



Environmental Services Capability Statement

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KPMG SGA Environmental Services Profile

KPMG SGA provides objective and commercial advice on property related environmental matters.

We provide a specific service aimed at identifying and evaluating environmental risks associated with property transactions, development and occupation. Our focus when undertaking any such work is to translate the risk into a commercial reality.

Our environmental services can be accessed from all our offices, delivering not only consistent quality but local knowledge and service delivery.

Our Key Services include:

- Preliminary Site Investigations (PSI) also known as Phase 1 Assessments
- Detailed Site Investigations (DSI) also known as Phase 2 Assessments
- Targeted Site Investigations (a focused DSI specifically for due diligence purposes)
- Hazardous Materials Assessments
- Environmental Management Plans (EMP)
- Remedial Action Plans (RAP)
- Management and Validation of Remedial Works including UST removals and installations
- Hazardous Materials or Asbestos Registers & Management Plans
- Acid Sulfate Soil Assessments
- Salinity Assessments
- Preliminary Hazard Analyses
- NABERS & BEEC Assessments
- Environmental Management Policies

Properties assessed can range from a single site to large international portfolios of real estate encompassing commercial, retail and industrial sites.

The KPMG SGA network operates throughout Australia and New Zealand in conjunction with our other property services including Technical Due Diligence and Make Good Assessments.



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KPMG SGA Environmental Services and Expertise



1. Preliminary Site Investigation (PSI)

The Preliminary Site Investigation (also known as Phase 1 Assessment) offered by KPMG SGA is an efficient, effective way of determining risks associated with potential contamination of soil and groundwater on a site. The assessment does not include an intrusive assessment and therefore detailed characterisation and quantification of risk cannot be made.

However, if required intrusive investigations can then be undertaken to further quantify risks present.

The scope of a Preliminary Site Investigation is as follows:

- site inspection to identify:
 - potential contaminating activities
 - historical features which may be associated with contamination
 - surrounding land use for sensitivity and/or potential contaminating activities

- signs of stress to local environmental systems
- desktop historical assessment to identify:
 - past site uses
 - searches for environmental notations recorded against the site
 - development phases on the site
 - review of previous investigations
 - review of the sites environmental sensitivity based upon available soil, geological and hydrogeological data
 - provision of a factual and interpretive report, including an assessment of environmental risk with reference to relevant legislation.

The findings of a PSI may be that a potential exists for contamination of soil or groundwater to have occurred on the subject site. If so a Targeted or Detailed Site Investigation may be recommended.

2. Targeted/Detailed Site Investigation (DSI)

Federal and State legislation provides guidance for identification and management of contaminated land which is considered to pose an unacceptable risk to human health or the environment.

A Targeted or Detailed Site Investigation (also known as Phase 2 Assessment) should ascertain whether contamination is present beneath a site and what actual level of risk should be associated with the site.

Depending on the level of investigation required, the assessment can either be targeted towards known contamination sources or the assessment can be undertaken on a grid pattern across the site. A targeted investigation is typically less expensive. The scope of services undertaken includes:

- selection of likely chemicals of concern (CoCs)
- intrusive investigation of soil, soil vapour and/or groundwater
- collection of samples for CoC laboratory analysis
- development of a site conceptual model taking into account all data sources to build a detailed picture of any environmental issues, and
- provision of a factual and interpretive report, including an assessment of environmental risk with reference to relevant legislation.

KPMG SGA Dedicated Drill Rig

One of our competitive advantages in this area is the KPMG SGA drill rig which has been custom designed specifically for easy access to tight spots while maintaining an extremely effective drilling action. The rig also means we can be on site quickly as we do not have to book in a subcontractor to undertake drilling services, a process which commonly takes over one month. This is coupled with the fact that our drillers are experienced environmental scientists and therefore the effectiveness of the drilling program is maximised.

Further details regarding our drilling capabilities are provided on page 7.

