



PATRIOT
ENVIRONMENTAL MANAGEMENT

CAPABILITY STATEMENT

Cutting Edge Environmental Management
Solutions and Technologies

WWW.PATRIOTGROUP.COM.AU



QUEENSLAND | VICTORIA | SOUTH AUSTRALIA

**CALL US
1800 PATRIOT**

Working with Patriot

As a proudly Australian-owned company, our core values revolve around safety, quality and environmental sustainability. With over 15 years in the industry, our commitment remains unwavering. Backed by a highly skilled and professional team, as well as investments in cutting-edge technology and equipment, we ensure that every project is executed with precision and excellence. You can trust us to deliver results that exceed expectations, every time.



OUR SERVICES

- Non-destructive Digging
- Drain Cleaning
- CCTV Inspection
- Vacuum Recovery and
- Bulk Liquid Waste Transport
- Concrete Structure Investigation
- Utility Services
- Utility Locating
- Emergency Response Services
- Zero Waste Treatment Plant





NON-DESTRUCTIVE DIGGING

Non-Destructive Digging (NDD) is fast becoming the preferred method of excavation for many in the construction Industry. By safely breaking up soil through the use of air or water, the risk of damage to utilities is vastly reduced, when compared to manual or mechanical digging methods. This enables safe, fast, precise excavation that requires less backfill, labor and restoration. NDD can safely excavate without causing unnecessary damage to existing underground services. NDD services can be conducted near and around water networks, telecommunications, power or gas lines with minimal risk and without any potential damage caused to those services.

Patriot Environmental Management offers a wide range of state-of-the-art NDD units for vacuum excavation. Depending on the application, our units range from:

- 6,000L to 20,000L units. Heavy rigids fitted with 4-6" hoses, most with booms for intricate work through to high-powered semi-trailers for bulk excavation work.
- 2,000psi to 5,000psi high-pressure water jetting equipment.



DRAIN CLEANING

We operate a fleet of combination high-velocity drain cleaning trucks equipped to handle both stormwater and sewer mains ranging from 150mm to 1800mm in diameter.

Our drain-cleaning units effectively clear silted pipes and extract debris from pits using a powerful 1" water jetting pump, capable of pumping 333 liters per minute at 170 bar pressure, along with a 180m x 1" sewer hose.

With our high-pressure jet cleaning technology, we ensure the removal of any blockages in the pipe. Additionally, our trucks are equipped with a 6000L debris tank, providing ample capacity to accommodate all debris cleaned from the pipes.



CCTV INSPECTION

For comprehensive assessments of existing assets, such as stormwater pipes, sewer pipes, wells, shafts, and ducts, we employ Closed-Circuit Television (CCTV) technology.

Our CCTV inspection service enables our skilled team to conduct thorough inspections, surveys and recordings adhering to WSA 05-2008 and WSA 05-2013 standards. All our CCTV operators are accredited to record and report in compliance with relevant codes and standards.

Our CCTV Inspection services include:

- Push Rod CCTV: Utilised for inspecting and locating sewer and stormwater conduits ranging from 60mm to 100mm in diameter.
- CCTV Tractor: Deployed for inspecting sewer and stormwater conduits ranging from 100mm to 2m in diameter, covering up to 500 lineal meters.
- Vehicle and portable options available for locations with restricted access.
- WinCan reporting software utilised for all inspections.



