ALS is a diverse and dynamic provider of hydro-meteorological products and services. We specialise in the supply and operation of a wide range of monitoring systems for long term, continuous monitoring of many environmental parameters including water, weather and air quality.

We pride ourselves on the provision of high quality and dependable data to enable informed decisions for environmental projects. The comprehensive range of products and services is complemented by a solid commitment to quality and customer service.

Our client base includes national, state and local governments, private industry, multinationals, utilities, and major mining and resource companies. ALS is a strong supporter of industry associations such as Australian Water Association and the Australian Hydrographers Association.

Safety leadership and innovation are what our clients receive. ALS provides expert technical support, client service and training which is why clients continuously rate ALS so highly.
Core Values

We incorporate our core values in our daily operations, never forgetting the foundations of our success.

› Safety as a Priority
› Honesty and Integrity
› Exceeding Client Expectations
› Belief in our Ability
› Hard Work and Continuous Improvement
› Doing it Better
› Celebrating Success

So what is the ALS difference? It’s simple:
RELIABILITY – QUALITY – COMMUNICATION – TRUST
As one of the world’s largest and most diversified Testing, Inspection and Certification (TIC) companies, ALS has sites strategically located around the world to provide accurate and timely services. We have operations in more than 400 locations, in 65 countries, and on six continents. We have teams of experts around the world available to provide specialised business solutions that align with client needs. Major hub facilities are located in Australia, Asia, North America, South America, Europe, the Middle East and Africa.

Our company can trace its origins to 1863 when Peter Morrison Campbell first established a soap making business in Queensland, Australia. After listing on the Australian Stock exchange in 1952, the modern era of the company began in 1981 with the acquisition of Australian Laboratory Services Pty Ltd and a shift to becoming a highly regarded international testing, inspection and certification company employing in excess of 12,000 staff.

Irrespective of our size, we have always retained a uniqueness that has allowed us to truly understand the industry, encouraging innovation and an entrepreneurial spirit that creates strong links between our global business operations.
We are focused on delivering superior services through eleven main service lines:

- Environmental
- Food
- Pharmaceutical
- Consumer Products
- Geochemistry
- Metallurgy
- Inspection
- Coal
- Oil & Gas
- Asset Care
- Tribology.
Health, Safety and the Environment

ALS is committed to a safe work culture. Our global minimum standard assists in managing health, safety and environment risks. On a national basis, policy and procedures are designed to comply with the requirements of relevant legislation. ALS employs a team of Health and Safety professionals at both a regional and corporate level to support continual improvement and best practice.

ALS believes the meeting of its safety and environmental obligations is essential to its long term success. The company imparts its safety and environmental values from the first day the employee commences work with the company and throughout their term as a valued employee. We do this by:

- Comprehensive safety inductions
- Ongoing Training such as tool box talks, formal training on core topics, regular whole site safety address, and personalised training where identified via risk assessments
- Integration with our day to day operations via our BSI AS4801, OHSAS18001 and ISO14001 certified HSE management systems
- Auditing, reporting and review at all levels of the organisation

ALS has a core value of “Safety as a Priority”. Being an employee of ALS is about putting safety first. As part of this global approach, the minimum standard is driven by an ethic to deliver a consistently friendly and safe approach to work, regardless of differences in local laws. The ALS HSE Foundation Standard requires each business to manage key risks by adopting the following:

- Ensuring health, safety and environmental resources are available;
- Ensuring managers are aware of their responsibilities;
- Implementing a plan for managing injuries and site emergencies;
- Ensuring contractors work safely;
- Ensuring that key safety information is available for all staff to view;
- Providing training on key safety risks;
- Ensuring that staff have an opportunity to provide feedback;
- Ensuring all field staff are fully trained in field safety procedures incorporating site assessments and safety equipment;
- Empowering ALS staff to make critical decisions in regard to the continuation of works based on HSE conditions;
- Ensuring that work areas are designed and maintained in a safe manner;
- Ensuring that all incidents are designed so we can learn from our experiences; and
- Completing a review of health and safety issues on a regular basis.

