

New South Wales



**IPWEA**

INSTITUTE OF PUBLIC WORKS  
ENGINEERING AUSTRALASIA

# ENGINEERING EXCELLENCE AWARDS 2017



**COMPLETE**



# MESSAGE FROM THE MUNICIPAL FOUNDATION

---



## The Engineering Excellence Awards are a major highlight in the IPWEA NSW Division calendar.

This year we received 91 nominations which is mind blowing considering that just three years ago we had 41 nominations.

This is a great achievement in itself. The Excellence Awards enables all of us to appreciate the diversity and innovation of work undertaken by members of IPWEA NSW and their employer organisations. The Excellence Awards also give the wider community an insight into the outstanding Public Works and Services being delivered in their communities.

Nominating a project for the Excellence Awards gives Members the opportunity to showcase their talents and the production of this publication provides IPWEA with a valuable reference resource.

NSW Award category winners automatically become the NSW nominations for the International Australasian IPWEA Awards which occur every two years. This process ensures that NSW provides a benchmark for excellence in Public Works Engineering for all Australians.

The Trustees of the Municipal Engineering Foundation join with me in congratulating all those who have taken the time and made the effort to nominate projects for this year's Excellence Awards. In particular, we would like to commend the 2017 Excellence Awards Judges, Geoff Fowler, Henry Wong, John O'Connor and Greg Moran. They have spent a considerable amount of time travelling across New South Wales to assess this year's projects and have done so with immense professionalism, enthusiasm and attention to detail.

Thank you also to David Niven, Paul Yannoulatos, Oleg Sannikov and Terry Winning who assisted in the judging of the Road Safety Award. I also thank Wendy Dummett for her difficult task of judging the David Abbott Award and the Public Works Leader of the Year Award.

I would like to thank our Award Partners for their support: Complete Urban Pty Ltd, the Water Directorate, the NSW Roads and Transport Directorate, Roads and Maritime Services, Public Works Advisory, Boral and Pro-Visual.

As well as supporting the Excellence Awards, the Foundation is responsible for providing scholarships; endowments for Overseas and or National conferences; enabling participation and exposure to new ideas early in the careers of young engineers.

The purpose of the foundation is to expand the knowledge of the science of Public Works

Engineering and this objective is met in all these activities.

### **Chris Watson**

Chairman

Municipal Engineering Foundation (NSW)

# JUDGES COMMENTS



John O'Connor



Geoff Fowler



Greg Moran



Henry Wong

Due to the substantial increase in the number of submissions in 2016, it was decided to split the judging for 2017 into Regional and Metropolitan. As this year's numbers were in excess of 90 submissions it was appropriate that the judging was split to allow for thorough inspections.

Judges John O'Connor and Greg Moran inspected the Regional submissions and Judges Geoff Fowler and Henry Wong inspected the Metropolitan submissions.

Again, the quality of submissions was of a high standard covering a wide range of activities encountered in the Public Work Sector.

## **Congratulations to those listed as Winners and Highly Commended.**

To the other entrants who submitted projects, your projects were also of a high standard. Remember, the concept of the Engineering Excellence Awards is to showcase what is being achieved in the Public Work Sector. It allows others to be aware of what is being achieved and this showcasing may help others to gain good results for their employers

John O'Connor & Greg Moran | Regional Judges

Geoff Fowler & Henry Wong | Metropolitan Judges

# THE DAVID ABBOTT AWARD

**WINNER:** Todd Clarke, Randwick City Council



He has been employed at Randwick City Council for ten years, for seven of these he has been studying part time for his Bachelor of Civil Engineering and Diploma in Engineering Practice at the University of Technology. He is now completing his MBA.

Todd is quick to dedicate his fast progression through Council to the mentorship of peers and members of senior management. He is taking the opportunity to mentor students within his department on their journeys from internship to graduate positions. Part of Todd's leadership success can be put down to having worked in both the administrative and operational environment enabling Todd to bridge the gap between office staff and employees on the ground.

Todd is currently on the board of the Randwick City Council Sports Committee and as a member of the local community Todd is passionate about delivering quality customer service ensuring he and his team go out of their way to meet residents and discuss their issues face to face.

Todd is an enthusiastic advocate for local government engineering believing that councils can attract young engineers from private enterprise because of the breadth of opportunities available. Todd empowers his project managers and staff by developing their skill set in all aspects of the public works industry so that everyone in

his multicultural team is capable of delivering any project required within the capital works budget.

Todd is a genuine and authentic leader who takes the time to get to know each of his team personally supporting each individual to reach their full potential. He knows he still has a lot to learn but he plans to achieve 60 years at council so he has the time to leave a brilliant legacy.

## Highly Commended

**Nick Havyatt** | Upper Hunter Shire Council

Nick Havyatt is a young IPWEA member who has a reputation of being a very motivated young man with a strong engineering background who 'makes things happen' and continuously pushes for improvements and change while challenging people and systems.

# PUBLIC WORKS LEADER OF THE YEAR

**WINNER:** John Maretich, Port Stephens Council



John Maretich is “a musician with an engineering problem” according to his colleagues.

A classically trained guitarist and one time member of a rock band on the local scene, John draws on his creative instincts and his Master of Business Administration, Diploma in Management and Bachelor of Civil Engineering to deliver innovative and pragmatic engineering solutions.

As the Asset Section Manager for Port Stephens Council, John leads a team of more than 30 people and he is accountable for the full breadth of engineering areas from Road Safety and Transportation to Civil Assets Planning, Project Management and Assets Systems through to Community and Recreation Planning and Capital Works.

Considering his background it is not surprising that he has developed his own unique approach to asset management. John has coined the phrase “asset service delivery practitioners” to describe how all of his diverse teams focus on delivering outcomes for customers.

John takes his knowledge transfer responsibilities seriously. He combines technical capability with business excellence which ensures he takes a natural leadership role in varied multidisciplinary groups and projects. He

is an active member of the IPWEA NSW Division Asset Management Panel, is entering his sixth year as Hunter Group Chairman, and has presented at Regional and State IPWEA conferences.