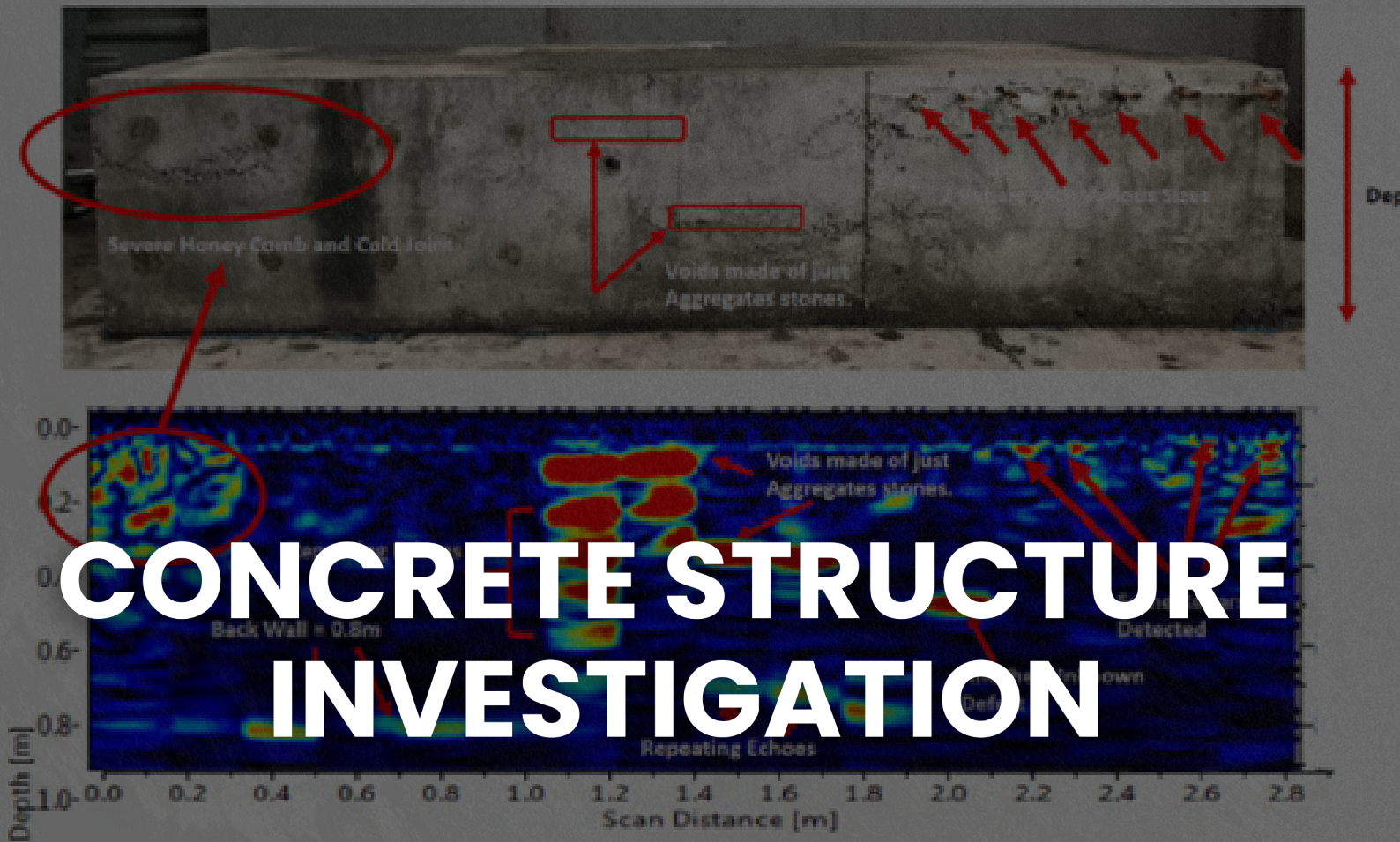
VACUUM RECOVERY AND BULK LIQUID TRANSPORT

Patriot Environmental Management offers Bulk Liquid Transport and is able to treat and manage a broad range of regulated and prescribed industrial waste.

Our fleet of purpose-built waste vehicles can handle substantial volumes of various waste types, including stormwater, grease traps, sewerage, oily waters, industrial wash-waters and more. Our partnerships with numerous waste facilities nationwide enable us to provide our clients with the most optimal and cost-efficient waste disposal solutions.

Furthermore, our onsite storage bins are available for managing NDD slurry waste. You can rent these bins for the duration of your project and have them transported to a waste facility by our semi-trucks as needed. This process minimises the time spent offsite and maximises shift productivity.