Quality

ALS is committed to consistently providing quality data and service to satisfy the requirements of each client. ALS achieves and maintains its high standard through a quality system focus combined with documented policies and procedures. The system is supported by a dedicated team of highly experienced professionals who maintain the Quality Management System, conduct internal audits and proficiency programs, staff competency and knowledge audits, control documentation, identify improvement opportunities and assist in training and compliance. External audits are also a key aspect of the focus on continuous improvement. ALS are ISO17025 (NATA) accredited and maintain ISO9001, ISO14001, AS4801, OHSAS18001 and Achilles supply chain accreditations.
Overview

Services
Our technically focused operations offer a wide range of products and services across a variety of disciplines. Data can be provided in near real time to support business, quality and compliance decisions.

- **Hydrology** – water/wastewater level, flow and quality
- **Meteorology** – weather, rainfall and climate
- **Air Quality** – ambient air, gas, dust, noise and vibration
- **Instrumentation** – off-the-shelf and customised solutions
- **Telemetry** – data collection, monitoring and control
- **Field Services** – operation, calibration and maintenance
- **Data Management** – processing, validation and reporting
- **Training** – accredited Hydrographic and client site specific

Industry Focus
We offer tailored solutions across a wide range of industries including:

- Water supply and catchment management
- Waste water
- Mining
- Mining water management and compliance
- Flood warning systems
- Energy – water management and compliance
- Science and industry

Complementary Services
A complementary range of services are available via the ALS Water and Environmental Divisions:

ALS Water provides field sampling, chemical, biological, radiological, pathogenic and microbiological testing solutions to the greater water industry including all sectors from catchment and waste water to desalination and tap water.

The Environmental Group provides chemical, biological, physical, radiological and microbiological testing capabilities to the wider environmental industry including: consulting, government, mining, remediation, waste, oil and gas and general industry sectors across Australia.
Services

Hydrology

Services for the remote, continuous monitoring of water level, flow and quality in streams, rivers, estuaries, channels, canals, weirs, dams, bores and drains, as well as in water distribution, storm-water and wastewater.

Applications:
- Water resource management
- Water reticulation systems
- Waste water management
- Storm water management
- Ground water
- Compliance monitoring
- Flood warning systems
- Rural water supplies
- Agriculture and irrigation
- Canal systems
- Marine monitoring
- Bathymetric Surveys

Meteorology

Services tailored to monitor any parameter, including wind speed/direction, air temperature and humidity, solar radiation, barometric pressure, evaporation, rainfall and snow depth.

Applications:
- Water resource management
- Weather and climate information
- Flood warning
- Wind and solar energy systems
- Air quality and pollution dispersal
- Road weather information systems
- Coastal and maritime
- Lightning detection and warning

Air Quality and Gas Detection

ALS is experienced with a wide range of sensors and systems for the monitoring of dust particulates, gases, hydrocarbons and odours. We have systems for undertaking surveys, short and long term deployments. Our systems are able to be integrated with other monitoring systems such as our meteorology systems.

Applications:
- Air quality and pollution dispersal
- Coastal and maritime
- Landfill operations
- Fugitive emissions
- Construction monitoring
- Compliance monitoring

Noise and Vibration

ALS is experienced with a wide range of sensors and systems for the monitoring of noise and vibration on construction, mine and industrial sites. We have systems for undertaking short and long term deployments.

Applications:
- Construction monitoring
- Compliance monitoring
- Sensitive receptor reporting
- Asset protection
- Road and traffic monitoring
Environmental Instrumentation

We offer a complete service for any environmental monitoring requirement, from the initial design phase through to the fabrication, installation and operation of standard or customised monitoring and telemetry systems tailored to client requirements.

- Data loggers and software
- Sensors, including sensor interfacing
- Solar panels, regulators and batteries
- Enclosures, masts and brackets
- Custom data logger programming
- Landline, cellular and satellite telemetry
- Radio telemetry
- Wired and wireless IP solutions
- Warning systems, including lights, alarms and barriers
- CAD drawings, procedures and user manuals
- Instrument repair and maintenance
- Flow gauging and rating tables
- Bathymetric surveys
- Sampling

Field Services

With experience in catchments, mining, industrial and urban environments our qualified staff can provide a wide range of tailored field services.

