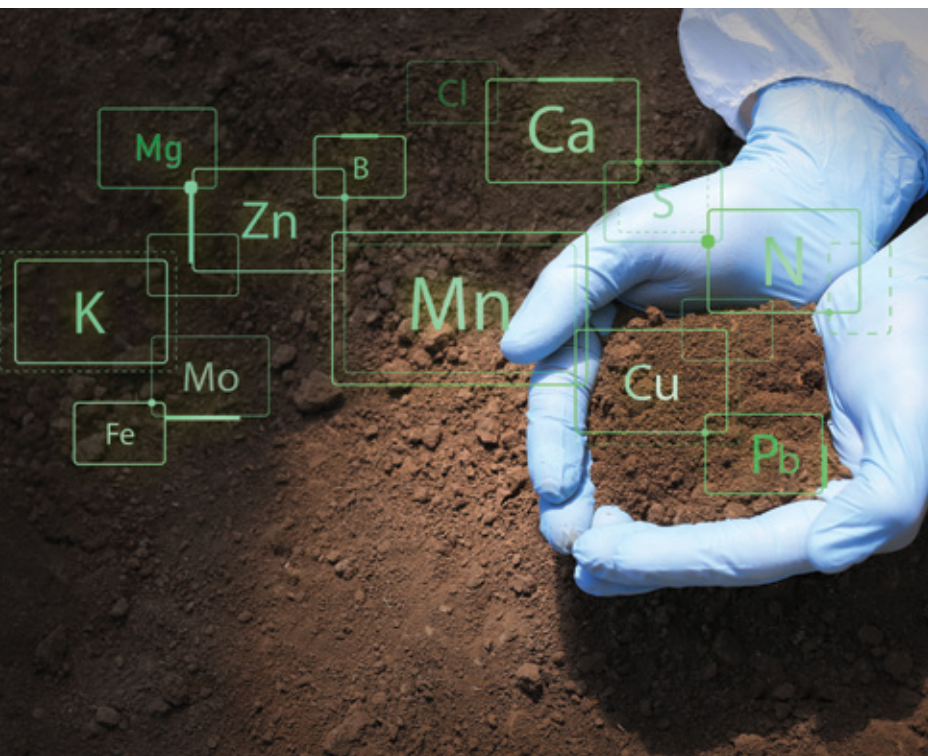


LANDSERV

Providing Environmental
Solutions to shape
communities and enhance
our environment since 1994.



 **Landserv**
Environment

ABOUT LANDSERV

Our team of experienced professionals provide leading environmental science, engineering and management consulting services. "Our people, our clients and the environment are our business."



Established in 1994, Landserv's highly professional contaminated land engineers and scientists are experts in contaminated land and groundwater assessment, remediation, landfill reporting and environmental management.

From offices in Melbourne and Geelong, we service private industry and State and Local government clients throughout regional Victoria and metropolitan Melbourne.

We are not only committed to helping our clients manage the potential risks and impacts associated with contaminated land and groundwater, but also to ensuring that our own business employs sustainable practices.

We provide focused, practical and sustainable solutions for the benefit of our clients, the environment and the community.

OUR VALUES

- We seek to create solid partnerships with our clients based on trust, integrity and pro-active communication.
- We are responsive and accountable. We work hard to understand our clients' needs and deliver quality outcomes, on time and on budget.
- We are committed to the health, safety and wellbeing of our employees and providing a fair and inclusive workplace.
- We are active contributors to the communities, social enterprises and business networks in which we work.



"It was a challenging project in relation to the number of sites and the additional Covid controls. I really appreciate the professionalism and communication throughout the project, as well as the excellent reports."

Karina Pierotti, Barwon Water



OUR TEAM

Our team of professionals are all tertiary qualified in environmental engineering, earth sciences or related disciplines. We share a passion for the environment and doing the best for our communities. We are well respected within the environmental management industry and trusted by our clients. We provide exceptional client management service and are responsive to our client's needs.



"Landserv is a family owned business that cares for its employees and nurtures their careers in a safe and supportive environment. Our unique LEAF culture, balances Lifestyle, Experience, Achievement and Family."

Damien Chappell,
Managing Director



MANAGING DIRECTOR:

Damien Chappell

(BSc Geol, CEnvP, GAICD)

Principal Environmental
Scientist

Damien is an Environmental Scientist with over 30 years' professional experience implementing contaminated land and multi-disciplinary environmental projects and providing strategic environmental advice. Damien developed several environmental consulting teams for global engineering firms prior to joining Landserv as Managing Director in 2008. He has since consolidated Landserv's reputation throughout metropolitan Melbourne and regional Victoria.