John understands people. He knows that community members are only interested in council issues when they are personally affected. Yet he is driven to get community buy in to council asset management strategy and he is effective because he is skilled at telling stories that people can relate to. John believes leadership is all about integrity – doing what you said you’d do.

And it’s about getting to know each member of your team as an individual and tailoring your communication with them accordingly. He has vision, he’s energetic, and he takes people with him, but he is also quick to own up to his mistakes because it’s important to be transparent.

For John, the future is engineering and he is committed to investing in his people. He says engineers can see the choices, they see through the blockages and they make things happen. With his passion for music, his fascination with people and his self-confessed love of concrete, John is a unique and worthy IPWEA NSW Leader of the Year.

**PUBLIC WORKS LEADER OF THE YEAR IS SPONSORED BY BORAL ASPHALT**



# THE MINISTER FOR LOCAL GOVERNMENT'S AWARD FOR INNOVATION IN LOCAL GOVERNMENT ENGINEERING

WINNER:

Ku-ring-gai Council

North Turramurra Recreation Area



The North Turramurra Recreation Area (NTRA) sport facility features a synthetic Soccer sports field, small synthetic practice areas, two natural turf soccer fields (winter season) as well as cricket nets and a Cricket pitch to utilise in the (summer season).

The facility also offers superior lighting for night time training and competition purposes.

The land which was once a landfill turned into a golf course and further into a recreation area. The Master Plan for the recreation area was adopted in 2007.

In addition to the sports fields, the project included construction of a 10 ML stormwater Dam and a sewer mining plant. The project was completed in 2016 and an additional stage of the project which is a sports carpark is due for completion in 2017.

## Judges' comments

The project has transformed an ordinary 9-hole Golf Course into a major Recreational Reserve that any Council would treasure. Facilities include: a further eleven golf holes including the reconfiguration of seven holes together with three floodlit multi use sports fields covering over 33,000 square meters, three training fields with irrigation or synthetic turf, four netball training courts, a new amenities building including change rooms and golf cart storage together with a 265 vehicle car park for the reserve users.

*Presented by Mr Scot MacDonald MP on behalf of the NSW Minister for Local Government, the Hon Gabrielle Upton MP*

# CATEGORY 1A

## DESIGN AND/OR CONSTRUCTION OF A LOCAL GOVERNMENT/ PUBLIC WORKS PROJECT (PROJECTS LESS THAN \$1 MILLION)

**WINNER:** Hilltops Council Harden Skate Park



Council commenced the delivery of its then first skatepark for this locality approximately five years ago.

A 355 Committee of Council was formed to oversee the project which informed and guided Council on the eventual site adoption. Plans for the project were drafted by Enlocus, a specialty skatepark/open space design firm based in Melbourne. One design of three variations was adopted for the construction. The project's aesthetics from the street, all age use and ensuring a point of difference were key design points considered.

Funding for the \$350k project was multi-sourced ranging from Council, the local community, private sector and the Australian Government.

Construction commenced in May 2016 after development consent and construction tender process was concluded with Council awarding the construction of the project to Precision Skate Parks with final works completed in September 2016. The youth of Harden now has a modern, artistic and vibrant skate park.

### Judges' Comments:

Hilltops Council commenced the pre-delivery process for its first skateboard park five years ago, with construction commencing in May 2016. A committee was formed to oversee the project which guided Council on the overall project. Plans for the project were drafted by a skateboard design specialist based in Melbourne. One design with three variations was adopted and the project's aesthetics from the street; all age use and ensuring a point of difference were key design points.

### Highly Commended

**Nambucca Shire Council** | Volunteers Providing New Infrastructure

**Sutherland Shire Council** | Activity Based Working Refurbishment

# CATEGORY 1B

## DESIGN AND/OR CONSTRUCTION OF A LOCAL GOVERNMENT/ PUBLIC WORKS PROJECT (PROJECTS GREATER THAN \$1 MILLION AND LESS THAN \$5 MILLION)

WINNER:

City of Canada Bay

Five Dock Main Street Streetscape Improvements



The Five Dock Main Street improvements has seen the transformation of a heavily trafficked road environment into a pedestrian friendly environment which has stimulated the revitalisation of this important local shopping village. The Five Dock shopping village competes with the Burwood shopping centre for custom.

This streetscape improvement project has created an improved sense of identity and belonging for local and visiting community. The streetscape enhances the appeal as a cafe and restaurant destination which supports the village as a meeting place for locals to socialise. Key features include centralised street tree planting along the central great north road which is a state road. Widened and landscaped pedestrian areas, modern LED lighting, stormwater drainage and new pavements.

### Judges' Comments:

The objectives of the project were to improve the visual and aesthetic qualities, amenity, live ability and attractiveness of Five Dock focusing on pedestrian safety by slowing down vehicles by use of pedestrian refuges. One pleasing feature of the footpath vegetation was the planting of a line of Buxus shrubs on the footpath which separates the pedestrian movements from car doors opening. The upgrade has greatly improved the Shopping Centre with a substantial vacancy reduction

### Highly Commended

**Nambucca Shire Council** | Macksville Sports Park Revitalisation

**Fairfield City Council & COMPLETE Urban** | Prairiewood Waterplay Park "Aquatopia"

# CATEGORY 1C

## DESIGN AND/OR CONSTRUCTION OF A LOCAL GOVERNMENT/ PUBLIC WORKS PROJECT (PROJECTS GREATER THAN \$5 MILLION)

**WINNER:** Port Macquarie Hastings Council | Stingray Creek Bridge Replacement



Replacement of the existing concrete bridge on Ocean Drive over Stingray Creek between Laurieton and North Haven is a \$26M project spanning 18 years in pre-planning and construction. The project culminated in the switch of traffic onto the new bridge on 10 February 2017.

In recognition of the complexity of this project and the cross departmental relationships, Council established a project Steering Group to oversee the delivery of the project. Chaired by Cllr Justin Levido the steering group was represented by various stakeholders including RMS (Roads) RMS (Maritime) NSW Public Works (Project Managers) as well as various Council representatives with carriage of project management, media, financial control etc.

