



Institute of Public Works Engineering Australia
Queensland Division Inc

2011 nominations and results

IPWEAQ excellence awards

...shaping public spaces



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foreword

The IPWEAQ Excellence Awards were introduced to give recognition to engineers and other practitioners working in the local government and public works industries and their Councils and organisations for outstanding achievements.

This booklet provides an historical record of the nominations and winners from the 2011 event. The showcasing of all nominations and the presentation to winners was made during the IPWEAQ State Conference held in Maryborough. A special plaque is awarded to the council/organisation that nominates for the award, with the nominee being presented with a certificate. Winning project entries may be considered for nomination in the IPWEA National Awards, with the winning "people" award being considered for nomination in the IPWEA National Emerging Leaders Awards.

There are many benefits to submitting an entry for the IPWEAQ Excellence Awards, and we recommend all councils consider nominating their people and/or projects. Many of the projects undertaken during the year are examples of industry best practice and may, therefore, assist a fellow practitioner in undertaking projects that may otherwise not happen. While we are keen to showcase the projects we recognise that people are our most valuable asset, and the attributes of staff can also be recognised for their excellence by nomination in that category.

Presentations are made in the following categories, with all projects showing how they have addressed environmental issues:

- projects over \$10 million
- projects \$5 million to \$10 million
- projects under \$5 million
- innovation and/or introduction of new or improved techniques
- road safety
- asset management projects
- water, waste water, sewerage and drought management
 - above \$10 million
 - \$5 million to \$10 million
 - up to \$5 million
 - innovation and/or introduction of new or improved techniques

People Category:

- IPWEAQ Engineer 2011
- IPWEAQ Young Engineer 2011
- IPWEAQ Works Supervisor 2011
- IPWEAQ Woman in Engineering 2011

Each of these categories was selected to represent the diverse nature of the work of local government and public works practitioners, and the range of nominations received clearly shows this diversity. The Judges of the Excellence Awards nominations believe the calibre of the projects submitted in each year has been outstanding.

IPWEAQ acknowledges its grateful thanks to the Queensland Foundation for Public Works Engineering and the Queensland Water Directorate for their sponsorship, and to the Judges for the time they spend and expertise they bring to assessing the nominations:

- Peter Way (Chair), *Queensland Foundation for Public Works Engineering*
- Ian Woodyard (Trustee), *Queensland Foundation for Public Works Engineering*
- Dr Rob Fearon (CEO), *qldwater*

We trust that you find the book interesting and informative and we welcome any feedback.

Suzanna Barnes-Gillard
Chief Executive Officer

2011 WINNERS

PROJECTS LESS THAN \$5 MILLION

Somerset Regional Council

Alf Williams Interim Bridge

PROJECTS \$5 MILLION – \$10 MILLION

HIGHLY COMMENDED

Cairns Regional Council

Cairns International Tennis Centre

PROJECTS MORE THAN \$10 MILLION

Kellogg Brown and Root Pty Ltd

Ted Smout Memorial Bridge

ASSET MANAGEMENT PROJECTS

Gold Coast City Council

Asset Data Management Using ADAC as the Foundation

INNOVATION

Research Alliance

Long Term Pavement Performance Study for Southeast Queensland

WATER, WASTEWATER, SEWERAGE AND DROUGHT MANAGEMENT

PROJECTS UP TO \$5 MILLION

Carpentaria Shire Council

Normanton Water Treatment Plant Upgrade

WATER, WASTEWATER, SEWERAGE AND DROUGHT MANAGEMENT

PROJECTS UP TO \$5 MILLION

HIGHLY COMMENDED

Kellogg Brown and Root Pty Ltd

LinkWater Barrel Union Joint Replacements Phases 1-3

WATER, WASTEWATER, SEWERAGE AND DROUGHT MANAGEMENT

PROJECTS \$5 MILLION – \$10 MILLION

Longreach Regional Council

Longreach Sustainable Water Management

WATER, WASTEWATER, SEWERAGE AND DROUGHT MANAGEMENT

PROJECTS MORE THAN \$10 MILLION

Mackay Regional Council

Nebo Road Water Treatment Plant Upgrade

IPWEAQ ENGINEER 2011

Martin Crow
Rockhampton Regional Council

IPWEAQ YOUNG ENGINEER 2011

Mitch Bichel
Lockyer Valley Regional Council

IPWEAQ WOMAN IN ENGINEERING 2011

Nicole Bichel
Lockyer Valley Regional Council

IPWEAQ WORKS SUPERVISOR 2011

Rob Bourchier
Somerset Regional Council



Cairns Regional Council

Cairns Local Disaster Coordination Centre

Cairns is a low lying coastal city vulnerable to numerous natural disasters. As such, the Cairns Local Disaster Coordination Centre is a vital piece of community infrastructure, providing for better emergency preparation, prevention, response and recovery operations. The facility is the only Category 5 cyclone rated coordination centre in Australia.

