A NATIONAL REVIEW OF

EDUCATION AND TRAINING IN LOCAL GOVERNMENT SKILLS SHORTAGE AREAS

ACELG
Australian Centre of Excellence
for **Local Government**

UTS:CLG
CENTRE FOR LOCAL GOVERNMENT

LEARNING
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Written on behalf of the **Australian Centre of Excellence for Local Government.**

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UTS: Centre for Local Government

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About the Learning in Local Government Project

The 'Learning in Local Government' project explores the often unique and complex needs of education and professional development in Australian local government. It aims to inform and facilitate the development of education and training programs through the Australian Centre for Excellence in Local Government (ACELG). ACELG has committed funds to the project through its Workforce Development Program with a view to coordinating, commissioning or (in rare instances) delivering training programs to address priority needs.

Work and discussions continue to explore gaps in the content and availability of education and professional development specifically tailored to local government's needs. ACELG is advocating an integrated national approach that:

- is forward looking and reflects the changing environment and role of local government;

- addresses sector needs for essential skills now and into the future;

- focuses equally on people working in the sector and meets their personal needs to enhance their skills and develop their careers; and

- offers seamless pathways between vocational and higher education and ongoing professional development.

Abbreviations

ACELG	Australian Centre of Excellence for Local Government
AIBS	Australian Institute of Building Surveyors
ANET	Australian National Engineering Taskforce
AQF	Australian Qualification Framework
ABCF	Australasian Building Certification Forum
AUQA	Australian University Qualities Agency
BP Act	Building Professional Act
BPB	Building Professionals Board
CIT	Central Institute of Technology
COAG	Council of Australian Governments
CPSISC	Construction Property Services Industry Skills Council
CPD	Continuing Professional Development
CSHI	Community Services and Health Industry
DEEWR	Department of Education Employment and Workplace Relations
EBPPP	Enterprise Based Productivity Places Program
EHA	Environmental Health Australia
EP&A Act	Environmental Planning and Assessment Act
GSA	Government Skills Australia
HE	Higher Education
IAC	Industry Advisory Committee
IBSA	Innovation and Business Skills Australia
IPWEA	Institute of Public Works Engineering Australia
ISC	Industry Skills Councils
ITAB	Industry Training Advisory Body
LGA	Local Government Association
LGAQ	Local Government Association of Queensland
LGASA	Local Government Association of South Australia
LGMA	Local Government Managers Australia
LGTI	Local Government Training Institute
MSA	Manufacturing Skills Australia
NAF	National Accreditation Framework
NCVER	National Centre for Vocational Education Research
OTEN	Open Training and Education Network
PIA	Planning Institute of Australia
RPL	Recognised Prior Learning
RTOs	Registered Training Organisations
TAFE	Technical and Further Education
TEQSA	Tertiary Education Quality Standards Agency
TGA	Training.gov.au
VET	Vocational Education and Training
WALGA	Western Australia Local Government Association

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Introduction

Background

The preliminary *Learning in Local Government[1]* program inventory prepared by ACELG in 2010 included a profile of existing vocational and higher education courses relevant to some of the key skills shortage areas in local government. The identified skills shortage areas were civil engineering, urban planning, building surveying and environmental health. Post-graduate university courses that contained a specific focus and tailored content for local government were also identified and profiled, both within Australia and also internationally. In addition, the inventory included a sample of innovative professional development initiatives that utilise content and modes of delivery tailored to the needs of local government more generally.

A practitioner survey was then undertaken in 2010 to explore experiences with education and professional development, as well as practitioner perspectives on their own and the sector's future needs and opportunities.

This report builds on these two bodies of work to explore opportunities and gaps in education and training in the same four areas of skills shortage, while also drawing some broader lessons.

Clearly, the four identified areas do not cover all those sectors of the local government workforce where skills shortages are being experienced. It is well known, for example, that many councils are having difficulty recruiting and retaining semi-skilled staff such as plant operators, especially where they are competing in the same market as the mining industry. However, a more comprehensive investigation was beyond the scope of the project at this stage.

In examining further the education and training needs involved in addressing skills shortages in local government, the following questions focused the research:

- What kind of education and training is available for the identified local government skill shortage areas?

- What are the gaps in training?

- Is the currently available training sufficiently flexible to meet the needs of the local government workforce?

- Who is best placed to deliver each of the components? Universities or Vocational Education and Training (VET) providers?

- How well are these components connecting to deliver pathways for individuals?

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[1] ACELG (2010) *Learning in Local Government: A Preliminary Inventory and Gap Analysis of Education and Professional Development for Local Government in Australia*

Methodology

A review of the inventory contained in the ACELG *Learning in Local Government* report of September 2010 was undertaken to determine training suitable for the identified skill shortage areas and how this can be accessed. This information was updated and clarified with data from the following websites:

- Universities nationally
- TAFE networks
- Registered Training Organisations
- Training.gov.au - the database of Vocational Education and Training in Australia
- Tertiary Education Quality Standards Agency (TEQSA)
- Australian Universities Quality Agency (AQUA)
- Government Skills Australia (GSA)
- Construction and Property Services Industry Skills Council (CPSISC)
- Innovation and Business Skills Australia (IBSA)
- Manufacturing Skills Australia (MSA)
- Skills Australia.