The construction delivery by Council's contractor Smithbridge/Waterway involved a number of innovative techniques resulting in a shorter construction duration, competitive price and significantly reduced environmental impacts while at the same time meeting all development consent conditions and consistency with the existing EIS.

### Judges' Comments:

The replacement of the existing concrete bridge on Ocean Drive over Stingray Creek between Laurieton and Port Macquarie is a project spanning 18 years in the preplanning and construction. The project culminated in the switch of traffic onto the new bridge in February 2017.

### Highly Commended

**Bayside Council** | Angelo Anestics Aquatic Centre  
**Tamworth Regional Council** | Gunnedah Road Upgrade

# CATEGORY 2

## NEW OR IMPROVED TECHNIQUES INCLUDING: INNOVATION AND/OR INTRODUCTION OF TECHNIQUES OR OUTSTANDING MANAGEMENT INITIATIVES OR OUTSTANDING ACHIEVEMENT IN ASSET MANAGEMENT

WINNER:

Bega Valley Shire Council

The Network Operation Centre



Bega Valley Shire Council has developed a Network Operation Centre, nicknamed 'The NOC' by staff, enabling data mining between Council's separate corporate information management systems. The NOC is used to enable Transport servicing, renewal and upgrade information to be represented spatially and available to any employee, or community member through Council's 'Portal', within the organisation's capacity, ability and authority, that is relevant, repeatable, reliable and defensible, linking to customer requests and for defining and monitoring asset defects.

The NOC aligns with Council's Community Strategic Plan of 'Strong Consultative Leadership' by optimising value for money and delivering responsible and ethical spending and efficient service delivery across all of Council's services.

### Judges' Comments:

Bega Valley Shire Council has developed a Network Operation Centre enabling data mining between Council's separate Corporate Information Management Systems. The concept originated from a need to manage and utilise Council's intellectual property so that staff in the organisation do not duplicate or miss opportunities. The viewing platform of the Network Operation Centre uses cutting edge technology to display and provide access to voluminous quantities of data compiled through the use of drones, video and photographic evidence.

### Highly Commended

**Blacktown City Council** | Development of Standard WSUD Drawings and online Deemed to comply tool  
**Muswellbrook Shire Council** | Water Main Asset Management and Improvement

CATEGORY 2 IS SPONSORED BY ROADS & TRANSPORT DIRECTORATE



# CATEGORY 3

## INNOVATION IN WATER SUPPLY & WASTEWATER

**WINNER:** Eurobodalla Shire Council | Rosedale and Guerilla Bay Pressure Sewerage Scheme



Rosedale and Guerilla Bay are small coastal villages located on steep terrain in dense bushland approximately 20 minutes from Batemans Bay with communities of local residences and holiday houses. The works were located in the road reserve and private properties requiring constant community consultation to keep the project on time and budget. The works in private properties included decommissioning of existing on-site septic tanks and systems, installation of a boundary kit (isolation and non-return valve) at each property, installation of a pump/tank unit (900 litres) for collection of sewage at each property; pump alarm and electrical switchboards; and pipe installation to transport the sewage to the boundary kit. The installation of the pressure sewer mains was undertaken by both open trench excavation and directional drilling methods. The latter method being predominately used to prevent disturbance to the surrounding environment and minimise impact to residential properties.

The Rosedale and Guerilla Bay pressure sewerage scheme curved and bended to ensure the project was delivered on time and within budget. Ensuring the safe guard of the

surrounding environment and public health of residents and holiday markers alike with minimal complaints.

### Judges' Comments:

This project involved construction of 9.3 kilometres of pressure sewer mains and installation of 340 onsite sewage pumping stations to address the public health and environmental issues existing within the small coastal villages of Rosedale and Guerilla Bay. The project required innovative construction techniques to overcome the challenging bushland environment and social constraints of identified endangered ecological communities, known aboriginal sites and very steep terrain.

### Highly Commended

**Shoalhaven City Council** | Porters Creek Dam Remediation

**Narrabri Shire** | The Baan Baa Water Supply Provision Project

CATEGORY 3 IS SPONSORED BY WATER DIRECTORATE



# CATEGORY 4

## WORKPLACE HEALTH AND SAFETY

WINNER:

Lismore City Council

CIVIC Pride



The project was a major culture change exercise driven by the need to improve our performance and reputation. The team was provided new management and the teams name and focus changed to CIVIC Pride. Through the work done in these areas a dramatic productivity increase was achieved with up to an 80% reduction in complaints received with no additional budget or resources. The team is now highly engaged and are our most vocal supporters within their community contacts. This was achieved through a rigorous program of managing and supporting staff and community expectations while continually focusing the team on the end goal - a team that delivers what our community wants.

The project used a variety of innovative leadership and management methods to achieve these results, in particular creating a shared vision and communicating the journey needed to get there and engaging with staff and the community. The project has had a substantial positive impact on the perception of the parks and gardens team and Council as a whole. The image and reputation has vastly improved with staff, sporting clubs and the community now trusting that we will deliver. This has also

changed the attitude of staff doing the work, with the entire team now conscious of their impact on community perceptions and the need to always do what we say when we say to the standard we committed.

### Judges' Comments:

Civic Pride was a 12 month initiative run by Lismore City Council with the key aims to improve the image and reputation of Council. The initiative focused on areas of Council that were known to have long term management issues in an unproductive and poorly engaged works team. The project had a substantial positive impact on Council and the works team as a whole. The image has vastly improved with staff, sporting clubs and the community now trusting that Council can deliver consistently.

### Highly Commended

**Sutherland Shire Council** | Figtree Online System for WHS Reporting

CATEGORY 4 IS SPONSORED BY PRO VISUAL



# CATEGORY 5

## EXCELLENCE IN ROAD SAFETY ENGINEERING

**WINNER:** NSW Public Works Advisory, Roads Maritime Services & Specialised Geo

**Bulli Pass Landslide Barrier**



Bulli Pass is a road of significant importance to the Illawarra providing access to and from Sydney from the northern suburbs of Wollongong.

