

In-situ Remediation

Site-specific solutions to eliminate groundwater contamination



Remediation programs from design to execution



Safe, technically proven and cost-effective chemical injection



Flexible solutions, customised to your project



Modular Injection and Dosing System

We offer environmental remediation solutions through a modular chemical dilution, injection and dosing system.

Supporting in-situ chemical oxidation and reduction at contaminated groundwater sites, this skid-mounted system provides a compact solution for a range of remediation challenges and contaminant groups. This includes organic pollutants, chlorinated solvents, metals and PFAS.

Mobilised from Sydney, our technical design and remediation programs support safe and efficient chemical injection based on specific contamination concentrations and pollutant loads. Depending on project goals and other geo-technical or regulatory requirements, our services can include program design, treatment chemical supply, plant operation and the implementation of required safety measures.

Solutions to Meet Your Needs

We will support your selection of services to deliver the best fit for your project site requirements.

	End-to-End	Equipment Hire
Equipment	Injection system	Injection system
Remediation Program	Implemented by Photon Water	Implemented by the customer
Key Benefits	Implementation of turnkey solutions Site and contaminant-specific program design*	Cost-effective deployment options Flexible operating terms

* Including project design and planning, sampling and quality plans, subsurface characterisation, chemical distribution programs, safe operation and project delivery.

Injection System Features

- ▶ Efficient and cost-effective treatment of contamination "hot-spots" with minimal waste production and excavation requirements
- ▶ Treatment of complex contaminant plumes
- ▶ Integrated measurement and control equipment
- ▶ Coordination with external treatment solutions if required
- ▶ Modular components allows for rapid deployment with flexible and customisable operation
- ▶ Control panel with customised PLC and HMI automation ensures remote access capabilities
- ▶ Flexible turndown range and option of one or two high-pressure injection pumps
- ▶ Accurate primary and secondary dilution of chemical solution
- ▶ Fast, accurate and effective injection of chemical solutions including:
 - Sodium Persulfate
 - Photon specific Zero Valent Iron
 - Hydrogen Peroxide
 - Sodium Percarbonate
 - Sodium and Potassium Permanganate
 - Ozone

FUNCTIONAL SPECIFICATIONS

- ▶ 3 HDPE (IBC) storage tanks, with the neat injection fluid storage tank coupled with a 1.1kW mechanical paddle mixer
- ▶ Additional storage tanks can be supplied
- ▶ 0.55 kW vertical multistage centrifugal water pump with 5,700 L/h duty
- ▶ Fixed speed helical rotor (progressive cavity) injection pump with 300 L/h duty (6 bar max)
- ▶ 40 mm static mixer
- ▶ Mechanical turbine flowmeter, pressure regulator and rate measuring cylinder
- ▶ 2 (duty/standby) variable speed helical rotor injection pumps. Operation capacity of 3,000 to 5,000 L/h at a maximum operating pressure of 12 bar
- ▶ 40 mm Sch80 PVC pipework with 400 m Sch304 stainless steel well injection pipework and attached electromagnetic discharge flowmeter
- ▶ 40 mm groundwater PN16 HDPE connection hose with male camlock
- ▶ 600 x 800 mm stainless steel lockable control panel



Contact Us

204/55 Grafton St, Bondi Junction, NSW 2022

+61 2 8021 3383

info.aus@photonwater.com

photonwater.com



ISO 9001
ISO 14001
ISO 45001