, the internal faces of both webs of each bridge girder  
were prepared and primed using Sikadur-330 epoxy. SikaWrap-600 C carbon  
fibre fabric was then fully impregnated with Sikadur HEX-300 structural epoxy  
prior to installation, ensuring complete saturation of the fibres and optimum  
bond performance. Once cured, the strengthened surfaces were protected with  
Sikagard-550 W Elastic, providing a durable protective coating suitable for long-  
term exposure.

Works were completed across day and night shifts, including throughout the  
Christmas shutdown period, to meet the client's programme requirements.  
Activities adjacent to live traffic were carefully coordinated, with works directly  
above the roadway undertaken during planned lane closures under approved  
traffic management arrangements, ensuring the strengthening works were  
completed safely while minimising disruption to the travelling public.







/ PROJECTS

M7-M12 INTEGRATION.

/ PROJECTS

SYDNEY METRO WEST –  
WESTERN TUNNEL PACKAGE.

Client

John Holland

Scope

Hydro-demolition of existing bridge decks and soft saw cutting

Equipment used

AquaJet 750V Robot, Containerised UHP pump (100 bar / 260 l/m) and water recycling system



Location

North Section

Scope

Controlled hydro-demolition of existing bridge deck to expose bar reinforcement in preparation for future concrete stitch pours.



Location

South Section

Scope

Soft-cutting concrete CRCP pavements to meet R83 specification.

Client

Gamuda / Laing O'Rourke JV

Scope

Metro Tunnels and station boxes - Concrete remediation and polyurethane injection

Location

Sydney Olympic Park Station

Scope

Polyurethane injection of d-wall panel joints prior to the construction of cast in-situ waler beams.

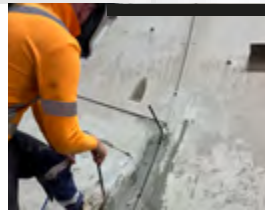


Location

Tunnels

Scope

Completed defect repairs throughout the full 9km of tunnels between Sydney Olympic Park and Westmead stations. Repairs included structural crack injection and patching of pre-cast tunnel segments and polyurethane injection of gasket joints.



Location

Cross Passages

Scope

Contact grouting of in-situ lining, acrylic chemical injection of fuko tubes and polyurethane injection to address ground water ingress from earthing points and construction joints.







## / PROJECTS

# SYDNEY METRO WEST – CENTRAL TUNNEL PACKAGE.

### Client

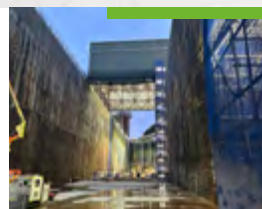
Acciona / Ferrovial JV

### Scope

Metro Tunnels and station boxes - Concrete remediation, contact grouting and polyurethane injection

### Location

The Bays Station



### Scope

Polyurethane injection to stop ground water ingress from exposed ground anchors that form part of the station boxes retaining structure. The injection works carried out by DI were required to meet strict inflow criteria stipulated in the project specification.

### Location

Five Dock Station

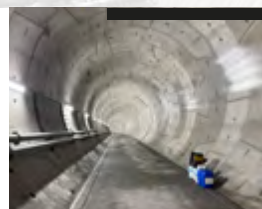


### Scope

Polyurethane injection to stop ground water ingress in the cross over caverns to prevent water pressure build up behind sheet waterproof membrane installed in the crown.

### Location

Tunnels



### Scope

Completed all types of defect repairs throughout the full 11km of tunnels between the Bays and Sydney Olympic Park stations. Repairs included structural crack injection and patching of pre-cast tunnel segments and polyurethane injection of gasket joints.

### Location

Cross Passages



### Scope

Contact grouting of the cast in-situ lining to fill voids, seal water paths and ensure proper load transfer from the surround rock to the structure. Works also included and acrylic chemical injection of fuko tubes to address leaks and damp patches.