The Pass has a history of slip and rock fall events. Following several more recent events, including a serious rock fall that landed on a vehicle, the project team engaged Coffey Geotechnical and University of Wollongong experts to undertake extensive site investigations, field mapping, aerial laser scan surveys; modelling for rock fall bounce heights and impact forces; debris flow modelling, risk analysis and assessment, and industry consultation to assist in determining the best treatment options.

A number of difficulties were encountered in the planning and construction phases that the project team worked through including: time pressures, extended road closure of a significant road, working in Illawarra Escarpment State Conservation Area, stakeholder engagement and consultation, and reopening during constructions due to 3 major truck roll-over accidents on the M1 Motorway.

The first stage of barrier works on Bulli Pass was successfully installed by Specialised Geo and the road opened ahead of schedule on 2 December 2016. The Bulli Pass Landslide Barrier is the longest of its kind in Australia

that will:

### **Judges' Comments:**

The Wollongong Escarpment Area is unstable and Bulli Pass is subject to rockslides especially in times of heavy rainfall. The project reduces the residual slope risk profile from landslide and rock fall events. The project consisted of a high energy absorbing and high volume rock fall and landslide protection barrier system over a length of 1.1 kilometres. The barrier is 3,5m high including over 1000 rock nail anchors constructed in difficult terrain. The fence is capable of containing a 500kg rock travelling at 160 kilometres per hour.

### **Highly Commended**

**Wingecarribee Shire Council** | Braemar Rail Bridge and Intersection Upgrade

# CATEGORY 6

## ENVIRONMENTAL ENHANCEMENT PROJECT OR INITIATIVE INCLUDING RECOVERING, RECYCLING AND REUSING

WINNER:

Ballina Shire Council

Coastal Recreational Path Project



Ballina Shire Council's Coastal Recreational Path is an ongoing project connecting Ballina to Lennox Head via a Shared Pathway, enabling the community to safely walk or cycle between the two towns.

A significant part of this project has involved the path's construction through the East Ballina Aboriginal Place, which is a place of high importance to the Traditional Custodians of the land. This section stretches six kilometres along the Ballina coastline from Angels Beach to Sharpes Beach.

The project has been a collaboration between Ballina Shire Council, Jali Local Aboriginal Land Council and Ballina Shire's Aboriginal community. The project has also been supported by the NSW Office of Environment and Heritage and the Heritage Council of NSW.

Raised boardwalks and viewing platforms have been constructed along the route to avoid direct and indirect impacts on sensitive vegetation. A web-based app has also been developed and can also be used in conjunction with the signage to provide complementary material along

the path.

### Judges' Comments:

The construction of the final 3 km section of shared pathway, completes a 6 km recreational pathway connecting East Ballina to Lennox Head including a series of Boardwalks, Viewing Platforms and small bridges as well as access for people with disabilities. The project also involved installation of a series of 22 large interpretative signs along the pathway, recognising the Aboriginal Cultural Values and stories of historical events connected to the area.

### Highly Commended

**Kyogle Council** | Kyogle Weir Fishway

**Randwick City Council** | Seawater and Freshwater Separation for Irrigation at Yarra Bay

CATEGORY IS SPONSORED BY COMPLETE URBAN

# COMPLETE

# CATEGORY 7

## LOCAL GOVERNMENT EXCELLENCE IN ROAD SAFETY

**WINNER:** Eurobodalla Shire Council | Kings Highway Safety Initiative



Eurobodalla Shire Council's Roads Safety officer has been working with RMS and Palarang Council to educate drivers on the Kings Highway on the need to realise that, during holiday periods, they need to allow extra time to reach the coast.

Over the last Christmas a road safety campaign on the Kings Highway was again undertaken with a partnership between the NSW and ACT Police, the ACT Government, Local Council's and the RMS. The message this year is Don't Rush, Allow Plenty of Time and Plan a Few Breaks.

Eurobodalla's roads safety officer has worked with all stakeholders to improve driver education and road safety statistics.

### Judges' comments:

The Kings Highway Road Safety Initiative a partnership between Eurobodalla Shire Council, Queanbeyan Palarang Council, Roads & Maritime Services and NSW Police. The partnership was also supported by funding from the ACT Government and NRMA. Council's Traffic Officer and Road Safety Officer played a major role in the initiative. The road safety initiative saw a significant drop in accidents demonstrating the value of the Local Government Road Safety Officer Program and collaboration across Councils, Government and the NRMA.

This road safety initiative used an evidence based 'safe systems' approach with an innovative media campaign combined with enforcement and a range of road improvements that more than halved serious crashes within the Eurobodalla section of the Kings Highway.



# CATEGORY 8

## MULTI-DISCIPLINARY PROJECT MANAGEMENT

**WINNER:** Randwick City Council Chifley Sports Reserve – Stage 3



The final stage of works entailed 3 projects including; Chifley Sports Reserve Amenities Buildings, Inclusive Playground, and Fitness Stations. The total value of the final stage of delivering the plan of management to the community was approximately \$3,300,000. The construction of the two new amenities buildings scope of works included by not limited to; a new precast panel walling system clad with the innovative external brick snap wall tiling system, toilets, changerooms, accessible unisex toilet and shower, canteen, storeroom and meeting rooms and external works.

Council sourced an alternate building foundation solution called a 'muscle slab' that is commonly used in New Zealand in Earthquake and landfill sites common to lateral spread and gas emissions. This revolutionary technique allowed the entire pre-cast wall building to be elevated of the ground allowing for free air travel of gases below the building.

A Council developed working group delivered the specifically designed playground. The working group included Councils Landscape Architect, the local community, parents of children with special needs and

disabilities, parents with disabilities themselves, parents of fully able-bodied children, health groups and medical professionals such as the Prince of Wales Hospital Spinal Clinic to meet a range of physical, emotional and intellectual abilities. It was very important to not only design and construct the playground so children with and without disabilities can interact and socialise but also parents with disabilities and/or in wheelchairs can utilise the fun space with their active children promoting a healthy community.