3. Hazardous Material Assessments

Our Hazardous Materials Assessment provides clients with an assessment of what hazardous materials may be present on a site and how the risk associated with the materials will affect a forthcoming purchase, sale or occupation. The hazardous materials scope of services includes:

- internal and external inspection of the site
- targeted review of potential hazardous building materials such as:
 - Asbestos
 - Polychlorinated Biphenyl's (PCBs)
 - Synthetic Mineral Fibres (SMF)
 - Chlorofluorocarbons (CFCs) and Hydrochloro Fluorocarbons (HCFCs)
 - Lead Paint





One of our competitive advantages in this area is the KPMG SGA drill rig which has been custom designed specifically for easy access to tight spots while maintaining an extremely effective drilling action.



- collection of samples where possible for visual or laboratory analysis
- comparison of results to relevant standards, and
- provision of a factual report including a risk assessment.

The hazardous material assessment is typically coupled with a PSI to allow consideration of both hazardous materials and environmental issues.

To streamline this service we offer a Limited Hazardous Materials and Environmental Assessment where required.

4. Remedial Action Plans (RAP) and Environmental Management Plans (EMP)

Management or remediation of environmental issues identified can be handled in many ways. Effectively handling these issues can reduce costs and timeframes for projects. A successful approach must take into account:

- the conceptual model developed within the investigation stage
- proposed or actual uses of the site
- expectations of interested government bodies
- site workers
- local residents or neighbours, and
- future plans of the client.

Successfully prioritising and meeting all of these expectations requires experience and good planning. The environmental staff at KPMG SGA have extensive experience on environmentally sensitive sites and we can confidently offer a solution which exceeds client expectations for both RAPs and EMPs.

5. Management, Supervision and Validation of Remedial Works

A smooth running remedial program means sticking to timeframes and budgets, keeping the client well informed and preventing accidents or injuries on the working site. We minimise unexpected issues by:

- close association with our preferred remedial contractors to assist the client in choosing the best contractor for the project
- our supervisors are trained as both project managers and environmental scientists, therefore we are able to interact with contractors while providing constant scientific supervision of remedial works
- proposing solutions which address the issue and take into account the site conditions and client expectations, and
- constantly researching new methods and findings for remedial technology, to ensure we are offering the best possible solution.