PROJECT CONTACT

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Cairns Regional Council

Cairns International Tennis Centre

The Cairns International Tennis Centre is a state-of-the-art facility boasting 12 courts, including one show court, tennis club, pro shop and café. This centre allows Cairns to host international tournaments and gives residents and visitors access to world-class tennis facilities.

PROJECT CONTACT

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nominees 2011



Carpentaria Shire Council

Normanton Water Treatment Plant Upgrade

Carpentaria Shire Council has upgraded the Normanton Water Treatment Plant to improve the quality, quantity and reliability of water supplied to its consumers through the full automation of the water treatment process and the installation of a single high-rate clarifier.

PROJECT CONTACT

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Cook Shire Council

Grassy Hill Lookout Redevelopment

The re-development of Grassy Hill Lookout resulted from a collaborative vision between Cook Shire Council and The Lions Club of Cooktown. The intent was to engage the community and retain the identity of Cooktown whilst developing an open space with minimalist infrastructure that embraces the landscape, cultural and historical significance of Grassy Hill Lookout in Australia's history. The resulting venue now has improved access, enhanced amenity of the area and incorporates public art and interpretive information.

PROJECT CONTACT

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Diamantina Shire Council

Diamantina Shire Council Core Asset Management Plan

This project involved the development of the Asset Management Plan (AMP) for Diamantina Shire Council. Given the remote environment, the plan reflects the unique level of service requirements, constrained availability of resources and the available funding sources.

PROJECT CONTACT

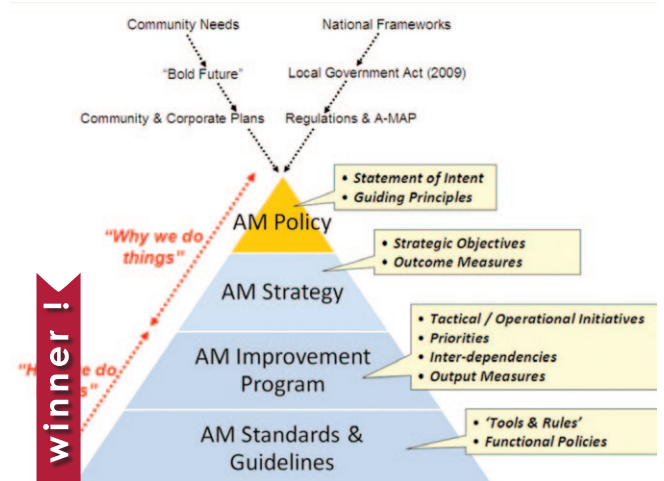
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Gold Coast City Council

Asset Data Management Using ADAC as the Foundation

Gold Coast City Council developed and implemented a robust Asset Data Management Framework based on IPWEAQ's ADAC v4.0 (Asset Design As Constructed). ADAC was used as the standard for as-constructed information from property development, external contract works and day-labour works. A whole-of-Council framework was produced for Asset Data Management, including documented processes for handover of as-constructed data, agreed asset data standards (i.e. asset register data schema and hierarchies and classifications) and defined roles and responsibilities for managing asset data.

PROJECT CONTACT

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nominees 2011



Kellogg Brown and Root Pty Ltd

LinkWater Barrel Union Joint Replacements Phases 1–3

KBR project-managed a program to replace deteriorating barrel union joints in LinkWater’s water network in Brisbane. It involved shutting down critical supply pipelines once a fortnight over 15 months. In over 29,000 work hours, there were no water quality, lost time or major supply incidents.

PROJECT CONTACT

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Kellogg Brown and Root Pty Ltd

Ted Smout Memorial Bridge (Houghton Highway Duplication)

For Australia’s longest bridge, KBR incorporated lessons learned from bridges destroyed by Hurricane Katrina in the United States to radically change a standard design into an aggressively lean, efficient structure. The Houghton Highway duplication project also involved extensive community facilities and ancillary works.

PROJECT CONTACT

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Longreach Regional Council

Longreach Sustainable Water Management

Longreach had two water reticulation systems which both had aging infrastructure that needed to be addressed as a priority. Councils due diligence with reviewing the viability of Longreach's water supply provided a clear direction for a sustainable approach to its water management.

PROJECT CONTACT

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Longreach Regional Council

Longreach Fluoride Dosing System

Councils reviewed the viability of Longreach's water supply. As a result a unique opportunity emerged to satisfy Longreach's fluoride obligations and provide a number of other benefits to the community.