### Judges' Comments:

This multi-disciplinary project consists of three projects including Chifley Sports Reserve; Inclusive Playground and Fitness Stations. The multi-disciplinary project involved the following disciplines: Project Management, Civil Engineering, Environmental Engineering, Electrical Engineering, Hydraulic Engineering, Geotechnical Engineering, Landscape Architecture, Architecture, Environmental Hygienist and Remedial Consultants, Sport and Recreational Consultant and a Private Certifying Authority.

CATEGORY 8 IS SPONSORED BY PUBLIC WORKS ADVISORY



# SPECIAL AWARD

Ballina Shire Council

Marine Rescue Tower Project



Ballina Shire Council has constructed a new Marine Rescue Tower, to replace the existing facility located on the northern break-wall of the Richmond River. The Richmond River is the only navigable river with access to the ocean in Ballina and is an important recreational and commercial resource.

The mouth of the Richmond River is recognized as difficult and dangerous to negotiate in certain conditions. It is paramount that facilities are provided that increase the ease with which vessels can negotiate the bar and for emergency service facilities to be available to assist vessels in distress, their crew and passengers.

The existing Marine Rescue Tower located adjacent to the Ballina Coastal Reserve was in a poor state of repair and did not meet current standards for safety and support facilities. The existing Tower was not ideally located and the observation platform lacked the height required to provide a clear and unimpeded view of approaching vessels.

The need for a new facility was partly driven by subsurface instability associated with the existing tower, presenting a safety risk to the public and operational staff. There was also a need to provide operational improvements for the Ballina Marine Rescue Unit to improve their ability to monitor marine safety, particularly relating to the Ballina Bar, and co-ordinate emergency rescue response when required.

## Judges' Comments:

This new Marine Rescue Tower replaces an old facility on the northern break wall of the Richmond River, at its point of access to the ocean at Ballina. The tower is a custom designed facility utilising latest building materials for a hostile coastal environment, and is equipped with modern search and rescue communication equipment. The tower also includes an observation and communication room, training and storage rooms, disabled access and full facilities for the team of volunteers who man the tower 365 days a year.

# SPECIAL AWARD

Wollongong City Council

Wollongong Waste and Recovery Park –  
Cell Development and Expansion



Wollongong City Council owns and operates Wollongong Waste and Resource Recovery Park (Whytes Gully), which handles approximately 170,000 tonnes of waste materials per annum. With the landfill airspace at Whytes Gully projected to expire in late 2013, Wollongong City Council took the innovative approach of designing and constructing a new landfill on the existing occupied site, on top of and adjacent to prevailing landfill locations.

Due to the piggyback and unstable subgrade nature of the project, special consideration needed to be adopted during design and construction of the synthetic lining portion of the works. The synthetic liner consisted of a geo-composite clay liner, low and high-density polyethylene plastic liner and bi-planar geo-composite drainage net. Plastic lining weld seams were rigorously tested to project specifications, with only a small portion not achieving strength or air pressure requirements and demanding repairs or replacement. The synthetic lining works covered an area of over 50,000 m<sup>2</sup>.

A major component of the secondary works scope of the Whytes Gully project was the construction of the Western Gully Haul Road, a 470m asphalt road construction on an existing waste cell. The finished road would link existing routes with the active tip face, and provide access for the operations team to meet requirements of the sites EPA approved fill plan.

## Judges' Comments:

As Whytes Gully Landfill is about to expire, Council undertook an innovative step to construct a new landfill site over the existing occupied site. This approach is understood to be an Australian first and will give Council a further 6 million cubic meters of storage which equates to a further 50 years of life to the facility.

The high specification cell construction consists of coal wash and clay earthworks, polymer liner placement and welding, geo-synthetics deployment, subgrade and surface pipe installation, gravel placement and surface drainage works.

# EMERITUS AWARD

The Emeritus Membership Award is the highest award that can be bestowed on any member of IPWEA. To be eligible the nominee must be a Fellow and have served the community for at least twenty years in the delivery of public works and services. They must also have made a major contribution to the Institute and the contributions must be outstanding in character and well recognised by both the membership and the community generally.

## Geoff Fowler



Geoff Fowler has been a long-term member of the IPWEA during his extensive career in Local Government and has shown his passion, support and commitment to the association through his involvement with the Municipal Engineers Foundation.

Geoff has been a judge for the Engineering Excellence Awards for the past 18 years. This judging role often took Geoff away from home for 3 to 5 weeks each year as he travelled the state probably having visited every city, town and village across the state in this role. Geoff has always been extremely supportive of the engineering staff proposing their amazing projects to the judges, promoting the Institute and highlighting the value of showing the world what they had achieved, whilst mentoring and

supporting the staff especially the young engineers involved in the projects.

Geoff Fowler through his efforts has earned the friendship and respect of every council across the state and is truly deserving of this Award from the IPWEA (NSW).

# EMERITUS AWARD

The Emeritus Membership Award is the highest award that can be bestowed on any member of IPWEA. To be eligible the nominee must be a Fellow and have served the community for at least twenty years in the delivery of public works and services. They must also have made a major contribution to the Institute and the contributions must be outstanding in character and well recognised by both the membership and the community generally.

## Chris Watson



Chris Watson has been a long-term member of the IPWEA during his extensive career in Local Government and has shown his passion, support and commitment to the association through his involvement with the Municipal Engineers Foundation and both IPWEA NSW and IPWEA National. Chris has worked alongside IPWEA since 1993 when he became the Vice-President of IPWEA National he served as vice president for 4 years when he then became IPWEA National President.

Chris was the IPWEA National President leading significant change for the Institute to create the national office in 1999 and a broadening of its activities for the future. At this time, the Institute changed its name from the Institute of Municipal Engineering Australia (IMEA) to become the Institute of Public Works Engineering Australia (IPWEA). The change of name reflected the new direction for the organisation in response to ongoing changes in local government engineering practice.

