



HYDROGRAPHICS



CAPABILITIES OVERVIEW



Introduction

ALS is a leading provider of hydro-meteorological products and services.

We deliver and operate advanced monitoring systems for continuous and periodic measurement of environmental parameters, including hydrology, meteorology, groundwater, wastewater and air quality.

Our core services encompass environmental monitoring, field services and data management, with a focus on delivering accurate, reliable data to support effective water resource management.

ALS operates under the standards of ISO-certified quality, environmental and safety management systems. Full and current certification details are available on the ALS website.

We serve government agencies, private industry, utilities and major resource companies, and actively support industry associations such as the Australian Water Association and the Australian Hydrographers Association.

Our Hydrographics team is committed to providing clients with expert support, responsive service and tailored solutions for their environmental monitoring needs.

Safety, innovation, and technical expertise underpin everything we do. Our clients benefit from expert support, responsive service, and tailored training.

Our locations



Core services

Our core services deliver end-to-end environmental monitoring solutions across water, mining, air and meteorology

Hydrology monitoring

Water and wastewater level, flow, water quality, flood warning, rating curve development and bathymetry.

Meteorology data solutions

Rainfall, meteorological, climate and data collection.

Air quality and noise compliance

Monitoring of ambient air, dust, gases, odors, noise and vibration. Detection of gases in ambient air for safety and compliance.

Instrumentation

Standard and customised solutions for all environmental monitoring needs.

Telemetry

Data collection, integration of M2M, radio and satellite communications with customisable triggers/alerts.

Field services

Installation, monitoring, calibration, operations and maintenance.

Data management

Quality assurance including processing and data reporting.



Innovative solutions

Drone capability

Aerial mapping and 3D modelling using the Drone Deploy platform for high-resolution data capture.

Space-time image velocimetry (STIV)

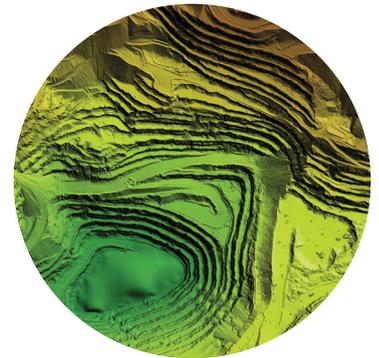
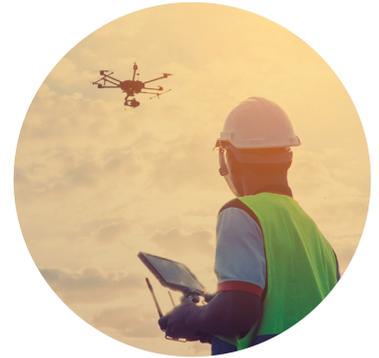
Advanced image-based flow measurement for hydrology and flood studies.

Bathymetry and LiDAR surveys

High-resolution underwater and terrain mapping to enable accurate modelling and analysis.

LiveData™

ALS field application for collection of environmental data. Full integration into hydrographic software including Hydstra.



Industry applications

- ▶ Water resources
- ▶ Wastewater
- ▶ Mining
- ▶ Flood warning
- ▶ Energy
- ▶ Science and industry

Overseas projects

ALS delivers comprehensive hydrographic monitoring solutions worldwide, with proven project experience across Papua New Guinea and other Pacific Islands; Africa, including Tanzania and Mali; and South-East Asia, including Malaysia and the Philippines.

Our capabilities span key hydrology disciplines, including flood risk assessment, hydraulic and rating curve modelling, reservoir assessment, water quality monitoring and the design and implementation of hydro-meteorological monitoring networks.

We work closely with local communities and stakeholders, maintaining rigorous safety, governance and operational standards.



Specialist areas

Hydrology

Remote sensing and telemetry for streams, rivers, dams, bores, drains, stormwater and wastewater systems.

Applications: resource management, environmental compliance, monitoring flood warning, agriculture, marine monitoring, water quality, STIV and drone-based aerial surveys.

Field services

Comprehensive site engineering including system design, installation, accurate flow gauging, bathymetric mapping and environmental sampling.

Applications: catchment monitoring, mining operations, urban and non-urban water management, sewerage transfer and remediation. LiDAR and bathymetry mapping and Drone Deploy aerial inspections.

Data management and visualisation

Automated data collection, validation, secure reporting, alarming, SCADA integration and custom data visualisation.

Applications: compliance reporting, real-time decision support, quality assurance and fit-for-purpose data use, rating development, integration with third-party systems and LiveDataTM app access.

Instrumentation and telemetry

Monitoring systems incorporating advanced sensors, ruggedised data loggers, solar power solutions and multi-mode telemetry (cellular, satellite, radio) with integrated alarm protocols.

Applications: integrated monitoring networks, remote data acquisition, automated alert systems and customised logger programming to meet specific client requirements.

Meteorology

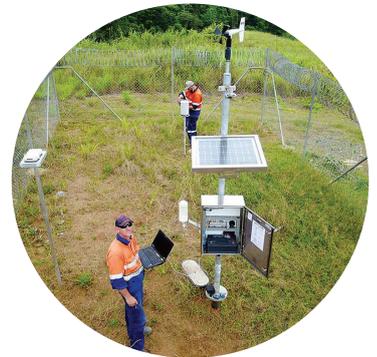
Precision measurement of atmospheric parameters including wind speed/direction, temperature, humidity, solar radiation and rainfall.

