

**Submission  
No 18**

## **SKILL SHORTAGES IN NSW**

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# **Inquiry into skill shortages in NSW**

**A Submission to the Legislative Assembly  
Committee on Economic Development**

**By**

**Local Government Engineers' Association of New South Wales**

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## **1. Introduction**

- 1.1 The Local Government Engineers' Association of New South Wales (LGEA) is a registered industrial organisation representing professional engineers, engineering staff, and related professionals in local government in New South Wales. LGEA is a division of the Association of Professional Engineers, Scientists and Managers, Australia (APESMA), a nationally registered industrial organisation of employees.
- 1.2. The LGEA welcomes the opportunity to make a submission to the NSW Legislative Assembly Committee on Economic Development on skill shortages and the value and contribution of skilled migration into NSW.
- 1.3 Members of the LGEA live and work in nearly all local government communities in NSW. They have a strong commitment to, and identify with, their local communities. This is particularly so when they live and work in the same community.
- 1.4 Local government engineers are directly involved in the planning, design, construction and maintenance of council assets and infrastructure including roads and footpaths, parks and gardens, community buildings and amenities and water and sewerage assets owned and operated by local government authorities. They are engaged in the delivery of infrastructure projects for local communities, either council projects or projects involving state government instrumentalities and/or private industry.
- 1.5 The LGEA believes the Committee needs to be fully aware of the relationship between the engineering skills shortage and the capacity of local government to deliver community infrastructure.
- 1.6 In preparing this submission senior engineers with extensive experience in working with skilled migrant engineers in regional NSW were interviewed. Comments on the impact of skilled migration on the engineering skills shortage and what improvements can be made formed the basis of the interviews.
- 1.7 The LGEA has conducted extensive recent research into engineering skills shortages in NSW local government as a foundation for submissions to local government reviews and inquiries established by the NSW government, in particular the Independent Local Government Panel and the Local Government Acts Taskforce, both established by the Minister for Local Government We draw upon our research and reports of the Panel in this submission.

- 1.8 In this submission the terms 'skilled migrant engineer' and 'overseas qualified engineer' will be used interchangeably to refer to engineers who have gained their degree abroad. It should be acknowledged that migrants may gain or finalise their engineering qualification in Australia, which omits them from the terms as defined.

## **2. Sound Infrastructure is vital for Local Communities**

- 2.1 The adequacy and quality of community infrastructure affects the wellbeing of regional communities. Well maintained roads, safe bridges, properly functioning drainage, sewerage and water supply systems are critical to the viability of regional NSW.
- 2.2 The delivery and maintenance of this infrastructure is largely in the domain of local government.

*"Appropriate local infrastructure forms a critical component of strong and sustainable communities and the effective management of this infrastructure is a vital function of all councils in NSW,"<sup>1</sup> - Minister for Local Government.*

## **3. NSW has a Local Communities Infrastructure Backlog**

- 3.1 There is an acknowledged serious infrastructure backlog in local communities, particularly in regional NSW. Generally 'backlog' refers to the cost of bringing infrastructure to a satisfactory level of service at a particular point in time.
- 3.2 The Independent Local Government Review Panel says;

*"... there is no doubt that the sheer scale of infrastructure problems threatens to overwhelm a significant number of councils. This applies particularly to semi-rural councils ..."<sup>2</sup>*

- 3.3 In the June 2013 *Local Government Infrastructure Audit*, it was stated that,

*'..the total infrastructure backlog for all NSW councils is estimated to be \$7.4 billion at 30 June 2012, of which \$4.5 billion relates to roads and related assets and \$1 billion relates to buildings.'<sup>3</sup>*

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<sup>1</sup> Page D (2013). *Councils Turn Corner on Infrastructure Under O'Farrell-Stoner Government*. Minister for Local Government Media Release, 10th June 2013.

<sup>2</sup> Independent Local Government Review Panel. *Future Directions for NSW Local Government (April 2013)*, p20

<sup>3</sup> Division of Local Government (2013). *Local Government Infrastructure Audit*, p9

- 3.4 The Treasury Corporation (TCorp) report, *Financial Sustainability of the NSW Local Government Sector*, that many regional councils are in a financially weak position compared to urban councils with respect to dealing with their infrastructure backlog.<sup>4</sup>

#### **4. Local Communities need more skilled Engineers**

- 4.1 The NSW government has received numerous reports in recent years showing that there is a serious shortage of skilled Engineers in local government.