# SERVICE EXCELLENCE

In sincere appreciation of their dedication and support in promoting achievement and excellence in Public Works Engineering as an IPWEA (NSW) Board Member



## Ken Halstead

Ken Halstead was first elected onto the IPWEA NSW Board in 2000, and in 2014 he also took a seat on the IPWEA Australasian Board. During that time Ken has been a loyal advocate for local Government engineering; at UTS, in short courses for IPWEA in local politics, a councillor and as a mayor, (on more than one occasion). No matter what Ken takes on, and he isn't afraid of a challenge, Ken always approaches every task or decision with a focus on due process and fairness. He is straight to the point, not afraid to speak his mind, has a genuine desire to see engineers and public works professionals properly trained and aware of their legal responsibilities.

Ken is a keen advocate for recognition of engineers and has always been a strong advocate, educator and inspiration. 17 years of service is an incredible achievement and Ken's contribution IPWEA NSW is immeasurable. In one word, Ken is a living legend and we pay tribute to him.

## Grant Baker

Grant Baker joined the IPWEA NSW Board in 2014 and it has been a pleasure seeing an already passionate and forward thinking engineer with an interest in surveying and engage fully in the Institute's affairs. Grant has from day one as a Director been hands on in the role and with the entire team at IPWEA NSW and as a result, he has as the Events Portfolio Director been a big part of growing the Institute's annual events in size and reputation.

The growth in the state conference has in no small part been as a result of the leadership Grant has offered since taking on the portfolio. He is an innovative thinker and has made strong contributions to the NSW Board over the past three years alongside his role as a Director at Blayney Shire Council. His successful completion of the AICD Company Directors Course brought new found skills in interrogation of the CEO, offering a strong sounding board for ideas, with the necessary checks and balance for due process but overall Grant has been an enthusiastic champion of the cause.



# Build something great™ with Boral products

One of Australia's largest construction materials suppliers with a strong reputation for product quality, service and technical competency across a vast network of concrete, quarry and asphalt plants. Boral is the ideal partner for your construction materials solution.

[www.boral.com.au](http://www.boral.com.au)

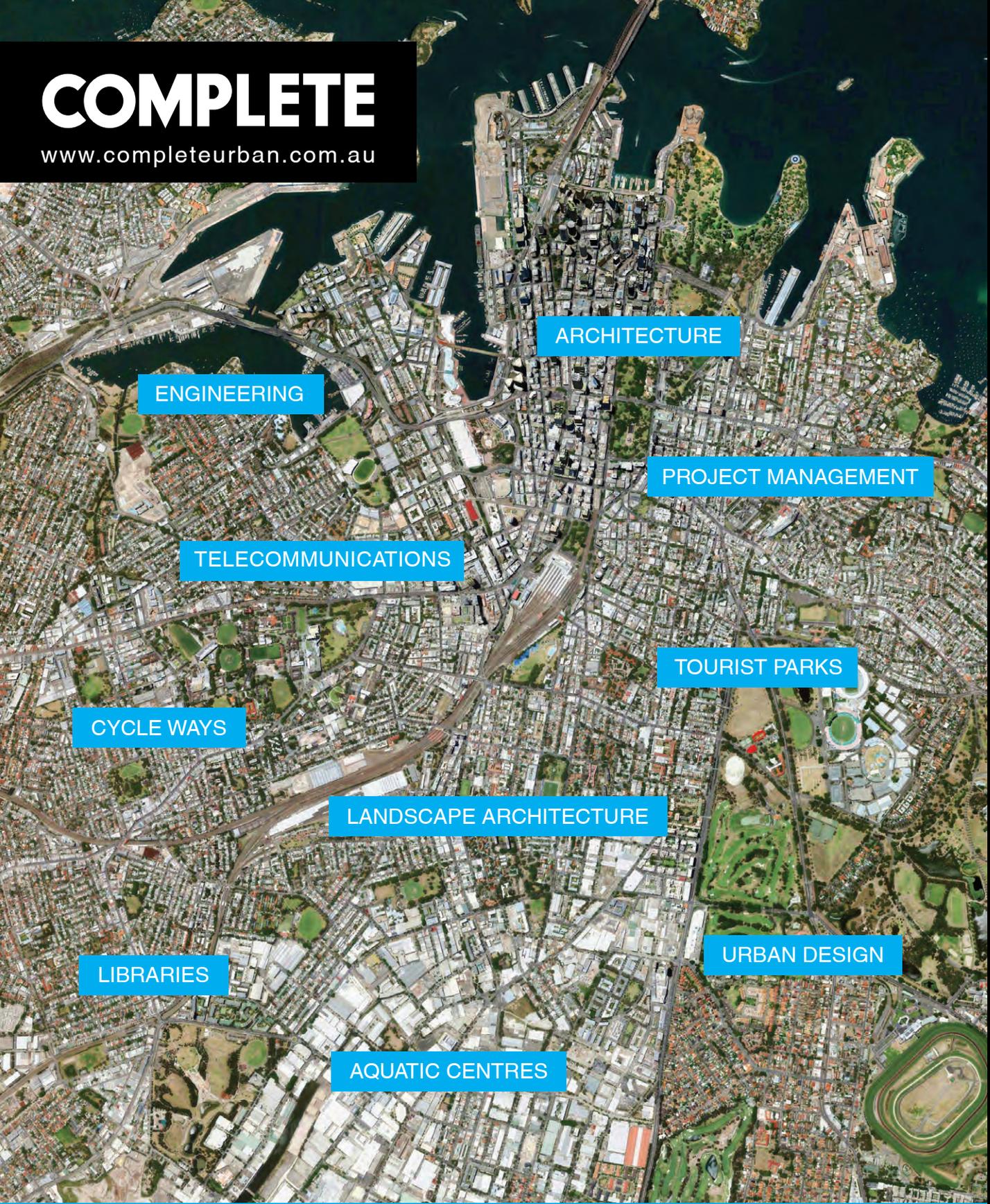
1800 555 445

Boral® is a registered trademark of Boral Limited or one of its subsidiaries.  
BCC 14180 Sep16



# COMPLETE

www.completeurban.com.au



DESIGNS AND DELIVERS PUBLIC WORKS



in f



Roads and Maritime Services is committed to building and maintaining thousands of major and minor road projects across regional NSW in any given year.

In the next 12 months over \$4.8 billion is being allocated on rural and regional road projects and maintenance in NSW.

