



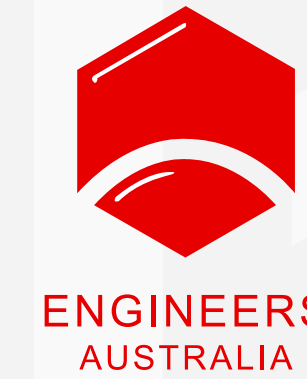
ENGINEERS  
AUSTRALIA

Excellence  
Awards

# People & Projects Awards 2022

Finalists handbook

# Join us: Engineers Australia Excellence Awards 2022



Excellence  
Awards

2022 Engineers Australia Excellence Awards will be held on 5 October at the Hilton Hotel in Sydney.

It has been two years since we last gathered in person to celebrate the national awards and we are thrilled to be announcing and celebrating the national winners of the:

- Professional Engineer of the Year
- Engineering Technologist of the Year
- Engineering Associate of the Year
- Young Professional Engineer of the Year
- Young Engineering Technologist of the Year
- Young Engineering Associate of the Year
- Sir William Hudson award
- President Prize
- Peter Nicol Russell Career Achievement Memorial Medal
- Honorary Fellows
- Recognition Awards.

Each finalist has showcased outstanding examples of innovation and resourcefulness within the engineering profession, the highest technical, professional and community service standards in engineering and inspiring engineering professionals who demonstrate contribution to the well-being of people, communities, and sustainable engineering practices, promotion of the engineering profession, and the formulation of resourceful, innovative, and aesthetically appealing engineering solutions.

To register and attend this prestigious event, please head over to the [website](#).

Register now →

## About the Engineers Australia Excellence Awards

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The Excellence Awards offer a range of national awards, medals and scholarships that highlight contributions to the various areas of engineering, which we support and promote.

The Excellence Awards Program seeks to reward outstanding achievement and eminence in the practice of engineering, and standout service to the profession. It plays an important role in promoting engineering excellence and the significant contribution engineering makes to the community.

## About the Project Awards

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The project awards recognise Australia's top engineering projects and the teams behind them. They inspire and encourage engineering distinction through teamwork, innovation, and technical excellence.

The national award program first began in 1988 after a decade of celebrating local projects.

Today, there is a local submission and assessment project awards process. Up to six finalists are selected per location, of which the winner will go on to be a finalist for the Sir William Hudson Award.

The Sir William Hudson Award is the highest honour that an engineering project can receive from Engineers Australia, and it will be presented at the 2022 Engineers Australia Excellence Awards in October.

## About the People Awards

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The Engineer of the Year (People) Awards recognises outstanding engineers who show innovation and resourcefulness in their work.

### Awards Categories

- Professional Engineer of the Year
- Engineering Technologist of the Year
- Engineering Associate of the Year
- Young Professional Engineer of the Year
- Young Engineering Technologist of the Year
- Young Engineering Associate of the Year

## Project Awards winners

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### CANBERRA

#### evolve: smart software for the orchestration of 21st century electricity systems

ANU Battery Storage and Grid Integration Program



### NEWCASTLE

#### Woolgoolga to Ballina Pacific Highway Upgrade

Pacific Complete Joint Venture (Laing O'Rourke and WSP Australia) in partnership with Transport for NSW



### NORTHERN TERRITORY

#### City Deals Austin Lane Activity Node

ADG Engineers (Aust) Pty Ltd



### QUEENSLAND

#### Australia's first biosolids gasification facility

Logan Water



### SOUTH AUSTRALIA

#### SA Water's Zero Cost Energy Future Program

SA Water



### SYDNEY

#### Quay Quarter Tower

AMP Capital



### TASMANIA

#### King Island UniWave200 Wave Energy Converter

Wave Swell Energy Ltd



### VICTORIA

#### Additional Works Package 1 - Cheltenham and Mentone

Southern Program Alliance



### WESTERN AUSTRALIA

#### Koolangka Bridge, Perth Children's Hospital

AECOM Australia Pty Ltd

## People Awards:

### Professional Engineer of the Year

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**Andrew Chapman**

*MIEAust CPEng APEC Engineer IntPE(Aus)*

**VICTORIA**



**Karu Esselle**

*FIEAust*

**SYDNEY**



**Abel Immaraj**

*MIEAust CPEng EngExec NER APEC Engineer IntPE(Aus)*

**QUEENSLAND**



**Jim McKay**

*MIEAust CPEng NER*

**NORTHERN TERRITORY**



**Matteo Tirapelle**

*FIEAust CPEng EngExec NER APEC Engineer IntPE(Aus)*

**WESTERN AUSTRALIA**

## People Awards:

### Young Professional Engineer of the Year

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**Steve Adamthwaite**

*MIEAust*

**NEWCASTLE**



**Samantha Chapman**

*GradIEAust*

**TASMANIA**



**Brody Clark**

*MIEAust CPEng NER*

**QUEENSLAND**



**Bryce Cronin**

*GradIEAust*

**CANBERRA**



**Margaret Gayen**

*MIEAust*

**SOUTH AUSTRALIA**



**Emily Harris**

*MIEAust CPEng NER*

**VICTORIA**



**Deanna Hood**

*MIEAust*

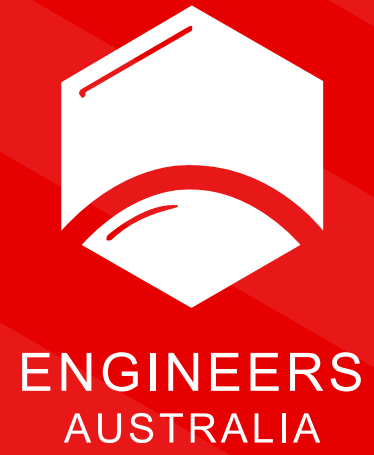
**SYDNEY**



**Tynan Luzuk**

*MIEAust CPEng NER*

**WESTERN AUSTRALIA**



Excellence  
Awards

# Associate & Technologist



## People | Engineering Associate of the Year

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### Malcolm Shepherd

AFIEAust CEngA EngExec NER APEC  
Engineer IntETn(Aus)

Today Mal is the Chief Development Officer at Sunwater where he leads the development and delivery of significant major water infrastructure projects.

Prior to joining Sunwater, Mal had an accomplished career in the private sector where he served in a range of project and management roles across Australia, New Zealand, South East Asia and the Middle East.



### Timothy Swann

AffillIEAust

Tim Swann has 15+ years' experience as an Engineering Associate. He is a Digital Transformation Champion. Commencing as a drafter, Tim transitioned into the specialist field of design and drafting of tailings and water dams, progressing to Project Manager for some of Australia's largest tailings dams.

He is passionate about digital design advancement, focusing on unique ways to collect data, streamlining civil design workflows and presenting data in a simple and meaningful way.

Tim led development of GHD's Infrastructure 4.0 initiative developing a fully automated workflow from site investigations, through to geological modelling and stability analysis, to design and drafting.



### Jarrod Pettigrew

AFIEAust CEngA NER IntETn(Aus)

Jarrod is an Associate Fellow and Chartered Engineering Associate with over 19 years' experience in a wide range of infrastructure projects across the public and private sectors in Australia and New Zealand. He has a successful track record in leading multi-disciplinary transportation projects of varying size and complexity from early planning, through to detailed design and construction.

Jarrod is an Associate Director (Transportation) within the Civil Infrastructure group at AECOM. Since the start of 2021, Jarrod's role has been Gold Coast Area Manager, with responsibility for establishing and growing AECOM's Gold Coast office.

## People | Engineering Associate of the Year

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### Alvan Nair

AMIEAust

Born in Suva, Fiji as Alvan Avilash Nair. Educated in Fiji till 1986 at which point the family migrated to Australia. He attended schooling in the Catholic schooling system in Sale, Victoria and attended RMIT where he undertook an Aerospace Systems Engineering course.

He joined Ansett Australia in 1995 as an apprentice Avionics Aircraft Maintenance Engineer. During his tenure at Ansett Australia, he received training and became qualified in three aircraft trades.

After a short hiatus in the Oilfield industry, Alvan returned to the Aviation industry where he has attained over 25 years of experience in various technical and management roles within the civil and defence aircraft industries.

## People | Engineering Technologist of the Year

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### Nicholas Clarke CMS

TFIEAust CEngT EngExec NER

Nick has a background in Space, Communications, Weapons, Electronic Warfare, Intelligence, Surveillance, Target Acquisition and Reconnaissance (ISTAR), Project Management and has worked and lived in the UK, Saudi Arabia and Australia.

Nick has served with the Royal Air Force (RAF), the Royal Australian Air Force (RAAF) and the Saudi Arabian Airforce. He has also undertaken various operational tours in the Falklands, Northern Ireland, Iraq and Afghanistan. He semi-retired and is currently the Chief Engineer responsible for the Design Acceptance and Technical Certification of equipment.



Click to skip to location:

[Canberra →](#)

[Queensland →](#)

[Tasmania →](#)

[Newcastle →](#)

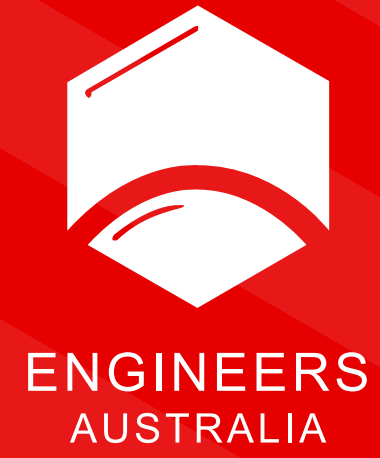
[South Australia →](#)

[Victoria →](#)

[Northern →](#)

[Sydney →](#)

[Western Australia →](#)



Excellence  
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# Canberra



## Chief Judge

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### George Tomlins PSM

BE MURP MPA FIEAust CPEng EngExec NER APEC Engineer IntPE(Aus)

George Tomlins is a civil engineer and urban planner with more than four decades of experience in engineering and related urban activities. He has worked for Commonwealth, State, Territory and local governments, with experience in Australia and the United Kingdom. Before leaving the public service, he was responsible for billions of dollars of procurement and project delivery. The construction side of the organisation had an annual capital works budget of half a billion dollars for several years. He has been a member of the Australian Procurement and Construction Council.

Earlier, George has been the ACT Chief Planner and played key roles in the ACT Economic Stimulus Taskforce responding to the global financial crisis, the bushfire recovery, the High Speed Rail Study and the privatisation of Canberra Airport. He headed the implementation group which managed the design and delivery of Stromlo Forest Park, the Arboretum, villages and community facilities.

In 2001 George was awarded a Public Service Medal.

## People and Projects Judges

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### Belinda Smith

FIEAust CPEng EngExec NER APEC Engineer  
IntPE(Aus) GAICD

### Greg Taylor

MIEAust CPEng NER

### Catherine Galvin

FIEAust CPEng

### Kevin Earle

FIEAust CPEng NER

# Evolve: smart software for the orchestration of 21st century electricity systems

ANU Battery Storage and Grid Integration Program

Sir William Hudson  
Canberra Finalist

The evolve project was the largest collaboration of electricity network providers, technologists, aggregators, academia, and government departments ever assembled. Through the cost-effective development of smart software, in particular the use of dynamic operating envelopes, 250 per cent more energy can safely flow through the same wires. Crucially, the evolve project paved the way for the development of a set of Australia-wide guidelines for the management of distributed energy resources in the electricity system, that are now in the process of standardisation through Standards Australia.



## Community models for deploying and operating distributed energy resources

ANU Battery Storage and Grid Integration Program

Highly Commended

Neighbourhood batteries are a nascent technology poised to contribute significantly to energy system transformation in Australia. This medium form of energy storage complements household and utility-scale batteries with power capacities ranging from 1 - 5 MW. A wide range of stakeholders are interested in neighbourhood batteries as they potentially can unlock the value of battery storage to all energy users including vulnerable families, those who rent and those who do not own their own solar panels.

Energy network operators, energy retailers, market operators, consumer groups and governments are all interested in the range of benefits neighbourhood batteries can offer. This project consisted of an Australia-wide analysis of neighbourhood batteries from a technical, regulatory, economic, and social perspective, identifying a range of possible ownership and operation models.



## Whitlam Stage 2

Calibre Professional Services  
Suburban Land Agency

Whitlam is the newest suburb in the ACT, and brings together the best aspects of civil engineering, planning and project management. Whitlam Stage 2 provides residents with high-quality amenities, multiple open spaces and promotes active travel through its multiple linking pedestrian and cycling paths to the surrounding playgrounds, future schools and shops. The development provides residents with maximum solar benefits to improve the energy efficiency of their houses, and through the construction phases has reduced the projects impact on the environment due to the use of recycled materials



## People | Young Professional Engineer of the Year

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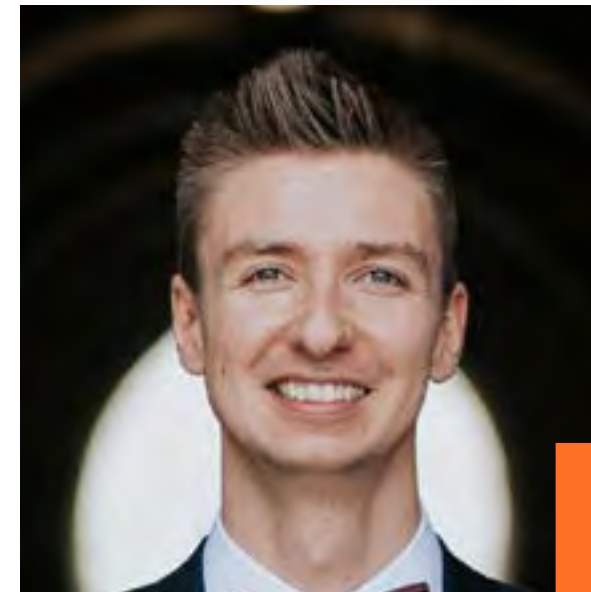
WINNER

### Bryce Cronin

GradIEAust

Bryce Cronin is an international award-winning engineer and designer recognised as an emerging leader in the Australian technology sector. He's passionate about harnessing technology in innovative ways for social good and for the promotion of STEM education. He's created robots, developed apps, and has founded Hackathons.com.au to promote tech events happening around Australia.

In 2021, Bryce was a Young Canberra Citizen of the Year Finalist. In 2022, he created the Access3D.org initiative to design and ship 3D-printed accessibility devices to Australians in need.



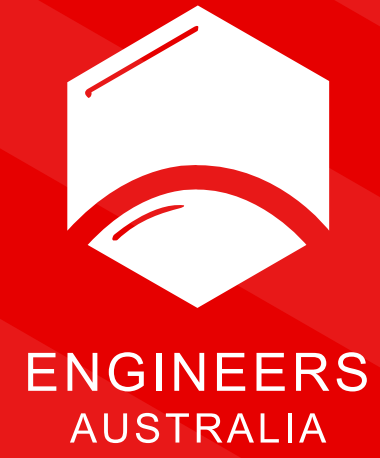
Highly Commended

### James Dean

MIEAust CPEng NER

James is a professional engineer with experience in modelling and simulation, and software engineering. He has a passion for coaching junior engineers to achieve engineering excellence in their careers, and a passion for helping businesses improve their systems to achieve previously unobtainable outcomes.

Through more than eight years of engineering experience, James has led small, distributed teams in software intensive environments to deliver quality outcomes for clients, demonstrated strong communication skills through extensive public speaking experience, and delivered projects across the defence, space, and oil and gas industries.



Excellence  
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# Newcastle





## Chief Judge

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### Paul Reynolds

FIEAust CPEng EngExec NER APEC Engineer IntPE(Aus)

Paul has over 20 years of experience in the engineering and manufacturing sector including design, project management, business management and strategic leadership. Paul currently works with Ampcontrol as the General Manager – Technology. Paul is an active member of Engineers Australia having held a number of positions including Division President, National Congress Rep, Mechanical College Board Rep and Division Committee member.

Paul is the current Chair of the Education Committee and sits on Engineers Australia's Accreditation Board. Paul is the current Chair of the University of Newcastle's Industry Advisory committee for Mechanical Engineering. Paul is a current Board Member of Regional Development Australia (RDA) Hunter. Paul received his Bachelors in Mechanical Engineering with honours class 1 from the University of Newcastle and holds a Diploma of Management from the Australian Institute of Management.

## People and Projects Judges

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### Projects Judges

#### Pierre Gouhier

FIEAust CPEng NER APEC Engineer IntPE(Aus)

**Karlie Collis** FIEAust CPEng NER

#### Michael van Koeverden

FIEAust CPEng NER APEC Engineer IntPE(Aus)

### People Judges

#### Erica Matthews

MIEAust CPEng NER

#### Hilary Barton

FIEAust CPEng

**Karlie Collis** FIEAust CPEng NER

#### Michael van Koeverden

FIEAust CPEng NER APEC Engineer IntPE(Aus)

**Paul Skeen** AMIEAust

## Woolgoolga to Ballina Pacific Highway Upgrade

Pacific Complete is a Joint Venture between Laing O'Rourke and WSP Australia, in partnership with Transport for NSW.

Sir William Hudson  
Newcastle Finalist

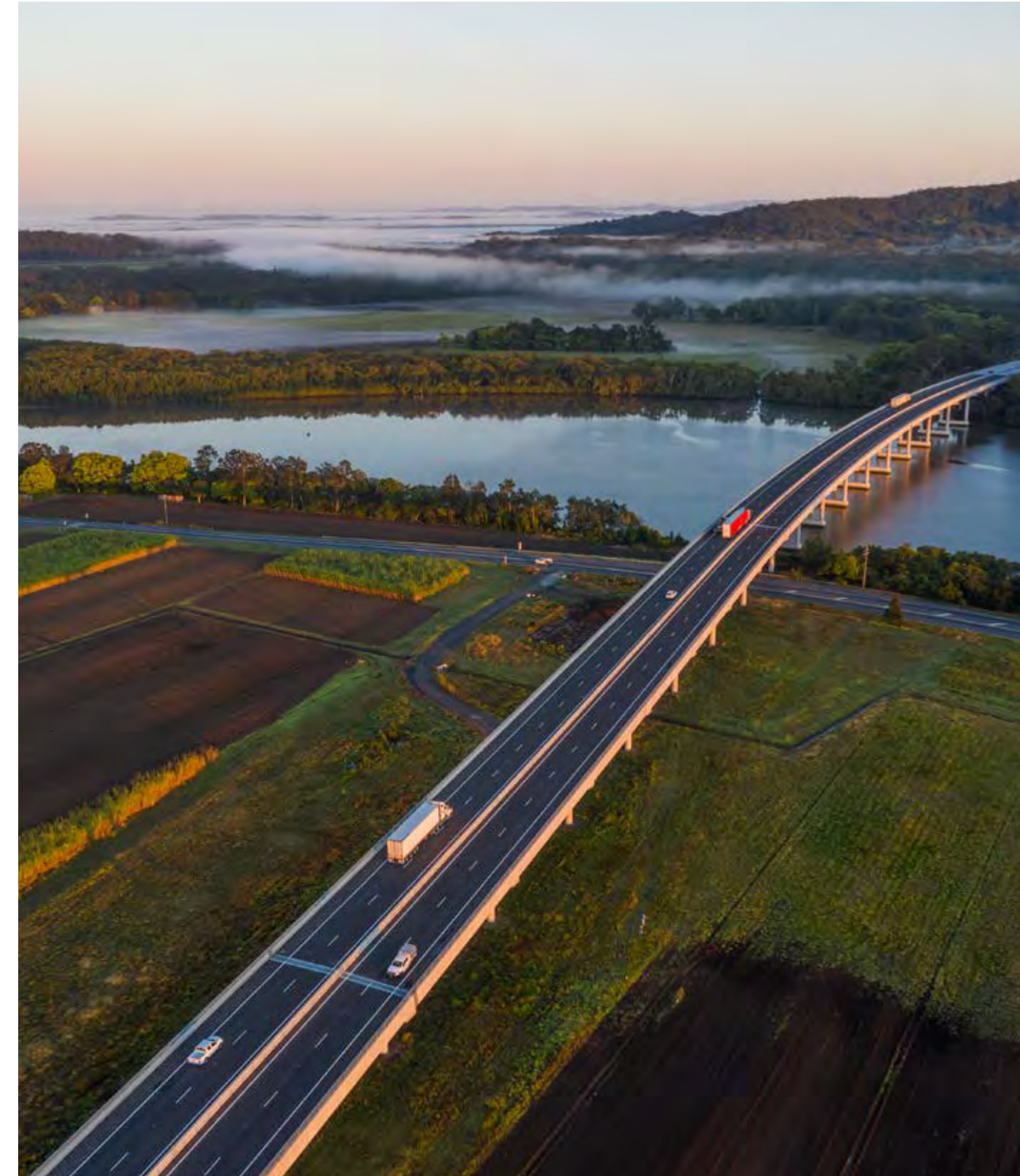
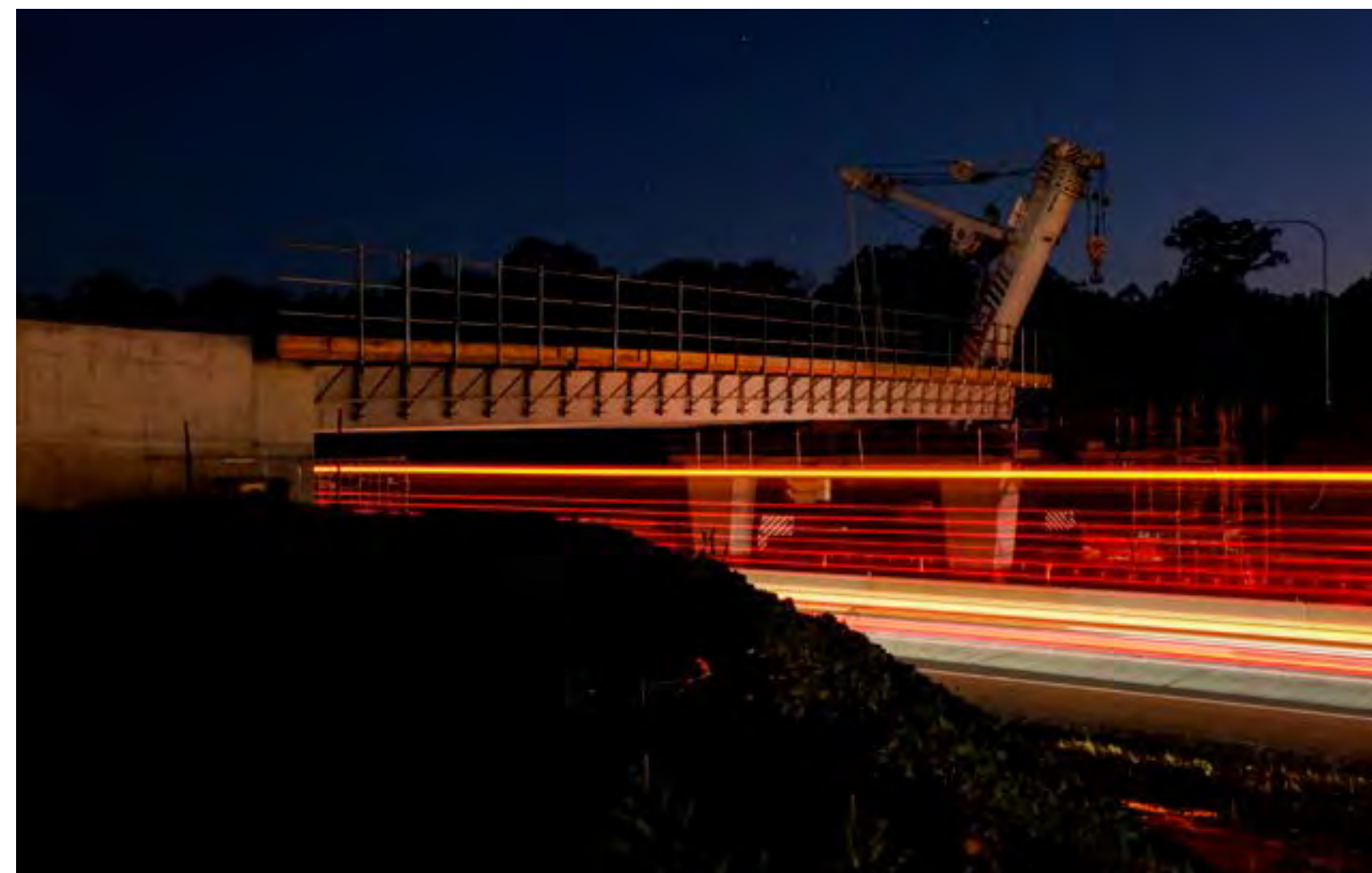
The Woolgoolga to Ballina Pacific Highway upgrade was the final link in upgrading the Pacific Highway to four lane, divided carriageway between Hexham and the Queensland border.

