



CONTOUR

Contour is a multi – disciplined firm providing innovative solutions for our clients. We offer specialised engineering, environmental and project management expertise in preliminary planning, detailed design and construction phase services throughout Australia, Asia and the South Pacific Islands.

TECHNICAL SPECIALISTS

Contour boasts a team of experienced specialists in the Hydraulic and Hydrologic field. Our technical expertise extends to most areas of surface water hydrology, hydraulics and water management. From local small-scale stormwater management and roof-water harvesting, through to major river flood studies and town levee systems, Contour has a strong portfolio of water resources modelling for all forms of development.



Our hydrology and water management team specialise in the following areas:

- River and channel system hydraulics
- Regional flood investigations for strategic planning
- Dam and levee protection systems
- Flood impact mitigation studies
- Floodplain mapping and management
- Surface water hydrologic modelling
- 1D and 2D hydraulic modelling
- Detention basin design
- Hydraulic structure design
- Erosion and sediment control (CPESC accredited)
- Stormwater management planning
- Water sensitive urban design
- Roof-water harvesting and re-use
- Grey and Black water harvesting
- Irrigation systems for sporting fields and parks
- Design of stormwater quality improvement devices, lakes and wetlands
- Building hydraulic services including: sanitary drainage and plumbing, trade waste services, potable and non-potable (reuse) domestic water supply, fire hydrant and hose reel supply and roof water, car park and site drainage designs



SCIENCE AND PRACTICALITY

It is a requirement that our team maintain an intimate familiarity with new developments in the water resources sector, both with local authority development conditions, as well as new and updated codes and guidelines. Whilst our specialists strive to achieve a professional personalized service, we recognize the importance of defining and incorporating economic, practical and sustainable outcomes.

RELEVANT SOFTWARE

Contour's engineers and designers have a comprehensive understanding of a wide range of industry software packages including:

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|---------------------|--------------|
| • Music | • Autocad |
| • Rafts | • 12D |
| • Hec Ras | • PCDrain |
| • Tuflow | • RORB |
| • Mike 21 & Mike 22 | • PIPES |
| • XP-SWMM | • XP Culvert |

Plus various in-house analytical programs.



WATER & DRAINAGE

civil

water

structural

environmental

project management

RECENT REPRESENTATIVE PROJECTS



WATER & DRAINAGE



FLOOD STUDY FOR THE MARY RIVER TIARO

This project included preparation of a 2D hydraulic model and detailed flood assessment report for the Mary River at Tiaro. The works were commissioned by the Gympie Regional Council. Mary River is a major watercourse in south-east Queensland, with an upstream catchment area exceeding 9000km². The flood study considered a section of the river approximately 5.0 kilometres in length.



FULL WATER RESOURCES RE-USE STRATEGY CORBOULD PARK RACECOURSE, CALOUNDRA

The \$14M stabling project at Corbould Park included a full water capture, recycling & re-use strategy incorporating a waste-water treatment plant and reticulated grey-water network. The design also featured a potable water supply network, an irrigation system, a solid waste management strategy and a WSUD stormwater treatment design with bioretention discharge into the existing lake.



FLOOD LEVEE SYSTEM PALLAMALLAWA, NSW FOR MOREE PLAINS COUNCIL

Contour provided concept and feasibility analysis through to detailed engineering design for a flood protection levee around the township. Services included flood modelling for seven separate scenarios, public consultation sessions, concept plans and estimates, and then the preparation of construction drawings, tender documentation and a levee maintenance procedures manual.



EROSION AND SEDIMENT CONTROL (CPESC) ROMA

CPESC designed and certified erosion and sediment control for a proposed quarry at Fairview, plus 35km of roadworks and a pipe laydown area near Roma. Services provided by Contour included the development of design plans and associated detailed erosion and sediment control report.



WSUD AND FLOOD MITIGATION STUDY MANGO HILL VILLAGE

The project entailed both WSUD strategies for proposed road works upgrading to the existing 250 dwelling village, plus detailed hydraulic modelling of the local suburbs to ascertain flood mitigation measures to existing effected residences. The flood study included backwater effects from existing local wetlands downstream, plus evaluation of existing twin detention basins upstream.



STORMWATER QUALITY MANAGEMENT PLAN RUMBA RESORT, CALOUNDRA

The site layout prohibited the use of on-site bioretention basins for stormwater quality treatment. An alternative system, not previously approved for use by Council was recommended for use within the development. The system proposed was a 16 cartridge stormfilter system, which provided the required level of treatment, whilst meeting with the desired outcomes of the building design and fitting in with site constraints. The proposed treatment also included the installation of roof water collection tanks in the basement to reduce the volume of water requiring treatment. This roof water was proposed for utilisation in toilet flushing, pool top up and landscape irrigation.

Head Office (Sunshine Coast)
Level 1, 6 Innovation Parkway, Kawana Waters QLD 4575
PO Box 474, Buddina QLD 4575
P: (07) 5493 9777 F: (07) 5493 6888

Mackay Office
78 Carlyle Street, Mackay Qld 4740
PO Box 4093, South Mackay QLD 4740
P: (07) 4957 7777 M: 0438 939 771

Dalby Office
133 Cunningham St, Dalby Qld 4405
P: (07) 4669 7977
M: 0457 939 777

E: admin@contource.com.au W: contource.com.au