

Environmental

Our 60 years of experience gained over 130,000 completed projects, combined with our highly skilled and hands-on team of consultants, delivers clients innovative advice and solutions across a wide range of industries.



### Grounded Expertise

We are down-to-earth, practical ground experts who have been getting the job done with integrity since 1963. Our specialist disciplines encompass geotechnical engineering, rock mechanics, contaminated land, groundwater, geophysics, and materials testing.

With over 60 years of experience, using local knowledge to collect highquality ground data, Douglas Partners are uniquely positioned to deliver practical solutions for projects where the built environment interacts with the ground.

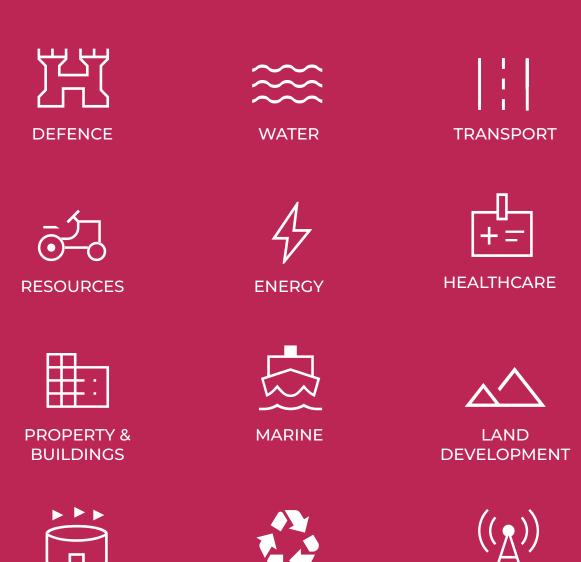
Quality is central to our operations. Our Quality Assurance system certified for conformance to ISO9001, underscores our commitment to excellence. Our culture embodies our guiding mantra: "Keep it Simple, Get it Right, Do it Well."

With 600+ dedicated professionals across 19 branches in Australia, including 14 NATA registered laboratories, our expert advice helps manage and mitigate risk and our solutions are tailored to enhance outcomes for our clients, community and environment.



## Services Across Sectors

Douglas Partners consulting services provide our clients with a range of integrated and specialist skills with the aim of delivering practical solutions across a large number of business sectors including:



WASTE MANAGEMENT

TELE-COMMMUNICATIONS

**SPORT &** 

RECREATION

Utilising the expert skills of our in-house environmental engineers, scientists, occupational hygienists and auditors, Douglas Partners has a proven track record in assisting clients to navigate the labyrinth of complex regulatory responsibilities faced by project teams to ensure environmental compliance is achieved across all stages of the project cycle.

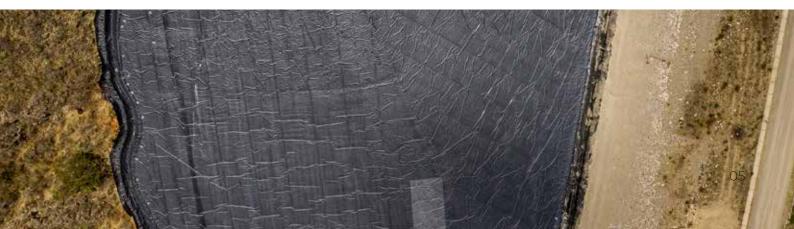
Our team of highly experienced and innovative environmental consultants specialising in the protection and sustainability of environmental resources, provides services and support to a range of market sectors, both government and private, in the following specialist areas:

### **Remediation Services**

Douglas Partners provides remediation services to a wide range of clients including state waste management authorities; local government authorities; state government departments & authorities; federal government departments; private landfill operators; land developers; and industrial/contaminated land owners.