The project traversed diverse and challenging environments including two major river catchments, floodplains, significant areas of soft soil, threatened species habitat, and sensitive heritage areas.

Opening the 155km project to dual carriageway by December 2020 has provided:

- safer travel
- reduced travel times with improved transport efficiency
- more consistent and reliable travel
- improved amenity and connectivity for local communities.

The size, scale, delivery approach and complex nature of this project provided unique challenges to the project team, which required innovative solutions to achieve the required project outcomes and ultimately leave a positive economic, social, and environmental legacy.



## Farley Wastewater Treatment Works Upgrade

**GHD**

**Hunter Water, Project principal/ asset owner and John Holland, Construction Contractor**

Hunter Water's \$70 million Farley 'Stage 3B' Biological Nutrient Removal treatment plant upgrade was designed by GHD, as the lead designer, and constructed by John Holland using innovations to solve significant challenges and providing a benchmark for future, similar projects that seek to improve effluent quality and wastewater services and improve water sustainability.

The technology innovations delivered by the project featured a combined structure on a single pour post-tensioned concrete base slab. The upgrade caters for future growth and improves the reliability and performance of the plant, supplies recycled water to the nearby suburb of Gillieston Heights. The project supports the predicted population growth in the catchment leading to local socio-economic benefits.

The plant was upgraded to address the identified process limitations and to extend Environment Protection Licence compliance to year 2032, with future focused provisions for year 2042, to the limit of best available treatment technology.



## New England Highway Upgrade at Bolivia Hill

**ARCADIS**

**Transport for NSW and Georgiou Group Pty Ltd in joint venture with SRG Global**

Located 59km north of Glen Innes and 33km south of Tenterfield in New South Wales, the Bolivia Hill New England Highway Upgrade included 2.1km of road realignment and a 316m cast in situ balanced cantilever bridge. The three-span balanced cantilever bridge, with a main span of 150m and end spans of 80m and 86m, was vital in overcoming the site challenges. The main span of 150m is the second longest span for this bridge type in New South Wales.

The bridge span configuration maintained an exclusion zone for the endangered Bolivia Wattle and provided connectivity for fauna, including the endangered spotted-tail quolls. The end spans of the superstructure were designed to be constructed through cantilevering off the abutments, eliminating the requirement for traditional temporary falsework on the steep terrain.

The project delivered an improved road alignment that provides safety and time benefits to all road users.



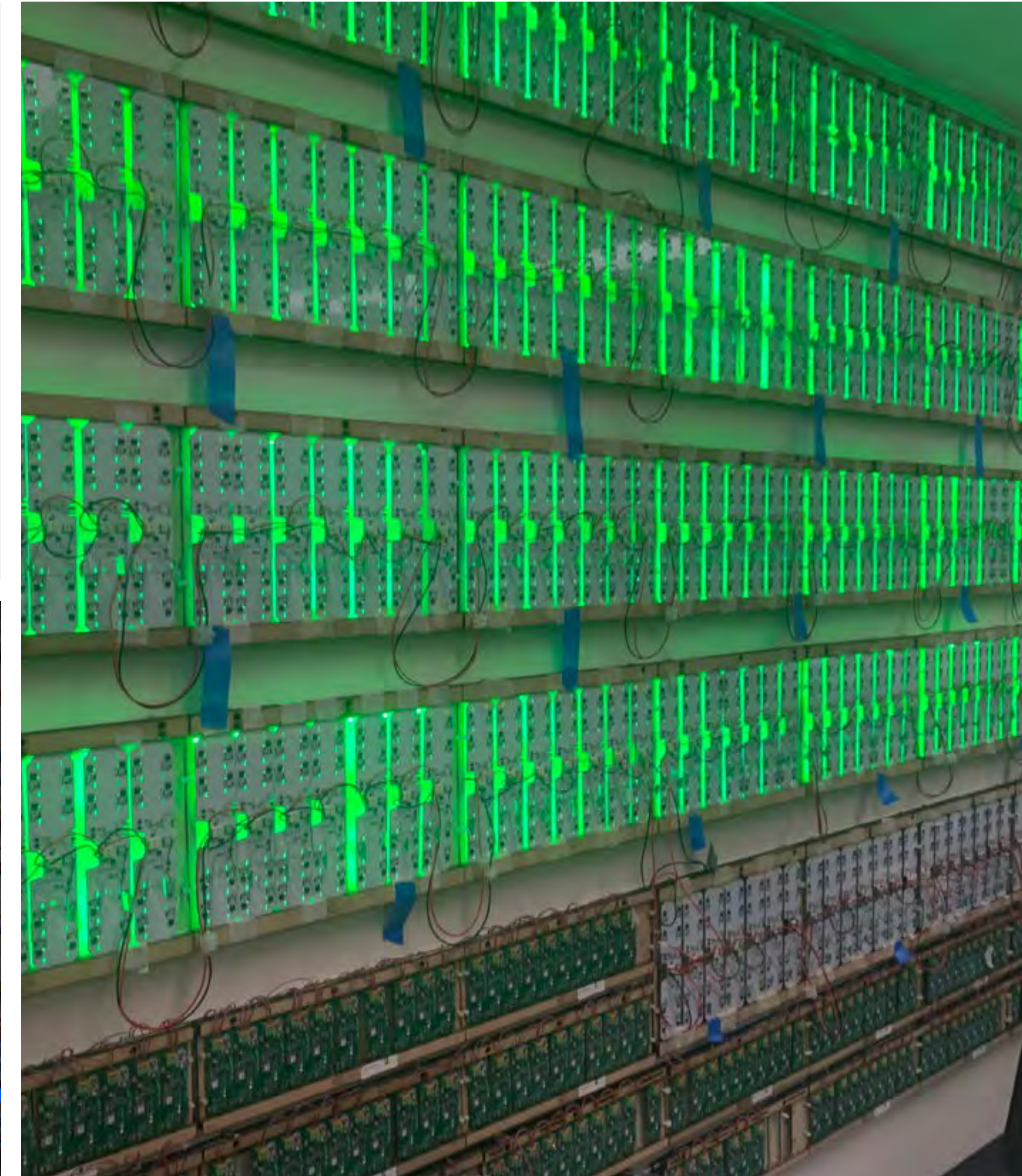
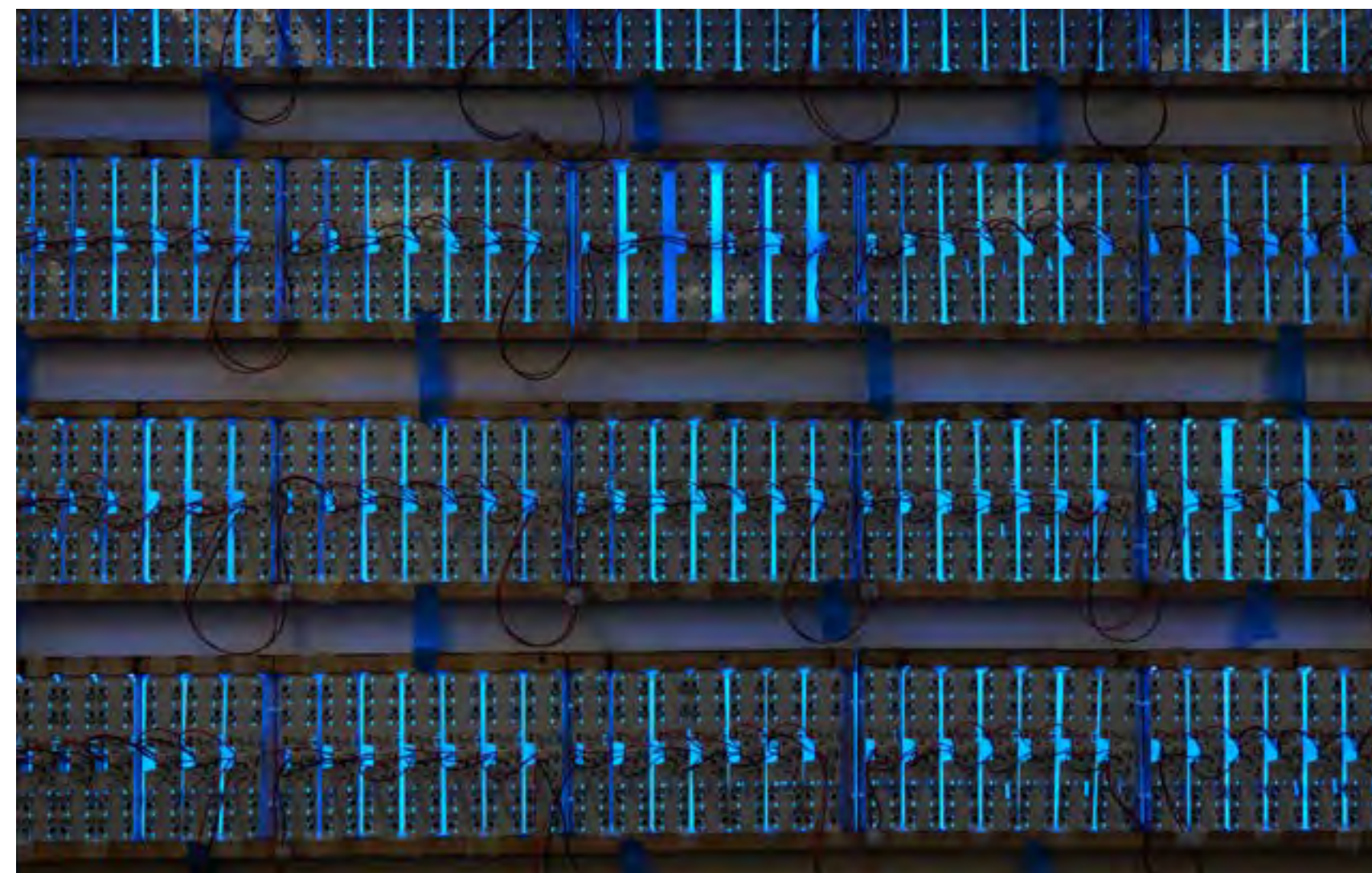
## Next-generation longwall lighting system, BurnBrite ISLEDi

ResTech

Burnbrite and Ampcontrol

IS LEDi – Next Generation Longwall Lighting System has been designed specifically for use in underground coal mines, key components of the IS LEDi system are IECEx certified Ex ia for Group I applications.

The system comprises three main components: the intrinsically safe light, a Bluetooth gateway device, and an interface module. Each light on the system is individually controlled using a Bluetooth mesh network. The lights can display seven colour variations, a variety of flash sequences and brightness levels, all controlled by the mine automation system.



## People | Young Professional Engineer of the Year

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WINNER

### Steve Adamthwaite

MIEAust

Steve Adamthwaite is passionately committed to Australia's infrastructure sector and shifting how it achieves resilience and security long term. He represents the next generation of leaders and innovators driving change, leading projects and growing skills that will underpin a sustainable future for sector.

Leading Arup's NSW/ACT Water Business, Steve drives water strategies centred on implementing sustainable, community-oriented solutions. He delivers the best levels of service and infrastructure for the community and industry.

Steve also shapes the sector beyond project delivery. He is actively involved in shaping future strategy through leadership positions with WaterAid NSW (Deputy Chair), Australian Water Assoc (Vice President NSW) and Engineers Australia (Deputy Chair – National Young Engineers Committee, Shadow Board).



### Gareth Evans

MIEAust CPEng NER

Gareth Evans completed his high schooling and upbringing within the Coffs Harbour region. Gareth delayed his study commencement to undertake a year of work as a concrete batcher in 2010 for Boral, and continued to work as a batcher throughout his engineering studies. Gareth completed his university practical experience through the Boral Technical department, employed as a technical assistant/undergraduate engineer. Gareth then started with Northrop as an undergraduate structural engineer in 2014 and graduated from the University of Newcastle the following year. Gareth began working at the Newcastle office before establishing the Coffs Harbour office in February 2021.



### Willorage Perera

MIEAust

Will Perera is a Mechatronics Engineer who graduated from Monash University. He is working as a senior systems engineer/project engineer at Boeing Defence Australia. Before devoting his work to BDA, Will was a lead engineer and technical advisor to the Department of Transport VIC and NSW.

He is currently a chartered engineering candidate. He is the founder of the Engineers with Disability Australia community of practice. While he is passionate about engineering, he takes pride in providing the best volunteer work to impact society positively.



Excellence  
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# Northern





## Chief Judge

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### **Simon Flowers**

MIEAust CPEng NER

Simon Flowers is the Project Director for the Middle Arm Sustainable Development Precinct and accountable for the strategic direction and delivery of the Middle Arm Infrastructure and project objectives. Simon is a chartered Engineer and project delivery professional having spent 6 years in the UK on infrastructure development and subsequently the past 12 years with a global energy company.

Most recently Simon led an international team of engineers responsible for the delivery of projects of onshore LNG plant and offshore hydrocarbon production platforms. Simon also has a background in enterprise asset management and a passion for business strategy and energy development and is currently studying a masters in sustainable development.

## People and Projects Judges

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### **Simon Flowers**

MIEAust CPEng NER

### **Jacinta Kelly**

FIEAust CPEng NER APEC Engineer IntPE(Aus)



## City Deals Austin Lane Activity Node

ADG Engineers (Aust) Pty Ltd

Clouston Associates – Landscape Architect

Northern Territory Government, Department of  
Infrastructure, Planning and Logistics,

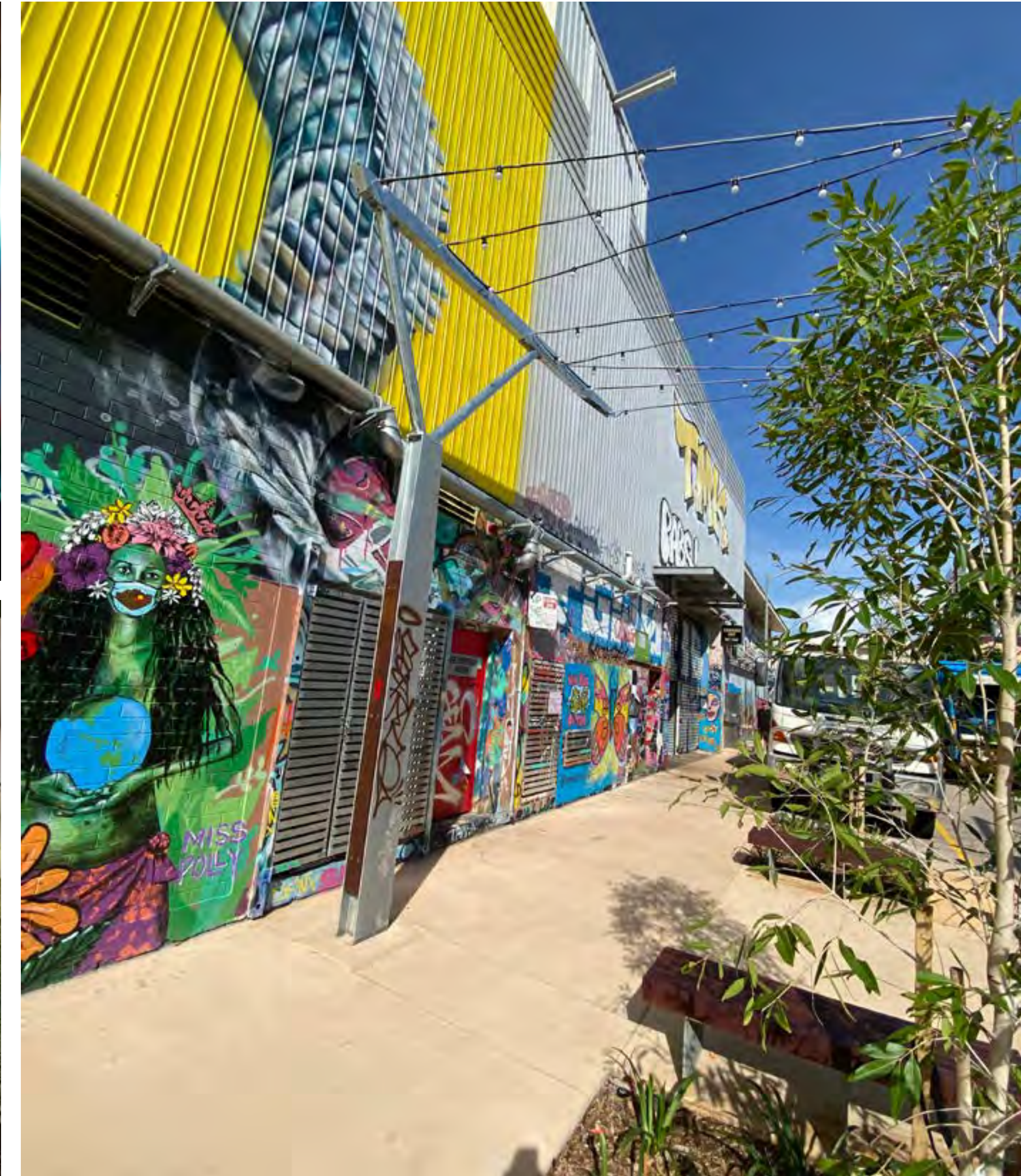
City of Darwin

NTBS – Electrical Engineers

Sir William Hudson  
Northern Finalist

The Austin Lane project has seen the Austin Lane transformed from a derelict laneway, which attracted anti-social behaviour, to a new and vibrant precinct within the heart of Darwin CBD. The upgrade of the laneway is now a destination for nightlife. Graffiti and anti-social behaviour have been replaced with street art and new trendy hospitality venues opening onto the laneway. The transformation of the laneway into a shared zone was achieved through innovative design solutions that promoted safety while also achieving the desired performance characteristics. The innovative engineering design applied to this project has been key to its success.

Creating an inclusive environment has opened the laneway to host public events and street festivals. The project has provided many social, environmental, and economic benefits to the local community and will continue to do so. The laneway is continually used for events and evolves with the growth of the city.



