



MASTER BUILDERS
A U S T R A L I A

30 January 2012

Senator Chris Back
Chair
Senate Education, Employment and Workplace Relations References Committee
Parliament House
Canberra ACT 2600

Dear Senator Back,

Thank you for the opportunity to provide a short submission to the inquiry into *The shortage of engineering and related employment skills* by the Senate Education, Employment and Workplace Relations References Committee.

Master Builders is the peak body for Australia's building and construction industry with almost 33,000 members nationwide, and is the only industry association to represent all of the residential housing, commercial construction and civil contracting sectors. The building and construction industry is one of the largest employers of engineering professionals in the country, with over 15 per cent of the industry's one million employees being in highly skilled professional roles such as civil engineers, engineering managers and construction project managers.

Master Builders estimates that over the course of the current decade the cumulative value of construction work will be approximately \$2.1 trillion, requiring an additional 300,000 workers by 2020, approximately 56,000 of whom will be engineers and professional managers. The Master Builders National Survey has revealed persistent difficulty in filling professional positions in the industry across the economic cycle, something that is likely to worsen as growth in demand for highly skilled roles will exceed growth in other roles in coming years.

Documents such as the ANET *Scoping our Future* report (2010) have clearly demonstrated the shortfall in the pipeline of Australian engineers and related professionals available to meet this employment demand. Construction is one of the areas where this shortfall is most keenly felt. This is particularly the case in the civil construction sector, which grew as a sector by 11.3 per cent in 2010-11, leading to a high demand for engineers for booming infrastructure, mining and energy projects.

To some degree, employers are able to use Australia's skilled migration system to address the low numbers of engineers and professional managers produced by the Australian education system. In 2010-11, 820 civil engineers, 560 engineering managers, and 420 construction managers came into Australia under temporary skilled migration (457 visa) arrangements, and somewhat smaller number arrived through permanent migration arrangements. Although this is at best a partial solution, continued streamlining of the skilled migration program (e.g. reducing the minimum period of employer sponsorship for permanent migration to two years) should be one element of a response to the shortage of engineers in Australia.

Industry's strong preference, however, is to train more Australians to work in highly skilled roles, which will require a multi-faceted approach by Government, industry and the education system. Such an approach would promote increased interest in and aptitude for engineering careers among school leavers, facilitate closer industry linkages in undergraduate programs, and enhance career development opportunities for graduate engineers and professional managers.

The key elements of such an approach would include:

- Increasing investment in maths and science education from primary school onwards to stem the decline in school leavers undertaking advanced studies in these fields, including increasing the number of suitably qualified teachers in school system and addressing the 'image problem' of these subjects;
- More industry-led careers advice for school leavers to better promote the opportunities for careers in engineering and professional management in industries such as building and construction, including targeting groups (e.g. women and Indigenous Australians) currently underrepresented in such roles;
- Greater industry linkages to faculties of engineering, construction management and similar disciplines to ensure the currency of programs of study and to maximise work-integrated study opportunities within degrees;
- More streamlined articulations between relevant vocational education and training (VET) and higher education courses to foster aspirations to higher level skills and career development;
- Support for greater adoption of workforce development concepts by industry, in order to offer graduate engineers more structured skills development and pathways into management roles and postgraduate study; and
- Promotion of greater employment flexibility within industries employing significant numbers of engineers and professional managers in order to improve retention outcomes, particularly in the context of an increasingly ageing workforce (Master Builders is commissioning a study in this area which we would be happy to discuss with the Committee).

Master Builders is open to consideration of commercially viable measures to leverage large-scale Government procurement to encourage greater investment in workforce development. This could include, for example, taking training effort into account in tender selection processes and/or requiring tenderers to have a formal workforce development plan in place. However, Master Builders does not support in isolation measures such as employment quotas that seek to 'micromanage' how employers deliver projects. Measures of this kind will result in increased costs without necessarily delivering any real commitment to training and workforce development.

Master Builders would be pleased to appear before the Committee to discuss these issues further if desired. If you require any additional information or clarification, please contact Dr Alex Maroya in the first instance on (02) 6202 8888 or email amaroya@masterbuilders.com.au.

 Yours sincerely

Wilhelm Harnisch
CEO