

2021 Awards for Excellence – Superior Sustainability

The OneConsult 2021 Awards for Excellence Superior Sustainability Award winner has been announced as Arup for Melbourne Connect.

This year's Consult Australia 2021 Awards for Excellence Superior Sustainability Award winner has been announced as Arup for Melbourne Connect. This award recognises the achievement of sustainable outcomes on an internal or external project that go above and beyond expectations in the application of the firm's services (e.g. through design, advice, and/or the application of sustainable materials and principles etc.).

Winner

Arup

Melbourne Connect

Innovation precinct pushes sustainability outcomes to win Consult Australia award. Arup has received the Consult Australia 2021 Awards for Excellence Superior Sustainability Award for its sustainable design of Melbourne's new innovation precinct, Melbourne Connect.

The prestigious award recognised the sustainable outcomes that exceeded expectations through design, advice, the application of sustainable materials and principles. Melbourne Connect is on target to meet and exceed its ambitious NABERS, Green Star and on-site renewable energy with 40-50% estimated energy consumption and associated greenhouse gas emissions reductions.

Arup, working with Lendlease for the University of Melbourne, undertook the structural engineering, facades, acoustics, and sustainability design with a holistic and credible sustainability approach which focussed the whole project team on the challenge set by the University of Melbourne to have sustainability at the heart of the precinct. The 75,800m² precinct is formed by three separate, but connected sustainable buildings arranged around a central courtyard. The design significantly improves upon standard practice in Australia with estimated 40-50% energy consumption and associated greenhouse gas emissions reductions. Strategies embedded into the project by Arup's sustainability team at project inception reduce the demand for energy through massing, optimisation and façade design that responds to each orientation, tenant agreements and energy efficient building services including LED lighting and a precinct heating and cooling network.

Greenhouse gas emissions are further reduced through a significant provision of on-site renewable energy. Melbourne Connect is bringing together world-class researchers, government, industry, SMEs, startups, higher-degree students and

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artists, as well as the Science Gallery that promotes science, art and innovation in a purpose-built innovation precinct right in the heart of Melbourne.

The precinct showcases highly innovative design and technology and will be a significant contribution to the city's iconic urban landscape. "Melbourne Connect is a place that connects global ideas and innovations of the future and Arup is proud to contribute to a project that put sustainability as the guiding principle for the design," said Richard Stokes, Sustainable Buildings Leader VIC/SA "It is great recognition to have the sustainability design of Melbourne Connect acknowledged in this way by Consult Australia, which represents consulting firms in the built and natural environment."

Consult Australia has also recognised Aurecon for Monash Woodside Building for Technology and Design, Cardno Ltd and WSP Australia for Cedar Grove Environmental Centre, and Digital Twinning Australia for Renewable Energy System Digital Twin as an Educational Tool as Highly Commended 2021 Awards for Excellence in the category of Collaboration for Project Excellence.

Highly Commended

Aurecon

Monash Woodside Building for Technology and Design

Monash Woodside Building for Technology and Design has been recognised as Highly Commended in the Awards for Excellence Superior Sustainability category.

A living lab for Passive House design, Woodside Building for Technology and Design tackles climate change in the built environment and was featured on the world stage at the United Nations Climate Conference (COP26) in October. The Woodside Building for Technology and Design at Monash University is a sustainability project aimed at enabling students and researchers to embrace innovation, design and cutting-edge technology to develop new solutions in sustainable energy.

The project was selected as one of only 17 initiatives worldwide to be on show in the COP26 'Build Better Now' virtual pavilion on October 31. Aurecon's integrated design approach helped bring to life this innovative teaching building, with project partners Lendlease and Grimshaw Architects, applying the Passive House building principles and designing the building as a living laboratory to redefine next practice in building design, teaching and learning practices.

Aurecon Technical Director, Jeffrey Robinson said it was fantastic to see Woodside Building for Technology and Design selected to feature at COP26. "Woodside

Building for Technology and Design demonstrates a real leap forward for the built environment sector in Australia. "By using the Passive House design principles, the building has shown how our structures of the future can provide high performing, thermally comfortable, energy efficient and healthy work and study places, while helping Australia achieve our emissions-reduction targets.