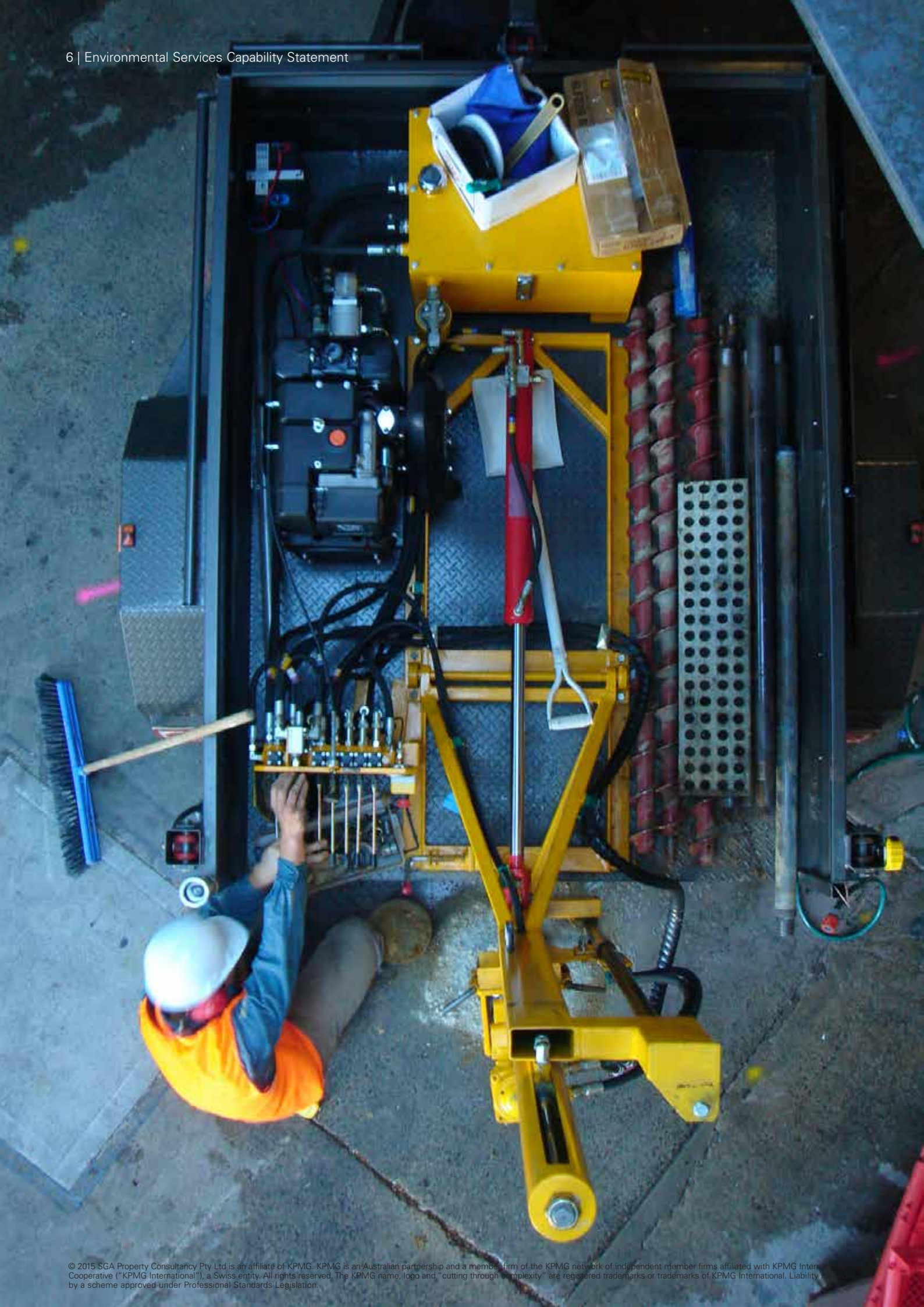
Although we provide a specialist service for removal and validation of underground storage tanks, we also have extensive experience in soil and groundwater remediation for organic and inorganic chemicals of concern.

6. Other Environmental Services

Depending on the location of a site, or the age of infrastructure, other environmental issues can be present. Our environmental team offers a full scope environmental service; we have staff who are highly trained in:

- Asbestos Registers
- Acid Sulfate Soil Assessments
- Salinity Assessments
- Land Capability Assessments
- Preliminary Hazard Analyses
- NABERS (formerly ABGR) Assessments
- Environmental Management Policies.

Maintaining capability for these services in-house provides clients with further tools to implement sound risk management strategies.





Our operators are highly experienced in the fields of contaminated site drilling and sampling.



KPMG SGA Environmental Drilling

To complement our Environmental Consultancy, we have acquired a custom, Australian-made, trailer mounted, drilling rig to enable us to get on site without the long waiting periods for subcontractors.

Our operators are highly experienced in the fields of contaminated site drilling and sampling.

Our rig is efficient, light weight, manoeuvrable and is capable of:

- both open and closed piston push tube sampling to collect undisturbed soil samples in cohesive and uncohesive flowing formations
- installation of groundwater wells using conventional methods as well as pre-packed wells, and
- concrete coring maximum diameter of 200 mm.

1. Drill Rig Specifications

Stroke	2.1 metres
Minimum working height	3.6 metres
Maximum height	4.7 metres
Augers – 83 mm dia.	12 metres capability
Push tube – 57 mm dia.	12 metres capability
Hammer energy	150 Joules
Hammer frequency	1250 blows per minute
Down force	1.7 tonnes
Lifting force (normal)	2.8 tonnes
Lifting force (maximum)	5.6 tonnes
Concrete coring (200 mm)	0.45 m (maximum depth)

2. Tooling

The KPMG SGA Rig currently uses Geoprobe® MC5 tooling for push tube sampling. Our rig is compatible with other Geoprobe® 2.25 inch tools and rods.