TECHNICAL DIRECTOR:

Mo Daud

(CEnvP, BEng (Geo))

Principal Environmental
Engineer / Technical Director

Mo is Landserv's Technical Director/Principal Environmental Engineer. He leads technical deliveries and provides guidance to Landserv professionals on all aspects of contaminated land management projects. Mo has over 30 years' experience in delivering projects for various industry sectors such as chemical, petrochemical, manufacturing, property development, and transport as well as government sectors.



PROJECT DIRECTOR:

Ryan Edwards

(CEnvP, BEnvSc)

Principal Environmental
Scientist / Operations
Coordinator Melbourne

Ryan is a Principal Environmental Scientist and Certified Environmental Practitioner (CEnvP) with over 15 years' experience. Ryan provides technical reviews and advice across a range of site assessment and remediation programs on petrochemical, industrial, landfill and agricultural sites. Ryan has worked on and managed multidisciplinary environmental investigations, statutory environmental audits, complex soil and groundwater assessments and remediation projects and has provided evidence as an Expert Witness on numerous projects.



PROJECT DIRECTOR:

Andrew Wigley

(BSc (Hons))

Associate Environmental
Scientist / Operations
Coordinator Geelong

Andrew is an Associate Environmental Scientist with 15+ years' experience across contaminated land, landfills and analytical chemistry. Andrew is an experienced project manager and has worked on many projects ranging from large scale statutory environmental audits to smaller soil and groundwater investigation and remediation projects.



BUSINESS MANAGER:

Sarah Dowling

Business Manager

Sarah manages the general business operations for Landserv with a particular focus on business planning, monitoring and reporting, HR, safety and our Quality Management System. Sarah has over 25 years of experience in operations, project management and business management across 4 countries in both the private and public sectors.

OUR SERVICES

We help our clients to understand the potential risks to human or environmental health from contamination and provide them with strategic advice and cost effective remediation options to help them to meet regulatory requirements. Our private and government client's rely on our expert advice to make the best possible commercial and environmentally responsible decisions about their property portfolios.



Construction Environmental
Management

Contaminated Land
Assessment

Contaminated Land
Remediation & Management

Environmental Due Diligence
Services

Environmental Management
& Approvals

Environmental Project
Management

Environmental Risk Assessment

Groundwater &
Hydrogeological Assessment

Landfill Gas Risk Assessment

Landfill & Waste Management
Services

Mapping and GIS Services

Specialist Environmental
Services and Expert Advice

INDUSTRIES AND SECTORS

Landserv has extensive experience supporting clients in the following industries and sectors:

- State & Local Government
- Retail Petroleum
- Manufacturing & Industrial
- Major Projects & Infrastructure
- Waste Management
- Education and Childcare
- Property Development & Construction
- Water & Port Authorities
- Legal and Financial



OUR PROJECTS

Landserv has completed over 1,000 environmental projects, supporting everyone from small scale developers, through to \$100M+ government infrastructure projects.



DETAILED SITE INVESTIGATIONS

MOREMAC PROPERTY GROUP, 'THE POINT' RESIDENTIAL ESTATE

Complex and multidisciplinary environmental site assessment to facilitate the development of a large residential estate.

The Point by Moremac Property Group is Winner of the Urban Development Institute of Australia (UDIA) 2020 Environmental Excellence Award.

To facilitate this large residential estate development, Landserv conducted a complex and multidisciplinary environmental site assessment. The assessment involved a historical review of former land use activities to identify potential contamination sources. Based on these findings, a large-scale soil, sediment and groundwater sampling program was undertaken to assess the site's suitability for the proposed sensitive land use.

The proposed development included extensive earthworks to excavate waterways and fill existing water bodies. Further to the contamination component a comprehensive investigation of potential acid sulphate soils across the site was carried out including development of a site-specific environmental management plan.

BENEFITS

- Reduced development costs through management solutions
- Comprehensive environmental documentation and reporting
- Expert advice and support on-hand throughout the project
- Environmental compliance and quality objectives achieved



"It has taken an incredible effort to deliver this project, required an almighty team effort and Landserv has been a valuable contributor."

Nick Withers



VICTORIAN PLANNING AUTHORITY, DEFENCE SITE MARIBYRNONG

A comprehensive review of contaminated land investigation data to develop a Site Remediation Strategy and contribute to urban planning.

The Department of Defence commenced an open market disposal process to sell the Defence Site Maribyrnong (DSM) on behalf of the Commonwealth. DSM is a 127.8 hectare site fronting the Maribyrnong River, located within 8km of Melbourne's CBD. The site has a history of explosives manufacturing throughout much of the 20th century.

The Victorian Minister for Planning instructed the Victorian Planning Authority (VPA) to lead the planning for DSM in collaboration with state and local government partners and the community.