"If these practices are adopted across the whole built environment sector it would allow for faster decarbonisation of the sector in Australia," says Robinson. The Woodside Building for Technology and Design brings to life a living laboratory with visual access to the workings of the building, enabling students and researchers to learn from its physical design and building services.

It also provides drastically reduced energy demands, balanced heat recovery ventilation, continuous insulation around the building envelope, building airtightness and maximised daylight. Opened in December 2020, the building will contribute to Monash University's Net Zero Initiative – net zero carbon emissions by 2030. Aurecon Lead Mechanical Engineer Walter van der Linde added, "The building envelope and its performance has been parametrically modelled to meet the Passive House principles. By controlling solar gain, we get very comfortable, high-performance spaces with much smaller mechanical plant. This is one of the most efficient and innovative teaching buildings in Australia and the largest Passive House project in the Southern Hemisphere," he concludes.

Highly Commended Cardno Ltd and WSP Australia Cedar Grove Environmental Centre

Engineering companies Cardno and WSP have been recognised as Highly Commended in the 2021 Awards for Excellence Superior Sustainability category for Logan Water's Cedar Grove Environmental Centre at this year's OneConsult Awards for Excellence held in Sydney.

The Cedar Grove Environmental Centre is part of a changing Australian water industry in which utilities are striving for a sustainable infrastructure, thanks to a collaborative team effort from project partners which include Logan Water, Cardno, WSP, Economic Development Queensland, Logan City Council and Downer. Located south of Brisbane in the Logan City local government area, Cedar Grove has set new benchmarks for innovation and sustainability.

It has become one of Queensland's most environmentally sustainable wastewater treatment plants (WWTP) to benefit the environment through membrane technology and constructed wetlands to achieve record low nutrient levels, and offsetting

remaining nutrients through catchment restoration. The site is also a centre for research and a community recreation reserve. "It's an honour for Cardno to receive this award and I would like to congratulate everyone involved in bringing this project to fruition from the very beginning," Cardno, now Stantec General Manager, Water & Environment, Natalie Muir said. "Innovation, sustainability and excellence have been the constant throughout this Logan Water project and we are proud to play a part in delivering Australian first water and environmental solutions and strategies to help provide water to the growing Logan region."

Queensland's environmental regulator imposed the strictest license conditions in history for the newly developed WWTP at Cedar Grove. With approximately 330,000 residents in Logan City, the population is set to increase dramatically throughout the decade. In part, this is due to urban development in the city's south; an area which includes the Queensland Government's Greater Flagstone Priority Development Area (PDA). Working with the regulator on policy and collaborating with the Cedar Grove Community Reference Group and Economic Development Queensland, the collaboration between Logan Water and its project partners led to a positive result.

Under the license, Logan Water and its partners are set to achieve a net environmental benefit for the catchment – maximising the uptake of recycled water and reducing nutrients entering the Logan River by 1.5 times the amount discharged in effluent. Dean Maguire, WSP's Section Executive of Water in Queensland says, "What began as a WWTP has been reimagined as a sustainable community and environmental asset to benefit today's residents and future generations. Our Water, Environment and Planning teams have worked closely as part of the Logan Water Alliances and Partnerships to deliver future ready innovations that benefit our communities through continued collaboration with our partners, industry and communities."

Cardno and WSP have been involved in the Logan Water Partnership since 2009, the renewed Logan Water Infrastructure Alliance between 2015-2020 and the current Logan Water Partnership from 2020- 2023. The partnership is a public-private enterprise responsible for delivering critical water and wastewater infrastructure across Logan City. It is one of the largest water infrastructure delivery programs in Australia, capable of delivering in excess of AUD\$120 million capital and renewal works annually.

Highly Commended

Digital Twinning Australia

Renewable Energy System Digital Twin as an Educational Tool

Digital Twinning Australia is a female founded, owned and operated leader in strategic digital asset management and digital twinning. The company spent a year

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in R&D intent on creating a technology that fully leverages the power of critical asset and operating data to optimise asset lifecycles.