- 4.2 The competitive disadvantage of local government in the professional labour market was noted in a 2012 Senate inquiry into national engineering skills shortages.

*"4.23 The impact of the skills shortage is also exacerbated for local governments which tend to have fewer resources but must compete with the mining and private civil construction sectors for engineers."<sup>5</sup>*

- 4.3 In the case of civil engineers in NSW local councils, DEEWR<sup>6</sup> commented in June 2012,

*'A number of local councils reported that it was difficult to attract civil engineers because of the higher salaries available in the private sector. Regional NSW councils, in particular, struggled to recruit civil engineers.'*

- 4.4 Earlier reports such as the 2006 Legislative Council Standing Committee on State Development's *Inquiry into Skills Shortages in Regional and Rural NSW*,<sup>7</sup> found that skills shortages in rural and regional NSW affected community infrastructure projects. Specifically addressing the skills gap in the engineering discipline, the report found,

*'Shortages are also evident in local government, including traffic management, design for civil work, technical services and asset management'.*

- 4.5 Figures included in the 2006 report showed that 75% of regional councils in NSW,

*'..identified engineers as a specific area of shortage, particularly civil engineers.'<sup>8</sup>*

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<sup>4</sup> NSW Treasury Corporation (2013). *Financial Sustainability of the NSW Local Government Sector*, p34

<sup>5</sup> The Senate Education, Employment and Workplace Relations References Committee (2012). *The shortage of engineering and related employment skills*, p30

<sup>6</sup> Department of Employment, Education and Workplace Relations (2012) ANZSCO 2332-11, 14, 15 *Civil Engineering Professionals*. Labour Economics Office, accessed in June 2013 [www.deewr.gov.au](http://www.deewr.gov.au)

<sup>7</sup> Legislative Council Standing Committee on State Development (2006). *Inquiry into Skills Shortages in Regional and Rural NSW*, p31

<sup>8</sup> Legislative Council Standing Committee on State Development (2006), p26

The engineering disciplines noted above are critical for the effective delivery of community infrastructure.

4.6 Further findings obtained from LGEA research in 2012 into the shortage of engineering skills included the following;

- 'ii. *In local government the skills shortage is exacerbated for reasons such as; remote location, employer size, budgetary constraints, inability to offer a competitive salary, declining quality of working conditions, management attitude and low perceptions of prospects.'*
- 'iii. *In some cases up to 50% of professional engineering positions are occupied by non-professionals.'*
- 'iv. *The real level of vacancies and skills gap is understated.'*
- 'vi. *Most local Councils use engineering consultancies and claim this as a costly exercise.'*
- 'vii. *Prolonged use of consultants may impact on the skills base, careers and Councils as 'informed clients'.*<sup>9</sup>

4.7 Also worthy of mention are two earlier reports. The 2005 NSW Department of Local Government report into skills shortages,<sup>10</sup> collected quantitative data that indicated regional councils had difficulty in filling engineering vacancies.

Similarly the LGEA Vacancy Survey conducted in 2004.<sup>11</sup> highlighted the engineering skills gap its effect on councils capability to deliver infrastructure. Not surprisingly, the 2004 LGEA survey also noted that,

*'Vacancies were most difficult to fill in regional and rural Councils, particularly in small rural Councils.'*<sup>12</sup>

4.7 The issues of infrastructure backlog and engineering skills shortage are linked. The engineering skills gap reduces the capability of local councils to deliver capital works and maintenance projects for local communities. This is especially a difficulty in many NSW regional areas as noted in the reports cited above.

4.8 The reasons that limit the ability of local government to attract sufficient engineers to deliver the capital works and maintenance programs are far more acute than for other levels of government. Local government has difficulty competing salary-wise

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<sup>9</sup> Banos, A (2012) *A Report on Engineering Skills Shortage and the Infrastructure Backlog in NSW Local Government* P3 appended to LGEA (2013). *Submission to Local Government Act Review Taskforce.*

<sup>10</sup> NSW Department of Local Government (2005). *Survey of Skills Shortages in NSW Local Government.* A report prepared for the Training and Professional Skills Shortages Taskforce, p24

<sup>11</sup> LGEA (2004) *Vacancy Survey 2004.*

<sup>12</sup> LGEA (2004) *Vacancy Survey 2004.*

with private industry and the state public sector. This disadvantage is exacerbated by factors such as remote locations and perceptions of inadequate community facilities such as schools and health care which limit the attractiveness of regional work locations.