### Client

CPB Contractors / Ghella JV

### Scope

Metro Tunnels, Shafts and Station Boxes - Concrete remediation, Contact Grouting and polyurethane injection

### Location

Tunnels

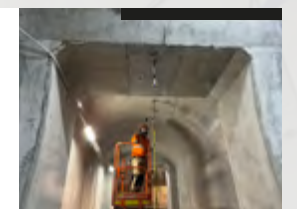


### Scope

Completed defect repairs throughout the full 19.6km of tunnels between the St Mary's and Orchard Hills (north section) and Airport Business Park and Aerotropolis (south section). Repairs included structural crack injection and patching of pre-cast tunnel segments and polyurethane injection of gasket joints. DI played a crucial role in helping the principal contractor achieve contractual handover of numerous portions of the project.

### Location

Cross Passages



### Scope

Termination preparation prior to the installation of sheet waterproof membrane, contact grouting of the cast in-situ lining to fill voids, seal water paths and ensure proper load transfer from the surrounding rock to the structure. Works also included and acrylic chemical injection of fuko tubes to address leaks and damp patches.

### Location

St Mary's and Aerotropolis cross over stub tunnels.

### Scope

Structural crack injection and concrete patch repairs to achieve the required class II finish.







/ PROJECTS

# SYDNEY METRO CITY & SOUTHWEST – TUNNELS & STATIONS EXCAVATION.

**Client**

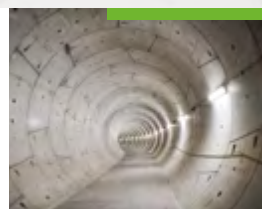
CPB Contractors / John Holland / Ghella JV

**Scope**

Metro Tunnels, shafts and stations - Concrete remediation, Contact Grouting and polyurethane injection

**Location**

Tunnels between Marrickville and Chatswood

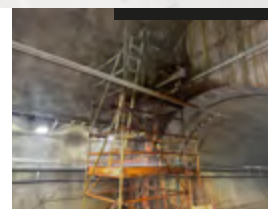


**Scope**

Completed tunnel defects throughout 31km of tunnels. Repairs included patching of damaged segment erector cones, Segment lips, structural crack injection and polyurethane injection to stop ground water ingress.

**Location**

Barangaroo Station



**Scope**

Polyurethane injection to stop high flowing ground water ingress at the cross over cavern headwall adjacent to Sydney Harbour.

**Location**

Victoria Cross Station



**Scope**

Polyurethane injection to stop ground water ingress around the cast in-situ linings in the caverns.

**Location**

Tunnels between Marrickville and Chatswood



**Scope**

Polyurethane injection to leaking grout ports during planned rail shutdowns.

/ PROJECTS

## OTHER PROJECTS.

**Project**

M12 Motorway

**Client**

EMC Civil

**Scope**

Hydro-demolition of existing concrete barriers to expose cast in items.

**Equipment used**

AquaJet Ergo-go and UHP trailer pump (2500 bar / 50 l/m).



**Project**

Sydney Metro West – Eastern Tunnel Package (ETP)

**Client**

CPB Contractors / John Holland / Ghella JV

**Scope**

Metro Tunnels - Concrete remediation, structural crack injection and polyurethane injection.



**Project**

WestConnex – Rozelle Interchange

**Client**

CPB Contractors / Joh Holland / UGL JV

**Scope**

Road Tunnel - Polyurethane injection of shotcrete lining.