- Monitoring site inspection and design
- Monitoring site fabrication and installation
- Weir design and construction
- Equipment installation, operation and maintenance
- Data loggers and software
- Data validation and archiving
- Secure web reporting
- Client data provision capabilities via SOAP and REST Web Services, catering for modelling or client web based data presentation
- Alarming, including email and SMS
- Custom processing and reporting
- Automated Bureau of Meteorology Water Act data provision
- Specialist HYDSTRA, VDV, LoggerNet software
- Monitoring and control solutions (SCADA)
- Integration with third party data systems
- Training and support

Data Management

A variety of data management solutions are available, for both in-house and client site operation, including:

- Automated data collection and processing
- Discrete sample and result Hydstra WQ ingest
- Data validation and archiving
- Secure web reporting
- Client data provision capabilities via SOAP and REST Web Services, catering for modelling or client web based data presentation
- Alarming, including email and SMS
- Custom processing and reporting
- Automated Bureau of Meteorology Water Act data provision
- Specialist HYDSTRA, VDV, LoggerNet software
- Monitoring and control solutions (SCADA)
- Integration with third party data systems
- Training and support

Profile & Capabilities Overview 9
Industry Focus

Water Resources

As the demand for the world’s water increases the need for effective water management becomes increasingly important. We provide accurate and reliable data about the movement, quantity and distribution of water for analysis, modelling and planning for:

- Water supply catchments
- Storage dams and reservoirs
- Ponds and drains
- Groundwater systems
- Treatment plants
- Reticulation systems
- SCADA integration

Waste Water

ALS specialises in the design, supply, installation and operation of waste water monitoring systems for use in the harshest of environments. These systems must be tough and reliable to withstand some of the worst monitoring conditions possible.

- Sewer level and flow
- Sewer inflow and infiltration (I&I)
- Sewerage Treatment Plants (STPs)
- Wastewater Treatment Plants (WWTPs)
- Stormwater channels and drains
- Sewer gas monitoring
- Industrial compliance
- Odour monitoring
- Waste water quality

Mining

Mining activities involve the removal and processing of large quantities of raw material, which must be properly managed to prevent environmental damage.

- Environmental compliance reporting
- Weather and rainfall
- Water level, flow and quality
- Air Quality and Gas detection
- Blast, noise and vibration monitoring
- Integrated monitoring software
- Real time telemetry systems
- Data management systems
- SCADA integration

Flood Warning Systems

ALS Flood Warning systems help authorities and communities to make informed decisions when disaster is imminent, and can include systems to monitor:

- Road crossings
- Pedestrian and cycle paths
- Sports grounds and public areas
- Residential and commercial buildings
- Rain/runoff modelling/prediction
- Radar integration
- Warning lights, barrier gates
- Alarm messages (SMS, email)
Energy

Energy companies use our weather and water monitoring systems to provide them with the necessary information to assess potential sites or monitor their performance once established.

- Wind energy
- Solar assessments
- Solar power performance monitoring
- Hydropower storage monitoring
- SCADA integration
- Greenhouse gas emissions

Science and Industry

Our products and systems are highly adaptable for monitoring virtually any parameter.

- Scientific research
- Compliance monitoring
- Industrial processes
- Dams, embankments, stockpiles
- Roads, bridges and pavements
- Slope and structural stability
- Seismic and monitoring
- Agriculture and horticulture
Service Approach & Value Adds

Our growth has been built on long-term relationships. Our clients are accustomed to receiving high quality data, technical support and excellent communication. This approach includes project managers, skilled and qualified field services teams, access to technical experts and a management team committed to service delivery.

**Fully Integrated Systems**

Our monitoring solutions can be configured for an almost unlimited variety of options, including auto-samplers, cameras and SCADA integration. On site data logging and a multitude of telemetry options enables a fully integrated and secure data collection, monitoring and control solution, tailored to individual needs.