## Manunda Place

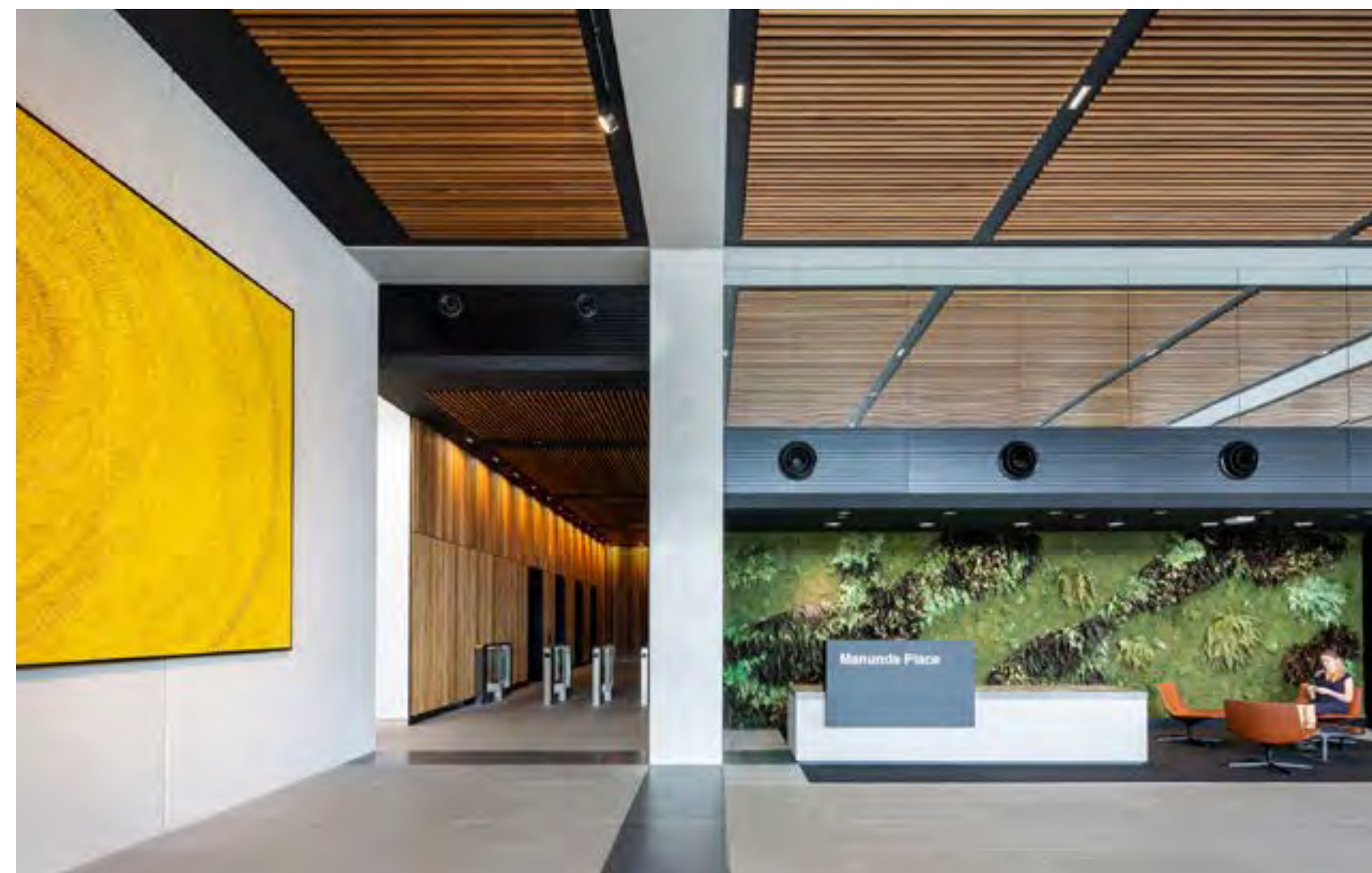
ADG Engineers (Aust) Pty Ltd

Sandran, Sissons and Hutchinson Builders

The Manunda Place building has replaced a dilapidated and dated building with an elegant, bold, and distinctive commercial office building. The ground level enhances the streetscape to Cavenagh, Knuckey and Litchfield Streets, activating the space by connecting the public domain with the grand lobby/gateway to the upper floors.

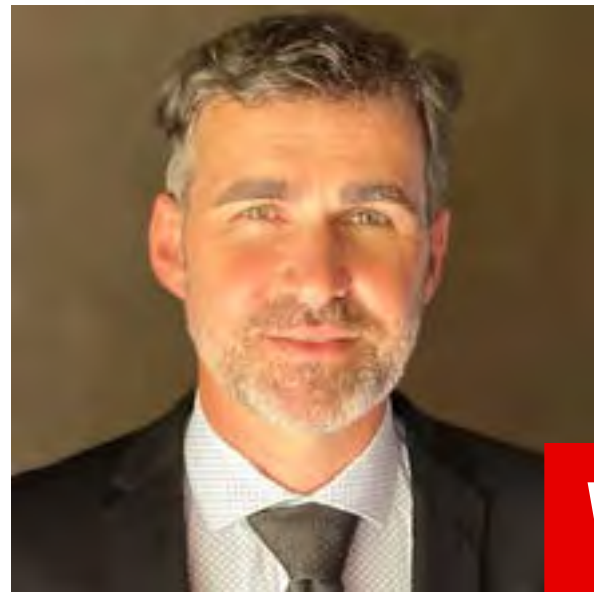
The lobby houses a public café, providing an opportunity to meet and collaborate while providing a further connection to the public. It is also home to the remarkable Wupun, Sun Mat, artwork by Regina Pilawuk Wilson, which was commissioned for the project.

The upper floors provide a-grade office space for the Northern Territory Governments Department of Health, achieving sustainability initiatives that exceed the minimum and set a benchmark for the area. The building was designed using post-tensioned slabs and pre-cast concrete walls, providing larger spans and open floor areas while reducing waste and material, and providing value for money for the developer and Northern Territory Government.



## People | Professional Engineer of the Year

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WINNER

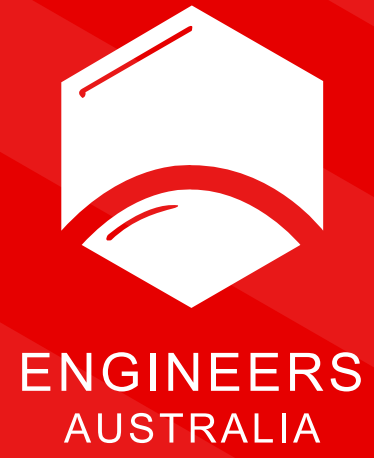
### Jim McKay

MIEAust CPEng NER

Jim is passionate about the opportunity for engineering to lead the change towards a de-carbonised, sustainable future.

He has more than 20 years' engineering experience across various roles in the electricity supply industry, including as Chief Engineer. Jim specialised in protection engineering and has worked in asset management, major projects, power system planning and renewables integration.

As the inaugural Executive Director of the Office of Sustainable Energy in the Northern Territory, Jim applied his engineering experience and leadership skills to reform energy policy and deliver the NT's first renewables-based system plan.



Excellence  
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# Queensland



## Chief Judge

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### Jane Copperthwaite

FIEAust CPEng NER APEC Engineer IntPE(Aus)

Jane has over 30 years industry engineering experience across the engineered system lifecycle, she runs her own consultancy business Anutha. She is passionate about applying engineering techniques in both technical and non-technical contexts all with an aim to assure that what is engineered will meet the need. Her most recent assignment is focused on assuring that a European Train Control System is operationally critical assets to serve the needs of the community.

Jane has been active in Engineers Australia for many years. Currently chairing the Queensland Honours and Awards committee, which is all about promoting engineering excellence, and seeking recognition within our engineering community. Jane has been a Stage 2 Assessor for Engineering Australia and that has encouraged her inherent fascination by what can be learned from beyond her own field of expertise. Being Chief Judge is a privilege that allowed her to review the amazing achievements of engineers.

## People and Projects Judges

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### Alan Ainsworth

FIEAust CPEng EngExec NER APEC Engineer  
IntPE(Aus)

### Mark Lendich

FIEAust CPEng EngExec NER APEC Engineer  
IntPE(Aus)

### Richard (Dick) Wharton

HonFIEAust CPEng(Ret)

### Kelly Coverdale

FIEAust CPEng NER APEC Engineer IntPE(Aus)

### Zoe Eather

MIEAust CPEng NER

### Colin Mitchell

FIEAust CPEng EngExec NER APEC Engineer  
IntPE(Aus)

### Simon English

MIEAust CPEng APEC Engineer IntPE(Aus)

## Australia's first biosolids gasification facility

Logan Water

Downer

WSP

Cardno now Stantec

ARENA

Sir William Hudson  
Queensland Finalist

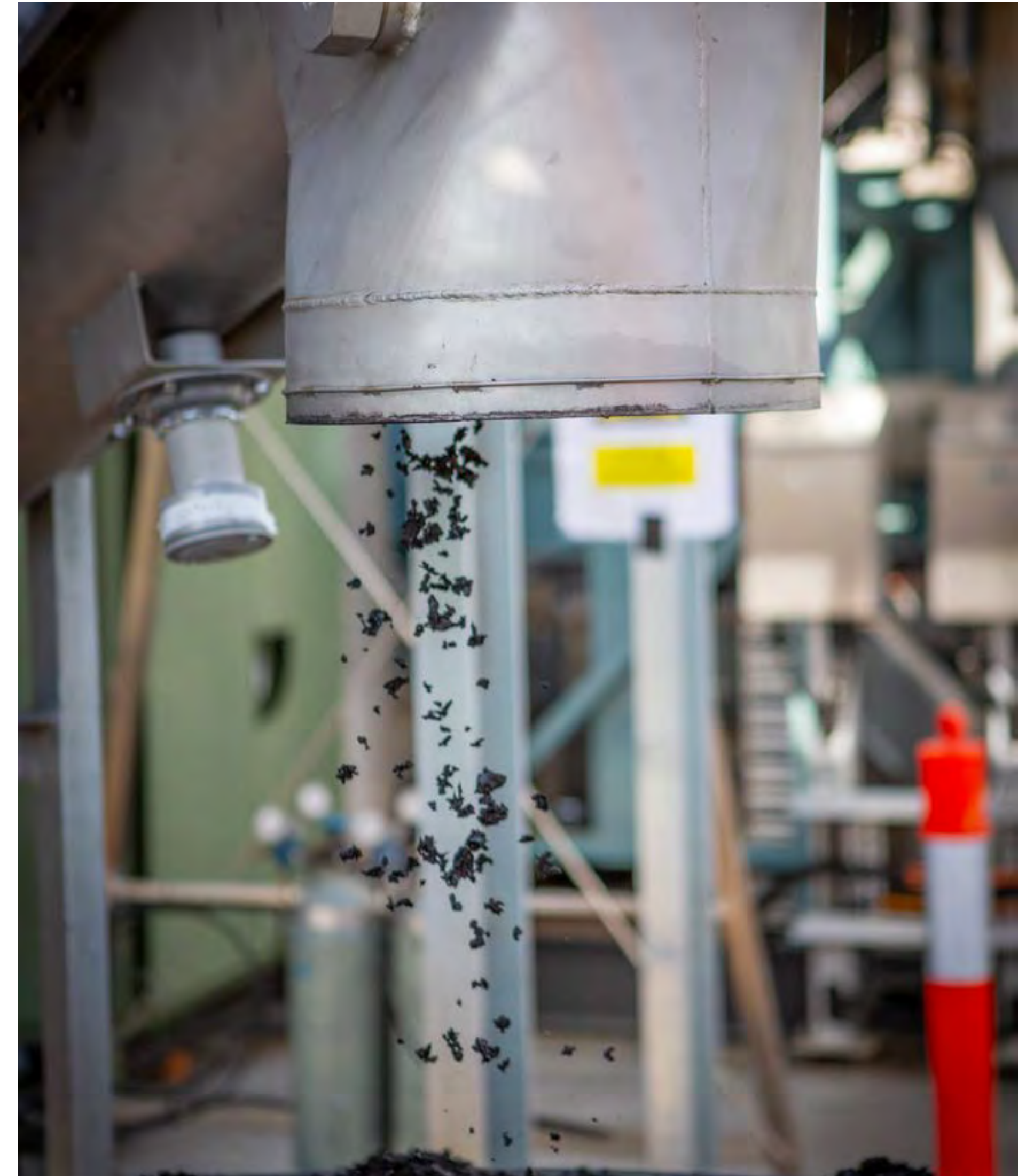
Logan City Council's Logan Water has pioneered an Australian-first—a facility that transforms human waste, or biosolids, into renewable energy and a sustainable product called biochar.

Biosolids gasification destroys chemicals in biosolids like persistent organic pollutants, and micro and nano-plastics. Carbon emissions will be reduced by about 6,000 tonnes a year.

Operational cost savings and carbon credits will return almost \$1M a year to the City of Logan, and a new revenue stream will be created from biochar sales.

Biochar contains nutrients like those found in commercial slow release fertilisers, making it great for healthy soil and plants. Biochar can also be added to soil, asphalt, concrete and bricks to sequester carbon for thousands of years.

Our \$28M project was completed in April 2022. It was funded by Council with a \$6.2M grant from ARENA. [Watch the video.](#)



## Coal-fired Power Station Flexible Operation via Combustion Optimisation and Control Software Changes

**Stanwell Corporation Ltd – Stanwell Power Station**

This submission is to recognise exceptional contributions that Stanwell Power Station's (SPS) Flexible Operations Team have made to allow SPS (Queensland) to reduce its turndown minimum load from 40 per cent to 26 per cent.

The exceptional technological innovations delivered significant increases in turndown capability whilst also providing improvements to thermal efficiency, fuel savings, reduced air emissions, improved reliability and flexibility, improved process safety and plant life.

The technical approach is world-leading and the delivery was exceptional.

The project provides significant contributions to the public with cleaner, more reliable, and economical electricity supply, and to the engineering community. It can be readily implemented across other coal power generators to drive improvements and make the transition to renewables more efficient, reliable and economical, whilst also providing essential grid stability services.



## Monterey Apartments

Aurecon

Gardner Vaughan Group

The Monterey Apartment building in Kangaroo Point is Brisbane's first engineered timber residential tower. The 12-storey building features an innovative hybrid superstructure of reinforced concrete and mass engineered timber (MET) and is the first of this size in Australia.

The innovative use of timber for the superstructure is the hero and sets itself apart from other developments of this style. The site is situated over the top of the city's Clem 7 tunnel with restrictions on loads that can be imposed from above. Traditional construction methods only allowed for a five-storey building before the load requirements were exceeded, which was not economically viable. To unlock the true benefits of the site, the weight of the structure was reduced through the innovative use of MET products including glue-laminated and cross-laminated timber.

The timber used in Monterey is from 100 per cent renewable resources. It is an Urban Development Institute of Australia accredited EnviroDevelopment.





## Tunnel Condition Assessment

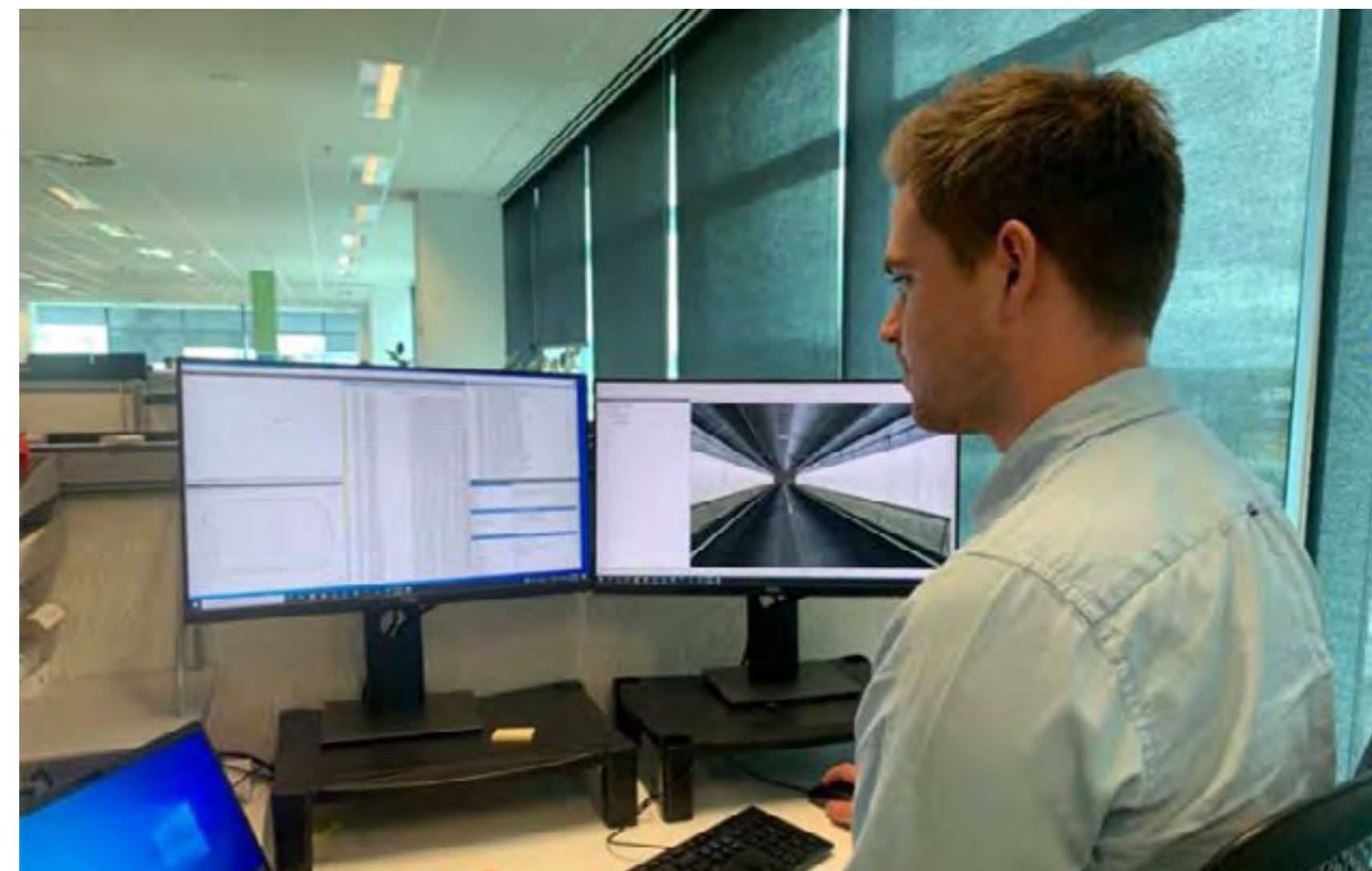
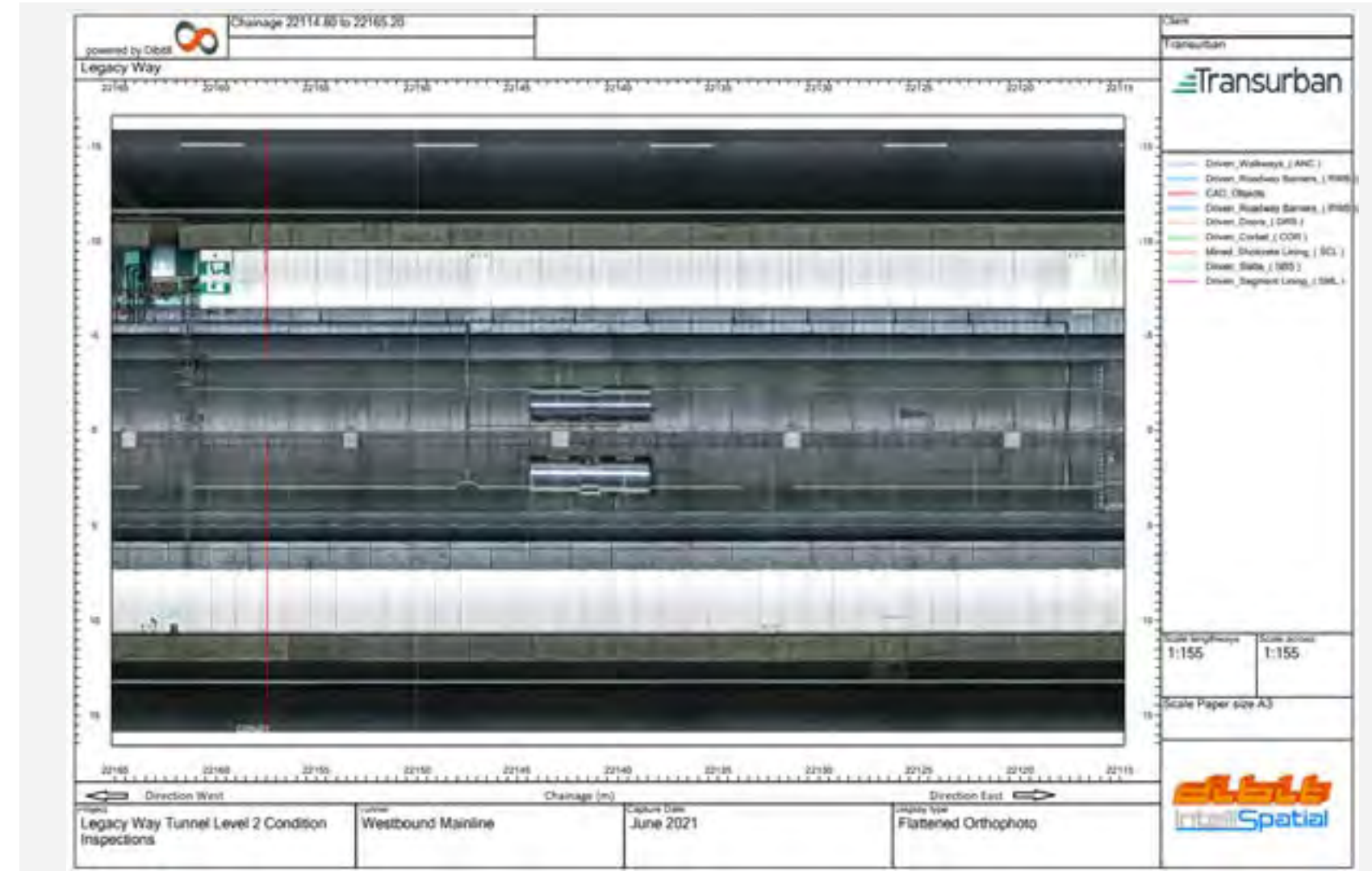
Transurban Queensland

Intellispatial

AECOM

Structural condition inspections and reporting of tunnels and their components are traditionally carried out manually. This can be expensive, time consuming, inconsistently captured, and difficult to cross reference over time. Formal reporting of tunnel condition relies on assessors finding, categorising and articulating changes in condition, which are reliant on being able to assess previous condition metrics. There are also constraints due to tunnel closure time frames, safety, risks, and costs due to working at heights and within confined spaces.