As part of a multi-disciplinary planning and environment team, Landserv provided strategic environmental advice to VPA and its government partners, including EPA. Over a period of 18 months Landserv's role included the review, interpretation and advice to government on several decades of investigation data.

Landserv's work culminated in a site remediation strategy that formed a key consideration of government's planning for the site.

BENEFITS

- Review and interpretation of several decades of environmental investigation data.
- High level strategic advice to VPA, EPA and Maribyrnong City Council.
- As input culminating in a Site Remediation Strategy.
- Key input to a multidisciplinary urban planning team, reporting to state and local government stakeholders.



"VPA thanks the Landserv team for all of your efforts and contributions to this document. I feel it is accessible and not overly complex, while still conveying a significant amount of technical information."

Brendan McRae, Senior Strategic Planner



SITE CHARACTERISATION VENDOR DUE DILIGENCE

CONFIDENTIAL CLIENT (INDUSTRIAL FACILITY), GEELONG VICTORIA

Complex site characterisation followed by remediation and management advice and liability estimates.

Landserv worked closely with our client to support the sale of their large industrial site with a long history of manufacturing activities.

We were initially engaged to conduct a combined preliminary and detailed site investigation to assess the general status of soil and groundwater within the 35-hectare industrial site.

A conceptual site model developed identified several potentially complete source-pathway-receptor linkages, including potential direct exposure of soil impacts, likely vapour exposure to site users and visitors, and potential for accumulation of vapours in confined spaces in service pits or trenches within site and adjacent to the site.

Subsequently, Landserv developed a contamination management plan for the site to mitigate potentially unacceptable risks to human health and the environment in the context of various future land use scenarios. Cost estimates to remediate or manage the site contamination were then prepared to estimate the site contaminated land liability.

Landserv also assisted the client with the review of the potential buyer's additional investigation for the site.

BENEFITS

- Comprehensive understanding of the site contamination status and its liabilities associated with contaminated land management issues.
- Assistance with information gathering to satisfy the General Environmental Duty (GED) outlined by Victoria's new Environmental Protection Act (2017).
- Support on hand with expert advice on contaminated land matters throughout the sale process.

“Results were received on time with additional information to assist with our reporting to the parent company and (the buyer) when required. Communication was excellent with follow up meetings to clarify findings completed on multiple occasions.”



METROPOLITAN MELBOURNE COUNCIL CLIENT

Assisting Council to meet its duties under the Environment Protection Act by understanding potential risks to human health and the environment.

PORTFOLIO RISK REVIEW

Landserv was engaged to review and advise on the potential risk to human health and the environment associated with 1,550 Council owned and managed sites. The review's objective was to assess for Potentially Contaminated Land (PCL) and to assist the council to comply with the Environment Protection Act 2017.

This project entailed a systematic review of EPA databases, publicly available information, aerial images and Council's database including its GIS Software Spectrum Spatial Analysis (SSA) system.

The probability of each site containing contamination was assessed and a procedure developed to visually present the data on Council's SSA system using a 'traffic light approach'. Landserv's approach allowed for multiple lines of evidence to support the probability classification for each site.

The portfolio risk review allowed council to make informed decisions about the further investigation (and possible other management measures) of these site in order of priority.

BENEFITS

- A cost-effective approach to assessing an extensive portfolio of properties
- Identification of sites at risk of containing Potentially Contaminated Land
- A visual database approach that informs Council, allowing management of Potentially Contaminated Land and minimisation of environmental risk
- Preliminary risk assessment to meet several requirements of the new Environment Protection Act 2017 (EP Act)
- Including the need to 'use and maintain systems' for identifying and managing Potentially Contaminated Land



CONTAMINATION ASSESSMENT REMEDIATION WORKS

VICTORIAN SCHOOL BUILDING AUTHORITY, INNER METROPOLITAN MELBOURNE

Landserv completed two complex environmental site assessments with subsequent remediation to facilitate the development of two inner city schools.

As of 2021, the Victorian Government's historical program of new school building and upgrade projects, has invested some \$10.9 billion to build new schools and deliver more than 1,700 school upgrades.

Some of the inner urban redevelopment sites selected for these projects have required expedited preparation to deal with the legacy of the previous land uses and render the sites suitable for school construction in a short space of time.

The environmental works Landserv completed for both these sites included detailed investigations of soil and groundwater conditions, followed by remediation programs including the removal and validation of underground fuel storage tanks and contaminated soils, followed by engineered backfilling, compaction and geofabric layers.

The contamination was associated with historical uses including a former firing range, electrical substation, buried asbestos waste and historical gasworks fill, which was deposited through many areas of some Melbourne suburbs during the 20th century.

