



ACSE NSW

Annual Awards

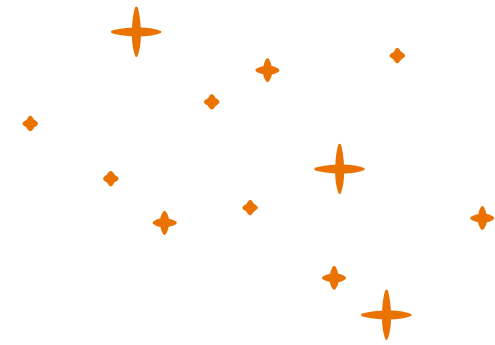
CELEBRATING EXCELLENCE IN STRUCTURAL ENGINEERING

THURSDAY 3 NOVEMBER 2022

DIGITAL PROGRAM

ACSE *Annual Awards*

THURSDAY 3 NOVEMBER 2022



AWARD CATEGORY SPONSORS

SMALL-MEDIUM
BUILDING PROJECTS



LARGE
BUILDING PROJECTS



SUSTAINABLE STRUCTURES



FEMALE ENGINEER OF THE YEAR



EMERGING ENGINEER OF THE YEAR



ACSE *Annual Awards*

THURSDAY 3 NOVEMBER 2022

ORDER OF PROCEEDINGS

6.30pm - Guest arrive

7.00pm - Entree

7.30pm - Building Category Awards:

- SMALL-MEDIUM BUILDING PROJECTS
- LARGE BUILDING PROJECTS
- SUSTAINABLE STRUCTURES

8.00pm - Main Course

8.30pm - People Category Awards:

- FEMALE ENGINEER OF THE YEAR
- EMERGING ENGINEER OF THE YEAR
- GOLD MEDAL AWARD

9.00pm - Official Proceedings conclude
Dessert served

ACSE *Annual Awards*

THURSDAY 3 NOVEMBER 2022

SMALL-MEDIUM BUILDING PROJECTS

1. **HELLENIC CLUB - SDA STRUCTURES**
2. **LAVENDER BAY HOUSE - PARTRIDGE**
3. **LORETO KIRRIBILLI INNOVATION CENTRE - NORTHROP**
4. **ST ANDREWS CHURCH HALL - ROBERT BIRD GROUP**

PROUDLY SUPPORTED BY



HELLENIC CLUB

SYDNEY, NSW



The Hellenic Club in Sydney comprises of two buildings - the main well known Club in Elizabeth Street, and a lesser known building to rear in Castlereagh Street the 'Australian Workers Union Building' that the Club has owned since the AWA moved out. This Castlereagh Street building is historically significant, and the re-development project proposed in 2019, required a detailed forensic investigation into the buildings past, appraisal of the existing structure and the adoption of innovative structural solutions to maintain the buildings heritage fabric and character. The role of Structural Engineer was critical to the successful delivery of this challenging project within the confines of a heritage building envelope subject to numerous development restrictions.

COMPLETION DATE: 01-07-2021



LAVENDER BAY HOUSE

SYDNEY, NSW

The Lavender Bay House project presented unique challenges, due to its location and the design brief. It involved highly detailed off-form concrete, dynamic views, and precise integration between all disciplines. The project required out-of-the-box thinking to solve unique structural problems and many architectural challenges in terms of the concrete's capacity. In particular, each element's ability to satisfactorily span the long distances between supports, without deflecting excessively or cracking.

This was exacerbated by the concrete having to perform significant origami in places, owing to folds, rebates, and substantial recesses notched into the beams or slabs at critical zones of high stress. The house is an embodiment of relaxed living, taking full advantage of its stunning position, with panoramic Sydney Harbour views, and streams of natural light throughout the build.



COMPLETION DATE:
01-08-2020



LORETO KIRRIBILLI INNOVATION CENTRE KIRRIBILLI, NSW

'Spiritus' is Loreto Kirribilli's new 7-storey Innovation Centre, incorporating a range of dynamic, versatile learning spaces and studios, to support the growing STEM needs of the school's year 7-12 cohort.

Loreto's Kirribilli campus has grown over the past 200 years, and now consists of many buildings of varying construction materials and scales supporting the junior and high school requirements.