**Project**

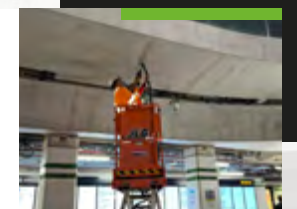
Central Station Upgrade

**Client**

Laing O'Rourke

**Scope**

Station ticket hall – Structural crack injection



**Project**

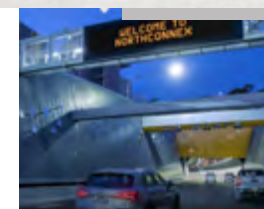
NorthConnex

**Client**

Lendlease / Bouygues JV

**Scope**

Road tunnels – Structural crack injection



**Project**

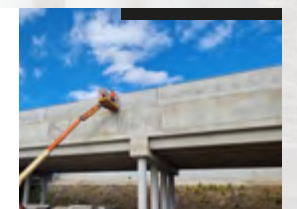
Sydenham Station Upgrade

**Client**

Laing O'Rourke

**Scope**

Bridges and culverts – Structural crack repairs





## / PROJECTS

# OTHER PROJECTS.

### Project

Parramatta Light Rail

### Client

CPB Contractors /  
Downer JV

### Scope

Bridges and culverts – Structural crack repairs.



### Project

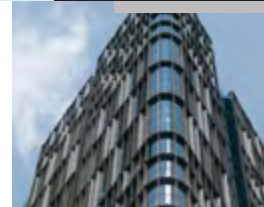
6 Parramatta Square 6  
Parra

### Client

Built / Obayashi JV

### Scope

D-wall repairs – Polyurethane Injection.



### Project

One Sydney Harbour

### Client

Lendlease

### Scope

D-wall repairs – Polyurethane Injection.



### Project

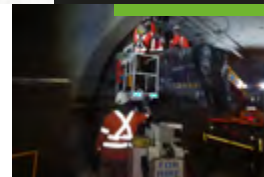
Northwest Rail Link  
(NWRL)

### Client

John Holland / CPB Contractors JV

### Scope

Tunnels – Contact grouting, structural crack repairs and polyurethane injection.



### Project

Mulgoa Road Upgrade

### Client

Seymour Whyte

### Scope

Structural crack repair and patching of existing culverts and contact grouting of new culverts.



### Project

Sydney Science Park

### Client

Guidera O'Connor

### Scope

Structural crack repair and polyurethane injection of concrete Sydney Water storage tanks.