Applications: climate data, flood warning, renewable energy and pollution dispersal.

Air quality and noise/vibration

Continuous monitoring of particulate matter, gaseous emissions, odour profiles, acoustic levels and vibration signatures for compliance and asset integrity.

Applications: air quality management frameworks, construction impact monitoring, sensitive receptor analysis, industrial emissions compliance and mining environmental performance.



Client focus and commitment

We partner with clients to deliver reliable data and tailored solutions that help ensure compliance and operational efficiency.

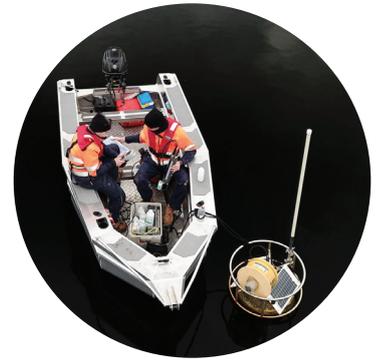
Our approach includes

Project management – dedicated managers for seamless delivery.

Qualified field teams – qualified professionals for installation and maintenance.

Technical expertise – access to specialised expertise for complex projects.

Commitment to service – a management team focused on client needs and success.



Integrated solutions

Customisation: Tailored programming and configurations for integration into water databases and instrumentation. Customised fit-for-purpose data solutions for all environmental monitoring needs.

Fully integrated systems: Configurable monitoring solutions with auto-samplers, cameras and SCADA integration.

Instrumentation: Independent selection from leading global manufacturers including Campbell Scientific, YSI/Xylem, OTT, Vaisala and others.



Data management and visualisations

LiveData™: iOD application designed and owned by ALS and used for the collection of field results and field duties. Used for HSE process and safety audits.

HYDSTRA: Enterprise-level platform for large-scale data management and reporting.

Eagle.IO: Flexible cloud-based solution for environmental data integration.

Secure portals - RAVEN: Hosted access for verified and unverified data, reporting and alerts.

Vista Data Vision (VDV): Alternative solution offering near real-time data access with lower operational costs.



Training and knowledge

Certification: All hydrographic staff hold Australian Hydrographers Association (AHA) certification, ensuring compliance with industry standards.

Industry training: Delivery of the Australian Diploma of Water Operations (Hydrography) and practical skills for field and data management.

Technical bulletins: Regular EnviroMail bulletins providing insights on emerging technologies and best practices.

Major clients and projects

Department of Energy, Environment and Climate Action

Operate and maintain 950+ hydrology and water quality monitoring stations, enabling statewide water resource management, real-time data reporting and compliance with regulatory frameworks.

Melbourne Water

Operate and maintain 500+ hydrological and meteorological stations, including critical sewerage billing sites. Our solutions enable accurate billing, flood forecasting and early warning capability, helping protect essential infrastructure.

Ok Tedi Mining

Designed and implemented integrated monitoring networks in remote, challenging environments, helping ensure sustainable water management and regulatory compliance.

BMA (BHP Mitsubishi Alliance)

Provide comprehensive water monitoring solutions for large-scale mining operations, delivering environmental stewardship, compliance assurance and operational efficiency.

Icon Water

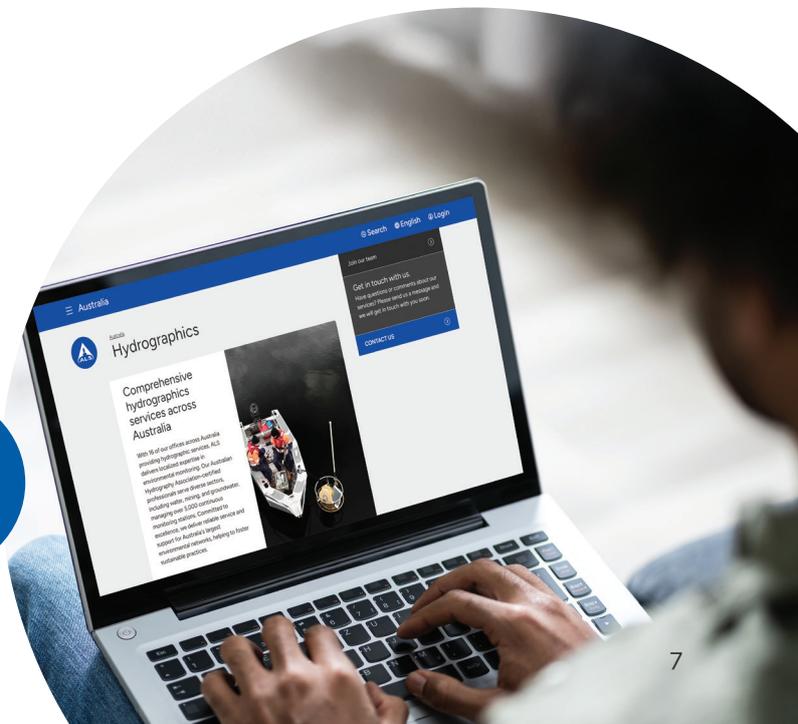
Supply for urban water networks, help meeting stringent regulatory obligations and supporting public health and environmental protection.

Hills and Fleurieu Landscape Board

Management, operation and maintenance of the H&FLB Surface Water Monitoring Network, encompassing all hydrometric services required to support 30 water quality, water level, flow and rainfall monitoring stations.



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right solutions.
right partner.

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Our capabilities include a range of flexible technical services that provide clients with customised, cost-effective solutions.

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