Excavated into a steeply sloping site, the new Centre interfaces with three adjacent buildings, providing better connectivity through the campus. The development also took the opportunity to improve the functionality of the existing gymnasium and junior school buildings.



ST ANDREWS CHURCH HALL

PARRAMATTA, NSW

St Andrew's church and the adjacent church hall structure was erected in 1926 within what was the small township of Parramatta. Fast forward almost 100 years and Parramatta city is now the commercial centre of Sydney's West and home some of Sydney tallest skyscrapers.



To conserve the Southern façade of the St Andrew's church hall heritage fabric, Robert Bird Group developed an integrated construction methodology and sequence solution, to transfer the existing church hall masonry structure onto the permanent suspended slab, while allowing excavation of the 9-storey basement to occur below. The plunge column integration, location of steel needle beams and the width of the suspended slab was strategically selected to allow maximum retention of the church hall while allowing the future jump form to pass unimpeded upwards. Robert Bird Group de-risked the construction sequence by using in-house digital capabilities.



COMPLETION DATE: 01-03-2022

ACSE *Annual Awards*

THURSDAY 3 NOVEMBER 2022

LARGE BUILDING PROJECTS

1. **ONE SYDNEY HARBOUR - ROBERT BIRD GROUP**
2. **SYDNEY FOOTBALL STADIUM - ROBERT BIRD GROUP**
3. **QUAY QUARTER LANES - SCP CONSULTING**
4. **PHIVE - NORTHROP**

PROUDLY SUPPORTED BY



ONE SYDNEY HARBOUR

BARANGAROO, SYDNEY

One Sydney Harbour is a development that is currently under construction, with the first tower, R1 and its surrounding garden area Hickson Park, now complete. R1 is the tallest residential building in Sydney. The four-story deep water tight basement required extensive in ground remediation to remove harmful contaminants. A portion of the ground floor was constructed top down to allow vehicle access through construction.



The basement is structurally connected to the Crown basement making it the largest of its kind in Sydney.



Robert Bird Group are proud to be the permanent structural and temporary works engineers for the entire development.

COMPLETION DATE: 30-06-2022



PHIVE

Phive is the centerpiece of Parramatta Square's \$2.7 billion transformation. The building is a library and cultural facility filled with community and exhibition spaces as well as the City of Parramatta's Council Chamber. The building acts as a new city landmark, a place where locals can meet, discover, learn and share.



COMPLETION DATE: 03-06-2022

PARRAMATA, NSW



Northrop were engaged to complete the structural engineering design of the building which included an innovative triangular shape design sculpted to match the course of the winter sun. Northrop designed a bespoke structural steel roof frame to support the envelope of the building, forming both the roof and façade made of hundreds of individual insulated roof panels.



QUAY QUARTER LANES

SYDNEY, NSW



Quay Quarter Lanes is a mixed-use development located in the Sydney CBD and comprises of 3 new buildings over a shared basement. The project included refurbishment of heritage buildings, Hinchcliff House and Gallipoli Memorial Club, as well as a new Retail Precinct. Quay Quarter Lanes was Commissioned by AMP Capital Investors at a value of 200 million dollars.

SCP Consulting provided structural and civil engineering design, working alongside Richard Crookes Constructions and a team of five leading Australian architects. SCP overcame significant design challenges on the site such as preserving the heritage listed Bennelong Drain, a GPO fault zone and a rail corridor.