The project team identified and developed an innovative 'best of industry' process, capturing and managing structural assets, then streamlining data into physical reporting and Maximo. The project has formed the base layer of a 'Digital Twin' and can be used to identify deficiencies and features, detect changes year-on-year and enable data-driven decisions for operation, maintenance and engineering activities to deliver operational efficiency over the life of the tunnel.



## People | Young Professional Engineer of the Year

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WINNER

### Brody Clark

MIEAust CPEng NER

Brody is the acting Pavement Team Lead for WSP based on the Sunshine Coast. He graduated from QUT in 2014 with a Bachelor of Engineering and went on to complete his PhD in 2018. In 2019, Brody acquired his chartership in civil engineering by Engineers Australia and subsequently became an RPEQ. Brody is the youngest known person to acquire both a PhD and chartership in the civil engineering field in Australia. Brody has authored several peer-reviewed articles, contributed to the updated Austroads Guide to pavement Technology Part 4E and has presented his research at international conferences.



### Steven Bondio

MIEAust CPEng NER APEC Engineer IntPE(Aus)

Steven is a dynamic chartered professional engineer, passionate about decarbonisation and sustainable asset transformation to provide clients and communities a brighter future. Steven has advised government and industry across the energy supply chain with internationally significant projects.

He advises on renewables, hydrogen, microgrids and storage projects, expertly managing complex issues and diverse stakeholder groups to identify critical risks and compelling opportunities to shape the future of Australia's energy ecosystem. Through both his professional and voluntary work, Steven is making significant contributions to the decarbonisation of Australian businesses and the wider community.

## People | Young Professional Engineer of the Year

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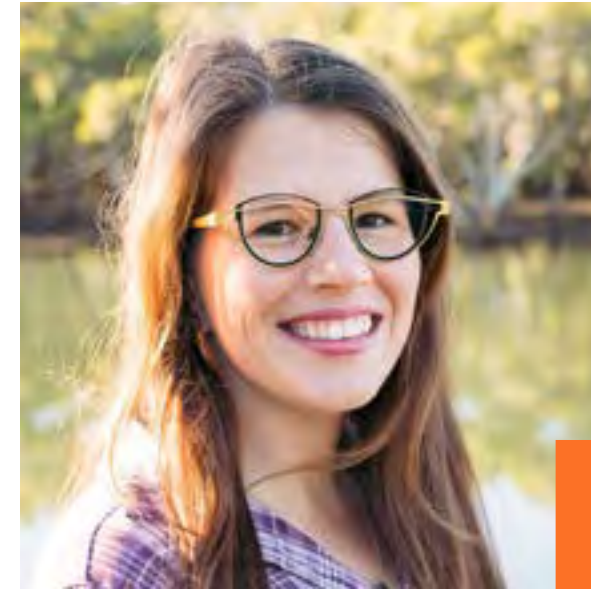


### Priyank Menezes

MIEAust

As a child, Priyank was fascinated by aircraft and air shows, which has translated to a passion for Aerospace Engineering. Priyank graduated with a bachelor's degree in mechanical and aerospace engineering and started his graduate career with Airbus Australia Pacific in 2017. He then completed his masters in systems engineering and has delivered significant weapon capabilities as an Armaments Engineer.

He is currently the Team Lead for Dynamic Systems which manages safety critical components on rotary wing platforms. Priyank also volunteers with the Australian Air Force Cadets and is a committee member with the Australian Industry and Defence Network Queensland.



Highly Commended

### Alice Twomey

MIEAust CPEng

Alice Twomey is a Postdoctoral Research Fellow in the School of Biological Sciences at The University of Queensland, developing interdisciplinary nature-based solutions to complex flood and coastal engineering problems. By combining the fields of coastal engineering and marine ecology, Alice is pioneering the way towards developing engineering design solutions which provide co-benefits for society and the environment.

An award-winning science communicator, Alice shares her passion for engineering through her role as a Queensland Flying Scientist and participating in Outreach events including the World Science Festival to promote the profession and highlight current and future problems engineers are solving using creative nature-based methods.

## People | Professional Engineer of the Year

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WINNER

### Abel Immaraj

MIEAust CPEng EngExec NER APEC Engineer IntPE(Aus)

Abel applies his deep experience of systems in water governance, planning, management, operations and audit to advise public, private, and not-for-profit sectors in Australia and New Zealand. Abel develops complex strategy, planning and decision making capability in engineering works. He has co-designed strategy and has then translated that strategy into implementation plans to ensure benefit-realisation. He has also co-delivered innovative solutions and managed programs and projects for the benefit of communities.

Abel's track record spans national, state and local scale projects across water and wastewater services, nature-based solutions, market and structural reforms, built and natural assets, asset management planning, and economic instruments.



### Fernanda Carrea

FIEAust CPEng EngExec NER APEC Engineer IntPE(Aus)

Fernanda Carrea is passionate about technology and making a difference. She has developed her professional career contributing to companies and projects that put the consumer at the centre of all decisions.

Fernanda holds an Industrial Engineering degree from Universidad de Buenos Aires, and a double Master of Marketing and Supply Chain Management from Griffith University. She is a Chartered Engineer in information technology and electrical engineering, project management, leadership and management, and a Registered Professional Engineer Queensland.

In June 2017, Fernanda Carrea joined GroundProbe, part of the Orica group, and is now Vice President of Technology.

## People | Professional Engineer of the Year

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### Shalendra Ram

FIEAust CPEng EngExec NER APEC Engineer IntPE(Aus)

Shalendra is a professional engineer with Bachelor and Master of Engineering (Civil) from Queensland University of Technology. Shalendra is a Technical Director, Transportation at AECOM with private and public sector experiences spread across all phases of infrastructure projects. Shalendra is a Registered Professional Engineer of Queensland and a Fellow/Executive Engineer of the Institution of Engineers Australia. Shalendra is the Chair of the EA's Transport Australia society (TAs) National Executive and a member of EA's Civil College Board and a board member of the Infrastructure Association of Queensland. Shalendra is a senior executive with AECOM and has driven leadership and management amongst engineering professionals in Australia.



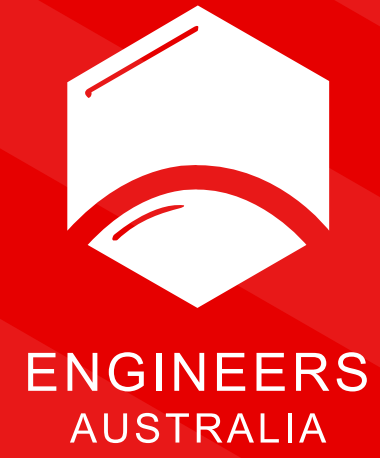
### Arne Nilsen

FIEAust CPEng NER APEC Engineer IntPE(Aus)

Arne Nilsen is a Chartered Professional Engineer, Principal and Design Director - Ports and Marine, at Aurecon. In his roles, he provides technical leadership across all markets, guiding multiple teams to deliver special outcomes across a broad range of infrastructure projects.

Arne holds a Bachelor of Engineering (Civil), Hons 1 from the University of Queensland. He is a highly regarded professional within the industry as an individual that has contributed to the majority of port developments in Australia.

He expertly manages complex issues to identify critical risks and realise compelling opportunities for the future of Australia's maritime transport and industry.



Excellence  
Awards

# South Australia





## People Chief Judge

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### Andrew Meyer

MIEAust CPEng NER APEC Engineer IntPE(Aus)

Andrew is a chartered professional engineer with technical, business and management experience.

His technical experience spans several industries: Vibration & Acoustics Consulting, Railway Rolling Stock Condition Monitoring and Automotive Measurement Equipment and has a broad theoretical and practical understanding of mechanical and electronic systems.

Andrew has run an international office for an Australian company providing railway wayside monitoring equipment installation, maintenance and sales and also managed a team of engineers developing several new and innovative automotive measurement products. Currently, he manages the Australian office for an innovative company delivering computer vision solutions to the railway industry.



## Projects Chief Judge

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### Katharine Ward

FIEAust CPEng NER APEC Engineer IntPE(Aus)

Katharine is a Chartered Professional Engineer and Fellow of the Institution of Engineers Australia. As a Civil and Environmental Engineer, with post graduate qualifications in Public Administration and 20 years' experience, Katharine is well regarded as a leader and specialist in the South Australian water and environment sector. Using her project management and natural resources management expertise, she is currently the Department for Environment and Water's Project Manager for flood management projects in the Northern Adelaide Plains region. Katharine is also currently a member of the Engineers Australia South Australian Division Committee and National Congress, and previously held board and committee roles with the Stormwater Management Authority and Australian Water Association where she used her strategy and governance acumen as an advocate for the engineering profession. Katharine has previously judged awards for Engineers Australia, Institute of Public Works Engineering Australasia, and the Australian Water Association.

## People and Projects Judges

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### People Judges

#### Michael Scott

FIEAust CPEng NER APEC Engineer IntPE(Aus)

#### Tasnim Al-Kufaishi

MIEAust

### Projects Judges

#### Adam Gifford

AFIEAust

#### Dominic Burnet

GradIEAust

# SA Water's Zero Cost Energy Future Program

SA Water

Sir William Hudson  
South Australia Finalist

SA Water's industry leading Zero Cost Energy Future is a highly innovative approach to the optimisation of energy generation and use.

Solar PV and battery storage at multiple locations works with sophisticated technology that manages the use and export of electricity to reduce operating costs and improve the sustainability of services.





# Osborne Naval Shipbuilding Precinct (Future Submarine Program) Infrastructure Development Phase 1

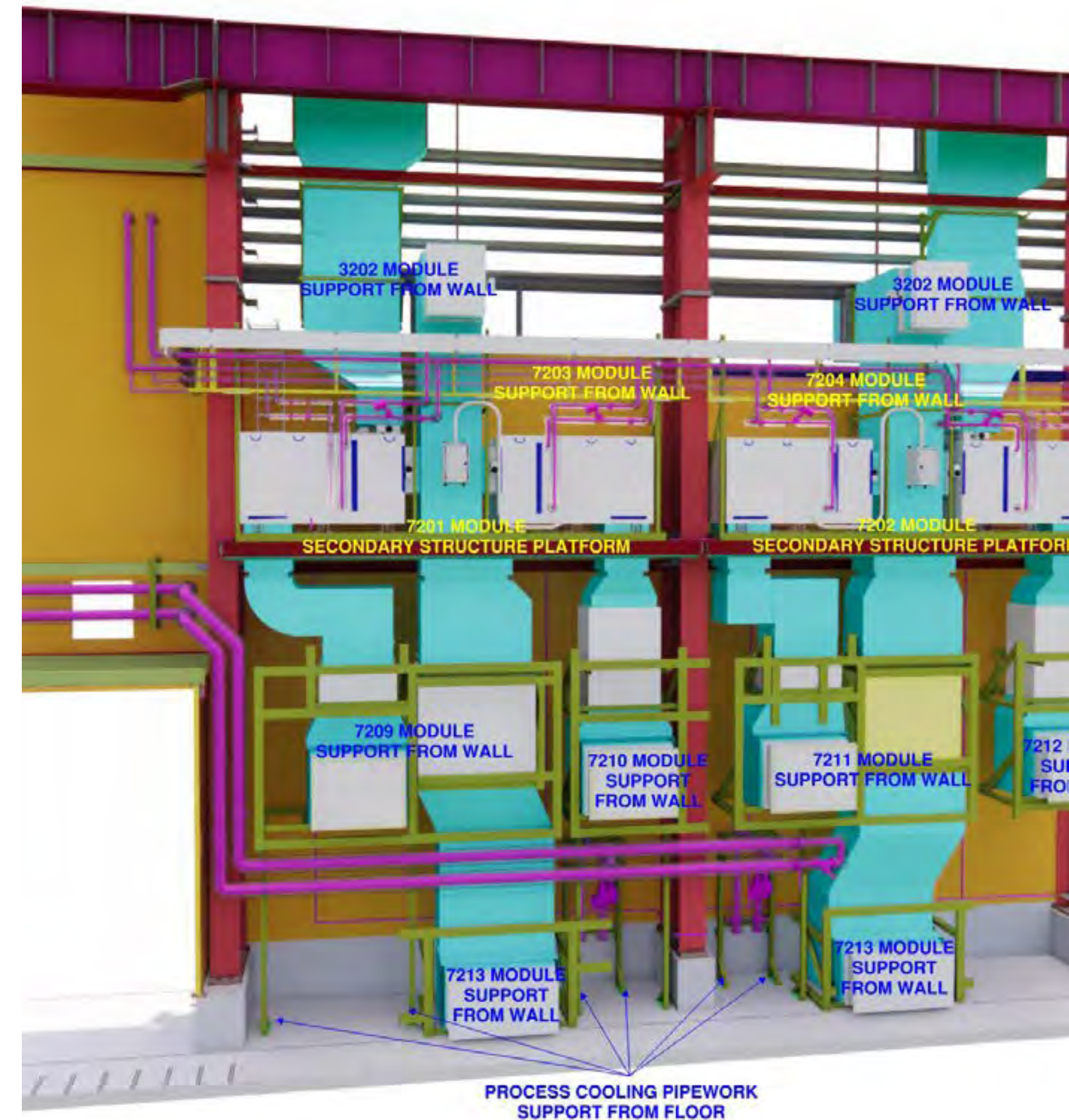
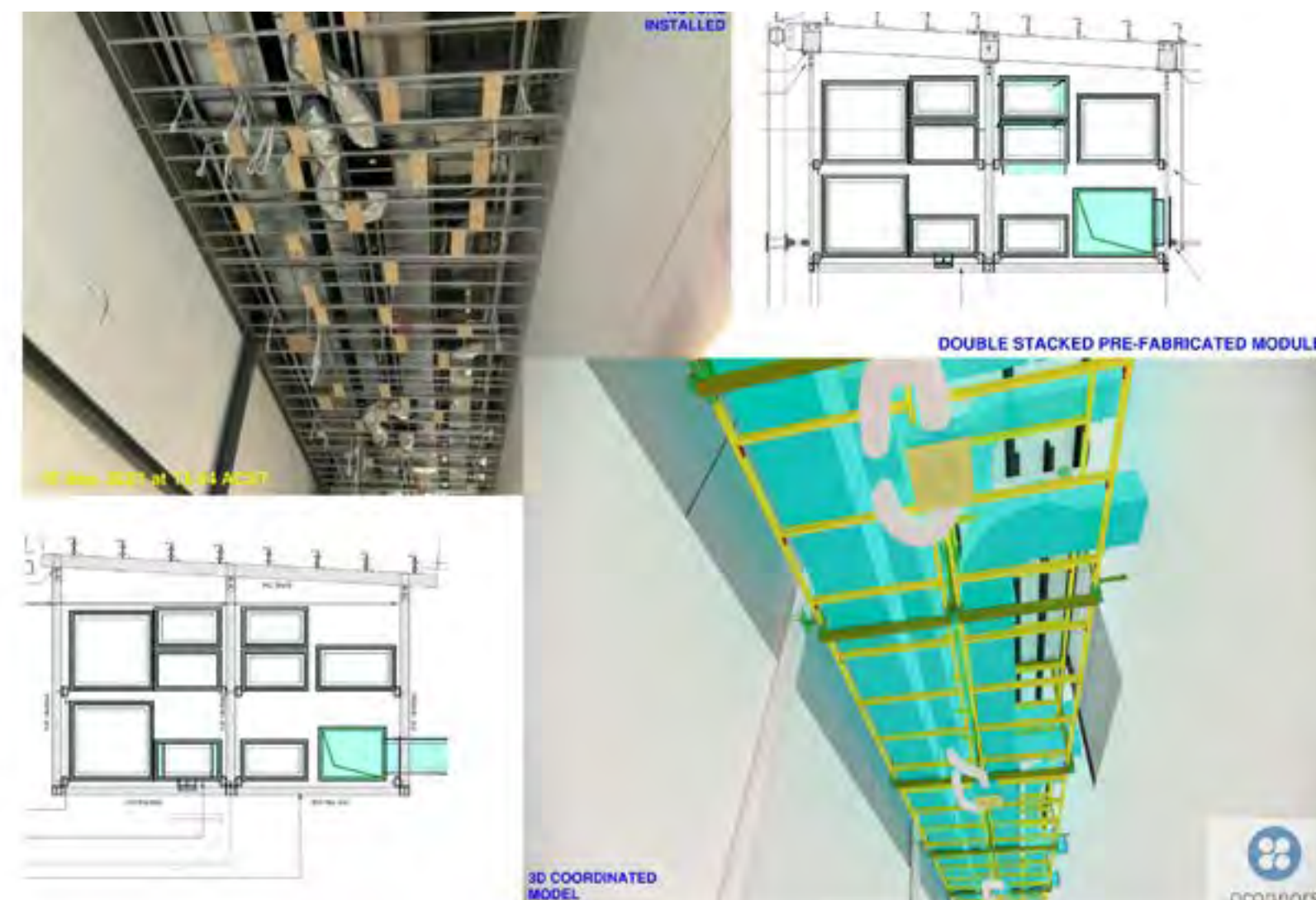
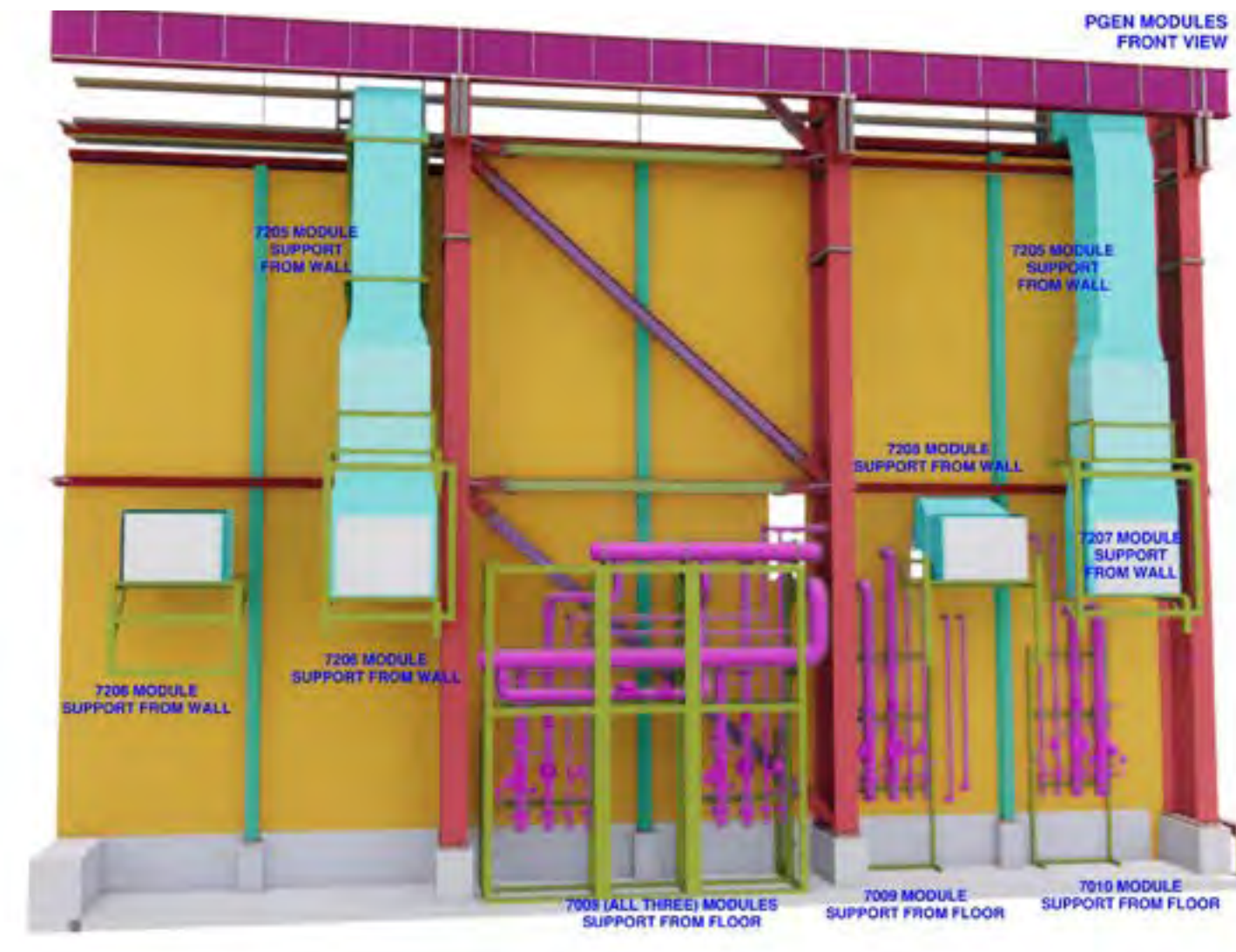
A.G. O'Connor Pty Ltd

Laing O'Rourke, KBR, Walbridge Gilbert Aztec,  
R2 sheetmetal and fabrication and  
RYS fabrication

Highly Commended

Osborne Naval Shipbuilding Precinct (Future Submarine Program) Infrastructure Development, mechanical services prefabricated modules, is a collaborative and innovative approach to overcoming challenges presented to engineers in construction. Excellence is achieved by overcoming time and spatial constraints with a process of detailed risk assessment and clearly objectifying successful outcomes. The engineering process produced a series of prefabricated services modules which ensured detailing, coordination, safety, constructability, commission ability and maintainability where all paramount in engineering to deliver successful project outcomes.

