



# Simmonds & Bristow

Established 1965 ACN 010 252 418 Pty Ltd

## Environmental Consultancy



### General Experience 2009

WATER AND WASTE MANAGEMENT SOLUTIONS FOR • MINING • HOSPITALITY • COMMUNITIES • DEVELOPMENT  
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## 1. Why Choose Simmonds & Bristow?

By choosing Simmonds & Bristow for your environmental needs you can count on being serviced by a team of highly-skilled, professional consultants who have a wealth of industry experience and knowledge. S&B also provides a one-stop-shop for water & environmental monitoring, laboratory analysis, engineering consulting and industry training needs.

## 2. Environmental Consultancy Overview

Simmonds & Bristow is now better equipped than ever to solve your environmental challenges and compliance requirements. Following the merger in early 2007 of Envirotest and Simmonds & Bristow, we've broadened our range of experience in the environmental field, which means we can help you with almost any environmental compliance issue.

Whether you're dealing with a tricky development application or an occupational health hazard, Simmonds & Bristow has the expertise to find the right compliance solution. As environmental compliance becomes increasingly complicated, you don't want to have to revisit the same problem time and again when it hasn't been handled correctly. We'll get it right from the start, finding the best environmental outcome and ensuring compliance, and ultimately saving you money.

## 3. Environmental Services

- Water & Wastewater Monitoring and Assessments (p.3)
- Land & Soil Investigations (p.3)
- Litigation Support (Expert Witness) (p.4)
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## 4. Customer Service

When you choose S&B, we will assign a single client manager to look after your company and its requirements. You will avoid wasting time by being transferred from person to person trying to find someone who knows about the work we do for you. In addition, a project manager from our environmental consultancy team will be nominated to manage your project and ensure outcomes are met.

Your client manager will have a thorough understanding of your project as well as knowledge of the status of all current jobs. Your client manager will maintain contact with you throughout the project to keep you informed of the project status, progress and any obstacles. When you have specific queries, your client manager will be your first point of contact, and will arrange for your environmental consultants to contact you directly as required.

## 5. Servicing Remote Communities & World Heritage Areas

In addition to a wealth of local and national experience, Simmonds & Bristow's environmental consultants specialise in operating in remote regions of Australia as well as environmentally sensitive World Heritage Areas including in the Torres Strait Islands Qld's Great Barrier Reef, the islands of the Torres Strait, and the Tasmanian Highlands and Riverlands..

## Water & Wastewater Monitoring and Assessments

As it becomes increasingly necessary to monitor the impacts of development, industry and other human activities on surrounding environment, Simmonds & Bristow have developed a full range of water and wastewater monitoring and assessment options including:

- Water & wastewater monitoring program design & implementation
- Groundwater monitoring
- EASI-Sample: sample collecting or prepared sampling kits
- Routine compliance reporting & trend graphs with recommendations
- Stormwater monitoring, assessments and modelling - routine or rainfall based; WSUD design and MUSIC assessments
- Effluent irrigation assessments and modelling
- Algae control & management plans
- Recycled water: validations & management plans
- Cooling tower waters assessments & monitoring
- Ecotoxicology – effects of various agents on humans, flora, fauna & ecosystems
- Biological monitoring

Recent clients who have used the services of our environmental consultants to conduct water and wastewater monitoring and assessments include:

- **Santos Ltd:** River health monitoring and environmental risk assessment
- **Huon Valley Council (Tas):** Water and sediment analysis and assessments
- **Redcliffe City Council (pre amalgamation):** Routine monitoring of reticulated water treatment plant effluent and environmental waters
- **Trade Coast Central:** routine and rain event stormwater monitoring
- **BP Oil:** Routine process waters monitoring
- **Tolen Holdings:** Mains testing
- **Carter Holt Harvey:** Routine environmental, process and stormwater monitoring

## Land & Soil Investigations

At different stages of use, development, excavation or sale, it can be necessary to undertake various investigations on a property or tract of land. Simmonds & Bristow's environmental consultants are well versed in conducting:

- **Contaminated Land Investigations:** Used for purchasing or change-of-use decisions, or removal from the Environmental Management Register (EMR)
- **Acid Sulphate Soils Assessments:** Commonly required for development in low-lying areas, to determine whether excavation may cause oxidising of pyrites into sulphuric acid, and if so, how to manage excavated soils
- **Effluent Irrigation Studies:** To determine the suitability of treated wastewater disposal via land irrigation, often using the MEDLI Model Litigation Support (Expert Witness). Our senior team members are available to provide expert witness, analytical services and reports for appeals and litigation. Typical projects include:
  - Quantification of water quality effects of residential developments
  - Environmental effects of mining operations on local ecosystems and water resources in resource development appeals
  - The sustainability of sewage treatment and effluent disposal systems, including effluent reuse and irrigation.
  - Quantification, review and assessment of stormwater systems using WSUD techniques and MUSIC modelling
- **Soil Salinity Assessments and Investigation:** To analyse sodicity of land in order to assess stability and fertility.

Simmonds & Bristow's environmental team have conducted land and soil investigations for a wide variety of clients including:

- **Brisbane Airport Corporation:** Investigation and disposal of poly-aromatic hydrocarbons in tarmac, and acid sulphate soil investigation.

- **Land Development Companies:** investigation and remediation of a residential property on which the previous asbestos home burned to the ground.
- **Gainsplay:** Contaminated land and acid sulphate soil investigation as well as hazard and risk assessment and effluent disposal design for STP.
- **Fuel Doctors:** Site investigation reports and pre-purchase due-diligence.

### Litigation Support (Expert Witness)

Developers and industry bodies use scientific and engineering strategies in order to fight legal cases. Our most senior team members are available to provide expert witness, analytical services and reports for appeals and litigation.

Typical projects include:

- Confirmation of cement content for building material
- Quantification of residential developments on water quality effects and the environment in re-zoning appeals
- Environmental effects of mining operations on local ecosystems and water resources in development appeals
- The sustainability and appropriateness of sewage treatment and effluent disposal systems, including effluent re-use and irrigation

We routinely provide expert witness support to the following clients:

- **Beaudesert Shire Council**
- **Gold Coast City Council**
- **Logan City Council**
- **Scenic Rim Regional Council**
- **Minter Ellison Law Firm**
- **Hopgood Ganim Law Firm**
- **Deacons Law Firm**
- **Corrs Chambers Westgarth**

### Occupational Hygiene

Australian workplaces are required to comply with health and safety regulations and public safety. Exposure to substances in the workplace is regulated by state and federal bodies and requires assessment of workplace exposure levels, which may include regular monitoring. We offer the following services in this field:

- Sampling program design (site-specific)
- Microbiological & chemical assessments
- Results interpretation: results are compared with relevant standards (e.g. Australian Workplace Exposure Standards) and guidelines.
- Health risk assessments and management
- Occupational hygiene audits or workplaces
- Training workshops

We have recently undertaken extensive occupational safety assessments for clients including:

**NCI Packaging:** investigation of fumes in new packaging line

**EGR:** Occupational health assessments at screen-printing facilities and manufacturing workshops

### Environmental Licensing & Development Support

With development rates increasing and public & private infrastructure projects struggling to keep up with population growth, developers and managers need consultants they can trust to assist with applications and negotiations with regulatory bodies. Site-based management plans for new developments include:

- Identification of environmental values on your site
- Identification of potential environmental hazards
- Risk minimisation strategies for each hazard
- Emergency response contingency procedures

- Reporting proformas to be issued to regulating authorities informing them of licence exceptions etc
- Environmental monitoring programs.

Simmonds & Bristow's services have recently been contracted for this type of work by organisations such as:

- **Kentish & Huon Valley Councils (Tas):** Licence applications and environmental impact assessments for Wastewater Treatment Plant development - Development Proposal and Environmental Management Plan (DP&EMP)
- **Mount Isa Water Board:** Water Quality Management Plan
- **Murrays Logistics:** Stormwater Management Plan
- **Industrial and Protective Coatings Queensland:** Site contamination and environmental audit
- **Kentish Council (Tas) :** DP&EMP for land disposal of effluent



*Huon Valley (Tas)*



*Kentish Council lagoons (Tas)*

## Impact & Risk

Simmonds & Bristow conducts risk assessments of exposure to hazardous substances or hazards associated with development proposals. They types of risk assessments are case-specific and vary from contaminated sites, air emissions, occupational hygiene, public safety issues to environmental risks from pollution.

### Environmental Impact Assessments

Potential impacts on surface and groundwater quality, soil, flora, fauna, and aesthetic amenity are assessed and predicted by our consultants. Predictions are supported by analysis of samples and computer modelling (e.g. Ausplume, MUSIC and MEDLI).