Our remediation services provided include:

- Site investigations;
- · Development of cost-effective remediation strategies and action plans;
- Remediation options evaluation for soils including soil vapour extraction, soil washing, stabilization/solidification, containment cell, thermal desorption, vitrification, bioremediation and phytoremediation;
- Remediation options evaluation for ground water including pump and treat, air sparging, multi-phase vacuum extraction, in-situ chemical oxidation, bioremediation (biostimulation and/or bioaugmentation), permeable reactive barrier, monitored natural attenuation and phytoremediation;
- Predictive modelling;
- · Design of soil and groundwater remediation systems;
- Design of soil gas mitigation systems including active or passive sub-slab ventilation and passive barriers;
- · Supervision, and validation of remediation works;
- · Management of environmental protection and OH&S during remediation;
- · Contaminated spoil/fill management and disposal;
- · Independent assessment and verification.





# Assessment and Management of Contaminated Land

Douglas Partners employs the best available technologies and methodologies to assess, and if necessary, provide specialist advice on the clean up and management of contaminated sites. The processes employed and services provided to manage land contamination include:

- Preparation of environmental management plans;
- Compliance with regulatory and statutory requirements;
- Mitigation of human health or environmental risks;
- Preliminary site investigations;
- · Detailed site investigations;
- Contaminant fate and transport modelling;
- Hazardous building materials assessments;

- UPSS regulation compliance services;
- Vapour risk assessments;
- Environmental and health risk assessments;
- · Preparation of remediation action plans;
- Site audits
- · Court representation; and
- Risk communication and community engagement.

"Without exception Douglas Partners have been able to add value to the project work we have been jointly involved in. We have found their staff to be knowledgeable, experienced, flexible, and a pleasure to work with."

John Eggleston Senior Project Manager Robert Luxmoore Pty Ltd

### Waste Management

Douglas Partners provides services to clients requiring:

- Waste management planning;
- Environmental improvement;
- Hazardous waste management;
- Waste minimisation;
- Resource recovery;

- · Occupational health & safety audits;
- Waste stream assessments / audits;
- Waste emission, monitoring inventory; and
- Liaison with regulatory authorities & communities.



# Salinity and Acid Sulfate Soils Assessment

Douglas Partners provides services to assist clients in determining the presence, extent and treatment options for salinity and acid sulfate soils (ASS). Client needs for salinity and ASS assessments and management plans can arise due to:

- Proactive compliance with local government requirements for development;
- · Site development planning;
- A need to manage and treat ASS on site prior to disposal; and
- A need to determine potential effects on structures.

Our services include:

- Preliminary assessment of potential for salinity and ASS through desktop studies;
- Assessment of potential and extent of ASS through field investigations comprising sample collection and testing;
- Field testing and laboratory analysis;
- · Compliance with Council requirements;
- Preparation of management plans to ensure safe and effective management of ASS and salinity.





### Environmental Management Plans

Douglas Partners provides services to clients requiring environmental plans to satisfy acceptable environmental goals. Client needs for environmental management plans can arise due to:

- A need to manage operations in line with environmental standards and acceptable practices;
- · Site development planning;
- · A need to demonstrate due diligence in environmental management;
- · Documenting a site remediation monitoring program;
- Proactive compliance with regulatory requirements and accreditation.

#### Our services include:

- · Preliminary overview of the site including locational and environmental characteristics;
- · Structure and operational review of the site;
- Assessment of environmental status and potential impact from site activities and processes;
- Compliance audits;
- · Land management and conservation of the environment; and
- Auditing, reporting and follow-up.



### Landfill Services

Douglas Partners has considerable experience with landfills and has facilities to assist in all aspects of design, gas control, water control and site management; including liaison with regulatory bodies and supervision of works on site. All works are designed and carried out to the most relevant and current legislation and are undertaken with due diligence to provide best value for clients and the environment.

Landfill Design:

- Cell and capping design with clay, HDPE (cell), LLDPE (capping), geocomposites and protective geo-fabrics tailored to site conditions;
- · Leachate drainage and collection systems;
- Surveying to provide design base levels and production of construction drawings;
- · 3 dimensional modelling for waste and soil (extraction) volumes;
- · Slope stability assessment and settlement calculations;
- Restoration and post closure plans including final height contours, both pre and post settlement; and
- Terrain analysis, geological mapping and desk studies for the siting of new landfills.