**Customisation**

If a standard solution is not available, or not desirable, we can customise. We are able to integrate virtually any instrument into our monitoring platforms and can customise programming and configurations as required.

**Instrumentation**

We are long term users of a wide range of products from internationally recognised manufacturers, including Campbell Scientific, Gill, Hydrolab, Hydrological Services, INW, In-Situ, ISCO, Lufft, Met-One, Middelton, Nivus, Observator, OTT, Solinst, Sontek, Thermo Scientific, Vaisala, Vega, YSI/Xylem and Young. Our independence means we can select products based on their suitability rather than just brand loyalty.

**HYDSTRA**

We are experts in the use and application of the HYDSTRA suite of data management products, the Number One data management solution for many large national and international organisations.

**VDV**

Vista Data Vision (VDV) is an alternative data management solution that provides customers an outstanding data management service with shorter action times and lower operational costs. Users may view, manage and report on their data in ‘near real time’ via a secure website.

**Secure Data Access**

We host both Hydstra and Vista Data Vision Web Portals for secure data access, depending on client requirements. VDV offers shorter action times and lower operational costs, whilst Hydstra offers full access to verified and unverified data, and a vast range of reporting options.
Industry Training

ALS has been at the forefront of developing and delivering the new Australian Diploma of Water Operations Majoring in Hydrography. We provide these qualifications to both ALS staff and the entire Australian Hydrographic Industry. We also provide practical instrumentation, software and hydrographic skills training to our customers both domestically and abroad.

HydroMail Technical Bulletins

These publications are designed to communicate technical developments and act as an educational resource. New or emerging technologies, publications, guidelines and key industry information are routinely featured.

Download the latest HydroMail or subscribe online.

» alsglobal.com/hydromail
ALS has considerable experience, skills, capabilities and a proven track record. A significant number of high profile clients use ALS as their primary hydrographic service provider for major projects of State, National or International significance. The ALS workforce includes in excess of 20 staff members with greater than 15 years experience working on major Hydrographic monitoring projects.

**Melbourne Water**

ALS operates and maintains a network of over 400 meteorological and hydrological monitoring stations under an Alliance Agreement for Melbourne Water, the organization responsible for providing the water, drainage and sewerage services for over 3.5 million people in the city of Melbourne, Australia. As well as provision of data for water resource management and flood warning, ALS operates and maintains 18 critical sewerage ‘Billing’ stations that combine the latest in Acoustic Doppler Current Profiler (ADCP) technology with an ALS-designed level monitoring system for continuous 24hr/day independent auditing of ADCP data.

**Turkey Emergency Flood and Earthquake Recovery (TEFER)**

The Department of State Hydraulics in Turkey received World Bank funding to review and upgrade its extensive hydrometric data collection and flood warning network. ALS and the Australian Bureau of Meteorology were selected to undertake the design phase of the project incorporating water resource management issues and an upgraded monitoring network covering 4 major river basins in NW Turkey, with a total catchment area of 960,000 km² and a population of 9 million people.

**WaterNSW**

Operating under the terms of the Sydney Water Catchment Management Act, WaterNSW manages, regulates and protects the water catchment areas and infrastructure of the City of Sydney and surrounding environs, and provides the bulk water for Sydney’s population of over 4 million people. ALS Environmental operates and maintains a major component of their hydro meteorological monitoring network, incorporating over 200 water and weather stations, most of which provide near real time data to the WaterNSW water supply operators.

**Icon Water Canberra**

For more than 60 years ALS has owned and operated a network of over 150 meteorological and hydrological monitoring stations within the City of Canberra, ACT and surrounding regional NSW areas. These stations are used for the purposes of water resource assessment, environmental management, water supply, legislation, integrated catchment management, flood and floodplain management for the Federal and State governments and local utilities.

**Newcrest Mining**

Newcrest Mining is Australia’s largest gold producer and one of the world’s top 10 gold mining companies. Since 1999 ALS has provided hydro-meteorological, air quality and geotechnical monitoring systems and specialist assistance for water resource and distribution management, rainfall intensity alarms (landslide and flood warning), air quality and mine plant operations.