# CUSTOMERS.

**JOHN  
HOLLAND**

**CPB  
CONTRACTORS**

**GHELLA**  
1894

**UGL**

**LAING O'ROURKE**

**GAMUDA**

**EMC  
Civil**

**BOUYGUES  
CONSTRUCTION**

**NSW  
GOVERNMENT** | Transport  
for NSW

**ferrovial**

**lendlease**

**Downer**

**O'BAYASHI**

**Built**

**SEYMOUR  
WHYTE**

**EPTec**

**VAUGHAN**  
Infrastructure

**TYLIM CIVIL**

**WARD**

**rocktown**

# PARTNERS & SUPPLIERS.

## INJECTION AND GROUTING

**MC**  
BE SURE. BUILD SURE.

**MASTER®  
BUILDERS  
SOLUTIONS**

**normet**

**bluey**

**DESOI®**

**Putzmeister**

**WIWA®**  
Your project deserves it.

**Sika®**  
BUILDING TRUST

## HYDRO

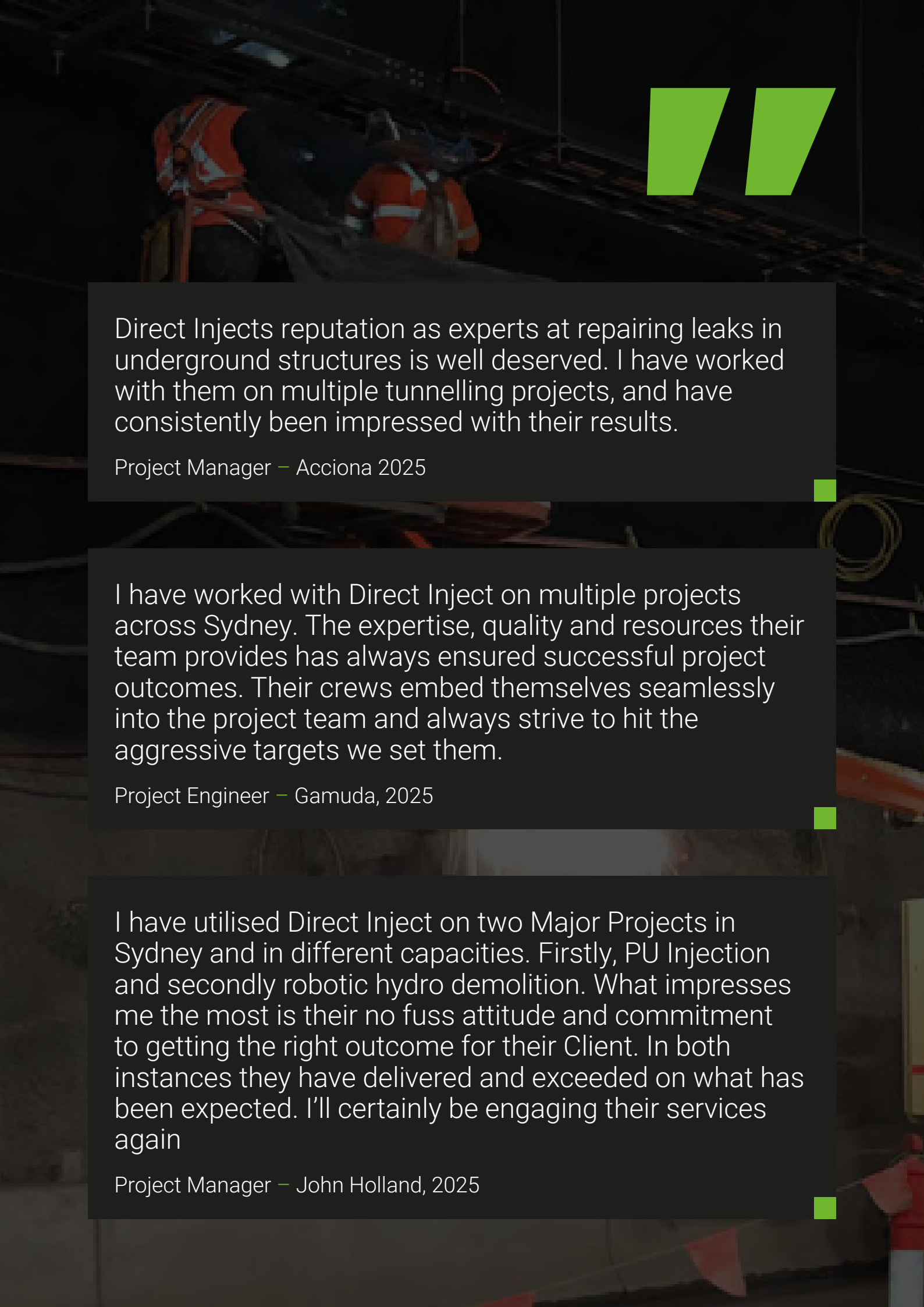
**AQUAJET  
SYSTEMS AB**

**BROKK®**

**WOMA®**  
Kärcher Group

**osmoFlo**





Direct Injects reputation as experts at repairing leaks in underground structures is well deserved. I have worked with them on multiple tunnelling projects, and have consistently been impressed with their results.

Project Manager – Acciona 2025

I have worked with Direct Inject on multiple projects across Sydney. The expertise, quality and resources their team provides has always ensured successful project outcomes. Their crews embed themselves seamlessly into the project team and always strive to hit the aggressive targets we set them.

Project Engineer – Gamuda, 2025

I have utilised Direct Inject on two Major Projects in Sydney and in different capacities. Firstly, PU Injection and secondly robotic hydro demolition. What impresses me the most is their no fuss attitude and commitment to getting the right outcome for their Client. In both instances they have delivered and exceeded on what has been expected. I'll certainly be engaging their services again

Project Manager – John Holland, 2025