#### Water and Leachate

- Hydrology and hydrogeology assessments;
- Water balance studies;
- Surface water control design;
- Leachate control and treatment studies; and
- Lagoon design.

#### Landfill Management

- · Landfill Environmental Management plans;
- Operational and closure plans; and
- Phasing plans for sites including drawings, volumetrics and soil balances.

#### Landfill Gas

- Due diligence on current and former operational landfill sites;
- Design mitigation for construction over or near former landfill sites including ventilation, extraction and barrier systems;
- Site management and action plans for the control and remediation of landfill gas migration;
- Assessment of landfill gas migration using chemical and carbon fingerprinting techniques;
- Gas field design including well placement, design and installation quality assurance;
- On site gas monitoring including composition of gas, flow of gas and capping/ well integrity; and
- Investigation and mitigation of subsurface fires.



"Sheargold use Douglas Partners for all of its geotechnical and contamination consulting because their services bring a brand of high quality and trusted service that is recognised by all stakeholders in the development industry.

When Sheargold engage Douglas Partners for assistance with challenging geotechnical issues, we are confident that we are getting the industry's best practice solutions with a cost- conscious approach to the project."

Ryan Duff, Development Manager Sheargold Group

GROUNDED EXP

# Marine Dredging and Environmental Studies

Douglas Partners provides services to clients seeking to determine the physical and chemical characteristics of marine and estuarine sediments and their potential to impact on the environment by:

- Chemical contamination of the water column or the surrounding marine environment in which they are deposited;
- Suspended sediment content in the water;
- Fluvial processes.

Our range of services, backed by an innovative drilling and field services unit, include:

- Environmental assessment of marine and estuarine sediments;
- · Acid sulfate soil assessment of sediments;
- · Specialist in-situ sampling and testing of fine sediments;
- · Geotechnical investigation for dredging works design;
- · Harbour reclamation studies;
- · Dredged spoil disposal advice;
- Conductivity Cone Penetration testing to determine stratification and comparative contaminant levels; and
- Geophysical surveys of bottom sediment type and depth.



### Occupational Hygiene Services



The occupational hygiene services provided by Douglas Partners include management of asbestos/hazardous building materials as well as identification, assessment and control of numerous other chemical, biological and physical stressors in the workplace. Our qualified and experienced consultants include members of the Australian Institute of Occupational Hygienists (AIOH), Licensed Asbestos Assessors (LAA's) and Competent Person(s) who conduct assessments in accordance with Australian legislative requirements, standards, codes of practise and industry guidelines.

Asbestos / Hazardous Materials

- · Sample collection and analysis;
- · Building surveys (general compliance, due diligence and demolition purposes);
- · Air monitoring for asbestos, lead and other contaminants;
- · Clearance inspections and certificates;
- Management plans;
- Technical supervision of removal work; and
- Investigation of unexpected finds.



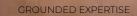
#### Occupational Hygiene

- · Air monitoring;
- Noise dosimetry, surveys and mapping;
- Thermal stress assessments;
- Lighting assessments;
- Vibration assessments (hand-arm and whole body);
- Radiation assessments (ionising and nonionising);
- Mould/fungi and bacteria assessment;
- Indoor air quality (IAQ);
- Odour investigation;
- · Analysis of unidentified substances; and
- Occupational health and safety audits.

"At all times we have found that Douglas Partners has provided a high level of service to us. Their advice has been reliable and they have been very timely in their service delivery. Based on our experience to date, we wouldn't hesitate to engage them in the future."

Stephen Parkin, Director Armstrong Parkin Architects







# Consistently delivering High Quality with Integrity

At Douglas Partners, our purpose it is to provide our clients with "Grounded Solutions for the Built Environment".

We hire, acknowledge and incentivise our employees based on their application of our values to steer their choices and behaviours.

Our Values:

#### • People

Safety comes first in all we do.

We foster an inclusive and collaborative culture, enabling all to thrive.

We build trusted relationships and are defined by how well we take care of them.

We strengthen connections and make a positive difference where we work and live.

#### • Integrity

We do what's right for the environment, client and community.

