

# Setting the Standard or Designing for Mediocrity?

I had the great fortune to be trained as a civil engineer around 1990. Professionally, this was an era of transition, with substantial deconstruction of State Government engineering institutions, and rise of both engineering consultancies and local governments. In Western Australia, this was closely linked to the 1992 Crown Land Administration Act (WA), which shifted relative responsibilities of State and Local agencies.

A crucial change that occurred within this era was introduction of Australian Standards. These were developed through a process of technical dialogue from key agencies across Australia, assimilating and amalgamating professional practices from the different States. Leading academics were involved, subsequently disseminating knowledge about the Standards through undergraduate training. I was lucky enough to be directly taught by academics who had been involved development of Australian Standards relevant to design in steel, concrete and geomechanics. Later I had professional exposure to those who had contributed to the wind code, maritime structures, and marina guidelines.

Clearly conveyed by all Australian Standards contributors was a depth of knowledge underlying more generic requirements within the Standards. Deeper knowledge covered understanding of local conditions, construction methods or interactions between engineering elements. Access to this knowledge was available through agency practices including direct mentoring, professional bodies, and academic research. A key objective for personal development as an engineer was pursuit of knowledge.

Introduction of Australian Standards immediately lifted the quality of engineering works in Australia. I thoroughly applaud the development and application of Standards. However, in my opinion, not all of the changes brought to Australia's engineering industry have been positive.

Over decades subsequent to their introduction, the role of Australian Standards has slowly changed. This is keenly illustrated by 2020 WA Work Health and Safety Act, including a semi-legal requirement to meet Australian Standards. Although understandable, such use of generic requirements provides an impediment to the application of more in-depth knowledge. Further, the relative ease of applying Australian Standards has created a commercial disincentive for engineers to apply greater knowledge, particularly if the Standards are used as a professional yardstick.

In my opinion, there is a need to reinvigorate pursuit of professional knowledge by Australian engineers. As a technical member of working groups for Standard revision, I am aware higher professional knowledge continues to exist within our community. However, in my role as a design regulator, it is apparent this knowledge is becoming less widespread, with general levels of professional knowledge condensing towards Australian Standards.

*This article has been prepared to prompt discussion on the evolving character of Australia's engineering profession and our relationship with Standards. It is NOT a criticism of using Standards!*

Words by Matthew Eliot