



Safeguarding our water future

Feasibility and detailed design, network planning and modelling, asset management and strategic planning

Our extensive skills and experience in water infrastructure planning, system design, modelling, asset management and strategic planning is helping our clients solve complex water infrastructure and management problems.

Our multi-disciplinary Australian water team has successfully combined skills in network planning and design, modelling, concept and detailed design, asset management, flood risk management and strategic planning to deliver a range of challenging and complex water infrastructure and management projects.

Working across the water, resources, transport, environment, and energy industries, we have an established track record in providing high quality water management and infrastructure services to our clients throughout Australia.

We take the time to understand fully your needs and any barriers to success, and then use that knowledge to provide well considered and persuasive concepts, designs, models, frameworks and reports that meet your requirements.

Water management and infrastructure services

Water and infrastructure planning

- Network planning, design and rehabilitation
- Sewage and stormwater pumping systems
- Irrigation system planning, design and review
- Urban stormwater system planning and design
- Water supply and sewerage modelling

Investigation and design

- Feasibility studies, concept and detailed design
- Peer review and assessment of concept and detailed design
- Coastal and maritime studies, planning, modelling and engineering
- Hydraulic flow structures and flood storages

Asset management

- Asset management plan preparation, review and auditing
- Asset maintenance procedures and review
- Benchmarking and asset management optimisation

Water resource management

- Integrated water resource planning supported by:
 - hydrologic and hydraulic modelling

- flood risk management, modelling and mapping
- stormwater modelling and quality studies
- waterway and statutory planning

Regulatory review and audit services

- Capital and operating expenditure review
- Audit of performance against operating licence
- Benchmarking research and comparative studies
- Development and review of system performance standards
- Development and review of regulatory reporting submissions

Strategic planning and review

- Water source/supply analysis
- Sustainable water strategies
- Integrated water cycle management
- Alternative water supplies

Flood modelling and mapping

- Hydrological and 1D and 2D hydraulic model development and review
- Modelling for climate change conditions
- Modelling of dam and flood defence failure
- Flood mapping using 1D and 2D model outputs
- Spatial analysis of flood impact e.g. property location and flood extents, etc

Flood forecasting, mitigation and design

- River and coastal flood forecasting models
- Analysis of best modelling approaches and forecasting techniques
- Mitigation option design and assessment
- Developing business cases for flood mitigation

Delivering value – applying our skills

■ Independent Design Review: Major Sewage Treatment Plant

Halcrow is undertaking an independent design review of the post-tensioned floor slabs in the recently constructed aeration tanks of a major sewage treatment plant. The independent structural review aims to identify the failure mechanism(s) and the root cause(s) of the defects, and recommend a methodology for remedying and/or repairing the defects to maximise the design life of the concrete tanks during their service life following repairs.

■ Mt Druitt Creek Restoration and Flood Mitigation Works

Blacktown City Council engaged Halcrow to complete a range of studies to support floodplain mitigation planning and detailed design of creek restoration works in Mount Druitt, NSW. The studies involve co-ordination of survey collection, detailed RAFTS and TUFLOW modelling, flood study, options assessment, floodplain risk management study, a geomorphic assessment of stream stability, and co-ordination of multiple specialist environmental studies. Halcrow is also preparing the Review of Environmental Factors and undertaking all detailed drafting to enable timely construction of the works towards the end of 2012.

■ Sugarloaf Pipeline Peer Review

Halcrow was commissioned by Melbourne Water to undertake an independent review of the Sugarloaf Pipeline Project design which was being developed by the Sugarloaf Pipeline Project Alliance. The review assessed compliance of the Alliance Team's design with Melbourne Water's functional requirements. In particular, it was focussed on the identification of issues that would potentially impact on the technical and commercial outcomes of the project. A number of key issues requiring further consideration as design of the project progressed were identified and reported to Melbourne Water.

■ Melbourne Metropolitan Sewerage Strategy

Halcrow supported the development of a Melbourne Metropolitan Sewerage Strategy to 2060 for Melbourne Water and the three metropolitan water retailers. The project involved development and implementation of modelling and assessment tools to assess the long term sewerage system development for Melbourne through scenario testing. Options to be investigated in the study were clarified through a series of workshops with industry and external stakeholders. Among these was a vulnerability analysis of possible future scenarios for Melbourne's sewerage system based on various possibilities for climate change, urban growth pattern, future population growth and living standards.

Contact us

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