Customers choose us because they trust our name, and people. We earn that trust by always acting honestly and with the highest level of integrity.

#### Improvement

We're proud of our industry-leading processes and are always looking for ways to improve.

We make improvement a daily habit as continuous improvements lead to sustainable innovation.

#### Excellence

We pride ourselves on our high level of technical expertise.

We recognise quality is important in every step of the process.

We work collaboratively, combining our collective knowledge and experience to provide grounded solutions.

### Environmental Specialists

Our success is due to the expertise, skills and knowledge of our staff, many of whom have postgraduate qualifications and international experience. With over 600 highly skilled team members, clients gain access to top engineering talent. Our track record includes winning the Client Choice Awards 22 times - a testament to our unwavering commitment to Excellence.

Douglas Partners' offices have a number of key personnel who have expert environmental skills and experience, enabling projects to be undertaken effectively and at minimal cost to the client.

Directors and Principals actively participate in projects, ensuring clients access the highest level of expertise and experience within the Company.



#### NIZAM AHAMED Senior Associate / Environmental Manager

Nizam completed his Masters in Environmental Management and a Bachelors of Science degree with majors in chemistry, environmental science and zoology. His experience includes contamination investigations, landfill assessments, environmental risk assessments, site remediation, hazardous building material assessments and acid sulphate soil investigations. Nizam was appointed Environmental Section Manager for the Sydney branch in 2019.



#### PAUL GORMAN Principal / Environmental Engineer

Paul Gorman is a Principal of Douglas Partners with over 25 years' experience. He has a broad range of experience on both large and small scale investigations including remediation action plans, environmental management, validation reports, underground storage tank removals, asbestos management and groundwater remediation.



#### MIKE NASH Principal / Environmental Scientist

Mike has over 40 years' experience in the geo environmental industry, having previously worked in the UK and Hong Kong and brings extensive experience and knowledge to his clients' projects. Mike is an accredited auditor in NSW, WA, ACT and NT and undertakes contaminated site audits in these jurisdictions as well as providing expert witness services in accordance with environmental law and regulatory requirements.



#### TIM WRIGHT Principal / Environmental Engineer

Tim Wright has over 25 years experience in geotechnical engineering and contaminated land consultancy. Tim graduated from the University of Liverpool (UK) with a BSc (Hons) degree in Geology and Physical Geography before completing his MSc in Engineering Geology at the University of Durham (UK). He is a Chartered Geologist (Geological Society of London) and became a Registered Specialist in Land Condition (SiLC) in 2004.



#### KURT PLAMBECK

Senior Associate / Environmental Scientist

Kurt joined Douglas Partners in 2005 after completing an honours degree in Environmental Science majoring in earth sciences at the University of New South Wales. He has a wide range of experience in conducting contamination assessment and remediation projects for both public and private sector clients for varied developments as well as experience with environmental investigations and within the landfill industry.

# Local capability, world-class talent

For information on how Douglas Partners can assist on your project, please contact one of our branches below or email info@douglaspartners.com.au.

- BRISBANE CAIRNS CANBERRA CENTRAL COAST COFFS HARBOUR DARWIN GEELONG GOULBURN GOLD COAST MACARTHUR
- (07) 3237 8900
  (07) 4055 1550
  (02) 6260 2788
  (02) 4351 1422
  (02) 6650 3200
  (08) 8948 6800
  (03) 5221 0711
  (02) 4822 8395
- 🚡 (07) 5568 8900
- 🕿 (02) 4647 0075

- MELBOURNE
- NEWCASTLE
- NTH WEST SYDNEY
- PERTH
- PORT MACQUARIE
- SUNSHINE COAST
- SYDNEY
- TOWNSVILLE
- WOLLONGONG

- (03) 9673 3500
   (02) (050 050)
- (02) 4960 9600
- (02) 4666 0450
- (08) 9204 3511
- **a** (02) 6581 5992
- 🖀 (07) 5351 0400
- 🗟 (02) 9809 0666
- 🐱 (07) 4779 9866
- 🚡 (02) 4271 1836

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