



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
- Statutory Planning
- Environmental Planning**
- Consultation and Community Engagement
- Data Management

Climate Change

AWE offers consultancy services in the areas of climate change vulnerability and adaptation assessments, risk management and strategic planning.

AWE understands that a comprehensive framework is required in order to understand the impacts of climate change on the environment and to plan for climate change adaptation strategies.

AWE has knowledge and tools (expertise) for identifying problems and developing the adaptation strategies to cope for future climate changes in a structured and concise manner. Our staff are skilled in assessing policy implications and providing recommendations for water sector developments to assist decision-makers make appropriate policies for future climate change projections.

Our work on climate change related projects brings together our multi-disciplinary skills at AWE 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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Port Hughes-Moonta Bay Cliff Top Stability Study

AWE is undertaking a coastal management study on the Yorke Peninsula to identify coastal hazards and develop intervention and management responses for the coast of Port Hughes to Moonta Bay. This involves assessing coastal recession, stormwater impacts, looking at historical data and photographs, assessing future inundation from sea level rise. Community and stakeholder engagement is being undertaken. Recommendations to policy and planning are also being developed to help facilitate management of the coastline.



Victor Harbor Coastal Management Study

AWE is currently undertaking a coastal management study along the Encounter Bay foreshore to identify coastal hazards and develop appropriate management responses. The key issues include coastal recession, Inman River impacts, future inundation from sea level rise projections, and identifying important infrastructure and historical sites. Extensive community and stakeholder engagement has helped to appreciate coastal issues and identify the assets requiring protection. Further consultation will be held to gain their feedback on the proposed management responses.

Middle River Hydrological Assessment, SA Water

AWE was engaged to develop and utilise a numerical model of the Middle River catchment on Kangaroo Island to assess the impacts of various growth scenarios including the potential impacts of climate change. Two carbon emission targets were incorporated into the modelling process to drive the hydrological assessments under climate change.

Major Developments, South Australia

Staff at AWE have provided input into major development proposals in South Australia, including the preparation of Environmental Impact Statements. These major developments have required consideration of climate change impacts in their design and function, such as ensuring a minimum floor level requirement for buildings and infrastructure to ensure they are safeguarded from potential sea level rise.

National Climate Change Coastal Vulnerability Assessment

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 will be used to assist decision makers in identifying 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

The identification and application of renewable energy is becoming increasingly important as a way of minimising carbon dioxide emissions and to conserve resources. 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 the carbon dioxide emissions and resulted in economic benefits.

Whyalla Flood Risk Assessment

AWE undertook a detailed flood risk and water resource assessment for the Whyalla catchment, focusing on historical flooding and the potential flood risks associated with climate change. This required collaboration of historical records and data as well as projected Climate Change figures for sea level rise in order to identify zones of high flood risk. A comprehensive risk assessment was then undertaken to guide future decision making.