PROJECT CONTACT

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nominees 2011



Mackay Regional Council

Nebo Road Treatment Plant Upgrade

The Nebo Rd Water Treatment Plant capacity upgrade from 50ML/d to 75ML/d is the jewel in the crown of Mackay's estimated \$50 million expenditure in securing the water supply for the ever expanding community of Mackay.

PROJECT CONTACT

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Mackay Regional Council

Bluewater Trail – Pioneer Environmental Walk

The Bluewater Trail is part of Council's vision to revitalize the city, improve health and wellbeing through physical activity and provide a safe recreational "ring of activity" around the city centre. The 21km trail has been constructed in stages with the latest stage, Pioneer Environmental Walk, being the focus of this submission.

PROJECT CONTACT

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Moreton Bay Regional Council

State Equestrian Centre Beerburum Road, Caboolture

The Queensland State Equestrian Centre located at Caboolture is a world class multi-discipline venue designed to cater for state, national and international equestrian activities. It is a facility capable of hosting a wide range of activities and events including local to international class equestrian events, trade shows, markets, extreme sports activities, concerts and music festivals.

PROJECT CONTACT

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Research Alliance

Long Term Pavement Performance Study for Southeast Queensland

Research Alliance (Logan City Council, Gold Coast City Council and Redland City Council, Queensland Department of Transport and Main Roads and Griffith University) has developed an innovative approach for optimising the road maintenance budgets. The research outcome enhanced the management of state and local roads by establishing the pavement deterioration factors in SEQ. Using improved deterioration factors, future programs are optimised from available budgets. Utilisation of optimised work programs facilitates the reduction of carbon emission from vehicles in SEQ.

PROJECT CONTACT

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nominees 2011



Somerset Regional Council

Alf Williams Interim Bridge

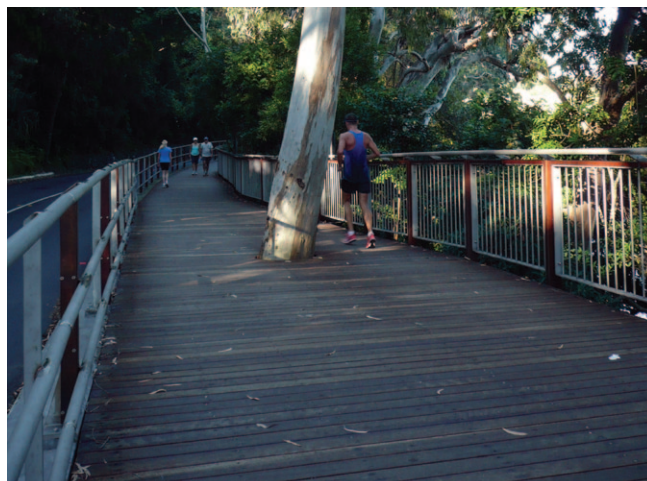
The Alf Williams Interim Bridge Project is a highly innovative, low-cost, fast but temporary measure to help bring the devastated Somerset community back together again. It came just four (4) months after the original bridge was completely destroyed in the Januarys 2011 floods.

PROJECT CONTACT

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Sunshine Coast Council

Park Road Stabilisation and Boardwalk Replacement

This project is the first time that a grout-injected micro pile A-frame structure was used in Australia to solve both a deep-seated slope stability problem, and to carry the applied design loads of the Park Road boardwalk and vehicle impact.

PROJECT CONTACT

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Sunshine Coast Council

Maroochy Bushland Gardens Arts and Ecology Centre

An exemplar of optimum sustainable architecture and landscape design, the Maroochy Bushland Botanic Gardens Arts and Ecology Centre was developed as an integral component of the existing and proposed facilities that enhance the environment and lifestyle of the Sunshine Coast.

PROJECT CONTACT

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Sunshine Coast Council and Golder Associates

Caloundra Landfill Piggyback Liner

The Pierce Avenue Landfill Piggyback Liner Project was an environmentally friendly interim solution to the issue of the Sunshine Coast's diminishing landfill airspace. Queensland's first Piggyback Liner will extend the life of the landfill by approximately two years, allowing council to complete their application to extend the landfill to the adjoining land.

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nominees 2011



Sunshine Coast Council

Tooway Bridge Replacement, Moffat Beach Caloundra

Tooway Bridge, Caloundra, was built in the 1930s and needed urgent replacement. The challenge was to maintain access to a major arterial road for some 17,000 vehicles a day throughout construction ensuring the sustainability of the local business and tourism community, whilst minimising the footprint on the Tooway Creek ecosystem.