## **5. How have NSW Councils responded?**

5.1 In developing a 2013 submission to the Local Government Acts Taskforce Review<sup>13</sup> the LGEA noted a number of initiatives taken by NSW councils to relieve the effects of the engineering skills gap.

- a. Larger councils have initiated selection and recruitment of graduate trainee engineers by providing financial support and work related experience. This 'grow your own' strategy is a deliberate attempt to identify and educate engineers from within the local or surrounding community. However, these efforts have been sporadic and uncoordinated across the state.
- b. Councils often resort to the use of consultants for specific projects and short term contract employees to fill vacant positions. In most instances this adds to project costs due to briefing time for consultants and the re-work of designs and plans that frequently eventuates. Many small regional councils lacking in specific skills tend to seek the assistance of consultants in large regional centres or from Sydney.
- c. A scheme of encouraging retired or semi-retired engineers to return to the workplace has proved to be successful in some regional areas. As well as applying themselves to engineering tasks, the 'grey nomads' often engage in the mentoring of less experienced employees. There is merit in such an arrangement that harnesses the skills and techniques of the retirees.
- d. Many councils have been left with little option but to place non-degree qualified technical staff in vacant engineering positions. This generally required existing experienced engineers to spend time supervising the non-graduate. This situation is more frequent in regional NSW where attracting and retaining qualified engineers has been shown to be more difficult.
- e. There are formal arrangements for the sharing of resources between some councils. The sharing is not limited to plant and equipment, but includes the secondment of staff as well as parcels of specific work. Some remote regional councils have made arrangements with urban councils to undertake certain types of work requiring skills unavailable locally.

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<sup>13</sup> LGEA (2013). *Submission to Local Government Act Review*.

f. Attempts to directly recruit engineers from abroad have met with mixed results. The experiences range from failure to lure candidates, frustration through delays in visa processing, to a few success stories. Some councils indicated they now refrain from this practice as they consider they had been used as 'stepping stones' by migrants in the past who have moved on after a short settling -in period.

5.2 It is clear that the above measures are not sufficient to relieve the chronic engineering skills gap. With the exception of the increase in trainee engineer programs, few of the remaining initiatives provide traction for on-going development of engineering capability.

5.3 The use of consultants is described as a costly measure that is necessary at times when there is absence of other options. LGEA members commented;<sup>14</sup>

*"We have no design office, so most of this work is outsourced. The experienced engineers are called upon to lend a hand with a bit of design and modify the consultant's work on the job. We are stretched."* - Engineer, small metropolitan Council.

*"Use of consultants increases project costs and briefing time. Local consultancies also have difficulties hanging onto experienced staff, thus there is no real advantage for 'on-time' performance by using them" –* Director of Technical Services, large regional Council.

5.4 The long term use of consultants and contractors does little for the skill development of council staff. Additionally, there is a question about the value to ratepayers in continuing the resort to outside professional services for skills that were once available in-house.

## **6. Have migrant engineers provided a solution?**

6.1 Australia has become reliant on the rest of the world to supply us with professional engineers.

*'Skilled migrants currently account for more than half of the supply of newly qualified engineers in Australia, and the proportion has been rising steadily over the past five years'.<sup>15</sup>*

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<sup>14</sup> Banos, A (2012) in LGEA (2013). *Submission to Local Government Act Review*, pp13-15