We are delivering major upgrades of key regional highways to better connect communities and plan for the future to support the increasing needs of the travelling public and freight movements.

**Roads and Maritime is proud to be a Silver Sponsor for the IPWEA NSW State Conference 2017.**

## **IPWEA NSW State Conference 2017**

Sapphire to Woolgoolga project  
– an aerial view looking south towards Korora



Public Works  
Advisory

Environment and Sustainability

Engineering Emergency Management

Natural Disaster Relief

Water Planning

Water

Wastewater

Rivers

Heritage Asset

Dams

Roads and Bridges

Waste

Coastal

Major Developments

Stormwater

Building

Surveying and Spatial

Capital Programs

Procurement

Technical Support



## Asset Advisory Experts

Public Works Advisory provides a broad range of infrastructure advisory, project management and engineering services, assisting clients to deliver, manage, operate and maintain the State's critical infrastructure.

# USING AUGMENTED REALITY AS A TOOL FOR SAFETY

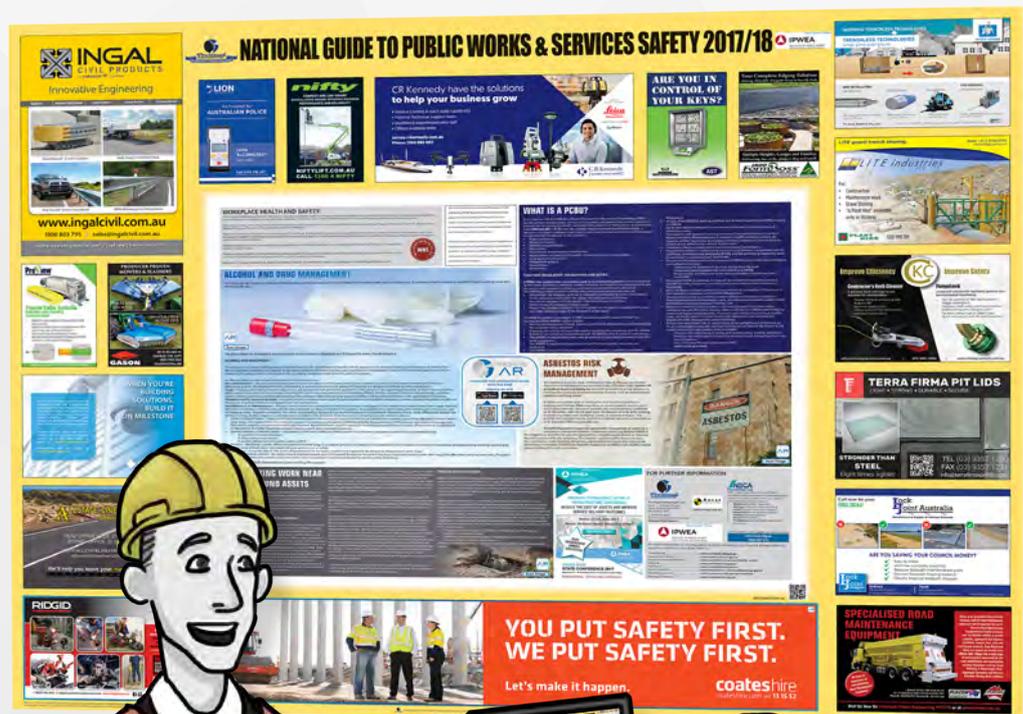
How do you try and get the message of safety and health across to those in your workplace? Have you ever had to consider the health and safety of others? What about your own health and safety?

*"Overall, most employers perceived that they managed health and safety empowerment and justice well and frequently in their businesses. However, up to one-quarter of employers indicated they did not frequently empower their workers through active consultation around safety and did not always treat their workers justly, especially when investigating accidents." - Safe Work Australia*

To help workers, within the public works and services sector, in their attempts to increase awareness, engage, train and share experiences of health and safety procedures or situations, the **Pro-Vis AR** app enhances the traditional print media based information and provides a window to further interactive, digitally accessible materials.

Imagine training your workers with digital materials and resources, imagine a more interactive induction process with better safety outcomes. The AR component on the Guide will unlock a new dimension to education and a new way for workers and contractors, engineers and supervisors to absorb information.

The National Guide to Public Works & Services Safety 2017/18 is supported by the Institute of Public Works Engineering Australia (IPWEA) and the National Safety Council of Australia (NSCA) Foundation.