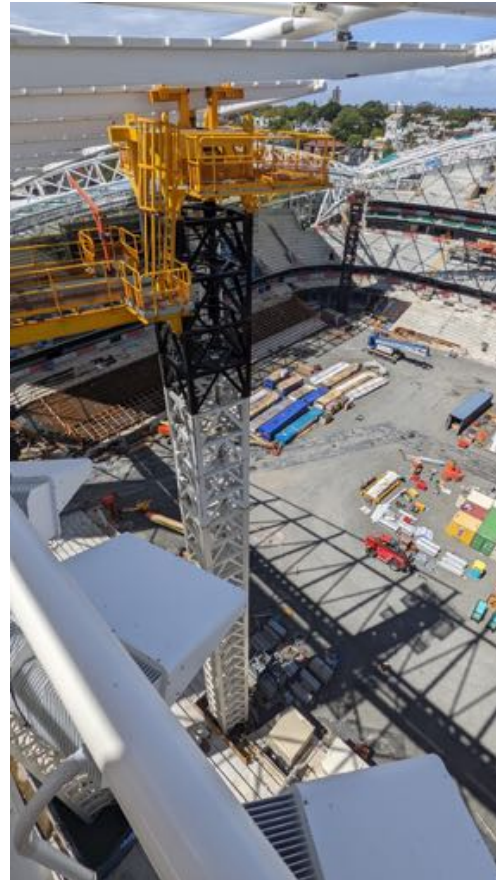


COMPLETION DATE: 04-05-2022

SYDNEY FOOTBALL STADIUM

SYDNEY, NSW

Robert Bird Group worked collaboratively with John Holland, Aurecon and SBP to design the temporary works for the erection of the Sydney Football Stadium roof, and for the construction of the bowl and concourse stadium structures. The height constraints for the new Sydney Football Stadium required a single layer shell roof structure, while keeping the eaves low to fit within an overall project height limit.



The roof structure consists of a form found cable net shape, with imposed loads, through pre-set geometry, including front eyebrow and front edge stiffening trusses, supported from the perimeter and the corners of the lower stand, and a geometrically pre-set tension ring supporting the diagrid. The project is an excellent example of aligning construction methodology, temporary works and permanent works to deliver an efficient and sustainable roof structure, and demonstrates structural innovation.

ACSE *Annual Awards*

THURSDAY 3 NOVEMBER 2022

SUSTAINABLE STRUCTURES

1. **FABPREFAB - SDA STRUCTURES**
2. **NATIONAL HERBARIUM - SCP CONSULTING**
3. **MELBOURNE CONNECT - NORTHROP**

PROUDLY SUPPORTED BY



FABPREFAB

VARIOUS LOCATIONS, NSW

Fabprefab is a highly engineered modular, adaptable, prefabricated building system with a world class focus on sustainability and minimised environmental impact. Fabrication is fully operational after 5 years of development with 13 projects now built around Australia.

The project combines the benefits of CLT and prefabrication to reduce construction generated carbon, and achieve sustainable high quality buildings that are nett carbon negative.

We estimate that so far 16.5 tonnes of CO₂ have been reduced from standard comparable buildings, with continued production saving a further 30 tonnes of CO₂ per year. Additionally, a 3 storey project is currently in design development.



NATIONAL HERBARIUM

MOUNT ANNAN, NSW

The newly imagined National Herbarium of NSW at Mount Annan is built to house the Australian Institute of Botanical Science's growing collection of over 1.4 million botanical specimens.



The main focus of the project is 6 distinctive rammed earth vaults, designed to be able to shield the botanical collection from bushfires and extreme temperatures.

SCP Consulting provided Structural & Civil engineering services while PMI Engineers provided the structural engineering for the unique fly roof. The Herbarium is a great example of sustainability and has set a precedence for future sustainable projects in NSW.



COMPLETION DATE: 02-02-2022



MELBOURNE CONNECT

UNIVERSITY OF MELBOURNE, VIC

Melbourne Connect is a 74,000 sqm purpose-built innovation precinct, which aims to set a new benchmark in education and industry collaboration, and was designed and delivered to the highest standards of sustainability. Northrop carried out the structural design for a six-storey engineered timber office building within the precinct, which contains a start up incubator and a childcare centre.



The building consists of a glulam beam and column structure with CLT slabs throughout. The extensive use of timber has dramatically reduced the embodied carbon footprint of the building structure, by saving an estimated 1200T of CO₂ when compared to a conventional concrete building.

