Australian
WATER
Environments

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.

AWE Capabilities:

- Hydrogeology
- Hydrology
- Civil Engineering
- Environmental Engineering
- Integrated Water Resources Management
- Groundwater Modelling
- Ecology
- Spatial Services
- **Environmental Management**
- Environmental Planning
- Consultation and Community Engagement
- Data Management

Sustainability

AWE seeks to embrace principles of sustainability throughout our projects, our day-to-day activities and our attitudes. AWE provides clients with innovative solutions and environmentally friendly best practices in a wide range of areas, whether it is managing salinity in our water resources, assessing climate change impacts, mapping vegetation, developing waste and recycling initiatives, strategic master planning or engaging stakeholders on complex issues.

Recently we have been working on climate change adaptation plans which bring together our range of specialist skills as well as providing opportunities to work with other professionals and clients. Our collaborative approach has been a vital component of developing adaptive and realistic responses to climate change and other environmental challenges.

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Project Experience

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Port Augusta Integrated Water Management Plan

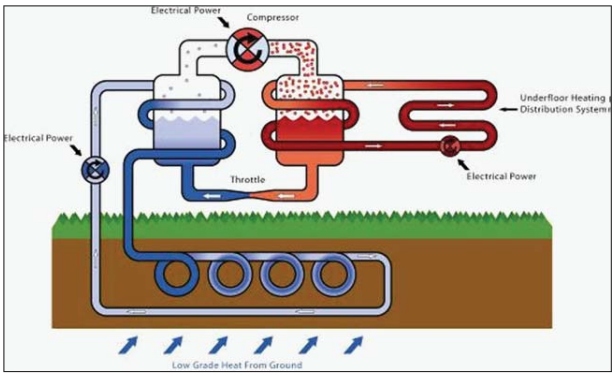
AWE assisted in the development of "Waterproofing the City" for the City of Port Augusta. Pt Augusta is an area significantly affected by mining activity, with the population expected to increase significantly in the next 10 years. The aim of the project was to reduce the city's dependency on the River Murray and to develop an integrated approach to water management for a more sustainable future. This involved assessing the water resources in the region: wastewater, stormwater, seawater; and developing management strategies. A water balance model of the city was developed using 'WaterCress' to run various management and development scenarios.

National Climate Change Coastal Vulnerability Assessment (NCVA) – Yorke Peninsula Case Study

AWE led a multidisciplinary project team to assess potential climate change impacts on coastal settlements of Yorke Peninsula, and the implications for government planning and approval processes. The assessment would be used to assist decision makers identify key climate challenges for policy development and implementation, and provide tools to develop adaptive responses. An extensive range of biophysical, built form and socio-economic data was collated for the project, which was managed, analysed and mapped using GIS software. The risk assessment process was used to identify the higher risk assets for more detailed analysis, such as damage costs and adaptation options/costs.

Renewable Energy - Geothermal heat for the Happy Valley Sports Park

AWE used an innovative approach for upgrading the Happy Valley Sports Parks by utilising geothermal heat as a renewable source of energy to heat and cool the clubrooms. A Ground Source Heat Pump (GSHP) was used to transfer and adjust the level of heat. This system proved to be a very efficient method of heating and cooling and has also reduced carbon dioxide emissions and resulted in economical benefits.



Principles of Sustainability, Hindmarsh Island

Staff at AWE assisted in developing sustainable options for a major development on Hindmarsh Island, focusing on the built environment and surrounding landscape . This involved the preparation of guidelines to promote sustainability through its design, application of water conservation, water reuse, renewable energy sources and reducing energy demand. Key aspects included housing design (orientation, siting, solar access, and ventilation), building materials with low embodied energy, innovative street lighting (phase down options), native plant selection, water recycling, investigations into geothermal energy, waste management and recycling, and road and house materials that reflect solar energy.

Institutionalising Water Sensitive Urban Design in the Greater Adelaide Region, Planning SA

AWE led a Team in preparing an overarching framework and suite of supporting technical documents aimed at facilitating the implementation of Water Sensitive Urban Design throughout the Greater Adelaide Region. This involved coordinating and preparing a range of technical information and synthesising the detail into concise fact sheets. AWE also prepared and implemented the Communication and Consultation Strategy, facilitated focus group workshops, developed the Capacity Building Strategy, co-prepared and co-facilitated trial training courses on WSUD, and project managed the final stages of the project.