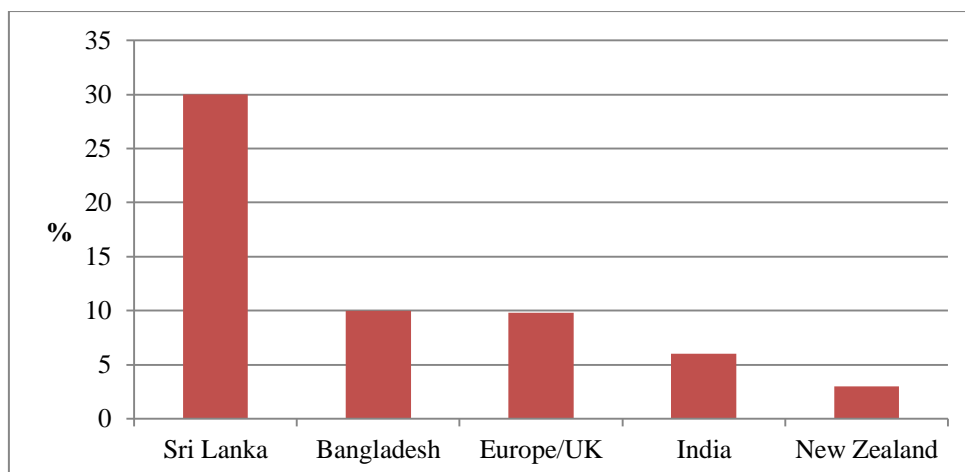
<sup>15</sup> Pearce et al (2010) quoted in Australian National Engineering Taskforce (2011). *Scaling Up Building engineering workforce capacity through education and training*, p 21



6.2 The call upon overseas qualified engineers to take up permanent or temporary placement in Australia may have eased due to economic factors in the resources sector, however reliance on migrant engineers continues.

6.3 Migrant engineers are especially prominent in NSW local government. LGEA's membership records shed light on the importance of migrant engineers in NSW local government.

1. More than 22% of members who give the origin of their qualification possess an overseas qualification.
2. Of this group 35% obtained their qualification in Sri Lanka and 10% from Bangladesh.
3. More than 45% of migrant engineers obtained their university qualification from Sri Lanka, Bangladesh and India
4. European/UK engineers comprise less than 10%, while New Zealanders account for fewer than 3% of the total.



**Figure 1; LGEA members: Country of overseas qualification.**

6.4 Information gathered during the recent interviews for this submission confirmed that respondents to local council engineering vacancy advertisements are overwhelmingly from overseas qualified professionals.

*"The majority of applicants are overseas qualified. Generally we find that appointments are successful, but not at senior engineering levels."-*  
Engineering Manager, small regional Council.

- 6.5 Reliance on overseas qualified engineers produced its own set of significant challenges for NSW councils. Despite assessment arrangements, some LGEA members admitted that desperation on the part of a council to fill a vacancy often led to an unsatisfactory appointment.

*"I suppose we had rose coloured glasses in assessing qualifications. It is difficult to check references for migrant engineers. We found his experience was not of value although he was qualified. It was high maintenance, but we had to train him up over 18 months to get him to grade." - Senior Works engineer, large regional Council.*

- 6.6 The technical skills of overseas trained engineers are generally viewed favourably by NSW councils. On the other hand, there were instances where cultural and language difficulties detracted from the otherwise positive contribution.

*"Migrant engineers can be a mixed bag with some excellent in their technical skills but lacking in other areas such as report writing, dealing with the public, contractors and outdoor workers" - Senior Engineering Manager, small metropolitan Council.*

*"Acclimatisation is important. They (migrant engineers) need time to understand local government culture. Some seem isolated. Maybe a champion or someone who has transitioned well, could have a role in mentoring the newer recruits." - Senior Engineer, small regional Council.*

- 6.7 In some circumstances when 'communications issues' were experienced, other engineers were required to take control of the matter.

*"There were occasions where members of the public would give the (migrant) engineer a hard time. I had to get involved and deal with the issue." - Director of Engineering, small regional Council.*

- 6.8 For some councils, the process of seeking to recruit engineers from culturally similar countries has proved too much for their limited resources.

*"The time and resources used in targeting UK engineers proved costly with no interest shown despite the economic situation over there." - Engineering Manager, small regional Council.*

*"We put a fair bit of effort in trying to get an engineer from New Zealand. It was a big money commitment from our part with removal expenses and so on, however it fell through...we think he got a better offer elsewhere" - Senior Engineering Manager, small regional Council.*

- 6.9 On the other hand recruiting overseas qualified engineers through advertisement has proven to be easier for some councils.

*"We are confident of selecting a good Sri Lankan engineer from what is usually a healthy field to choose from."* Senior Works Manager, large regional Council.

*"The Sri Lankans are already in Australia, with family ties and no visa hassles"* - Engineering Manager, small regional Council.

*"Most of the Sri Lankans come from a rural background and have no problem adjusting to rural life in NSW."* - Design engineer, small regional Council.