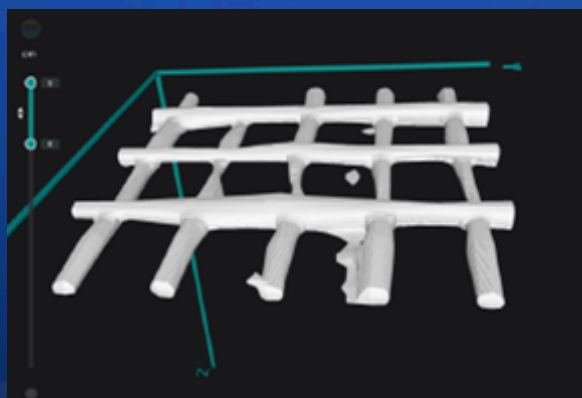


CONCRETE STRUCTURE INVESTIGATION

Our team utilises advanced structural investigation technologies UPV (Ultrasonic Pulse Velocity) and GPR (Ground Penetrating Radar) to provide accurate information on concrete structures.


We provide the following combined UPV & GPR applications:

- Quality assessment and uniformity
- Slab thickness measurement from a single side up to ~1 meter
- Delamination, void, honeycombing and other defects survey
- Reinforcement layout and cover depth
- Location of pipes, conduits and tension cables
- Detection of grouting defects in tendon cables
- Bridge deck and structure investigation
- 3D-modelling





UTILITY SERVICES



Our team of highly qualified and experienced surveyors are experts at translating utility information to engineering grade survey data. We specialise in utility surveys, topographical surveys and construction grade survey control. Our surveyors and drafters are skilled in using the latest CAD software, including 12D for survey reduction and design, AutoCAD and Civil 3D for drafting/modelling and CompNet for reducing complex survey control networks. Our surveyors use equipment that are the latest in technology, including 1" Trimble Robotic Total Stations, Trimble 3D Scanners, RTK and Static GNSS solutions and Digital Levels.

Surveys include:

- Topographical contour survey (detail)
- Point cloud surveys
- Cadastral surveys
- Civil construction setouts
- Work as executed surveys.





UTILITY LOCATING

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We specialise in detection, mapping and pre-excavation planning, boasting high-level utility accreditations across construction, telecommunications, rail, and energy sectors. Our dedicated team of DBYD certified utility locators assists in mapping all underground assets at your site. Leveraging electromagnetic cable locating and Ground-Penetrating Radar technology, we designate underground utilities effectively:

- Electromagnetic Locating (EML): Identifies conductive utilities like metallic pipes, electrical and communication cables.
- Ground-Penetrating Radar: Locates non-conductive materials such as poly or nylon gas lines, blue brute and PVC water mains, along with empty conduits, underground storage tanks and potential underground voids.
- Traceable Rod with EML: Used to locate accessible empty sewer and storm pipes, as well as empty conduits.

Our technicians expertly map and oversee the installation and construction of utility piping, cabling, and infrastructure. Our certified utility locators can accurately identify underground utilities, pipes, voids, underground tanks, cables, blockages, water and gas leaks.





EMERGENCY RESPONSE SERVICES

Patriot Environmental Management provides Emergency Response Service 7 days a week for all storm or flooding emergencies.

We operate a fleet of Vacuum Trucks and Tankers (up to 20,000L) across the regions where we operate. Services we can offer are:

- Dewatering basements, car parks and pits
- High pressure water blasting
- Drain cleaning
- Transport and disposal of water, sludge and slurry.

If you need our services during a disaster, we are only one call away.



ZERO WASTE TREATMENT PLANT

Our mobile zero waste treatment plant offers a comprehensive, environmentally friendly, sustainable solution for waste management as well as providing significant cost and time saving benefits.

- The plant efficiently collects, treats, and repurposes NDD wastes, ensuring resource conservation and a sustainable waste management cycle.
- By treating and reusing waste on-site, it slashes disposal costs and lowers operational expenses.
- The plant enables beneficial reuse of recycled materials on-site, minimising procurement needs and environmental impact.
- Efficient treatment and reuse of resources cut water and fill import costs, leading to overall savings.
- Its mobility eliminates the need for transporting waste to off-site facilities, reducing travel costs and emissions.
- It boosts ISCA credit ratings by promoting eco-friendly practices and responsible waste management.

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