

# Irene Chan: In Profile

*Penny Jones sat down with ATS member Irene Chan, Principal Geotechnical Engineer from PSM, to find out how she got into tunnelling and why she loves her job.*

## **What tunnel project are you working on at the moment?**

For the past 3.5 years I've been leading PSM's delivery of the Sydney Metro Western Sydney Airport Station Boxes and Tunnelling project (WSA SBT), through tender, design and now construction, with project completion planned for December 2024. This metro line connects Sydney's new second airport with the existing rail network.

## **What did you study and where?**

I have a Civil Engineering Degree with a major in Geotechnical Engineering, and a Bachelor of Arts, from Monash University, Melbourne. In 2008, I completed my Masters in Geotechnical Engineering at UNSW in Sydney.

## **What got you into tunnelling in the first place?**

I first went underground when issues arose during the construction of Burnley Tunnel in Melbourne in the late 1990s as a Site Geotech for the remedial grouting and anchoring works before the tunnel opened. Working long shifts in an environment so different from surface construction, with time pressure and media interest, Burnley Tunnel gave me a taste of what an underground career could be like.

It's also where I met some of my (now) colleagues at PSM. A few years later, I asked for a job, moved to Sydney and have worked at PSM ever since. I designed my first underground excavation at Warragamba under Philip Pells, one of PSM's founders, and have worked in many Sydney tunnels over the last 20 years.

## **What do you love about your job?**

I enjoy the perfect balance of working on site and in the office. The practical expertise gained from on-field experience and engineering judgement from my 25+ year career has made me a better geotechnical engineer. I believe I'm a better tunnel designer because of my exposure to construction priorities and concerns; and I can more easily help resolve construction issues because of my design background.

I love how diverse my professional journey has been. I've designed, helped construct and inspect water, road and rail tunnels used for mining, utilities and the



public, and been involved in many projects outside of tunnelling. It's satisfying to know that each day comes with fresh problems and challenges.

I also love working with my colleagues. On the WSA SBT project I work with a bunch of bright young professionals; I enjoy their enthusiasm, the I have your back and you have mine team environment, and I find the interactions invigorating and energising. I enjoy sharing my expertise and trust they value the mentorship.

Tunnelling is a high risk but high reward industry. Mistakes could cost lives, but the feeling of achievement for a job well done is immense. With major infrastructure projects, it is also gratifying to know one's efforts have contributed to the betterment of society.

## **Spending 20 years with a single company is unusual these days, why have you stayed with PSM for so long?**

I've spoken about the variety of interesting work and my colleagues, many of whom are world leaders in their fields. This has kept me professionally engaged. But a key reason I've stayed is the way PSM treats their people. I feel my career progression has always been merit based, irrespective of my gender, race or circumstance.

This really showed through when I was due to have my first child (some 18 years



ago and before any government mandated legislation). PSM set me up with a home office and allowed me to work part time – when working from home was uncommon. Then, while having two small children and working part time, PSM sponsored my masters degree, and promoted me. In my late 30s, I became the company's first female director, and then HSE Director. This clearly shows a company culture of acceptance and encouragement of diversity.

## **As a woman from a minority background, have you faced any particular challenges in the tunnelling industry?**

I'm very comfortable as a migrant woman of colour, an engineer in construction. I come from a family with three ambitious and outspoken girls, so being female has never felt like a barrier to success or achievement. I grew up knowing this is the world I'm going to live in and so I just got on with it.

## **Do you have any advice for the next generation of tunnelling professionals, particularly those from a diverse background?**

Everyone tells you that being a minority in engineering, or construction, or tunnelling, is hard. I would say that if you are a person, regardless of race, gender or age, who stands tall when faced with challenges or is motivated to overcome obstacles to succeed, then you are someone who will excel in these industries.

## **Can you share one of your most valuable career lessons?**

It's vital to listen to people from across the spectrum – there is no one in a project who is more important than anyone else, so take time to listen to and engage with people regardless of their role.

If you would like to know more about careers in tunnelling, women in tunnelling or diversity in tunnelling, please contact us at [ats@engineersaustralia.org.au](mailto:ats@engineersaustralia.org.au)