Achieved objects include maximising the collaborative use of technology to coordinate and communicate across multiple trades, detailed fabrication conducted in the safest, most efficient and most accurate manner and a product that is produced within the construction tight construction and spatial constraint, to ensure end users get full functionality and utility out of the services provided.



## Flinders Link Project

Jacobs

The quality of the urban and engineering design solution of Flinders Link in Adelaide has been critical to the project's success and the outcomes are exemplary. The infrastructure is both useful, appealing and encourages public transport usage and participation.

Flinders Link is considerate of its surrounds and balances the needs of the stakeholders and community. The design embodied several technical complexities such as the 430-metre elevated viaduct and the highly constrained nature of the project site that dictated its horizontal curvature being held to a tight, 237-metre radius, and construction above major roadworks.

The \$141m project was funded by Federal and State Governments and implemented by the Department for Infrastructure and Transport. Jacobs was Lead Design Consultant for the project, engaged by the Gateway South Joint Venture (Fulton Hogan and Laing O'Rourke).



# Whalers Way Orbital Launch Facility Development Application and Environmental Impact Assessment

**SouthernLaunch.Space Pty Ltd**

The Whalers Way Orbital Launch Complex will be Australia's first private rocket launch facility to be developed and constructed, and it is of strategic importance to Australia.

The development application and associated environmental impact statement are unique studies that required the involvement of over 30 subject matter experts. It required the development of testing and research methodologies, which have never been used in Australia before.

The level of complexity was very high because there were no previous similar projects to inform the assessment process. The resulting study is a 3,500 technical document which is a first for Australia. The resulting launch facility will be of high strategic importance to Australia.

Through its facilitation of getting satellites into space, it will benefit the Australian public at the local, state, and federal levels.



## People | Young Professional Engineer of the Year

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WINNER

### Margaret Gayen

MIEAust

Margaret is a mechanical project engineer at GPA Engineering, an athlete and an industry-leading change maker. Her engineering career covers sectors from high-tech manufacturing to heavy industrial design consulting. Margaret's achievements include the design of leading-edge medical technology, the publication of new research for the emerging hydrogen industry and representation of Australia at the Commonwealth Games.

Valuing attention to detail and systems-based problem solving, Margaret stands out as a reliable and capable leader and engineer. She is now applying these skills as an advocate for women in industry and is pushing for improved gender equality.



### Ben Howell

MIEAust

Ben has gained extensive experience across a number of significant South Australian civil infrastructure projects since 2010. His cross disciplinary experience on major road and urban infrastructure projects, critical high voltage power infrastructure projects as well as both pump station and associated pipeline projects has led to a multifaceted knowledge base and the ability to deliver challenging civil solutions at the highest safety and quality standards.

Having spent time in a managerial position within the United Kingdom, Ben has since returned to a pure project management role with his continued progression and technical learnings seeing him successfully oversee several high-profile civil transport infrastructure projects.

## People | Young Professional Engineer of the Year

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### **Oladimeji Benedict Olalusi**

MIEAust CPEng NER APEC Engineer IntPE(Aus)

Dr Benedict Olalusi is an award-winning Chartered Professional Engineer and a Senior Lecturer. He is currently a Senior Forensic Engineer with Sedgwick Australia. His work and research specialise in forensic engineering, structural reliability/safety and risk assessment, sustainable concrete materials, code/standard development and applied artificial intelligence. He currently serves as a technical committee member for the Concrete Institute of Australia and the International Federation of Structural Concrete (fib).

He is a Board member of the fib Young Member's Group and an Academic Editor for the Journal of Advances in Civil Engineering. He has supervised many PhD and MSc students in a variety of topics in structural engineering. Benedict has published over 60 quality technical publications in structural engineering and received numerous national and international awards.

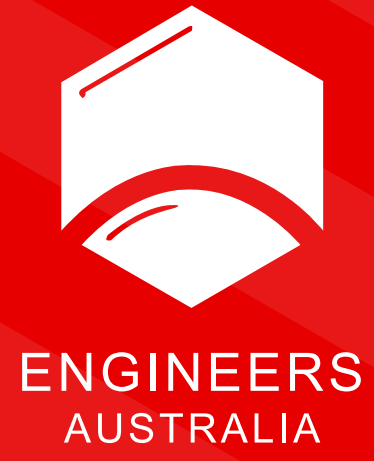


### **Jaya Sudarpa**

MIEAust

Mr Jaya Sudarpa is a Systems Engineer practising advanced digital engineering methods on some of the nation's most strategically significant defence programs. With a background in mechatronics, he is an adaptable engineer, demonstrated by practical experience in wireless communication, UAVs, statistical analysis, embedded software development, and of course, systems engineering.

Jaya is also passionate in supporting early career engineers, taking his role beyond the technical domain. He has volunteered as a university mentor, coordinated his organisation's nationwide University Engagement Program, and holds the role of Early Careers Lead, responsible for more than 30 engineering, integrated logistics support, and finance graduates.



Excellence  
Awards

# Sydney





## Chief Judge

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### **Bruce Howard**

HonFIEAust CPEng NER APEC Engineer IntPE(Aus)

Bruce Howard HonFIEAust CPEng NER APEC Engineer IntPE(Aus) is an exceptional engineer that has made an extensive contribution to Engineers Australia and the engineering profession at large.

Bruce is currently the General Manager of a major solar energy development project in NSW and the Managing Director of a renewable energy and electric power consultancy company, His professional experience in excess of 40 years is in the electrical power industry with a specialisation in renewables. Bruce holds a Bachelor of Engineering (Electrical - Hons), a Master in Biomedical Engineering and an MBA.

## People and Projects Judges

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### **Norm Himsley**

FIEAust CPEng APEC Engineer IntPE(Aus)

### **Julia Ratnayake**

FIEAust CPEng NER APEC Engineer IntPE(Aus)

### **Peter Goudie**

FIEAust CPEng NER APEC Engineer IntPE(Aus)

### **Ping Tan**

FIEAust CPEng APEC Engineer IntPE(Aus)

## Quay Quarter Tower

AMP Capital

Multiplex, BG&E, Arup, ADG, Kasina  
Consultants, 3XN architects, Architecture BVN

Sir William Hudson  
Sydney Finalist

Developer AMP Capital's radical sustainability strategy for QQT involved upcycling an existing skyscraper, retaining 65 per cent of the tower's beams, columns and slabs, and over 95 per cent of its existing core, resulting in an embodied carbon saving of over 12,079 tons.

Approximately 45,000 square metres of new construction were grafted on new floorplates to the existing slabs. The new structure optimises the structural grid span to increase views to the harbour. The façade's external sunshade hoods reduce the heat loads on the building, reducing energy loads while optimising views.

By upcycling an existing building into an exemplar of sustainability, QQT stands as a model for future construction, demonstrating that demolition need not be the favoured option for creating a world-class development. Unprecedented collaboration in this complex project involved design architects 3XN, Multiplex, structural engineering by BG&E, ADG, Digital Twinning and peer review by Kasina Consultants, and Architecture BVN as executive architects.





## Incat Crowther 123 - Catamaran Ro-Pax Ferry 'Eleanor Roosevelt'

Incat Crowther

Highly Commended

The Incat Crowther 123m Catamaran Ro Pax Ferry, 'Eleanor Roosevelt' was designed and engineered by Incat Crowther, a ship design and engineering firm with its main office in Sydney, for construction by Astilleros Armon Shipyard at its shipyard in Gijon, Spain. The Eleanor Roosevelt is one of the largest aluminium catamarans ever built and is the first to enter service using reciprocating dual fuel main engines, capable of using liquid natural gas as a low emission fuel source. The Eleanor Roosevelt operates a daily return service between Denia, Spain and the Balearic Islands carrying up to 500 vehicles and 1200 passengers with each trip.



## Christopher Cassaniti Bridge

Arup Australia Pty Ltd

KI Studio (Architect)

Landcom (Client)

Arengo Daracon Joint Venture (Contractor)

Honesty and elegance are hallmarks of any great bridge structure, and two attributes that the Lachlan's Line pedestrian and cycle bridge proudly flaunts.

Through structural ingenuity, advanced parametric analysis, and sheer determination, the design and construction team delivered a stunning, multi-span, materially efficient bridge structure in direct response to its site and functional desires.

Its structural system, legibility, and boldness resonates with any engineer, whilst its inherent open scale helps the community retain strong links to their surrounding ecosystems.



## Glasshouse - Macquarie Square

Meld Strategies

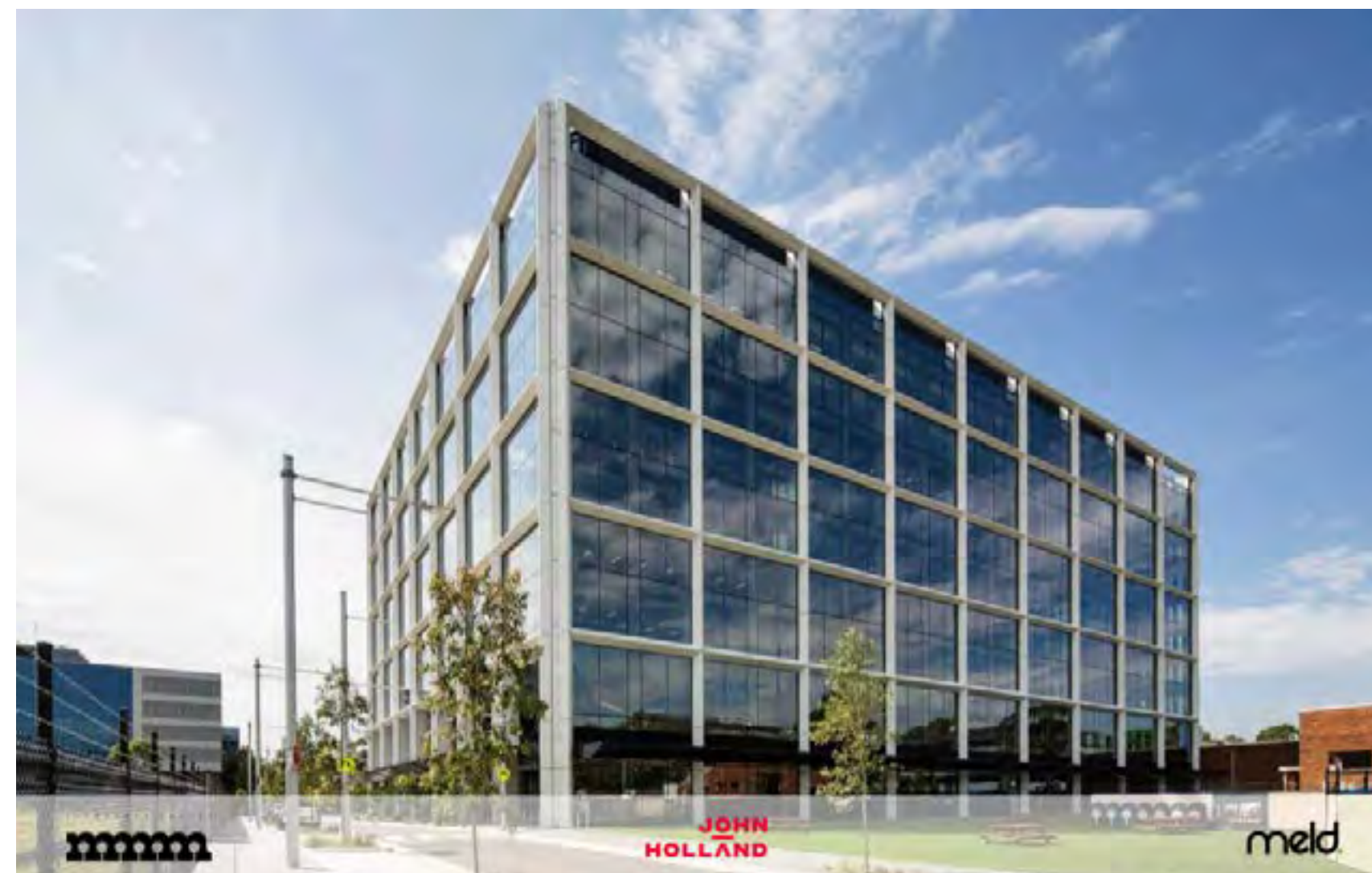
John Holland

Glasshouse is an exemplary Commercial Office Smart building that inspires the perfect balance of inspiration, creativity and productivity for tenants and optimised for operational efficiency.

Located near Macquarie Park Metro Rail, Macquarie Shopping Centre and Macquarie University, the Glasshouse is a progressive workspace designed to help tenants align to new ways of working. It has incorporated an extensive range of technology systems that supports the position of this office complex being of the smartest buildings in Australia.

The building was conceived for collaboration and connectivity by Architectus, and the building's developer and constructor, John Holland. The design and construction process extensively utilised 5D BIM to coordinate the design of the building and associated building services.

Contained within the building are over 32 technology systems connected via a smart building systems architecture based open standards and open systems with a focus on superior user experiences for occupants.



## Lord Howe Island Hybrid Renewable Energy Project

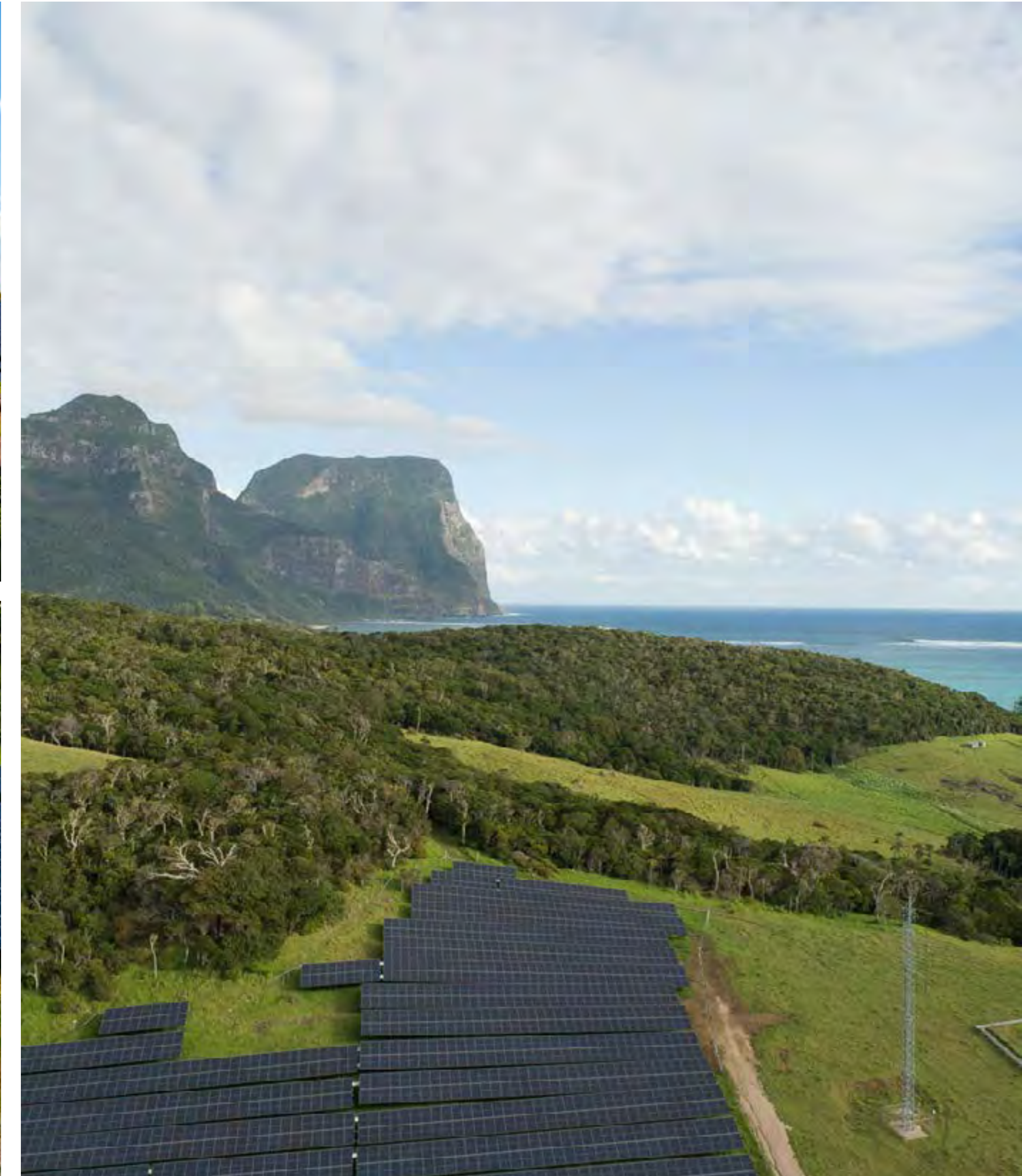
Lord Howe Island Board, Jacobs and Photon Energy

The Hybrid Renewable Energy Project could only be achieved through strong partnerships and cooperation executing an ambitious project on a tiny remote island with one shared vision: a sustainable future for Lord Howe Island.

Previously dependent on diesel for generating power, the island's residents now have access to clean energy.

The project team successfully met the challenges faced with delivery of a project of this scale, on a remote island, without a local construction industry and amidst a global pandemic. The innovative design and layout ensures the protection of the endangered Flesh-Footed Shearwaters who neighbour the site.

Today, the system is performing exceptionally well and exceeded expectations with a very high level of reliability.

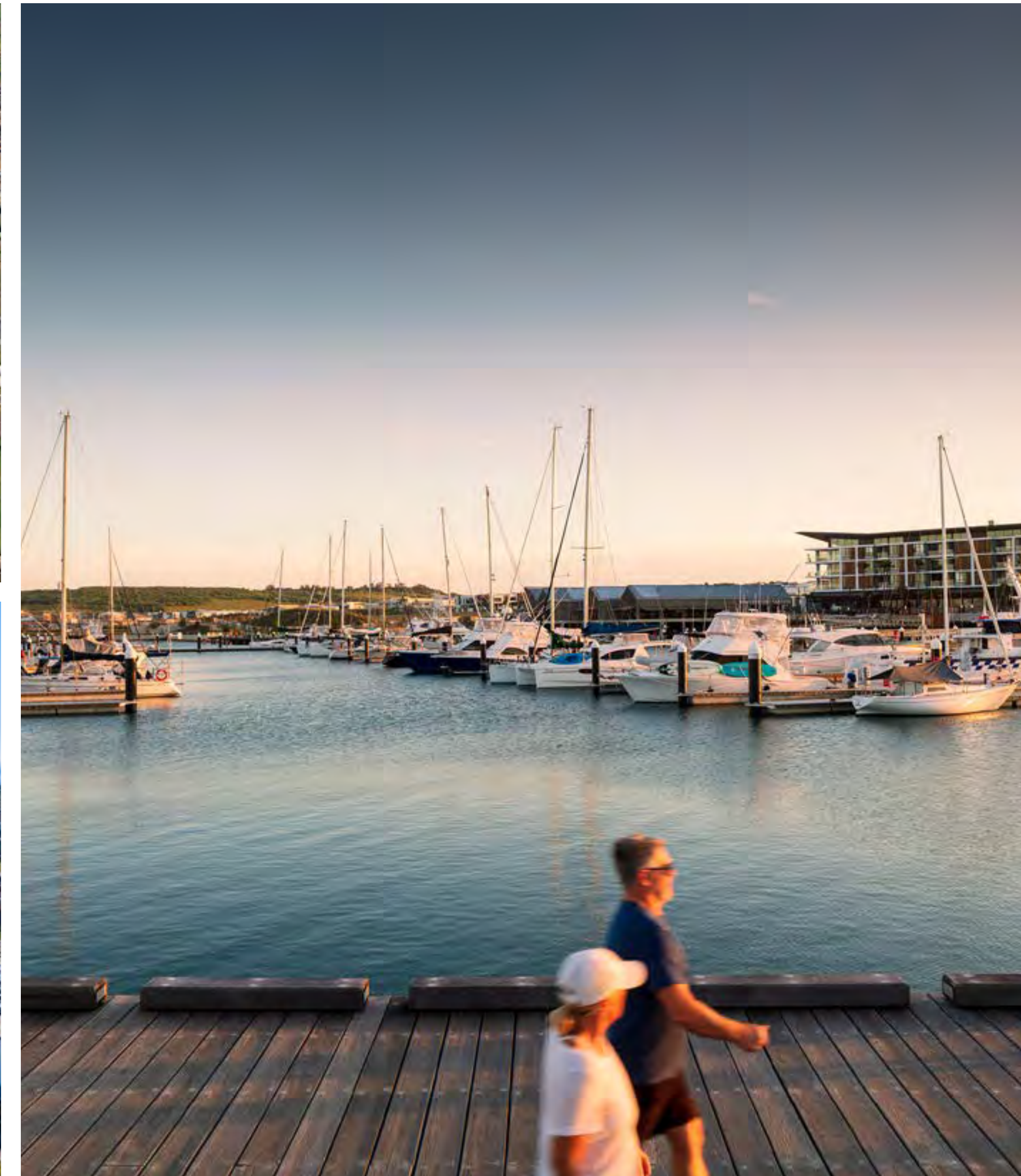


## Shell Cove Boat Harbour

### Advisian

The Shell Cove Boat Harbour is one of the most significant recreational boating facilities to be constructed on the NSW coast, located approximately 100km south of Sydney. The boat harbour development included dry excavation of a harbour basin bound by public promenade and boardwalk, and a trained entrance channel providing direct open ocean access. The harbour basin was flooded when connected to the ocean toward the end of the construction.