### Hazard & Risk Analysis

Qualitative or quantitative analyses determining likelihood and consequences of potential scenarios can be carried out for a variety of circumstances: Dangerous goods

- Hazardous events (fire, explosion)
- Human health risks (e.g. recycled water, chemical release)
- Environmental risks (waterways, air and land)

Recent work in this vein which Simmonds & Bristow's environmental team have undertaken, includes:

- Hazard and risk analysis of the impacts of an Industrial Estate (comprising hazardous industry) on a proposed residential development. Potential impacts included air emissions (both under normal operations and during hazardous events such as a chemical fire), contaminated stormwater runoff, odour and noise impacts
- Hazard and risk analysis of a Major Hazards Facility for the storage and handling of large quantities of flammable liquids.
- Preliminary Risk Assessment of Proposed Natural Gas Pipeline.
- Quantitative Risk Assessment of Proposed Natural Gas Pipeline.
- Hazard and Risk Analysis of Proposed Gas-Fired Generation Facility.
- Hazard and Risk Assessment of Proposed Resin Manufacturing Facility.
- Final Hazard Analysis. Focus Products Pty Ltd. Large Dangerous Goods Storage.

## Air Quality, Emissions & Dispersion Modelling

### Indoor Air Quality

If staff or inhabitants are experiencing irritated eyes, nose, skin or throat, headaches, lethargy or poor concentration, you may need an Indoor Air Quality Assessment.

Key performance indicators include:

- Physical parameters: temperature, ventilation, carbon dioxide, dust
- Chemical parameters: carbon monoxide, volatile organic compounds (VOCs), formaldehyde, insecticides
- Microbiological parameters: bacteria, mould, fungi.

Recent clients who have used Simmonds & Bristow's services to undertake indoor air quality investigations include

- **Royal Wolf**
- **Ausco**
- **PA Hospital**
- **Qld Health**

### Air Emissions & Dispersion Modelling

Air emissions from a wide range of industrial, commercial and other land activities can be estimated and modelled. Computer-based modelling (e.g. Ausplume) is used to generate or predict various levels of exposure which may form the basis of risk assessments and design of risk management. Applications include:

- Dust emissions
- Chemical emissions (e.g. solvents, combustion gases)
- Spills
- Fire and explosion effects

Simmonds & Bristow's environmental team have undertaken a wide variety of projects relating to Air Emissions and Dispersion Modelling including:

- **Environmental Assessment of Aerial Discharges (Stages 1, 2 and 3):** This assessment involved testing of all stack emissions on site (in the order of 30 sources) under normal operating conditions and air dispersion modelling to predict impacts on nearby residents and students within the grounds. The highest risk activities were identified and solutions recommended. The project provided a database of emission rates from the types of activities conducted in these facilities.
- **Hanson Tweed Sands** - Dust monitoring
- **Carter Holt Harvey Woodproducts** - Environmental and dust monitoring

<ENDS>



**OTHER SERVICES OFFERED BY SIMMONDS & BRISTOW INCLUDE:**



**ENGINEERING CONSULTANCY**  
 TREATMENT PLANT DESIGN | TREATMENT PLANT OPTIMISATION & VALIDATION | TREATMENT PLANT COMMISSIONING | PLANT EVALUATION & AUDITS | OPERATIONS, SERVICING & SUPPORT | HYDRAULIC MODELLING | PROJECT MANAGEMENT | ON-SITE CLEAN WATER TESTING | OPERATION & MAINTENANCE MANUALS | COMMISSIONING REPORTS



**TRAINING SERVICES**  
 CERTIFICATE II & III IN WATER OPERATIONS (NWP20107 & 30107) | DIPLOMA IN WATER OPERATIONS | SHORT COURSES IN WATER OR WASTEWATER TREATMENT PLANT OPERATION | SHORT COURSE IN ENVIRONMENTAL SAMPLING



**LABORATORY SERVICES**

CHEMISTRY | MICROBIOLOGY | DRINKING WATER | RAW WATER | WASTEWATER | RECYCLED WATER | AGGREGATES | SOILS | SLUDGES | ALGAE



VOYAGES HERON ISLAND GREAT BARRIER REEF



VOYAGES DUNK ISLAND GREAT BARRIER REEF