- 6.10 The interviews with senior LGEA members has confirmed that skilled migration of engineers in local government is viewed as having made an important contribution towards easing the engineering skills gap. However migrant engineers have not provided the solution to the skills shortage and, as shown above, have introduced challenges that require attention in order to improve overall effectiveness.

*"The reason councils are looking at graduate programs is because skilled migration hasn't solved the problem"* - Senior Engineering Manager, small metropolitan Council.

## **7. What the NSW Government should do**

- 7.1 The NSW Government has a direct interest in the infrastructure backlog in NSW local government and has committed itself to various initiatives to reduce this backlog. These initiatives include the following.
- i. The NSW Local Infrastructure Renewal Scheme, a loan subsidy for councils. The scheme unlocks up to \$1 billion in borrowings for councils to upgrade roads, community halls, libraries, parks, sporting grounds and water infrastructure. Councils can borrow at an interest rate subsidy which is the equivalent to 50% of the NSW government bond rate at a cost of up to \$70 million over 4 years.
  - ii. The appointment of the Independent Local Government Review Panel referred to earlier in this submission.
  - iii. The comprehensive auditing of the infrastructure backlog on a council-by-council basis.
  - iv. The commissioning of the TCorp report into the financial sustainability of councils referred to earlier in this submission.

- 7.2 In light of all the available evidence the NSW Government should acknowledge that;
1. there is a serious skills shortage of engineers in local government particularly in regional communities,
  2. the skills shortage contributes to the infrastructure backlog, and
  3. the Government's financial incentives and other strategies will not be effective unless the backlog is addressed.
- 7.3 The NSW Government should not see outsourcing as a solution to the engineering skills shortage. The LGEA's research referred to earlier in this report does not resolve the skills shortage. This is consistent with experience at other levels of government.
- 'The government, in outsourcing construction to the private sector, has also outsourced the responsibility for workforce development, while the skills shortage has applied pressure which diminishes the capacity for the industry to conduct appropriate levels of training and workforce development.'*<sup>16</sup>
- 7.3 The NSW Government should recognise that regional councils are already heavily reliant on skilled migration to fill engineering vacancies. As this is likely to continue, the NSW Government needs to become better informed about the challenges faced by skilled migrants, in particular migrants from different cultural backgrounds.
- Accordingly, the NSW Government should assist with the transition of skilled engineering migrants in a number of ways.
1. Reassess current training and orientation programs for relevance and completeness.
  2. Consult with relevant organisations with a view to developing new initiatives for assist skilled migrants to more effectively contribute to their new community.
  3. Provide more detailed information about career and lifestyle options in regional NSW to prospective migrants.
  4. Assess the effectiveness of the government funded Overseas Qualified Professionals (OQP),<sup>17</sup> project operating in Victoria to determine its application into NSW. This project is aimed at increasing the employability of some migrants experiencing difficulty gaining employment.

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<sup>16</sup> ANET (2012). *Realising an Innovation Economy*, p10

<sup>17</sup> For example refer to the Victorian Local Government Association and the Overseas Qualified Professionals project (OQP). [www.vlga.org.au](http://www.vlga.org.au) accessed June 2013.

7.4 The NSW Government should acknowledge that skilled migration alone is not the solution to the local government engineering skills shortage. To tackle the infrastructure backlog more effectively action needs to be taken to encourage local engineers to work in local government.

*'Access to skilled staff can be an issue particularly for more remote councils – providing assistance to councils in respect to specialist skills such as engineering and finance needs to be considered.'*<sup>18</sup>

7.5 The LGEA proposes two specific actions by the NSW Government.

1. The 'grow your own' initiatives of some regional councils aimed at developing graduate engineers requires uniformity, consistency and greater spread. The NSW Government should facilitate the development of an appropriate program through the Premier's Department Division of Local Government (DLG) that is relevant to the size and needs of NSW councils. All industry parties should be invited to participate in a project coordinated by the DLG.
2. There should be a linkage between councils' access to subsidised infrastructure funding with the sponsoring of trainee engineers or cadetships. Ideally large councils should be required to employ three engineering graduate trainees, whilst medium and small councils should support two and one trainee respectively. This should be a condition of an infrastructure loan.

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<sup>18</sup> NSW Treasury Corporation (2013). *Financial Sustainability of the NSW Local Government Sector*, p63