The project kicked off in 1977 when council purchased the 12ha site. Investigation and planning approvals progressed over the years with design commencing in 2003, followed by construction starting in 2013, and was opened to the public in October 2021.



## People | Young Professional Engineer of the Year

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WINNER

### Deanna Hood

MIEAust

Deanna Hood is the Senior Robotics Engineer on Inventia's "skin-printing robot" Ligō, working with burns surgeons to reduce the lifelong impact scarring has on bushfire, bombings and other widespread-burns survivors. Since her first internship at 17, she's been driven to apply engineering to society's most exciting and rewarding challenges. She pioneered the CoWriter robotic partner, which allows children with handwriting difficulties to benefit from 'learning-by-teaching'. Deanna was also a core Software Engineer on ROS 2, now used in NASA's VIPER mission. Her firmware contributions to the RASTRUM 3D bioprinter have supported cancer researchers to leverage RASTRUM's precision engineering to advance the treatment of disease.



Highly Commended

### Annabella Dao

MIEAust

Annabella Dao is a Civil Engineer with six years of experience in delivering some of Australia's most complex major transport infrastructure projects including Sydney Metro City and Southwest. She enjoys contributing to Australia's future landscape as a Design Manager for MCE Australia and gets a thrill out of leading multidisciplinary teams towards a socially beneficial outcome.

Annabella holds a combined Bachelor of Engineering (Honours) and Bachelor of Commerce from the University of New South Wales. She is actively involved in professional bodies and volunteering pursuits, having presented at the 2019 World Engineers Convention on methods to diversify the engineering workforce.

## People | Young Professional Engineer of the Year

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**Vikrant Sharma**

MIEAust

Vikrant Sharma, MIEAust with Engineers Australia based in Sydney. Graduated with a Bachelor of Engineering (Hons) majoring in Electrical and Electronics Engineering. Experience spans across telecommunications, aviation, and energy sectors. He is passionate about sustainability, decarbonisation, energy transition, digital transformations, and helping individuals and communities.

Vikrant holds four innovative patents which are tools that are aimed to assist emergency response teams and individuals take appropriate actions in situations and minimise losses to lives and infrastructure. Vikrant is currently employed with Worley as the Renewables Performance and Reliability Engineer and Director and Co-founder of Renewable Innovations (REIN) Pty Ltd.



**Megan Wheeldon**

MIEAust

Megan Wheeldon is a process engineer embedded in Aurecon's Sustainability and Climate Change team. She specialises in hydrogen production, industrial decarbonisation, and the transition of incumbent energy businesses to future fuels. Megan has significant experience across the hydrogen value chain, including techno-economic assessment and engineering feasibility studies.

Her early career in private oil and gas combined with her hydrogen project experience and postgraduate studies in sustainable energy have left Megan with valuable insights into the technical, commercial, and cultural changes required for companies to succeed through the energy transition.

## People | Professional Engineer of the Year

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WINNER

### Karu Esselle

FIEAust

Distinguished Professor Karu Esselle *FIEAust*, from the University of Technology Sydney, is a world leader in electromagnetic and antenna engineering. He is a national leader in engineering technologies for defence, telecommunications and space systems. Karu is a Fellow of the Royal Society of New South Wales, IEEE and Engineers Australia, and is a Director of Innovations for Humanity Pty Ltd. Karu's engineering research and development, leadership and professional engineering activities have received a number of international and national awards. Over his career, Karu has provided support to more than a dozen Australian and overseas companies.



Highly Commended

### Qilin Wang

MIEAust

Qilin Wang is a Professor and Australian Research Council Future Fellow at University of Technology Sydney. He has developed a suite of award-winning technologies to revolutionise the practice and science of urban water management.

Qilin has received 40 awards including 2020 Australia's Most Innovative Engineer in Utilities (Engineers Australia) and 2020 Australian Museum Eureka Prize for Outstanding Young Researcher—the 'Oscars' of Australian Science.

He has published around 200 papers and is a paper handling editor for four top 10 per cent journals in the field. Qilin has promoted engineering profession via various outreach activities and media engagement. He has received two outreach and community engagement awards from both QLD and NSW.



## People | Professional Engineer of the Year

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### Firas Shawash

MIEAust CPEng NER

Firas is an accredited certifier, a chartered professional engineer, and a national registered engineer (NER) in fire and mechanical engineering. Firas is the technical manager of i-Fire Engineers (NSW) where he is leading multi-million-dollar projects. Firas holds a master's degree in fire engineering.

In 2019 Firas was named the Fire Protection Industry leader by the Fire Protection Association of Australia. In 2021 Firas was awarded the Barry Lee Technical Excellence award.

Firas serves as a committee member for three of the most important standards committees in the fire industry, viz. FP-002-Fire Detection Systems, FP-003-Fire Extinguishers and ME-062-Ventilation and Airconditioning.

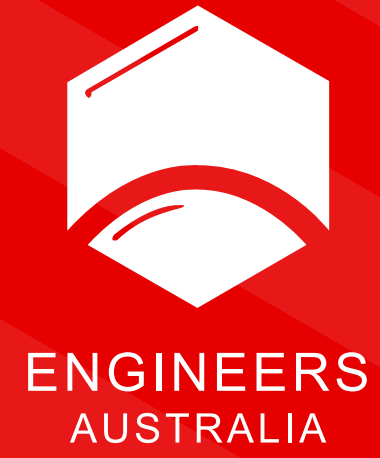


### Robert Fenton

MIEAust

Rob has dedicated his career to delivering solutions and insights for military platform operators all over the world, with experience ranging from learning to manufacture parts during his apprenticeship, to carrying out repair design and complex engineering assessments as a lead engineer.

No stranger to challenges he will always find a way or make one with a commitment to aviation safety above all, he is always ready to help those around him.



Excellence  
Awards

# Tasmania





## People Chief Judge

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### Prof Andrew Chan

FIEAust CPEng EngExec NER APEC Engineer IntPE(AUS)

Andrew was trained as a Geotechnical Engineer specialising in the computer modelling of soil and pore fluid interaction.

He received his Bachelor and Master degree from Hong Kong and PhD degree from UK.

He spent 28 years in UK so he has substantially experience outside Australia before arriving in Australia nine years and Tasmania seven years ago.

He is working towards the deepening of the collaboration between the university and Engineers Australia.

## Projects Chief Judge

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### Justin O'Connor

FIEAust CPENG NER APEC Engineer IntPE(AUS)

I am an accomplished executive, engineering manager and chief risk officer for an ASX200 listed aquaculture company. I have over 30 years' experience in executive and general management, team and business development functions, financial control and delivery of complex multi-disciplinary projects.

I am responsible for strategic projects, major procurements, asset management and corporate risk at Tassal. A career highlight is my role in developing Tassal's capacity in salmon production, and more recently in prawn production, to achieve a circa 4 - fold increase in production, employee numbers, sales and profitability during my tenure.

As Chief Risk Officer I have developed and managed a comprehensive corporate risk management program compliant with ISO standards and ASX guidance delivering significant stakeholder, financial, WH&S, operational and human capital certainty to the business since 2010.

## People and Projects Judges

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### People Judges

#### Rob Casimaty

FIEAust CPEng NER APEC Engineer IntPE(Aus)

#### Joanne Fisher

FIEAust CPEng EngExec APEC Engineer IntPE(Aus)

### Projects Judges

#### Elsbeth Moroni

MIEAust

#### Eddie Jager

TFIEAust CEngT EngExec NER

#### Meaghan Volker

MIEAust

# King Island UniWave200 Wave Energy Converter

Wave Swell Energy Ltd

Sir William Hudson  
Tasmania Finalist

The King Island UniWave200 Wave Energy Converter Project is a world-leading proprietary technology that demonstrates conversion of the energy in ocean waves into clean and emissions free electricity.



## Exploring the feasibility of pumped hydro in Tasmania

Hydro Tasmania

Entura

Hydro Tasmania's Battery of the Nation initiative is investigating the potential to maximise Tasmania's hydropower system capacity and add pumped hydro to better meet the needs of a transforming National Electricity Market. Extensive studies and investigations have identified feasible pumped hydro projects that can support Tasmania's renewable energy vision and provide the long-duration storage and dispatchable capacity needed.

To identify potential projects, the teams extensively explored technical, environmental, social, and economic factors and applied a risk-based multicriteria analysis. This involved detailed investigation and understanding of hydroelectric schemes, transmission options, technical complexity of construction and operation, environmental and community values, optimal and sustainable use of existing assets and water, and changing market dynamics, all within an overarching sustainability framework.

Hydro Tasmania and Entura's extensive feasibility investigations identified a preferred site in Tasmania's Northwest, with optimal storage capacity and flexibility, environmental and social sustainability, and greater technical and cost certainty.



## Murchison Dam Safety Upgrade

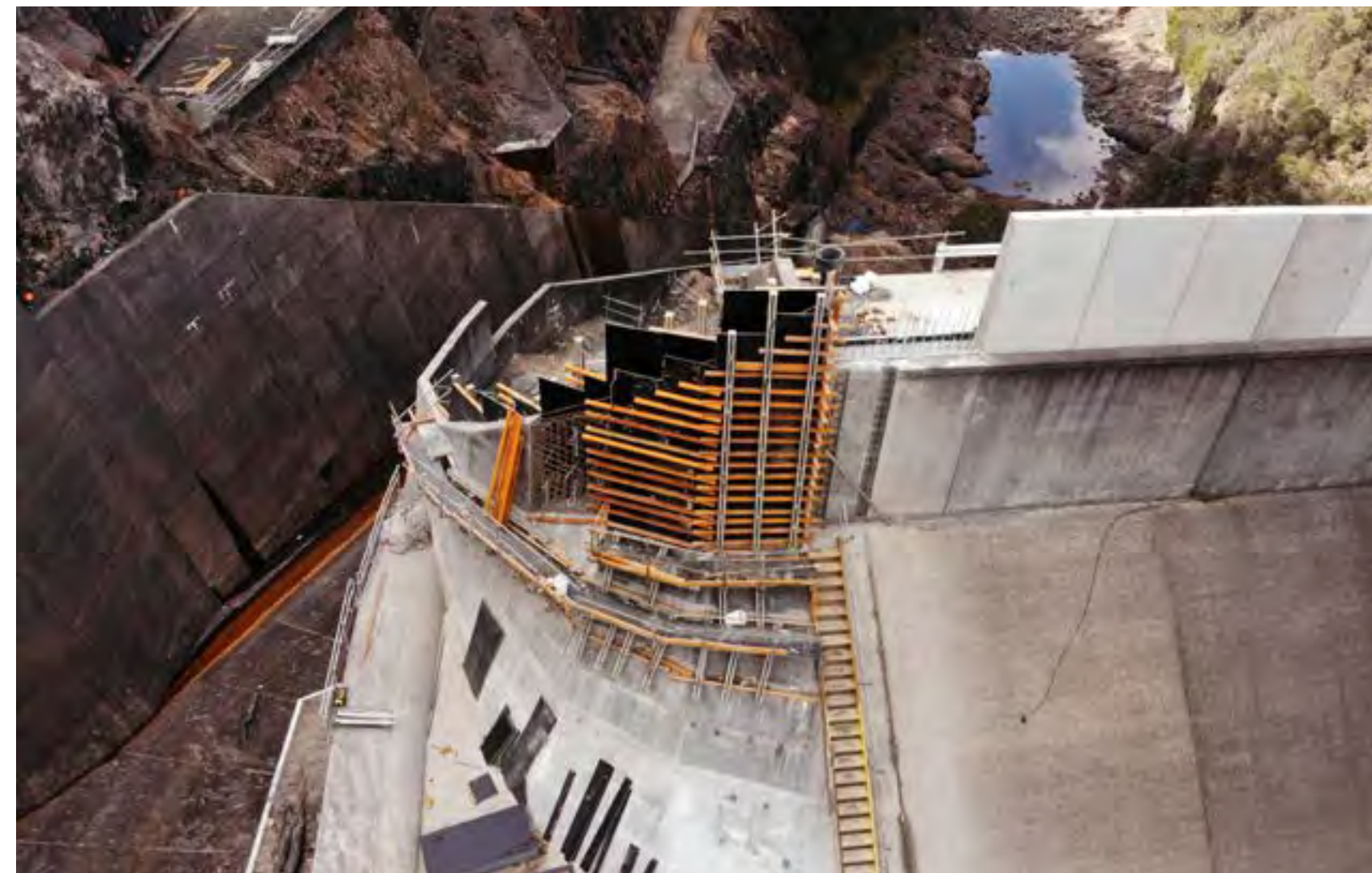
### VEC Civil Engineering

The Murchison Dam Safety Upgrade was a once-in-a-lifetime project. Hydropower dams are comparatively rare engineering structures; even rarer is the need to perform large-scale structural alterations once a dam is complete. There were no relevant precedents to draw on and the project team had to employ creativity and innovation to complete the work.

The project aims to address a deficiency in the flood handling capacity of the dam for extreme rainfall events, when compared to contemporary engineering standards.

The worksite was remote, steep, narrow, and prone to inundation, presenting multiple access and safety challenges. The technical specification was demanding, requiring complex temporary works, intricate and unconventional formwork, and stringent concrete mixes to ensure freeze-thaw resistance.

The Stage 1 work helped increase the flood handling capacity of the dam to withstand very large rainfall events, reducing risk for communities and the environment.



## Perth Link Roads

VEC\_Shaw Joint Venture  
pitt&sherry

The Perth Link Roads project is the largest single project delivered under the Australian Government's and Tasmanian Government's Midlands Highway 10-Year Action Plan. It has delivered safety and efficiency benefits for the town of Perth, general road users, freight operators and regional communities.

The VEC-Shaw Joint Venture delivered a technically complex project, working collaboratively with its designer and its client to solve challenges, while effectively managing environmental sensitivities. The workplace culture was second to none, and there was a significant investment in training and skills development.

The local economy benefited from job creation and procurement in the region. The success of the project can be measured, in part, on its delivery 44 weeks ahead of schedule.



## Reconophalt: Using recycled materials in road surfacing in Tasmania

**Downer**

**Kingborough Council, Redcycle and Close The Loop**

Downer pioneered the use of recyclable material in road surfacing. Reconophalt™ is Australia's first asphalt product containing a high proportion of recyclable content derived from waste streams otherwise bound for landfill or stockpiling. Reconophalt was first used on Tasmanian streets in partnership with Kingborough Council and has been used in the municipality since 2018. The past two years have seen the product trialled by several southern Tasmanian councils.

This has resulted in a significant quantity of recyclable materials being diverted away from landfill and into a valuable product.

Roads surfaced using Reconophalt have a 15 per cent longer life than traditional surfacing material. Therefore, whole-of-life costs are significantly less when Reconophalt is compared to standard asphalt applied in the same environment.

Downer invested in its Hobart asphalt plant so it could produce Reconophalt locally and is developing a state-of-the-art asphalt plant in Launceston to increase production of Reconophalt within Tasmania.





## Ship Information Management System (SIMS)

Cromarty

Incat

The project was to develop a DNV approved Ship Integrated Management System (SIMS) for Incat Tasmania to gather data from multiple systems on a high-speed catamaran. The data needed to be presented rapidly and in a consistent manner on touch screen operator workstations distributed throughout the vessel to allow operators to make informed operational decisions.



## People | Young Professional Engineer of the Year

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WINNER

### Samantha Chapman

GradIEAust

Samantha Chapman is an innovative transport engineer and project manager. She joined GHD's Tasmanian business in 2016 and has led or contributed to a range of projects in civil, transport, advisory, planning, stakeholder and investment streams. Samantha completed a Civil Engineering degree at the University of Tasmania (UTAS) and undertook honours research in partnership with GHD and the Department of State Growth on the impact of inner-city parking on the Hobart road network using mesoscopic modelling. She has work experience at GHD and UTAS and volunteer work with AITPM and Engineers Australia, locally and nationally. Samantha is an active member of the Tasmanian engineering and transport communities.



### Ashley Dyson

GradIEAust

Dr Ashley Dyson is a Post-Doctoral Research Fellow in Civil and Geotechnical Engineering at the University of Tasmania's School of Engineering. Ashley has established a reputation in Tasmania for strong industry-aligned geotechnical engineering research, with contributions to computational geotechnics, particularly in the fields of slope stability and landslides.

His research seeks to benefit the local Tasmanian community, with a focus on debris flow and landslide risk mitigation measures, as well as offshore foundation systems for Tasmanian renewable energy and aquaculture projects. Ashley currently serves as the secretary of the Tasmania Chapter of the Australian Geomechanics Society (AGS).



### Beth Scott

MIEAust

Beth's engineering career has involved close to one decade of design engineering in the water and hydropower space, following a Bachelor of Science degree in energy studies and two master's degrees in civil engineering. She has experience in managing teams and projects and in complex engineering design. As a civil engineer and project manager, Beth has strong problem-solving skills providing innovative solutions.

She is a team player who enjoys learning from those around her to be successful. She hopes to continue to sharpen her leadership skills and build on her experience as a design engineer while building strong professional relationships.



Excellence  
Awards

# Victoria



### People Chief Judge PEOY

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#### Emma Miller-Olsen

FIEAust CPEng EngExec NER APEC Engineer  
IntPE(Aus)

#### PEOY People Judges

##### Emad Gad

FIEAust

##### Kriston Symons

FIEAust CPEng EngExec NER APEC Engineer  
IntPE(Aus)



### People Chief Judge YPEOY

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#### Ross Kristinof

FIEAust CPEng NER APEC Engineer IntPE(Aus)

#### YPEOY People Judges

##### Scott Taylor

FIEAust CPEng NER APEC Engineer IntPE(Aus)

##### Maria Koutsimpiris

FIEAust CPEng EngExec NER APEC Engineer  
IntPE(Aus)

##### Allen Tam

FIEAust CPEng EngExec NER APEC Engineer  
IntPE(Aus)



### Projects Chief Judge

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#### Benita Husband

FIEAust CPEng EngExec NER APEC Engineer  
IntPE(Aus)

#### Projects Judges

##### Luke Belfield

MIEAust CPEng NER APEC Engineer IntPE(Aus)

##### Andrew Stevenson

MIEAust CPEng(Ret)

##### Saeid Nahavandi

FIEAust CPEng NER APEC Engineer IntPE(Aus)



## People Chief Judge PEOY

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### Emma Miller-Olsen

FIEAust CPEng EngExec NER APEC Engineer  
IntPE(Aus)

The Great Ocean Road celebrates its 100 years. Emma leads the delivery of the Great Ocean Road Upgrade Programs as the Department of Transport Operations Manager SW.

Projects for delivery extend between Geelong to the S.A Border. In the last 12 months, A/ Regional Director South Western and prior over the summer period A/ State Director Emergency Management. Emma has 20 years experience across the energy, transport, mining, manufacturing and oil and gas industries. Mentor, mum and wife.

‘One of my greatest achievements is supporting my organisations reputation that is built on trust and being a genuine, caring community member.’



## People Chief Judge YPEOY

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### Ross Kristinof

FIEAust CPEng NER APEC Engineer IntPE(Aus)

Ross is a Chartered Geotechnical Engineer with over 16 years of professional experience leading geotechnical design, interpretative studies, proof engineering and site investigations for infrastructure clients across Australia and New Zealand. Ross has worked as a site engineer, project manager, designer, discipline lead and proof engineer, and his experience spans several challenging and complex projects. He enjoys adding value in integrated project teams by solving complex engineering problems with smart, pragmatic design solutions.

He is a former committee member of the Victorian Chapter of the Australian Geomechanics Society, is a present committee member and Deputy President of EA's Victorian Division Committee, and a former Young Engineer of the Year nominee.



## Projects Chief Judge

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### Benita Husband

FIEAust CPEng EngExec NER APEC Engineer IntPE(Aus)

Benita Husband is CEO of pitt&sherry, a specialist engineering and environmental consultancy. Benita has 20 years' experience in the construction and engineering sector as an electrical engineer, project director and technical advisor to clients. Benita is recognised for her engaging leadership style, client focused outcomes, and guidance on aligning strategy with commercial success.

She continues to champion diversity in the construction industry and has been recognized with 2 awards from the National Association of Women in Construction, featured in Engineers Australia's national publication 'Inspiring stories of female engineers' and most recently was featured in the 2017 international '#CelebratingWomen' campaign.

