



*AWE is a South Australian based consulting firm providing sustainable and innovative engineering, water resources, planning and natural resource management solutions for the community and our clients. Our team of professional and support staff has strong technical capabilities in hydrogeology, hydrology, civil and environmental engineering, integrated water resources management, groundwater modelling, ecology, spatial services, environmental management and planning, consultation and community engagement and data management.*

*Professional, independent land and water solutions benefiting people and the environment.*

## Hydrogeology

*AWE has extensive experience in hydrogeological projects offering innovative solutions for our clients. Our capabilities include: all aspects of Salt Interception Scheme investigations, design, construction, optimisation and operational management support; disposal basin investigations and management; groundwater-surface water-vegetation interactions; floodplain processes; Managed Aquifer Recharge design and implementation; groundwater supply investigations and water well drilling and construction management; groundwater investigations and resource management; dewatering; salinity impact assessment and salinity management; groundwater engineering. AWE also has a groundwater modelling team that is fully integrated with the hydrogeologists to provide practical and accurate groundwater modelling outcomes.*



## Hydrology

*AWE provides hydrological skills in: water resource assessment and management; water quality analysis; Water Sensitive Urban Design; hydrodynamic modelling; computer based catchment modelling; hydraulic and water balance modelling (using DRAINS, Hec-Ras, WaterCress software); floodplain mapping using GIS and flood risk assessment and mapping; limnology; wetland design and stream rehabilitation; and strategic water resource management.*

## Civil Engineering

*AWE has extensive experience in the planning and design of a wide range of civil engineering projects offering innovative solutions for our clients. Some of our key capabilities include: infrastructure master planning and design; construction management; transport planning; traffic engineering (using SIDRA); water network investigation and design (using Watercad, EPAnet, Hammer applications); public open space and streetscape planning and design; wastewater network and resource planning; waste management and resource recovery strategies.*

## Environmental Engineering

*AWE provides the following environmental engineering services: wetland design and monitoring; stormwater harvesting and management; water reuse investigations and strategies; landfill management; soil erosion and drainage management; and environmental site assessments.*

## Integrated Water Resources Management

*AWE provides leading technical and strategic expertise in a range of water resource management disciplines to provide integrated solutions: Stormwater investigation and design; Water quality analysis and wetland design (MUSIC software); Sewer harvesting investigation and design; Managed Aquifer Recharge investigation and design; Water system analysis and design. The integrated studies provide a framework for investment and ecologically sustainable development.*





## Groundwater Modelling

AWE specialises in providing quality groundwater modelling products that are fully informed by physical data. Our capabilities include: saturated flow (MODFLOW) models at the conceptual scale to regional scale; unsaturated zone flow (HYDRUS) examining recharge concepts and providing inputs to the saturated flow models; solute transport modelling (MT3D) and density dependent flow (SUTRA and HYDRUS); aquifer test analysis (AquiferTest Pro). AWE also has a range of in-house analytical tools for the optimisation of borefields and the analysis of a range of specific groundwater problems, and a range of modelling support tools to facilitate efficient model development and reporting.



## Ecology

AWE's ecologists and natural resource managers develop fire and land management plans; provide watercourse rehabilitation advice; design revegetation for ecological and land management efficiency outcomes; conduct baseline surveys and prepare environmental asset inventories; deliver monitoring programmes; assess risk and impact to natural resources from changed conditions and management regimes. Our on-ground skills include field botany, vegetation health assessment, fuel load assessment, habitat assessment, water and soil sampling.



## Environmental Management and Planning

AWE aims to deliver environmentally sustainable outcomes for our projects through our environmental planning and management expertise. We use our environmental management expertise to bring together technical investigations and strategic planning processes. AWE has prepared numerous salinity, land and water and irrigation management plans. Our staff are involved in scientific, engineering and planning associations, such as the Environment Institute of Australia and New Zealand and the International Association for Public Participation.

## Spatial Services

AWE offers a range of technical applications to support our consultancy services. Staff have expertise in GIS software applications; surveying; CAD work practices; and data management. We can customise a range of spatial services to enable our clients to get the most benefit out of their data investments.

## Consultation and Community Engagement

AWE staff have extensive experience in developing and delivering consultation and communication strategies targeted to the needs of the particular project, client and key stakeholders. Our wide range of communication and consultation processes include: community engagement strategies; presentations; workshop design and facilitation; surveys; meetings; interviews; public notices; fact/information sheets; and communication coordination. Our staff are involved in scientific, engineering and planning associations, as well as the International Association for Public Participation.

## Data Management

Data management is becoming an increasingly important part of any business, given the ability to capture and store large amounts of information. AWE provides services in: systems analysis; data capture analysis; data storage analysis and implementation; decision support systems; data reporting systems design and implementation; web-based browser accessible database development; schematic analysis; Operations and Maintenance Manual development and maintenance; Quality analysis and Quality Assurance.

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