COMPLETION DATE: 01-11-2021



ACSE *Annual Awards*

THURSDAY 3 NOVEMBER 2022

FEMALE ENGINEER OF THE YEAR

1. **CASTHURI KAMALARAJ - PARTRIDGE**
2. **PIP EASLING - NORTHROP**

PROUDLY SUPPORTED BY



CASTHURI KAMALARAJ

Casthuri is a dedicated team leader and role model at Partridge. She is an advocate and instigator of the Partridge Intern and Graduate program. She assists in the oversight of the junior members and ensures they are educated, led, and exposed to the industry. She began as an intern in 2012, working on a wide range of projects at a small structural consultancy, varying from modest single-dwelling homes to post-tensioning design. She then progressed to designing and delivering large-scale commercial projects where she was given the opportunity to work within commercial, multi-residential, government, health, and temporary event structures, which reignited a creative flame in her and led her to Partridge. Casthuri regularly encourages the participation of staff members, in particular juniors and females, in industry events and activities that promote learning, development, and diversity.



PIP EASLING



Pip has been a structural engineer with Northrop since starting as an undergraduate in 2016. In her current role, she manages several key projects across the Community and Health sectors; including the new Rabbitohs training facility. Pip is involved in many extra-curricular initiatives including co-chair of the Climate Action Committee, Social committee and Structural technical group, not to mention captain of the lunchtime football team! Pip holds a crucial role in attracting and retaining junior engineers at Northrop and maintains several mentoring relationships supporting young women throughout the industry. As recognition of her contributions outside her daily role, Pip was the successful applicant to Northrop's first international exchange opportunity in Switzerland in 2023.

ACSE *Annual Awards*

THURSDAY 3 NOVEMBER 2022

EMERGING ENGINEER OF THE YEAR

1. **RONNIE HO - PARTRIDGE**
2. **MATT KEEN - NORTHROP**

PROUDLY SUPPORTED BY

**Cookson &
Roberts**

RONNIE HO



Ronnie's introduction to the structural engineering industry started with an undergraduate role at Partridge in 2017. After graduating with a Bachelor of Engineering and Bachelor of Design in Architecture from the University of Sydney in 2018, Ronnie continued his journey with Partridge as a full-time graduate engineer. Ronnie loves to share his time and inspire others with his passion for the engineering profession and the built environment. He is recognised as a role model to those around him for his delivery of practical, innovative solutions for the most challenging of client briefs. His dedication to his craft is evident in his well-considered, technical solutions to complex problems. His wide-ranging expertise spans the residential, commercial, and artwork spaces, driven by his keen interest to learn from others and getting involved.

MATT KEEN



Matt has been an integral member of Northrop's structural team since starting as an undergraduate in 2016. He currently leads some of Northrop's largest and most technically challenging projects across the residential, student accommodation and recreation sectors, including four new student accommodation towers in Kensington and the new artificial surf lagoon in Sydney Olympic Park. Matt loves to solve complex technical problems and work with builders to explore innovative and efficient structural solutions that achieve great results for the project team and end clients. Matt also makes a significant contribution to Northrop outside of his project work by publishing multiple design guides and design tools for use across the company, mentoring graduate engineers, running internal training courses, presenting at conferences and lunch time tech talks and through his work in Northrop's structural technical group.



ACSE *Annual Awards*

THURSDAY 3 NOVEMBER 2022

GOLD MEDAL

PHIL O'HARA

PHIL O'HARA WAS THE FOUNDER OF
NORTHROP SYDNEY AND
PRESIDENT OF ACSE NSW IN 1996



Phil came from Canberra in 1988 to open a branch office of Murray Northrop P/L on the back of the Lake Crackenback Village project near Thredbo. The project was designed in conjunction with the Architects now called BVN and went on to win the Sulman Medal.

When Phil joined Murray Northrop in 1988 there was a total of 3 full time staff. Since then the company has grown to 270 people in Sydney and 450 nationally.

Phil has 45 years experience as a structural design engineer. His projects range from houses and house extensions, educational facilities, correctional centres, industrial buildings and the occasional timber roller coaster! Phil's passion was building the foundations of a business with the right corporate culture. That corporate culture includes empowering engineers with 8-10 years experience to step up and "grow-the-pie" whilst at the same time becoming owners of the business. Northrop Sydney currently has 19 owners with 3 more expected to be added shortly.

Phil was President of ACSE NSW in 1996, being the first of 5 Northrop ACSE Presidents

ACSE *Annual Awards*

THURSDAY 3 NOVEMBER 2022

***THANK YOU TO OUR
CATEGORY SPONSORS***