Additionally, our rig has augering capabilities for installation of groundwater wells or drilling through difficult formations.

In difficult access areas, we use a variety of specialist equipment including rock hammers, Australian-made Dormer hand augers and sludge pumps.

3. Work, Health & Safety

The KPMG SGA rig is equipped with an emergency stop button, operates with dead man levers and can be fitted with a safety cage. All operators have current first aid certificates and complete SWMS prior to all jobs.

4. Operator

KPMG SGA has experienced consultants in contaminated site drilling and sampling. Our consultants operate the drill rig and can provide technical assistance to the lead consultant undertaking the investigation.

5. Other Services

KPMG SGA also offer a field service which provides a drill rig and experienced environmental scientist to supervise drilling works. This service includes core logging and sample collection which will be delivered to your preferred laboratory.

Please contact us for a competitive quote.

Principal Team Members



Peter Graham

Qualifications:

- BSc.(Hons) Geology/Soil Science
- MSc. Hydrogeology
- Certified Professional Soil Scientist (CPSS)-2
- Class A Asbestos Assessor
- NABERS Assessor

Experience:

Peter has worked in environmental consultancy since 1998

Summary of Skills:

- Contaminated site investigations
- Hazardous building material assessments
- Asbestos Registers
- Hydrogeological assessments
- Design of soil and groundwater remediation systems
- Groundwater modelling
- Maintenance and installation of groundwater remediation systems
- Acid sulphate soil assessments
- Geomorphology, interactions between surface water, groundwater, geology and soil
- NABERS assessments
- Energy management plans

Examples of project experience

Environmental and Hazardous Materials Due Diligence Assessments

- Numerous commercial, industrial and large residential properties across Australia and New Zealand for technical due diligence (TDD) including:
 - Portfolio of 20 shopping centres
 - Portfolio of 15 industrial sites
 - Portfolio of 14 bulky goods centres

Contaminated Land Assessments

- Former chemical works Camellia, NSW – Environmental Protection Authority (EPA) approved Detailed Site Investigation (DSI)
- Former military site Harristown, QLD – Targeted Site Investigation (TSI) for TDD
- Former textile factory Nunawading, VIC – Environmental Schedule of Condition (ESOC)

Hazardous Materials Assessments

- Multi-storey commercial office/retail building Sydney, NSW – Hazardous Materials Assessment

Environmental Management Plans

- Landfill Wetherill Park, NSW – landfill gas and groundwater monitoring plan

Remediation Design, Management and Validation

- Former chemical works Camellia, NSW – design of EPA approved Remediation Action Plan (RAP)
- Former service station Yass, NSW – in-situ chemical oxidation (ISCO) of groundwater
- Former oil refinery Townsville, QLD – groundwater treatment system design
- Industrial site Rosehill, NSW – soil and groundwater RAP
- Service station sites Sydney, NSW – EPA approved RAPs and groundwater treatment system design
- Industrial site Blackburn, VIC – UST removal, remediation and validation

Hazardous Materials Removal Design, Management and Validation

- Multi-storey commercial office building North Sydney, NSW – project management and validation of removal of friable asbestos insulation from multiple floors
- Retail building Fairfield, NSW – project management and validation of removal of friable and bonded asbestos from proposed redevelopment site



Dahmon Sorongan

Qualifications:

- BSc.(Hons) Environmental (Soil Science)
- MSc. & Tech Geographic Information Systems
- Certified Professional Soil Scientist (CPSS)-2

Experience:

Dahmon has worked in environmental consultancy since 2000

Summary of Skills:

- Contaminated site investigations and remediation
- Waste/Fill classification
- Environmental due diligence assessments
- Land capability assessments
- Acid sulphate soil assessments
- Salinity assessments and management plans
- Geographic Information Systems (GIS) & Global Positioning Systems (GPS) surveying
- Designing and implementing long term environmental compliance monitoring systems

Examples of project experience

Environmental and Hazardous Materials Due Diligence Assessments

- Numerous commercial, industrial and large residential properties across Australia and New Zealand for technical due diligence (TDD) including:
 - Portfolio of 62 shopping centres
 - Portfolio of 15 industrial sites

