



Tina O'Connell

Panel Member

Tina is an experienced hydraulic engineer currently in the position of Senior Principal Engineer (Hydrology and Hydraulics) with a high level of competency in design of hydraulic structures, flood level and velocity determination. This includes concept design, mathematical modelling (particularly 1D and 2D modelling), design, environmental studies and damage remediation components of projects. Tina's core competency in hydraulic assessments relates to flood impacts at corridor infrastructure (road/rail).

In addition to Tina's core competency, she has also carried out studies relating to Site-based Stormwater Management, Development Flood Impact Assessments, Flood Studies, Flood Plain Management, Water Resources and Dam Studies. She has been integrally involved in Community Information Sessions on road and rail projects across NSW and Queensland.

Tina has worked 23 years in specialist water resources management and design teams in engineering consultancies and seven recent years in state government for the Queensland Department of Transport and Main Roads' Hydraulics and Flooding Team supporting numerous complex hydraulics and flooding studies for a range of linear infrastructure and damage remediation projects throughout the state. This included peer review of the Options Analysis and Business Case of the Gore Highway (Millmerran to Goondiwindi) Pavement Widening and Flood Immunity Rehabilitation Project, Millmerran and Kingsthorpe Urban Stormwater Master Plans for Toowoomba Regional Council and member of the Advisory Group to Lockyer Valley Regional Council for the Lockyer Creek Flood Study and Floodplain Management Study. She was technical peer reviewer of numerous hydraulic reports on the Toowoomba Second Range Crossing and undertook flood immunity and impact studies for the New Grantham Road Access from the Gatton-Helidon Road across the rail line and into QRA's Grantham Reconstruction Area. Her involvement on the Condamine began in 1995 with hydraulic studies for a proposed 120km long Glen Wilga to Tarong railway line.

FIRM

HDR Pty Ltd

SPECIALISATION

Hydrology including runoff routing, flood frequency analysis

Hydrodynamic one-dimensional and two-dimensional modelling packages

Flood Immunity studies

Cross-drainage structures

12d Model / GIS capability

Queensland hydrology of coastal creeks and rivers knowledge including storm surge

Flood Impact Assessment

Extensive knowledge of TMR guidelines, policies, position papers, manuals and standard drawings

INDUSTRY TENURE

30 years

EDUCATION

Bachelor of Civil Engineering (Honours), University of Queensland

Graduate Diploma of Business Administration (Technology Management), Deakin University

PROFESSIONAL MEMBERSHIPS / PANELS

Queensland Department of Transport & Main Roads – Engineering and Technology Specialist Technical Services Panel

Institution of Engineers Australia, Member (MIEAust)

REGISTRATIONS

Registered Professional Engineer Queensland (RPEQ)

Institution of Engineers Australia, Chartered Professional Engineer (CPEng)

National Engineering Register (NER)

RELEVANT AWARDS

- Best Paper, Queensland Water Resources Symposium 2014, Water Panel, Engineers Australia, QLD Division, Brisbane
- TMR Chief Engineer's Award: Development Assessments (Stormwater Drainage), 2013
- TMR Chief Engineer's Award: Road Drainage Training, 2012

PUBLICATIONS / PRESENTATIONS / PANELS / INQUIRIES / EXPERT WITNESS

- O'Connell, Tina. 2020. A Flood Resilient Bruce Highway for North Queensland: Houghton River Floodplain Upgrade. 2020 Digital Floodplain Management Australia National Conference "A Flood Resilient Australia: transforming vision in to action," online.
- Malmsheimer, Travis and O'Connell, Tina, 2020. Balancing Safety and Community Impacts in a Highly Sensitive Floodplain in Central Queensland: Poster Paper. 2020 Australian Water Association and International Water Association Conference, Brisbane.
- O'Connell, T.M. 2016. Hydraulics: using spatial science to pre- and post-process flood modelling. Spatial Sciences Technology Forum, TMR, Brisbane.
- Gonzalez, C and O'Connell, T.M., 2014. Flood immunity and closure of road infrastructure crossing a braided river system: Landsborough. Queensland Water Resources Symposium, Water Panel, Engineers Australia, Qld Division, Brisbane.
- O'Connell, T.M. 2014. Storm tide – Issues for design of bridges/culverts in coastal areas. E&T Forum, Qld Dept. of Transport and Main Roads, Brisbane.
- Training Presenter, TMR's Road Drainage Courses 2011-2016. Delivery of road drainage fundamentals/design training courses to local and regional staff and external parties.
- Training Presenter, TMR's Bridge Construction and Maintenance Courses 2011-2014. Delivery of bridge hydraulics training courses to local and regional staff and externals.
- Doherty, H.M., Weeks, W.D., Niall, R.M., O'Connell, T.M. and Teakle, I.A. 2001. Fast-tracking the Alice Springs - Darwin Railway Project: An Innovation in Culvert Design, National Conference on Hydraulics in Civil Engineering, IEAust, Hobart.
- O'Connell, T.M and Weeks, W.D. 2002. Herbert Master Land and Water Management Plan - Using GIS to Improve Broad Scale Hydrologic Models, National Hydrology and Water Resources Symposium, IEAust, Melbourne.