## Additional Works Package 1 - Cheltenham and Mentone

Southern Program Alliance

Sir William Hudson  
Victoria Finalist

The Victorian Government is removing 85 of Melbourne's most dangerous and congested level crossings by 2025.

The Southern Program Alliance comprises of ACCIONA, Coleman Rail, WSP, Metro Trains Melbourne (MTM) and the Level Crossing Removal Project.

SPA was awarded the Additional Works Package 1 (AWP1) to remove three level crossings in Cheltenham and Mentone. Previously, more than 200 trains and 38,000 vehicles passed through these crossings every day. Boom gates were down for up to 40 per cent (49 minutes) of the 7am-9am morning peak. Pedestrians were at risk, local emissions were high due to idling vehicles and signal faults were common.

The purpose of AWP1 was to improve vehicle and pedestrian safety by constructing two rail trenches under new road bridges and two state-of-the-art stations with improved safety and sustainability, revitalising the Mentone and Cheltenham communities with new public spaces, and engaging with local stakeholders such as schools and traders.



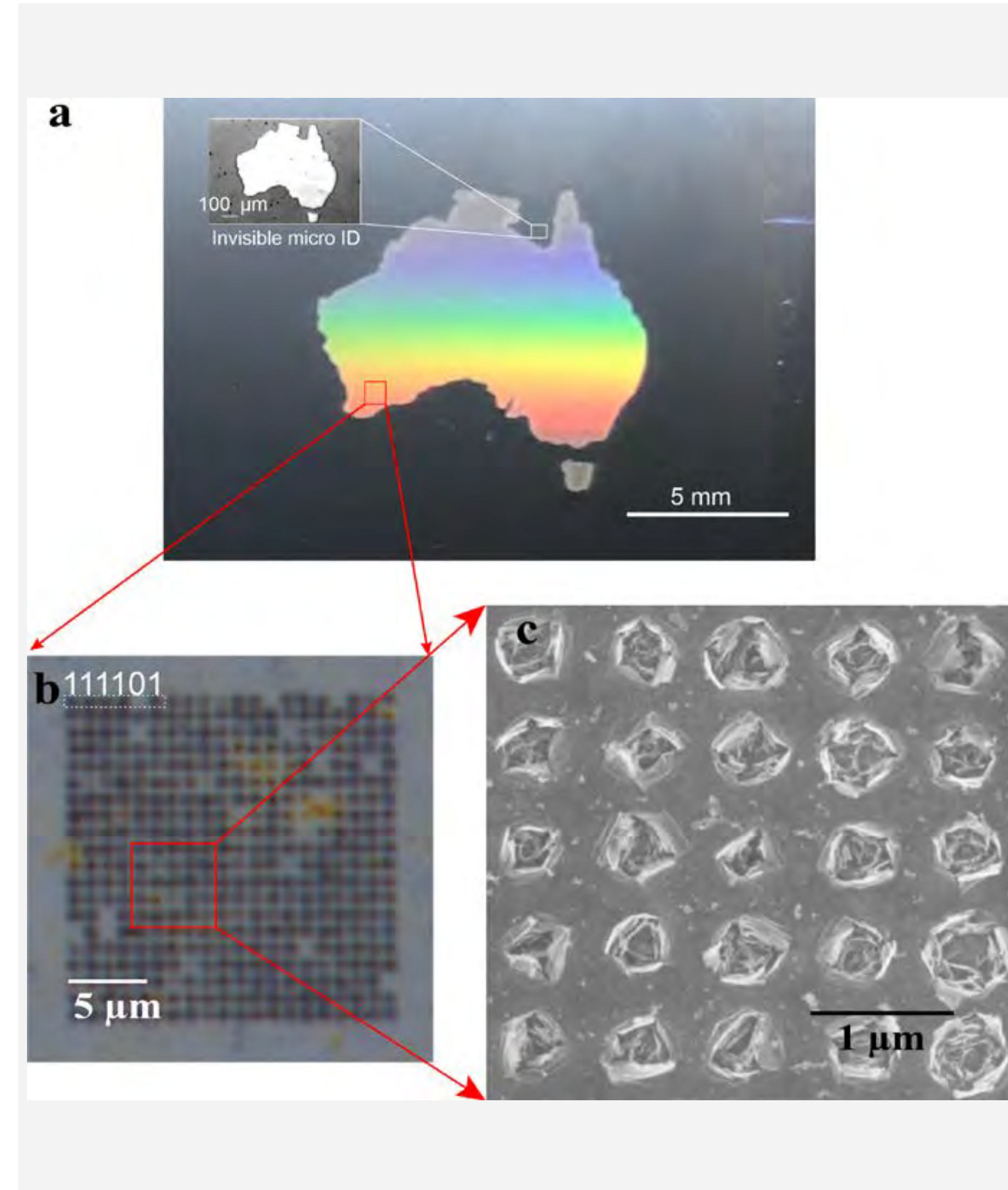
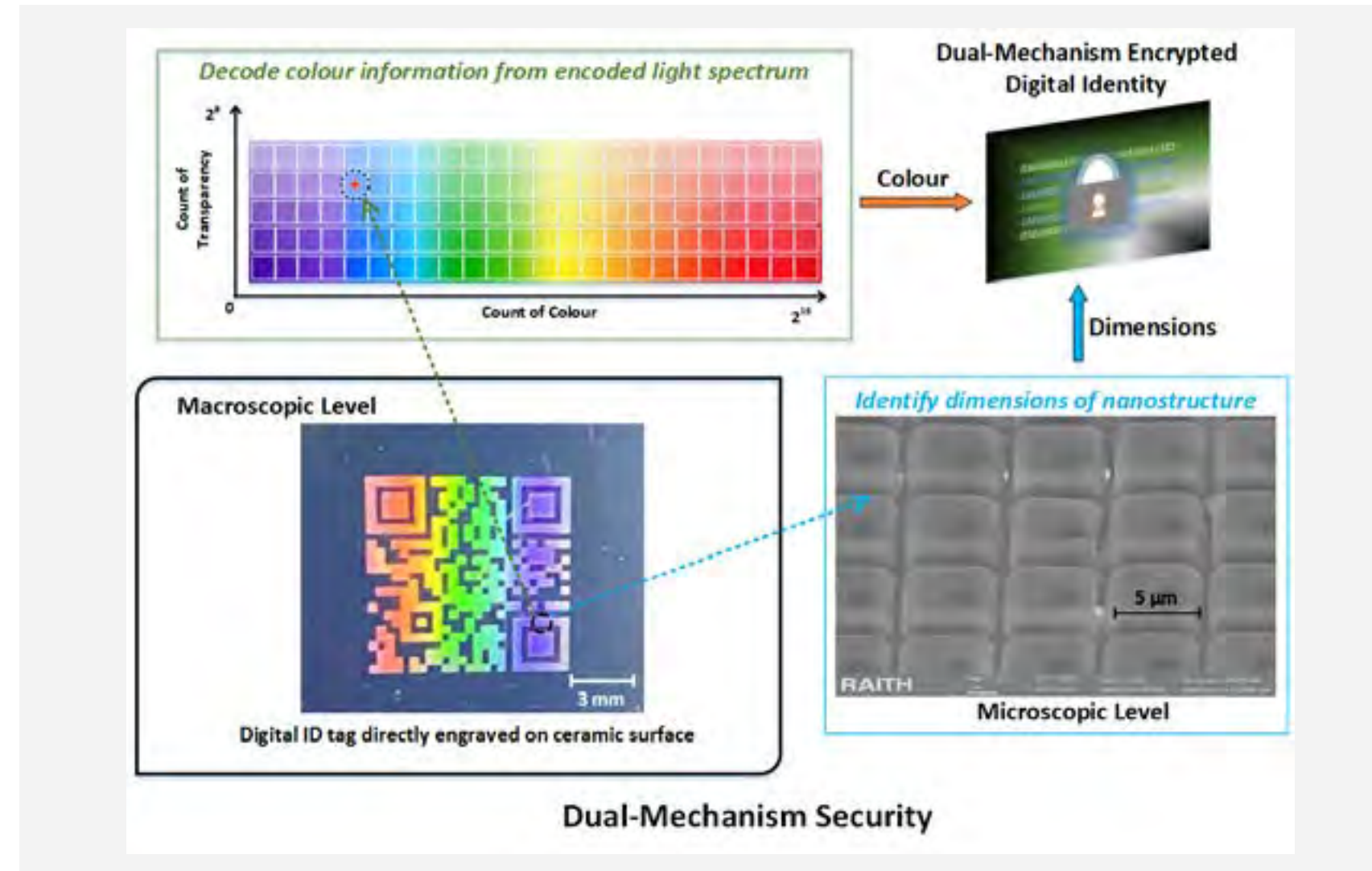
# A Highly Encrypted Laser Nanofabrication Method for Engraving Colourful Digital ID Tags

**Innofocus Photonics Technology Pty Ltd**

Our project designed and developed an innovation of nano-structural colour-printed tags. The Nano Colour Digital ID, enabled by a state-of-the-art ultrafast-laser nanofabrication system Innofocus developed. Based on Innofocus' understanding of intelligent manufacturing in the fields of nanofabrication, properly designed nanostructures with embedded large volume of ID information are directly and permanently engraved into products, which fundamentally differentiate them from any other digital IDs have been used so far.

The project aims to revolutionise existing digital ID technologies and address data security and provenance of digital commodities, delivering top-notch Australian engineering excellence, establishing Australia's lead position in intelligent manufacturing in the accelerating global digitalisation.

Established in 2018 at Melbourne, Innofocus Photonics Technology Pty Ltd has been dedicated to technology innovation and translation of engineering excellence into valuable business solutions, to create a smarter, greener, and happier future.



## Ballarat GovHub

AECOM Australia Pty Ltd

The Ballarat GovHub is a \$100 million, 15,000m<sup>2</sup> five-storey mass timber office building and is the government's first mass timber commercial building in Victoria. The vision for the Ballarat GovHub was to provide a state-of-the-art community asset and workplace, supported by sustainable solutions that would lower operational running costs, improve environmental outcomes, and provide a building that provides wellness benefits to the users.

The architectural design features several challenging elements requiring non-standard engineering solutions as well as adopting a new design process, breaking from the efficient but prescribed business-as-usual approach in the local market to support the design of a unique building using a material that was still novel in this application.

As the first major timber commercial building in Victoria, the project will stand as the first of a new generation of buildings to underpin our efforts to address the current climate emergency.





## Bell to Moreland Level Crossing Removal Project

### North Western Program Alliance

The Bell to Moreland Level Crossing Removal Project involved the removal of four dangerous level crossings, the construction of a 2.5km elevated rail structure and two new train stations, the restoration of two heritage stations and the delivery of new open spaces.

Situated in a highly constrained corridor in Melbourne's busy inner north, the project presented one of the most complex level crossing removal projects undertaken at that time.

The project not only improved road travel times and safety, but transformed the liveability of the area by creating two MCGs worth of new community space.

The project's sustainability outcomes have been rated amongst the highest ever by the Infrastructure Sustainability Council and Green Building Council of Australia.

The Project overcame logistical barriers by challenging traditional methods, to set new benchmarks for the industry, deliver new rail infrastructure and safety improvements and ultimately, improve quality of life for commuters and community.



## Former Fitzroy Gasworks Remediation

**Enviropacific**

Enviropacific was engaged by the Victorian Government as Principal Contractor to remediate the former Fitzroy Gasworks located in the inner Melbourne suburb of Fitzroy North. The project was one of the most significant urban renewal projects undertaken in Australia from both a historical and environmental perspective, unlocking the former legacy site to enable an extensive urban renewal project.

The project delivered excellence across a range of engineering and applied science disciplines, including the significant feat of recycling, or regenerating more than 90 per cent of the 170,000 tonnes of highly contaminated wastes excavated throughout the project.

“The Fitzroy Gasworks Project was initially seen as a high-risk project with its confinement within a high density, urban setting, but Enviropacific has been able to manage these risks and consistently demonstrate to the community its ability to maintain a high level of safety and professionalism.” Adam Bradley – Senior Manager, Department of Treasury and Finance.



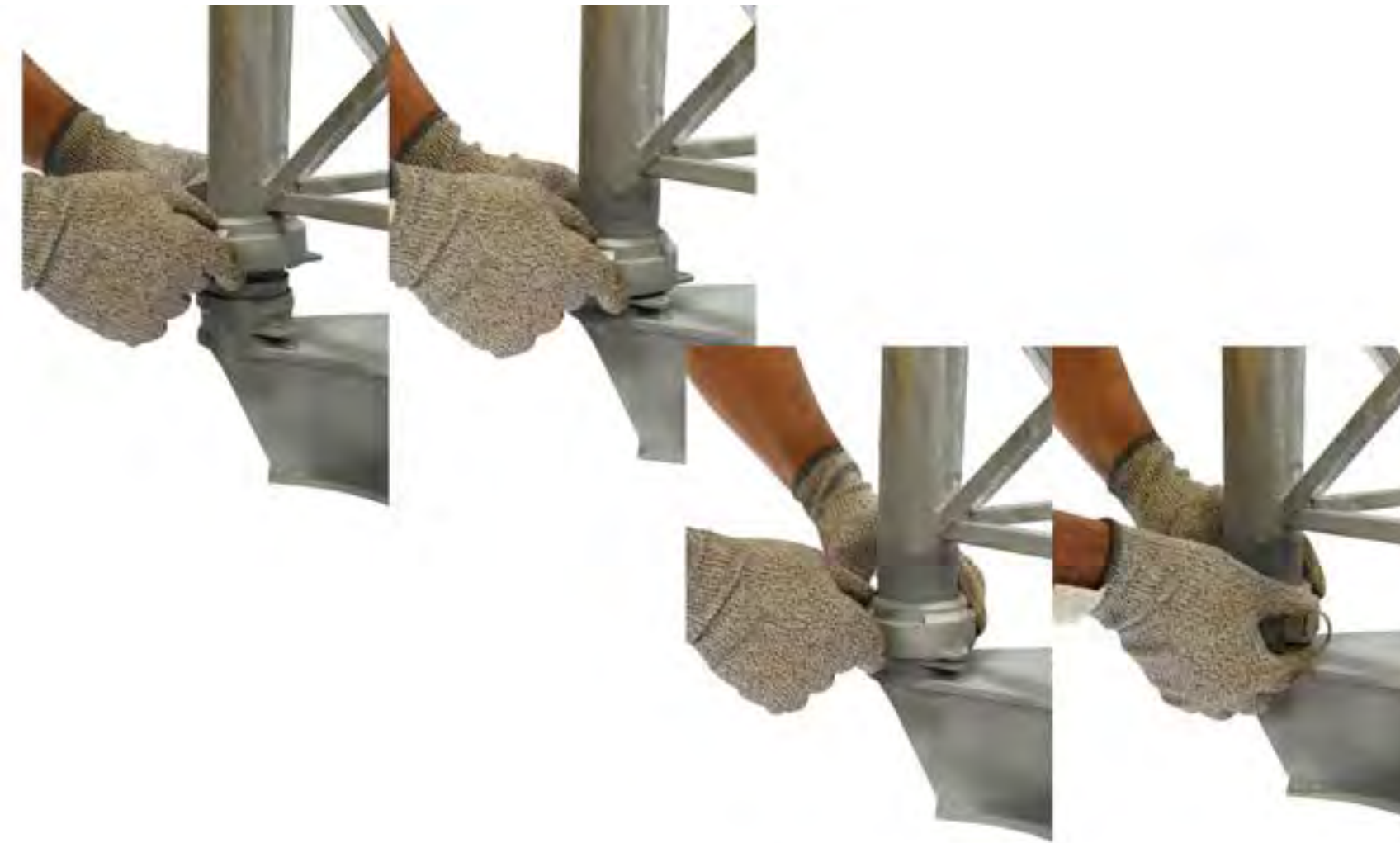
## Quadshore: The world's most sustainable propping solution for temporary construction works

Monash University

Coates Engineering Solutions

Completed through a collaboration between Monash University and Coates Engineering Solutions and certified in January 2022, Quadshore systems have disrupted temporary works arena due to their revolutionary design using lightweight, high-strength structural elements, as well as boltless module-to-module connections that render consumables obsolete.

The working load limit to weight ratio of a three-metre Quadshore propping system is at least 1.4 times higher than conventional propping systems. Moreover, the assembly/disassembly time of Quadshore is at least 40 per cent quicker than conventional systems. As a result, the patented Quadshore promises to make construction sites more efficient and safer, while also reducing labour, handling, storage, assembly/disassembly costs, saving construction companies both time and money. In addition to the economic benefits, the high capacity-to-weight ratio of the Quadshore systems means energy consumption for transportation, installation and de-installation is significantly reduced, resulting in a lower carbon footprint and more sustainable environment.



## People | Young Professional Engineer of the Year

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WINNER

### Emily Harris

MIEAust CPEng NER

Emily Harris is a highly motivated chartered senior civil engineer with Aurecon. Emily's strong interpersonal and communication skills have enabled her to successfully deliver some of Victoria's key infrastructure projects. She is passionate about sustainability and is involved in initiatives to embed this within the transport sector.

Emily is a strong advocate for her industry and passionate about creating positive change through increased female participation and sustainably focused projects. Emily is driving this change through her involvement in mentoring programs and through volunteering on the Civil College Board at Engineers Australia.



### Abrar Aziz

MIEAust CPEng NER APEC Engineer IntPE(Aus)

Abrar Aziz is a highly qualified and decorated chartered electrical engineer with a career build working from 'where do I start?' through to project development, design, delivery, and commissioning of assets for multiple industries across Australia and Asia Pacific. He is a business leader, advisor to many infrastructure clients, chair of the Electric Energy Society of Australia's Victorian division, a strong advocate and role model of the role engineers play in delivering sustainable energy solutions.

Abrar was recognised as the Engineers Australia Young Electrical Power Engineer of the Year in 2019 for his contributions to our industry over the last six years.

## People | Young Professional Engineer of the Year

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**Shauna Moore**

MIEAust

Shauna is among Victoria's most outstanding young engineers, with 11 years' experience in domestic and residential, landfill regeneration, windfarms, and major transport infrastructure. A confident and effective communicator, Shauna's known for her integrity, expertise, and ethical values. Shauna has completed four level crossing removals and is currently Station Manager upgrading fire systems in Melbourne's City Loop. Shauna's ability to understand project constraints and opportunities holistically from architectural aspirations to construction practicalities have contributed to innovative, sustainable, and economic solutions of essential public infrastructure throughout Melbourne.

Shauna is passionate about changing construction by innovating in sustainability and diversity, especially for women.



**Ari Hammerschlag**

MIEAust CPEng

Ari leads the Built Environment Sustainability Team in Victoria for GHD. Ari has more than nine years' experience in the engineering and ESD consultancy industry. He is experienced in the design of sustainable buildings, precincts and infrastructure ranging from standard practice to beyond compliance. He has worked on a range of international, large scale master planning, design and construction projects as a sustainability lead, civil engineer, and project manager.

He has solid experience in developing and implementing sustainability frameworks as projects progress from planning to construction and operation stage. Ari has experience in developing sustainable solutions for built environment projects.

## People | Professional Engineer of the Year

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WINNER

### Andrew Chapman

MIEAust CPEng APEC Engineer IntPE(Aus)

Andrew is an engineering leader who has influenced the direction of the Australian water industry over his 40-year career. He has driven transformational change and influenced policy whilst delivering long term benefit to government, water authorities, industry and the community.

A long-term committee member of the Australian Water Industry, Andrew received the 2014 Australian Water Association's Lifetime Achievement Award. He is a technical reference reviewer for the CRC for Water Sensitive Cities, Universities and Government. Andrew is also a committed mentor to several young water professionals and a regular speaker on water issues.



### Anthony (Tony) Barry

FIEAust CPEng APEC Engineer IntPE(Aus)

Anthony Barry Tony is President of the International Federation of Consulting Engineers (FIDIC), senior consultant with Aurecon and a non-executive director. Awarded Sydney Professional Engineer of the Year in 2006, he was President, Association of Consulting Engineers of Australia 2004–2006 and an Executive Director of Aurecon 2000–2016, where he held senior positions as Managing Director Asia, Chief Executive Asia Pacific and Chief Business Development Officer.

He is a civil engineer, a Chartered Professional Engineer, Australia, a Fellow of Engineers Australia, a Fellow Australian Institute of Company Directors and a Fellow of the Australian Academy of Sciences and Engineering.

## People | Professional Engineer of the Year

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### Julia Gibney

MIEAust CPEng NER

Julia is a chartered engineer with more than 28 years' experience in the defence, aviation and rail industries. She is an enthusiastic safety professional who is self-motivated, capable and diplomatic.

Julia is an astute and versatile leader with proven system safety and assurance, human factors, regulatory compliance, quality and WHS experience, coupled with a strong academic background. She is extremely passionate about all aspects of safety, from design to delivery, operations, and maintenance, with postgraduate studies giving her an in-depth understanding of safety management systems (SMS) and human factors in operational and maintenance environments.

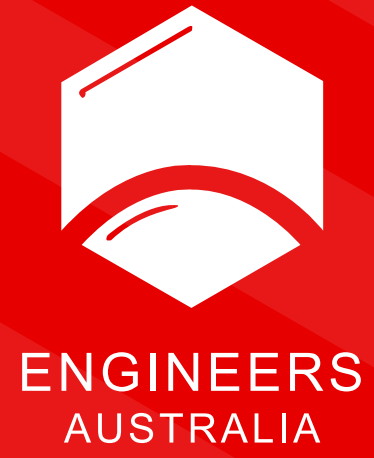


### Melanie Collett

FIEAust CPEng EngExec NER APEC Engineer IntPE(Aus)

Melanie has 24 years' experience in Water Resources and is Director of Technical Excellence for AECOM in Australia New Zealand. Melanie has extensive experience in water resources including hydrologic and hydraulic modelling, drainage design, floodplain management and, assessing flood risk and the impacts of climate change. She is experienced in undertaking environmental impact assessments for hydrology on large projects for proposed road, rail, and renewables infrastructure.

