

# From the tunnels of the Snowy to ITA President

Arnold Dix's fascinating range of interest areas and enduring quest for justice has seen him develop quite the eclectic CV. He is an accomplished lawyer, environmental scientist and engineer with significant expertise in tunnels, risk and transport. He was officially recognised by the ATS in 2011 when he was awarded the Allen Neyland Tunnelling Achievement Award with the judges noting:

*"The Australasian Tunnelling Industry is indebted to Arnold, not just for the substantial contribution that he has made to our domestic tunnelling practice, particularly in the fields of fire and life safety engineering, but also for the promotion of our local practice to the world at large."*

With a disarming mix of humility, charisma and great pragmatism, Arnold has just stepped into the world-changing role of President of the ITA, bringing with him a unique vision for the future of the underground.

**In this, the 50th year of the ATS,** I've just become President of the International Tunnelling Association (ITA) which, from an Australian point of view, is quite a big deal. So how on earth did that happen?

As a small kid I lived for a spell in the Snowy Mountains and visited the tunnels of the Hydroelectric Scheme and they were just awesome, they really captured my imagination. I'm not from an intellectual family. My parents are hotel keepers and I grew up in a pub, cleaning tables and washing dishes, so it was to the great disappointment of the family that I went off to university.

I studied geology and science and, because I'm passionate about the environment, ended up doing a piece of post graduate research at the Ranger Uranium Mine in the

Northern Territory. This got me in trouble with the Australian Government because I became too vocal about my environmental concerns and the fact that Australia was selling uranium to France for their nuclear weapons program. I was told, pretty bluntly, that if I continued to speak publicly, my career as a scientist would be over.

Well, that got me riled so, in 1985, I decided to study law and before I knew it, I was a lawyer in a top tier law firm with a growing reputation for my ability to hold governments to account (from an environmental perspective) on their big infrastructure and mining projects. This reputation led, in 1998, to the government in Victoria bringing me in on the City Link Tunnel Project in Melbourne, not necessarily because

they wanted my involvement, rather they didn't want me to be against it.

This case went well and my reputation and passion for the underground grew so much that the NSW government sent me to Europe in 2000 on an information gathering mission for a case. I'm guessing the Europeans must have thought, "Look at this cool little Australian fella who's a geologist, a lawyer and a scientist and who loves tunnels," because they asked the Australian Government to appoint me to PIARC (the peak world road authority). I was then appointed to PIARC for road tunnels and have maintained my roles there for more than 20 years.

Then, in 2001, the Twin Towers disaster happened and changed everything for me. An Australian Government agency appointed me to investigate and so I went, as a matter of urgency, to New York. Because of some work I'd already done in the U.S., many people from the New York Port Authority were my friends and colleagues so I could access Ground Zero fairly easily, but doing that work was one of the most challenging experiences of my life.

By that point in my career, I was a successful barrister with a highly technical, engineering, scientific and environmental focus. At just 34 years old, I'd been made partner by a major law firm and was being paid a phenomenal amount of money. But returning to Australia after 9/11, I found that nothing made sense. The only thing I can liken the feeling to is perhaps a soldier coming home from war so, at the end of 2002, I quit my legal partnership (which is completely unheard of) and set up my individual practice as a barrister again, specialising in the underground.

I continued to love international work and in 2004 I was appointed to NFPA 130 the international standards body for underground rail, and a year later I was appointed to NFPA 502 – the road tunnels standards committee too. I had an absolute ball doing that, working on underground metros as well as road tunnels in the U.S., in my capacity as a lawyer, while also still working as a scientist on various other standards bodies doing investigations. This year (2022) NFPA awarded me their prestigious Committee Service Award for distinguished service to the development of Codes and Standards.

My international work has also taken me to Albania, building tunnels into Kosovo so the military could do intervention in the war with Serbia, and I've worked in Africa, South America and the Middle East in all sorts of



Dix (centre) 1983 Monash University Geology class

Arnold Dix is brought in to work on the City Link Tunnel Project in Melbourne in 1998, a project which ignites his passion for the underground.



On site at Melbourne's Metro Rail



interesting and ethically-challenging environments. I've also worked closely with the world's re-insurers because when the Twin Towers collapsed so did the insurance industry for tunnels. That's how I got involved with the International Tunnelling Insurance Group (ITIG) and that's what ended up propelling me into the ITA in 2003, where I was the Animateur of the Contractual Practices Group for over a decade and, in 2017, appointed to the Executive Council.

Because I was a hybrid lawyer/technical person, I think I was found to be useful because I could transition seamlessly between my brown-cardiganed self and my lawyerly wiggled official self to navigate through extremely complex commercial and legal matters. For ITA, it meant I became instrumental in big initiatives to change how the world thinks about how we contract underground. The ITIG set up a code of practice for risk management, and I helped make that international, even bringing the recalcitrant Brits on side. I also initiated a specialist underground contracts project with International Federation of Consulting Engineers (FIDIC) and am now looking to New Engineering Contract (NEC) for a new underground contract for the world.

All those experiences have set the scene for where I am now: a completely independent person who is fiercely in search of the truth of things. This quest has taken me all over the world as the investigator of choice for terrible disasters because my clients know I give direct, transparent and honest advice about how and why accidents have happened and people have been killed. I've developed a reputation for not

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being partisan. I tell people the truth and I don't gild the lily. If I do take something on, it's never for the money. I'm doing it because it's the correct position to take from an ethical point of view. I've also never been bashful in clashing with powerful decision makers.

So now I'm in a powerful position of my own right - the President of ITA - and I have some big plans. For the last year, as President-Elect, I did a considerable amount of work behind the scenes to make sure I started my term heading up a united organisation. My mission is to make the ITA relevant, which means we must engage meaningfully with the narratives of the 21st century i.e., engaging on the global issues of sustainability, equality and the dignity of human beings.

The fact is, we live on a planet where most people still don't have access to clean water and a toilet and we, the ITA and all our affiliates, have the knowledge and expertise to solve this.

We know how good the underground is for things like water and sewerage and transport and energy. But we also know how expensive going underground is, so our job is never to go into a room with a decision maker in a country which is poor, where they haven't got education, where their roads are potholed, where their people are dying of dysentery, and recommend that they divert GDP impacting resources into building a lovely tunnel unless we've got a very compelling case.

This is the mission I took to the ITA when I was petitioning to lead, and that message seems to resonate well now, (although even in quite recent times, to talk like that I think I would have been seen as unhinged). But the world is different now and changing fast. I'm completely refocusing ITA's strategic plan and I'm urging my colleagues to pay attention to the declared UN climate emergency and that we need urgent policy changes to suit. My message to my colleagues is: Let's not be shy. Let's put on our brown cardigans, do our buttons up and get serious. Now is our time to shine.

The ATS has a role to play in all this of course, and my vision for the Society as it travels into its next 50 years is that it becomes the informed advocate for the combined professions of the underground in Australia. In a world of climate change and where intergenerational equity is increasingly important, I hope my ATS colleagues continue to get better at explaining to decision makers and the public why Australia needs the underground for many vital things including power, transportation, sewerage, water and perhaps even agriculture.