**Mekong River Commission**

ALS participated in an AusAid funded project to assist member countries of the Mekong River Basin to develop a long-term plan for the sustainable management of this large and complex river system. This included initial assessments, assistance with installation and commissioning, preparation and delivery of an Information, Education and Communication (IEC) program to local operators and provision of the in-country project Team Leader for several years.

**Australian Water Act Reporting**

As part of the Australian Government’s 10-year, AUD$12.9 billion, plan to secure the country’s water supplies, ALS carried out numerous network upgrades and improvements for the water authorities of Sydney, Canberra and Melbourne. Specialist support was provided by the ALS Data Management Group in the implementation of the Bureau of Meteorology's Water Data Transfer Format (WDTF), a unique data transfer format designed to support the water industry and permit the sharing of data between more than 250 organisations and the Bureau at a time when no national or international formats existed.
BHP Billiton Mitsubishi Alliance (BMA)

BMA is the world’s largest supplier of high quality hard coking coal for the international steel industry, with seven major coal mines and associated seaport in the Bowen Basin, near Mackay, Queensland. Since 2001 ALS has provided environmental monitoring products, systems and technical services for water resource management and distribution, meteorological (including flood, lightning detection and warning) and air quality (ambient air and noise) with associated integrated data collection, management and display systems.

Ok Tedi Mining Limited

ALS has established the Fly River and Tributaries Modelling and Information System for Ok Tedi Mining Limited in Papua New Guinea. The knowledge of the river conditions is vital for their transport and operational needs. ALS also provides training and qualification assessment for the local hydrographic staff.

NSW Government Roads and Maritime Services (RMS)

Roads and Maritime Services is a NSW statutory authority established on 1 November 2011 under the Transport Legislation Amendment Act 2011. Roads and Maritime implements initiatives to improve movement of people by various transport modes. ALS is a member of preferred suppliers for the procurement, installation and operation and maintenance of mandatory weather stations at new and existing construction zones owned by RMS. ALS has installed and operates over 20 weather stations (AWS) in NSW to various construction companies associated with RMS projects. Stations comply with Australian standards for monitoring air and are inclusive of set trigger alerts sent online.

Rajasthan Hydrometric Network

ALS carried out investigations and then designed and constructed a new hydrographic, flood forecasting and warning system for the State of Rajasthan. The project, funded by the World Bank as part of the Indian Hydrology Project I (HP-I), included radio and land line telemetry with automatic data collection by 13 regional centres, which then forwarded the data on to a centralised data management system at the central flood control centre.

Pacific Island Water Supplies

Many low lying countries in the South Pacific and Indian Oceans have a long history of using low quality water supplies for human and domestic consumption. ALS has conducted investigations and then assisted with the improvement of many small island water resources for more than 30 years. This work including the analysis of options, proposals and monitoring requirements; drilling, geophysical and recharge analysis and report preparation.

Gas Emissions Monitoring

ALS has experience across many projects monitoring and quantifying gas emissions from a variety of sources including landfill, well heads, pipelines and exploration wells. With tools and experience to undertake projects ranging from onsite investigations of landfill gas and fugitive emissions monitoring to long term continuous gas monitoring and leak detection. Utilising the best technology and industry practices our clients can be assured they are receiving the best possible data.
Australian sites

**Brisbane**
P  +61 7 3243 7111
2 Byth Street
Stafford QLD 4053

**Rockhampton**
P  +61 7 4936 3388
Unit 2/11 Sturt Street
Rockhampton QLD 4702

**Mackay**
P  +61 7 4952 2086
Unit 2 / 20 Caterpillar Drive, Paget
Mackay QLD 4740

**Sydney**
P  +61 2 4721 3477
2A Lemko Place
Penrith NSW 2750

**Canberra**
P  +61 2 6202 5419
16B Lithgow Street
Fyshwick ACT 2609

**Melbourne**
P  +61 3 8756 8000
22 Dalmore Drive
Scoresby VIC 3179

**Enquiries**
hydrographics@alsglobal.com

**Right Solutions • Right Partner**