Contaminated Land Assessments

- Farmland and motor racing circuit Oran Park, NSW – contaminated land and salinity assessments for the Growth Centres Commission Land release
- Industrial facility Springvale, VIC – investigation of PCB impacted soil
- Mine sites Sydney, NSW – assessment of current and former mine sites within the Sydney Catchment
- Former smelter Boolaroo, NSW – investigation of aerial dispersed heavy metal impacts on area surrounding smelter using geostatistics
- Former military land Mosman, NSW – Detailed Site Investigation (DSI) for redevelopment
- Regional, NSW – detailed assessment and risk assessment of RTA bridges. Assessment of impacts from past sandblasting and bridge maintenance activities
- Former landfill and industrial site Newcastle, NSW – DSI for proposed coal loading terminal
- Current drum reconditioning facility Seven Hills , NSW – Environmental Schedule of Condition (ESOC)

Hazardous Materials Assessments

- Multi-storey commercial office/retail buildings in Melbourne, Brisbane and Sydney– Hazardous Materials Assessment

Environmental Management Plans

- Former landfill Rocklea, QLD – landfill gas and contaminated soil Site Management Plan (SMP) (submitted to DERM)
- Landfill Shellharbour, NSW – provision of an Environmental Management Plan and long-term monitoring for Environmental Protection Authority license

Remediation Design, Management and Validation

- Fertiliser factory Penrith, NSW – assessment/ remediation of soil impacts
- Commercial office building Brisbane, QLD – UST decommissioning and installation of above ground petroleum storage tank



James Walker

Qualifications:

BSc.(Hons) Geology

Class A Asbestos Assessor

Certified Professional Soil Scientist (CPSS)-2

NABERS Assessor

CBD Assessor

Experience:

James has worked in environmental consultancy since 2000

Summary of Skills:

- Contaminated site investigations
- Contaminated land remediation
- Hazardous building materials assessments
- Environmental due diligence assessments
- Waste / fill classification
- Air & landfill gas monitoring
- Risk screening & assessment
- Geographic Information Systems (GIS) & Global Positioning Systems (GPS) surveying

Examples of project experience

Environmental and Hazardous Materials Due Diligence Assessments

- Numerous commercial, industrial and large residential properties across Australia and New Zealand for technical due diligence (TDD) including:
 - Portfolio of 62 shopping centres
 - Portfolio of 60 industrial/commercial sites

- Portfolio of 13 shopping centres
- Portfolio of 9 hotels and multi-storey commercial buildings

Contaminated Land Assessments

- Furniture factory Padstow, NSW – Detailed Site Investigation (DSI) for TDD
- Former service station Caloundra, QLD – Targeted Site Investigation (TSI)
- Dry cleaners and former service station Willetton, WA – TSI for TDD
- Former industrial site Alexandria, NSW – DSI for redevelopment

Hazardous Materials Assessments

- Former government laboratory Pymble, NSW – Hazardous Materials Assessment
- Multi-storey apartment building Gold Coast, QLD – Hazardous Materials Assessment, Register & Management Plan for proposed demolition site

Environmental Management Plans

- Shopping centre Artarmon, NSW – groundwater and vapour Environmental Management Plan
- Commercial office Canberra, ACT – Environmental Management Plan for former service station

Remediation Design, Management and Validation

- Vehicle servicing centre Bateau Bay, NSW – UST removal, excavation/validation of impacted soil and monitoring of groundwater
- Data centre South Melbourne, VIC – UST removal/validation and replacement with new UST
- Commercial office Macquarie Park, NSW – UST decommissioning and installation of above ground petroleum storage tank
- Former gasworks Hull, UK – project management and validation of multi-million dollar bioremediation project

Hazardous Materials Removal Design, Management and Validation

- Hotel Shepparton, VIC – project management and validation of removal of bonded asbestos debris
- Industrial site Bankstown, NSW – project management, air monitoring and validation of removal of friable asbestos dust/debris

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