

Carly Mapleson

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My personal profile:

I am an engineer by trade and problem solver at heart.

After working in a number of roles both in Australia and overseas, I have realised that the element common to all projects and roles I have experienced is human connection. Whether my task is technical, commercial or process driven, the final goal is to create a positive experience for the end user. Because of this, I like to explore how my own task fits in the bigger picture, to ensure that my solution contributes to achieving this goal.

Although I very much enjoy digging into the details of a project, one of my favourite things to be part of is automating systems that help streamline workflow and improve the speed and accuracy of repetitive tasks.

On paper, I bring:

- ✓ Cert IV in Programming
- ✓ Bachelor's Degree in Engineering (Mechanical) and Commerce (Finance)

In person, I bring:

- ✓ Attention to detail
- ✓ Creative problem solving
- ✓ Proven success working on and leading multidisciplinary teams
- ✓ Experience liaising with internal and external clients
- ✓ Focus on quality and following best practice guidelines

I look forward to working on exciting new projects in a fast paced, dynamic environment.

My journey so far:

Education

Cert IV in Programming, Upskilled Pty Ltd, Australia, 2021

Bachelor of Engineering – Mechanical (Hons 1), The University of New South Wales, Australia, 2013 (including 1 year of exchange to the Politecnico di Milano, Italy, 2009-2010)

Bachelor of Commerce – Finance, The University of New South Wales, Australia, 2013

Work history

2017 – 2020: Mechanical Engineer, Scentre Group, Sydney, Australia

As part of the Scentre Group design team, I focused on smaller scale projects within existing centres, where detail and coordination (both technical and with various stakeholders) were critical for success.

2014 – 2017: Mechanical Engineer, Beca Pty Ltd, Sydney, Australia

Working for Beca, I completed a range of assignments, from internal multidisciplinary work package management, to on-site performance testing, to tender and construction design documentation preparation and review.

2011 – 2013: Mechanical Engineering Scholar, Transport for New South Wales (previously RailCorp), Sydney, Australia

I enjoyed a two-year internship in rail signalling at TfNSW, working primarily on electrical diagrams, construction documentation, and safety on site.

2010 – 2011: Undergraduate Engineer, Roland Europe SpA, Acquaviva Picena, Italy

I interned at the Roland Europe office, where, in one building, their digital accordion's complete journey took place; from research and development through to detailed design, manufacture, quality testing and control, assembly, packing, and shipping. This was my first foray into the practical side of engineering, and was a valuable experience, from both a technical and cultural perspective.

Want to know more? Here are some examples.

Westfield Chatswood New International Tenant Infrastructure Works, Sydney, 2017 – 2019 (Scentre Group)

The Westfield Chatswood HaidiLao restaurant is HaidiLao's first, landmark store in Australia.

This was a fascinating project due to the need for coordination between teams with different languages and cultures. As the lead mechanical and project engineer, it was my role to communicate with the external client, architect, main contractor and sub-contractors, as well as our own engineering team, site team, architects and management (the project being of multi-million dollar construction value).

This was one of the more intricate and interesting projects I had the opportunity to work on, due to the complexity of the systems required. The preliminary budget and scope definition phases were critical to our success, as well as ongoing coordination with all levels of the external stakeholders.

Chalmers St Substation & Granville Junction Substation, Sydney, 2016-2017 (Beca Pty Ltd)

Chalmers St Substation and Granville Junction Substation upgrades fall within the TfNSW Power Supply Upgrade Program, worth approximately \$30 million construction value per substation.

On these two substation projects, I assisted in elements of hydraulic design, 3D Revit design modelling and clash detection for a number of disciplines; I led the coordination with architectural, structural and primary electrical disciplines, and the internal management of building services (HVAC, electrical, fire protection, comms and security, and hydraulic), through the detailed design stage of work.

This included understanding the engineering standards and processes of TfNSW, the project management requirements of an Accredited Engineering Organisation (AEO), and our own internal design standards. This experience helped me learn to balance and prioritise the requirements of multiple teams.

SKYCITY Adelaide Casino, Adelaide, 2016 (Beca Pty Ltd)

The SKYCITY Adelaide Casino Expansion is estimated at approximately \$300 million construction value. The expansion includes 90 hotel rooms, main gaming and premium gaming floors, function rooms, and signature restaurants.

I was involved in the mechanical services schematic and developed design of the expansion, which was a great opportunity to dive into the detail, where I undertook tasks such as heat load modelling (using Camel software), spatial planning of risers (using Bluebeam and CAD software), on-floor ductwork layouts, equipment selection, and coordination with other discipline models in 3D Revit space.

As well as engineering design, Adelaide Casino was a study in the benefits of coordination in a Building Information Modelling (BIM) environment, as we used different software to communicate between different teams (e.g. BIM360 Glue for viewing by stakeholders and markups for the design team). It was also an example of where virtual reality was used as a communication aid for the client to "walk through the space" before commencement of construction.

As one of the first teams in our company to use this software, it was a steep but exciting learning curve. I very much enjoyed working with the team to understand the new standards, processes and methods required ensure accurate design and coordination.

SKYCITY Cantonese Restaurant, Auckland, 2015-2016 (Beca Pty Ltd)

As part of a multidisciplinary team, I was involved in the concept, developed and detailed design stages of the SKYCITY Cantonese restaurant in Auckland.

This project gave me the opportunity to see the difference in approach between different teams and different countries, even when the content (mechanical services design) was fundamentally the same. I learnt a lot about the details of services design for kitchens and restaurants, and increased my awareness of international standards and their implementation.

This was a great introduction to the management and design of complex projects, and the application of different regulations and standards to a known system.

Any questions, just ask me.