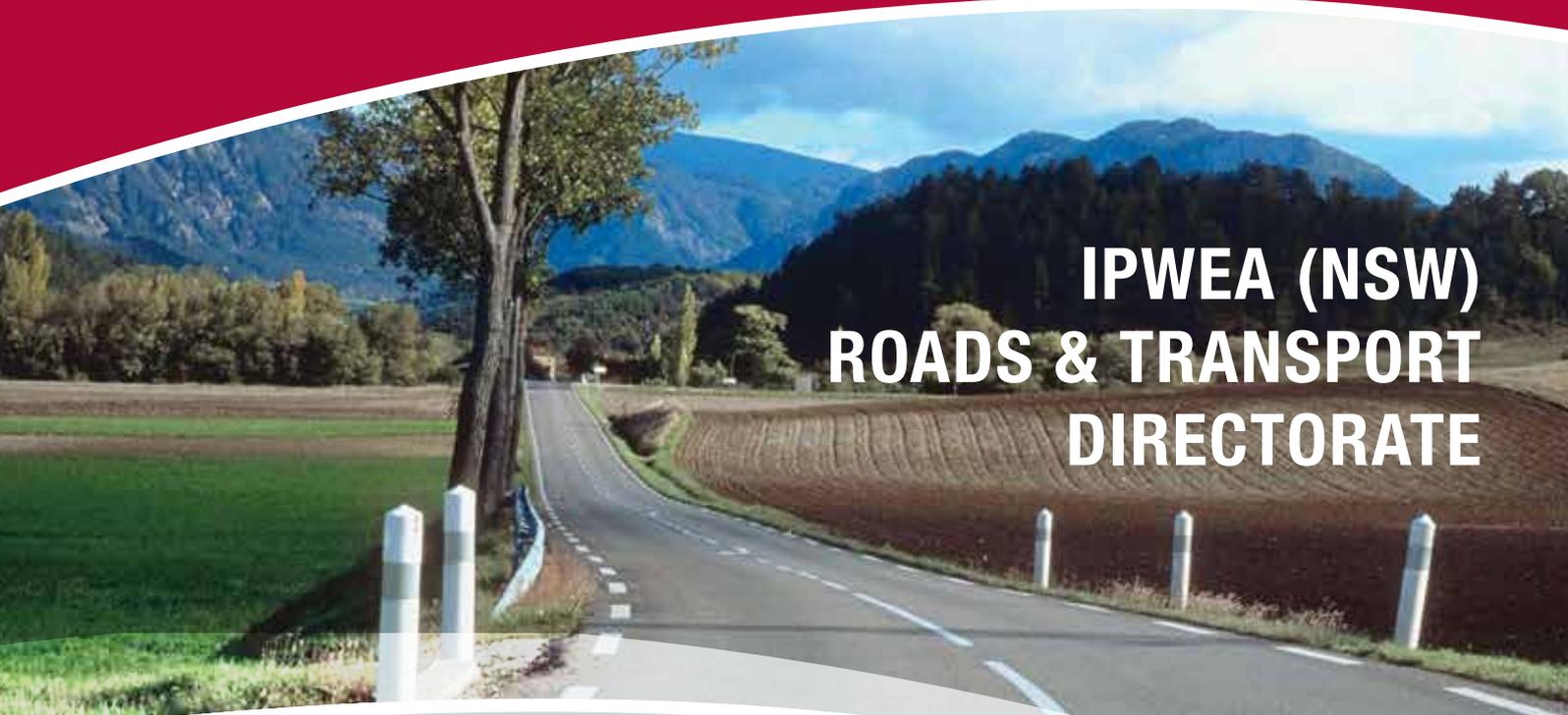


New South Wales



**IPWEA**

INSTITUTE OF PUBLIC WORKS  
ENGINEERING AUSTRALASIA



# IPWEA (NSW) ROADS & TRANSPORT DIRECTORATE

**The Roads & Transport Directorate is a joint undertaking between the LGNSW and IPWEA (NSW) to provide a resource to:**

- ▲ Assist members in discharging their road management roles
- ▲ Assist LGNSW
- ▲ Assist Individual Councils
- ▲ Assist IPWEA (NSW)
- ▲ Lobby for an equitable share of resources and funding
- ▲ Research road and transport issues

The Roads & Transport Directorate congratulates the 11 outstanding projects nominated for the New or Improved Techniques Category

## **IPWEA (NSW) Roads & Transport Directorate**

Level 12, 447 Kent Street  
SYDNEY NSW 2000

Ph: (02) 8267 3000

Fax: (02) 8267 3070

[www.roadsdirectorate.org.au](http://www.roadsdirectorate.org.au)



**IPWEA (NSW)  
Roads & Transport  
Directorate**

# WATER DIRECTORATE

SPONSOR OF THE IPWEA'S  
EXCELLENCE AWARD  
FOR INNOVATION IN WATER  
SUPPLY AND WASTEWATER



The Water Directorate congratulates these nominees on their outstanding projects.

**Albury City Council**

Upgrade Albury Water Filtration Plant

**Bellingen Shire Council**

Replacement of Dorrigo STP

**Eurobodalla Shire Council**

Rosedale and Guerilla Pressure Sewerage Scheme

**Muswellbrook Shire Council**

Water Main Asset Management and Improvement - Saving Time, Money and Stress

**Nambucca Shire Council**

South Nambucca Pressure Sewerage System

**Narrabri Shire Council**

The Baan Baa Water Supply Provision Project

**Parkes Shire Council**

Integrated Water Cycle Management Scheme Upgrades

**Rous County Council**

Elevated Steel Pipeline Corrosion Repairs

**Rous County Council**

Backflow Prevention Program

**Shoalhaven City Council**

Porters Creek Dam Remediation

**Snowy Monaro Regional Council**

Lake Wallace Biodiversity Offset Management

Gary Mitchell, Executive Officer

**Telephone:** 02 9188 4390

**Web:** [www.waterdirectoratesn.asn.au](http://www.waterdirectoratesn.asn.au)

**Email:** [gmitchell@waterdirectoratesn.asn.au](mailto:gmitchell@waterdirectoratesn.asn.au)



**WATER  
DIRECTORATE**

# THE IPWEA NSW 2018 STATE CONFERENCE WILL BE HELD AT CROWNE PLAZA HUNTER VALLEY, 7-9 NOVEMBER

## NOW IS YOUR CHANCE TO BE PART OF THE ENGINEERING EXCELLENCE AWARDS 2018

IPWEA NSW members are invited to nominate people and projects in various categories. Nominations are judged on their merits and are not constrained by project size or council/organisation size.

The IPWEA (NSW) Division presents the Engineering Excellence Awards each year to promote and recognise excellence of Local Government and public works projects. This is achieved through inspiration, innovation, development and completion of projects and technical management by our members.

Further information will be available early 2018. Keep an eye out for the fortnightly IPWEA NSW E bulletins. Subscribe to the newsletters by contacting [ipwea@nsw.org](mailto:ipwea@nsw.org)

**Award Submission Forms due: Monday 23rd April 2018**

**Award Full Project Submissions due: Monday 21st May 2018**

**Projects Nominated must have been completed between Feb 2016 and Feb 2018**

**Inspections to be conducted during July/August 2018**

**IPWEA NSW Engineering Excellence Awards Gala Dinner 8th November 2018**

The preparation of a paper to present at the conference is a unique opportunity to share your knowledge and experience, and to contribute to the future of local government and the public works industry.

**Submission of synopsis, bio and photo due: Monday 18th April 2018**

New South Wales



# IPWEA

INSTITUTE OF PUBLIC WORKS  
ENGINEERING AUSTRALASIA

\* All dates are yet to be confirmed and are subject to change