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Townsville CC/Seymour Whyte/Flanagans Consulting

North Shore Boulevard Project

The North Shore Boulevard is a two way rural road linking the suburb of North Shore to Mt Low and Bushland Beach. It caters for future growth in the area and provides residents an alternative connection to the city.

PROJECT CONTACT

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Western Downs Regional Council/Parsons Brinckerhoff

Dalby Stage 2 Desalination Plant

The Dalby Stage 2 Desalination Plant will augment the existing Dalby Potable Water Treatment Plant. The 2.0 ML/d plant uses reverse osmosis as the primary technology to treat brackish groundwater from nearby bores and make potable water for Dalby township.

PROJECT CONTACT

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nominees 2011

Engineer 2011

Martin Crow

Rockhampton Regional Council

Martin Crow has been the Central Queensland Branch President since July 2007 and on the IPWEAQ Board since November 2007. He recently stood down as Branch President and has been elected to the Board Committee position. Martin devoted considerable time and



energy to his Branch and Board activities. He is always participates and contributes and can be relied upon to fulfil obligations. Martin is closely connected with his members and maintains strong relationships with the local community of Queensland Transport and Main Roads, and James Cook University. As well as his Branch and Board activities, in 2009 Martin was project manager for the review of Queensland Streets. He engaged stakeholders and obtained funds, as well as coordinating the steering group and the workshops across Queensland. Martin is a worthy recipient of this Award of IPWEAQ Engineer of the Year.

Young Engineer 2011

Mitch Bichel

Lockyer Valley Regional Council

Mitch is a highly effective team leader. His skills have developed strongly over his five years with Council. He has supervised Cadet Technical Officer, Cadet Engineer and Technical Officer as well as supervising contractors. He gives support and advice to consultants, temporary staff, Council staff, contractors and the community. Council expansion increased his workload, requiring continuous improvement in planning, prioritizing, time management and organizational skills.



Mitch has shown maturity beyond his years, leading by example to develop and improve the team environment. The team he has developed supports and recognizes all members' contributions, empowers team members, focuses on positive outcomes and has open and honest working relationships. He coaches and mentors effectively. He is proactive in adopting culture change and improving business processes.

Mitch was paramount in rescue and recovery during the January 2011 flood disaster. Without his leadership and professionalism the recovery would not have been as timely or effective.

Woman in Engineering 2011

Nicole Bichel

Lockyer Valley Regional Council

Since commencing her professional working life as a Planning Officer of Laidley Shire Council, Nicole Bichel qualified as an Environmental Engineer in 2009. In June 2011 Nicole was promoted to the new position of Flooding and Stormwater Drainage Engineer at Lockyer Valley Regional Council.

She had begun specializing in the hydrological/hydraulic engineering disciplines earlier when she worked with consultants in 2010 to develop the flood model for the South East Laidley area. Within her speciality she has prepared reports to Council addressing the flooding and drainage problems across the region. Recently she presented a paper to a group of professionals including hydrologists on the behaviour of Lockyer Creek during the major flood event in early 2011.

Nicole played an important role in the January 11th and 12th flooding of Laidley when she used the flood model to predict accurately what would likely occur at a given time, that is, what properties would be affected and to what depth. This greatly assisted the evacuation of Laidley.



Works Supervisor 2011

Rob Bouchier

Somerset Regional Council

Charged with the responsibility to deliver Council's capital works program, Rob is a true leader. Rob is ultimately responsible for the outdoor workforce of Somerset Regional Council. He has six foremen who report directly to him for guidance and support. Rob is dedicated and is committed to excellence, consistently and carefully monitoring his work to ensure its quality and maintaining a high standard of accuracy and completeness. He strives to improve his own work and promotes quality throughout his team along with a culture of safety awareness. He is also willing to receive feedback positively to improve his own performance.

His dedication and leadership were clearly demonstrated in the aftermath of the recent January 2011 floods which presented many challenges in restoring essential public assets to get communities back on their feet. Rob was instrumental in achieving this outcome under very stressful circumstances.





The Queensland Foundation
for Public Works Engineering and *qldwater*
– proud to be sponsors of the IPWEAQ Excellence Awards –



The trustees believe that the Excellence Awards provides an appropriate and necessary mechanism for local government and public works practitioners to showcase their outstanding efforts on behalf of the community, many of which occur in their day to day operations. This publication provides an ideal reference book for practitioners, who can contact their colleagues and gain information prior to their commencing similar projects.

As well as encouraging excellence in projects, each year the Queensland Foundation offers Fellowships to approved candidates to participate in Study Tours. The purpose of each of the tours is to provide recipients with opportunities to enhance their professional and skills development by attending conferences and participating in visits to local authorities. By participating in any one of the Study Tours, recipients can broaden their perspectives and how they approach daily work and personal life.



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