BENEFITS

- Cost-effective and time constrained assessment and remediation
- Comprehensive environmental documentation and reporting
- Hydrogeological Assessment and Risk Assessment
- Environmental Construction Management
- Successful delivery of a clean site under EPA Audit
- Allowed for expedited development and construction of a new inner urban school



"The team always got back to questions and requests in a timely manner, were pleasant to work with and accommodating to VSBA comments and requests."



**TANK PIT VALIDATION & SOIL
VAPOUR INTRUSION ASSESSMENT**

**MULTIPHASE VACUUM EXTRACTION
(MPVE) EVENTS**

GROUNDWATER MONITORING

FORMER PETROLEUM RETAIL SITE, MOE, VICTORIA

Environmental advice, site
assessment, risk assessment and
remediation services to support
termination of a lease agreement.

Landserv undertook an extensive investigation and remediation program at the decommissioned petrol station with the aim of handing back the site to the land owner.

Landserv conducted various site characterisation works to facilitate the lease hand back, including soil sampling and installing and sampling of groundwater monitoring wells. Landserv also undertook soil and groundwater remediation works at the site between 2014 and 2019.

Based on a conceptual site model developed for the site and to meet the lessor's requirements, Landserv conducted follow-up works in 2020-21 comprising remediation option assessment, further groundwater monitoring events and a soil vapour intrusion risk assessment.

Landserv concluded and advised the client that following the soil and remediation works, the former service station site did not present a risk to human health and the environment for its ongoing commercial/industrial uses.

BENEFITS

- Remediation of hydrocarbon impacted soil to make the site suitable for ongoing commercial use.
- Providing data and evidence to support that Clean Up to Extent Practicable (CUTEP) had been achieved for the site.
- Support on hand with expert advice on contaminated land matters throughout the project.



CONTAMINATION ASSESSMENT RISK ASSESSMENT REMEDIATION

METROPOLITAN COUNCIL - MUNICIPAL KINDERGARTEN

Rapid assessment, investigation and remediation of petroleum contamination associated with historical use at an operating kindergarten site.

Evidence was discovered at an operating kindergarten that it had historically been used as a service station. Given the sensitive use, the highest priority was to quickly establish that occupants were not at risk of exposure to contaminants.

Landserv's fast-tracked response included preliminary and detailed site investigations including indepth research on the site history, together with soil and groundwater assessment. In parallel with the indepth site investigation, a soil vapour risk assessment was completed, including installation and sampling of vapour pins installed to ensure there was no accumulation of vapours beneath the site buildings.

Once it was confirmed that there was no immediate or imminent risk to occupants, remediation was necessary to remove any remaining primary and secondary sources of contamination as a precaution to support ongoing kindergarten use of the site.

Landserv managed the remediation work from scoping, tendering and management of contractors on site to deliver a rapid 14 day remediation program over summer holidays while the facility was closed. Landserv removed 1,200 tonnes of material from the site, including contaminated soil, fill material, timber, concrete and rubble for off-site disposal. We also removed all remaining underground fuel pipes, tanks and associated infrastructure, and conducted soil validation sampling and installed a geotextile marker layer.

Completion of remediation works included verification of backfilling soil, engineered backfilling, compaction and replacement of mulched play surfaces ready for the return of the staff and children.

BENEFITS

- Fast-tracked assessment and remediation during holiday closure
- Comprehensive environmental documentation and reporting
- Vapour and Human Health Risk Assessment
- Expert advice and support throughout the project
- Rigorous supervision and validation, ensuring the safety of kindergarten occupants

MEMBERSHIPS:

- Australian Contaminated Land Consultants Association (ACLCA)
 - Australian Land and Groundwater Association (ALGA) (Corporate Partner)
 - Waste Management & Resource Recovery Association of Australia (WMRR)
 - Victorian Planning & Environmental Law Association (VPELA)
 - Certified Environmental Practitioner (CEnvP) scheme (3 x Certified Professionals)
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PANELS:

- Municipal Association of Victoria
 - Victorian School Building Authority Technical Advisory Panel
 - State Government Construction Supplier Register
 - VicRoads Preferred Supplier
 - VendorPanel
 - Rapid Global Supplier Verification System
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COMMUNITY INVOLVEMENT & BUSINESS AFFILIATIONS:

- Geelong Community Foundation (Landserv Fund)
- Geelong Sustainability
- G21 Geelong Region Alliance
- Urban Development Institute of Australia (UDIA) Geelong Chapter (Committee)
- Australian Institute of Company Directors (Graduate AICD)
- Geelong Chamber of Commerce (Corporate Partner)



"Landserv provides a supportive, family oriented work environment and exposure to a great range of projects. This along with a great team of experienced professionals makes it a great place to work."

Charlie Bowers



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