Melanie specialises in integrating surface water modelling and design, investigating climate change impacts on flooding and coastal erosion and the effects of mitigation and adaptation measures on the built and natural environment.



Excellence  
Awards

# Western Australia







## People Chief Judge

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### **Kassia Ralston**

MIEAust

Kassia is an Engineer and Community Board Director. She currently holds the role of Deputy Business Director for the Department of Defence Naval Construction Branch. She has a Bachelor of Civil and Construction Engineering from Curtin University. Kassia spent her early career working for global engineering design firms Arup and AECOM in project management roles on major public infrastructure projects.

Kassia is the current Deputy President of the Engineers Australia WA Division Committee and a member of the Engineers Australia College of Leadership and Management WA Committee. She volunteers her spare time on the Cura In-Home Care Management Committee and Artsource Board.



## Projects Chief Judge

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### **Jillian Formentin**

FIEAust CPEng EngExec NER APEC Engineer IntPE(Aus)

Jillian is a chartered Mechanical Engineer and over her career, she has worked in the engineering and construction industry, across the resources and energy markets in operations, distribution, governance, safety and risk consulting, and leadership development.

Jillian is a relationship and results driven engineering manager with 25 years' experience and is the Engineering Director, APAC at Clough. Jillian was the EA WA Division President in 2020 and leads the WA division Committee's commitment to issues of culture as well as representing WA on EA's National Congress.

## People and Projects Judges

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### Projects Judges

#### **Brian Haggerty**

FIEAust CPEng NER APEC Engineer IntPE(Aus)

#### **Shalini Saldanha**

FIEAust CPEng NER APEC Engineer IntPE(Aus)

#### **Flori Mihai** FIEAust

#### **Chris Tenni** MIEAust CPEng

### People Judges

#### **Wes North**

MIEAust CPENg NER APEC Engineer IntPE(AUS)

#### **Nancy Hadden** MIEAust

#### **Bronwyn Brookman-Smith** MIEAust

#### **Barrett Moulds** MIEAust CPEng

## Koolangka Bridge, Perth Children's Hospital

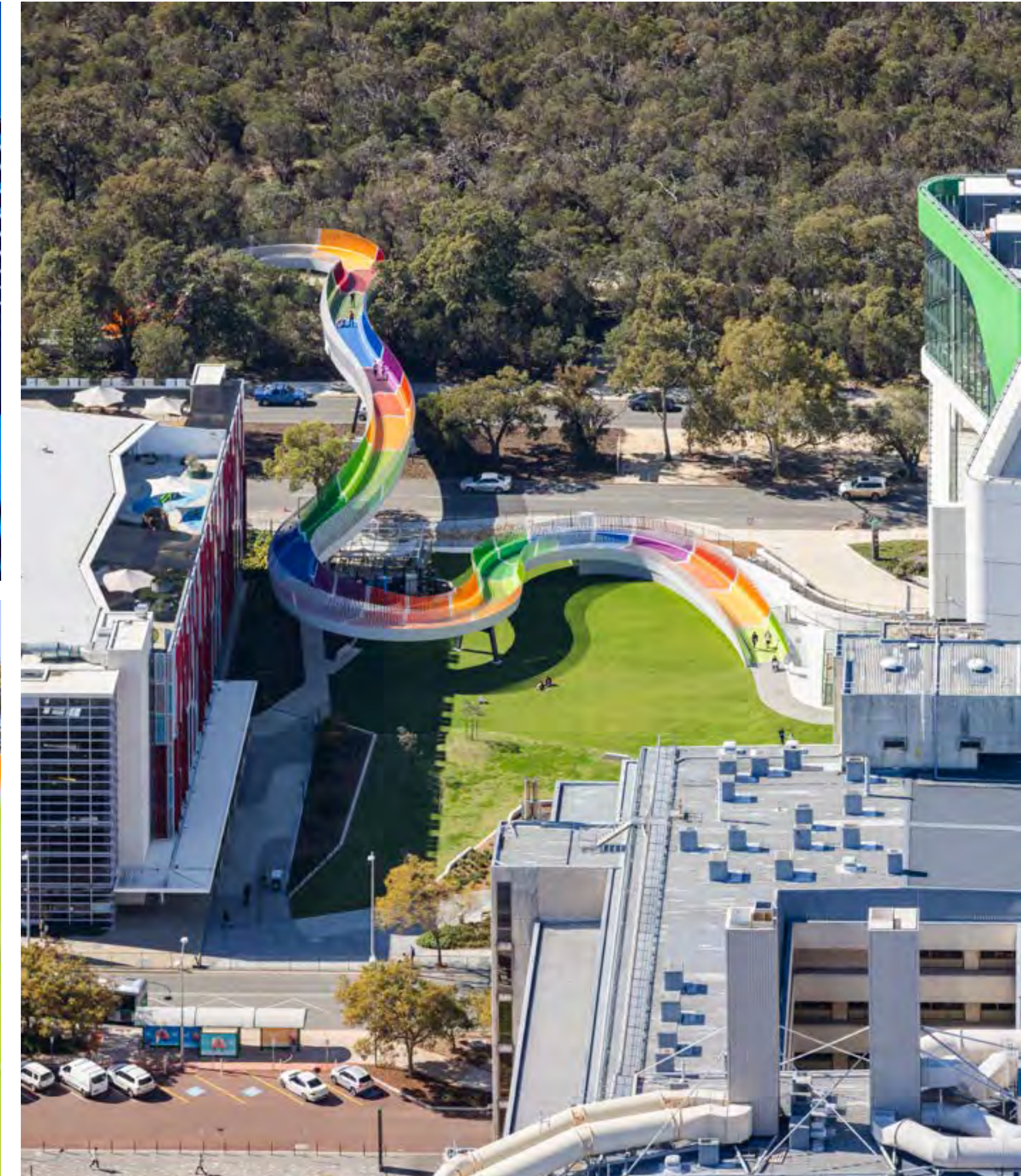
AECOM Australia Pty Ltd

Sir William Hudson  
Western Australia Finalist

The visually stunning Koolangka Bridge (Koolangka meaning 'children') in Noongar offers safe and direct access to the Kings Park bushland from the Perth Children's Hospital. Suggested more than 10 years ago by the Perth Children's Hospital Foundation and a group of children who thought that a bridge crossing would provide respite and a distraction from their treatment.

The bridge was envisioned to be a unique structure providing a playful experience for the community as they pass across it, reflecting the purpose and theme of the bridge, being for children and their families.

Key features of the bridge include the serpentine shape which snakes through Kings Park across to the hospital campus, the multicoloured deck and interactive sounds, offering the users an experience filled with beautiful vibrant colours, long open spans, large cantilevers, and inbuilt speakers amplifying nature sounds that lead to Western Australia's most popular and iconic tourist destination.



## Armadale Road to North Lake Road Bridge Project

Laing O'Rourke

BG&E

Main Roads WA

The Armadale Road to North Lake Road Bridge project transformed the increasingly congested Cockburn Central area with free-flowing road configuration. Delivered by Laing O'Rourke, BG&E and Main Roads WA as the Armadale Access Alliance, the project constructed Western Australia's first duck and dive road alignment with two grade separated roundabouts on Armadale Road at Tapper Road and Solomon Road. The project also delivered a new bridge over Kwinana Freeway, new collector distributor roads on Kwinana Freeway, and upgrades to Armadale Road and parking at Cockburn Station.

The success of the project is the result of a highly effective alliance culture that placed public participation at its heart, achieving outstanding results in indigenous participation, sustainability and stakeholder and community satisfaction by being adaptive and responsive. The project was delivered on time and within budget despite impacts from the COVID-19 pandemic.



## Assembly Hall

Civmec

GHD

This project came into existence as part of a vision for manufacturing and heavy engineering capability in Australia at a time when the trend was to offshore. Civmec believed a world-class manufacturing asset could be developed in Australia, to not only compete with offshore supply chains but provide a superior service offering.

This vision along with the determination of its workforce has been one of the key aspects of the company's growth and success of this project. Privately funded and delivered, today the vision has transpired through design and construction into a world-class facility and a strategic asset for Australia. Through the design and efficiencies, the Assembly Hall provides quality assurance, cost competitiveness and delivery certainty to a range of clients.

The underlying reasons for this success lays in the engineering excellence achieved by the Civmec and GHD integrated design and construction team.



## Cape Lambert Dolphin Head Life Extension Project

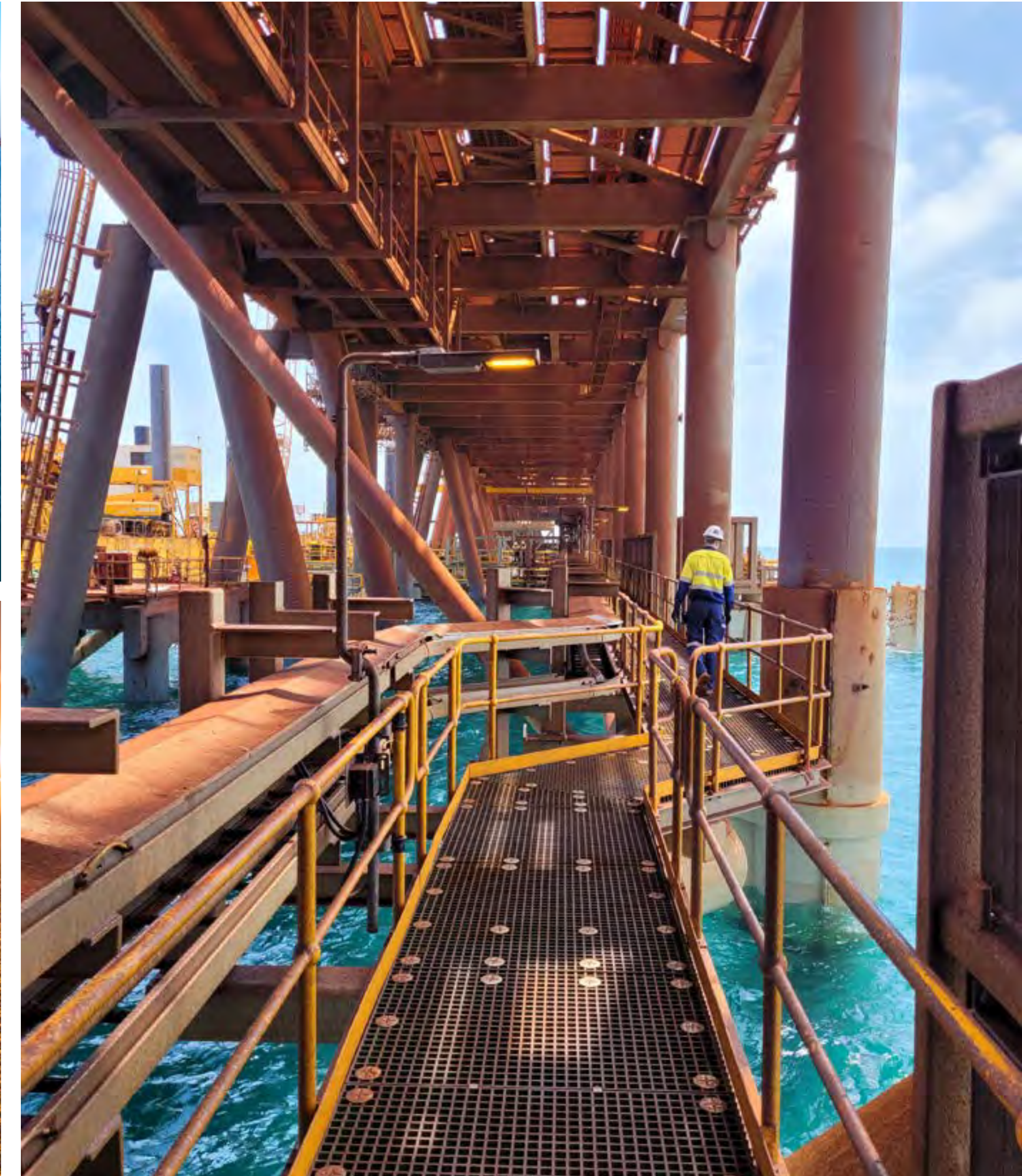
**Aurecon**

**Rio Tinto**

Cape Lambert is a port facility operated by Rio Tinto Iron Ore in the Pilbara region of Western Australia. By developing a 3D digital twin and completing digital surveying in the early design of the replacement of dolphin structures, a complex sustaining capital project, upfront construction cost risks for Rio Tinto Iron Ore were reduced by approximately A\$80million. The approach meant risks were identified and addressed early to manage spatial integration with existing structures and hazards before onsite construction commenced.

Dolphins are critical infrastructure used to berth and safely moor vessels alongside the wharf for iron ore outloading. As a result of this project, the access to dolphins has significantly improved with a newly installed network of walkways and stairs.

The strengthened jetty also updates the existing design to current Australian design standards, which require strength and resilience to one-in-500-year cyclonic events.



## Koora-Yeye-Boordawan-Kalyakoorl (Past-Present-Future-Forever), Wadjemup (Rottnest Island)

**Airey Taylor Consulting Engineers and Scientists**  
**SCAPE-ISM (Artists and Fabricators; featuring**  
**artists Jahne Rees and Sharyn ) and Rottnest Island**  
**Authority (Department of Biodiversity, Conservation**  
**and Attractions; Government of Western Australia;**  
**Project Owners)**

This striking nine-metre-high monument stands at the landing point of Thomson Bay at Wadjemup (Rottnest Island). It serves to welcome all visitors and to bridge the ancient and recent history of the Island towards a hopeful and positive future. Engineering solutions adopted included glass fibre reinforced polymer rods as reinforcement for the concrete throughout the piece and temporary post-tensioning of the form for fabrication, handling, transport, and installation.

These solutions achieved the artist's vision of a narrow and curved limestone aggregate concrete form directly on the beach, which will endure for future generations despite the highly corrosive environment. The resounding cultural significance of the piece for the Western Australian community is matched by the technical significance of the project as a durability benchmark for all coastal projects using concrete around Australia.

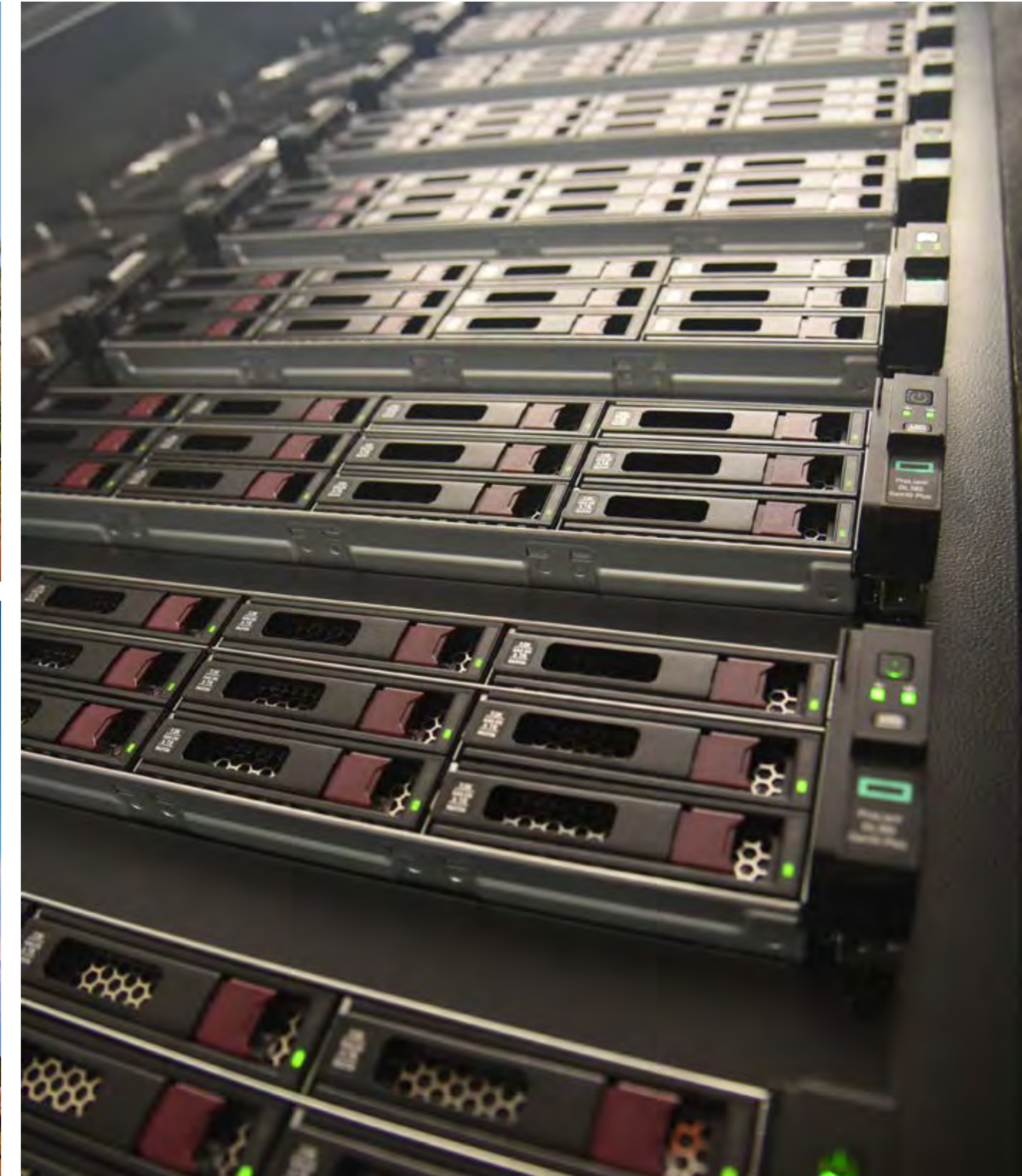


## The MWAX Correlator: A new high speed, high volume signal processing engine for the Murchison Widefield Array radio telescope

**Curtin University**

The signal processing operations of the Murchison Widefield Array (MWA) telescope are a massive computational effort, the bulk of which are achieved by the onsite correlator. A new correlator, dubbed 'MWAX', was designed with increased functionality to remove arbitrary limits and support more flexible observing modes and the expansion of the telescope.

The replacement of the MWA's decade-old correlator is an important development case study for the future SKA project, the world's largest radio telescope. The new MWAX correlator supports both local and international astronomy efforts and science goals and is an important engineering success story in the growing Australian space industry.



## People | Young Professional Engineer of the Year

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WINNER

### Tynan Luzuk

MIEAust CPEng NER

Tynan Luzuk is an accomplished project director and a champion for design innovation. Since very early in his career, he has successfully led some of Western Australia's largest and most complex projects.

Tynan is recognised across the industry for his rapid progression and technical ability. An advocate for cross-industry collaboration, Tynan has a reputation for driving change through smart and sustainable design methodologies delivering reductions in waste, cost, and time. Tynan is a natural leader with a passion and commitment to knowledge-sharing and industry development, being actively involved in research, education, and mentoring.



### Ye Jia Lim

MIEAust

Ye Jia Lim is a Marine and Coastal Engineer with Aurecon, specialising in the delivery of major port and coastal infrastructure projects. Ye Jia's expertise in interface management, and remediation engineering, has been utilised within many projects.

She advocates for younger engineers, particularly in sustainable engineering practices. She is a graduate of the University of Melbourne with a Master of Civil Engineering and Bachelor of Environmental Engineering.



### Tze Liang Chow

MIEAust

Tze Liang has 10 years' experience in civil and structural engineering. He worked in Singapore for six years before relocating to Australia in 2018.

Tze Liang is well-versed in the design of port and marine structures, industrial structures, and underground structures. He is self-driven and has a strong passion for engineering. He strives to provide creative and efficient construction solutions. He is a keen adopter of latest technologies, such as digital analytical and design methods to solve engineering challenges.



## People | Professional Engineer of the Year

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WINNER

### Matteo Tirapelle

FIEAust CPEng EngExec NER APEC Engineer IntPE(Aus)

Matteo is a Fellow engineer with almost 20 years of design experience in the Australian construction industry. A 40Under40 Award recipient, Matteo is driven by creativity, curiosity and communication in the pursuit of engineering excellence. He has extensive experience in the structural design and project management of high rise commercial and residential towers, hotels, industrial buildings, façades, long-span structures and complex temporary works. After several years building his experience and quickly ascending to senior ranks at a well-established engineering firm, Matteo saw an opportunity to branch out and elevate the level of service expected from a structural consultant. The result is his business, Hera Engineering which became WA business of the year in 2021.



### James Flattery

MIEAust CPEng NER

James Flattery is a Chartered Structural Engineer with 15+ years of experience in the industry. He is an advocate for better sustainable building designs, and known for developing innovative design solutions for environmental and community benefits.

His commitment to sustainability has led him to develop a new state-of-the-art software, which automates the design, documentation, scheduling, and shop detailing processes. The development of the software has also created a range of new services within the engineering industry, which offers greater transparency and certainty to clients, generating economic value, delivering tangible benefit to the industry, and ensuring sustainability.



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