Their platform ingests live and historic data from any source [from IoT sensors to Excel spreadsheets], curating and harmonising it before contextually visualising it in the framework of a static 3D Building Information Model [BIM]. A Synchronising Digital Twin. DTA's platform empowers better-informed decision making, providing a single point of truth across disciplines within the client organisation – everyone sees the same information at the same time – with the ability to drill down from the Value-Chain level, through System, Machine to Component levels within their critical assets and lift back up again.

Clients enjoy the ability to accurately monitor asset health, facilitate Machine Learning to optimise operations processes, remove data barriers, and deliver critical data governance and multi-dimensional analytics faster. Realising the potential demand for the platform and the need to accelerate, market research made it clear that despite a variety of State and Federal Government initiatives and Hi-Tech strategic objectives that will lead to the creation of future tech jobs, the education system had not responded by instilling the skills required for those jobs. With a focus on Data Literacy, DTA decided to step in. With a hypothesis that today's schoolchildren will be the ones that drive society to Net Zero, and that supplied with the right data, visually contextualised, students in Years 4 and 5 would be ready to start, DTA approached St Mary's College Adelaide [SMC] as a pilot site.

The school's new Veritas Centre had a solar energy system, and an existing BIM model. DTA linked the energy system's data feed to the BIM model, providing students access to a Synchronising Digital Twin. The data empowered the students to decide what their energy projects and outcomes would be, with SMC teachers facilitating and DTA mentoring kept to a minimum. By the end of phase one of the project, the students had studied the energy requirement of their school, peaks and troughs, calculated the shortfall, and the number [and location] of additional solar panels required to address this. Working together as a team across Years 4-12 they established a plan for creating a sustainable community at their school.

Phase 2 will expand the solar energy capacity of the school while pitching for a battery with the aim of making their school energy self-sufficient.

Phase 3 will be a pitch to the Department for Energy & Mining for an EV charging station to commercialise the surplus energy generated. The project proved the hypothesis, while reinforcing the value of DTA's platform in informing decision making.

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Phase 1 pilot project is ready for a systemic rollout across the education system and the value can be realised not just in schools but across all public buildings and precincts as Australia moves towards a hi-tech, decarbonised future.

Congratulations to our Award Winner Arup, and Highly Commended winners Aurecon, Cardno Ltd and WSP Australia, and Digital Twinning Australia.

Consult Australia is the industry association representing consulting businesses in design, advisory and engineering, an industry comprised of over 58,600 businesses across Australia. This includes some of Australia's top 500 companies and many small businesses (97%). Our members provide solutions for individual consumers through to major companies in the private sector and across all tiers of government. Our industry directly employs over 285,000 people in architectural, engineering, and technical services, and many more in advisory and business support. It is also a job creator for the Australian economy, the services we provide unlock many more jobs across the construction industry and the broader community.

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NOTES TO EDITOR

1. About Consult Australia

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2. About Nicola Grayson

Nicola Grayson is the Chief Executive of Consult Australia. Nicola is responsible for implementing the organisation's strategy, building ongoing external relationships, and for leading Consult Australia's advocacy and government relations agenda on behalf of members.

Nicola is a member of and former chair of the International Federation of Consulting Engineers (FIDIC) Risk, Liability, and Quality Committee. In Australia she chairs the Australian Sustainable Built Environment Council's Urban Resilience Task Group and sits on numerous government forums representing the Consult Australia membership. Nicola is the Convenor for Consult Australia's Champions of Change leadership group for gender diversity and inclusion, a member of the Champions of Change Coalition.

Nicola is a government relations specialist, and has represented industry associations in the United Kingdom, the European Union, and Australia. Nicola has worked across a range of sectors including general insurance, consumer finance, alcohol, and education, in addition to consulting engineering. She has an Honours Degree in Law from the United Kingdom and is a member of the Australia Institute of Company Directors.

3. For interview

For more information and to arrange an interview, please contact Nicola Grayson directly on +61499 878 839 or email nicola@consultaustalia.com.au.