In addition, interviews have been undertaken with representatives of:

- Local Government Associations in South Australia, Tasmania, Queensland and Western Australia, New South Wales
- Australian Institute of Building Surveyors (AIBS)
- Planning Institute of Australia (PIA)
- Environmental Health Australia (EHA)
- NSW Public Sector Industry Training Advisory Board
- LGAQ's Registered Training Organisation
- IPWEA QLD Division
- IPWEA WA Division
- LGMA (NSW)
- Government Skills Australia (GSA)
- NSW Building Professionals Board (BPB)
- TAFE NSW
- Local Government Training Institute (Hunter Councils, NSW)

The National Context

Skills Shortages in Local Government

In 2007 LGMA National released its National Skills Shortage Strategy for Local Government – *New Ways of Thinking: Doing Business Differently*. This strategy aimed to 'work collaboratively with key stakeholders, including peak professional bodies, State, Territory and Commonwealth Governments, to fund and implement a range of innovative programs to address the workforce needs of Local Government today and into the future'. (p.9)

Another important initiative was the LGAQ Local Government Skills Formation Strategy Report 2007 which formed sub-groups to develop and action a series of outcomes for three of the top 10 professional skill shortage areas identified by the LGMA strategy, Town Planning, Building Certification and Environmental Health (p.3). The actions from this Task Force were successful in enabling a range of stakeholders to work collaboratively to develop positive outcomes for the skill shortage areas including, addressing national processes and amending legislation for Building Certifiers; promoting cadetships arrangements leading to Environmental Health Officer qualifications; and producing a promotional Town Planning Career DVD.

One critical factor in this success was that the taskforce focused on the specific drivers of skill shortage for each particular profession which resulted in the development of a range of targeted initiatives. Providing a range of initiatives increases the chances of success as it approaches the issue on a number of fronts resulting in more opportunities to harness the interest and energy of a wider range of people in bringing the actions to fruition.

The federal government regularly identifies skill shortage areas. The Department of Education Employment and Workplace Relations (DEEWR) monitors the labour market and provides data on skill shortages at: http://www.deewr.gov.au/Employment/LMI/SkillShortages/Pages/Overview.aspx . Occupations relevant to local government such as Civil Engineers, Engineering Technicians, Urban Planners, Building Associates and Environmental Health Officers are captured in these lists.

The list describes if there is an actual skill shortage or whether skills are hard to recruit for specific reasons such as regional locations. In December 2011 the DEEWR Skill Shortage lists identified the following:

• **In New South Wales** there is a shortage of Civil Engineers and Building Associates; Urban and Regional Planners are difficult to recruit in regional areas; and engineering Draftspersons are difficult to recruit.

• **In Queensland** there are recruitment difficulties for Urban and Regional Planners and a shortage of Civil Engineers and Draftspersons.

• **In Victoria** Urban Planners are listed as a shortage; Civil Engineers are listed as difficult to recruit; Environmental Health Officers and Building Certifiers are not listed. There is a shortage and it is difficult to recruit Draftspersons.

- **In Tasmania** Urban Planners are listed as a shortage while Civil Engineers are listed as difficult to recruit. Environmental Health Officers and Building Certifiers are not listed however Building Associates are listed as a shortage. There is a shortage of Draftspersons.

- **In South Australia** there is a shortage of Civil Engineers and Draftspersons.

- **In Western Australia** there is a shortage of Civil Engineers and Draftspersons are difficult to recruit. The others are not listed.

- **In the Northern Territory** there is a shortage of Civil Engineers with no other skill shortage areas are not listed.

These lists are used to determine the allocation of government funding so it is important that the local government sector is able to provide data and evidence to ensure that identified skill shortage occupations are included on these lists. Federal funding is available to employers who enrol workers in accredited training related to the listed skill shortage areas.

Education and Training

ACELG supports the development of a nationally consistent and coordinated approach for local government. National education and training models will allow wider access to training and provide consistency of material delivered. The local government workforce includes numerous professionals as well as skilled employees requiring a range of qualifications, training and professional development. The training needs of local government are complex. The education and training environment is also complex however, changes are underway to streamline the education sector.

The federal government, through the Council of Australian Governments (COAG), introduced changes in 2010 to the education and training framework in an effort to improve confidence in the quality of qualifications, free up university places, and smooth the path between vocational (VET) and higher education (HE) courses. The two sectors are to be aligned by 2014, and are moving towards a more flexible education framework for students. HE courses will no longer be based on quotas and driven by demand as determined by the university. The COAG agreement also provides for demand driven VET courses

Funding incentives have also been introduced for universities to deliver particular outcomes such as an increase in places for students from lower-socio economic backgrounds to 20% of students. These changes will impact on the decisions educational institutions make about the range of courses they offer and the number of students they attract.

To address the skills shortages in local government, more students need to be attracted to study for relevant qualifications, courses need to be relevant to the needs of the sector and flexible delivery is required. Clarifying the role of the VET and HE sectors could offer greater synergies and strengthen collaboration in addressing student and sector needs. Greater collaboration could also increase the efficiency of training delivery and achieve better outcomes for the education dollar. This is particularly relevant to the delivery of practical courses such as Building Surveying and Engineering.

The Australian Qualifications Framework (AQF) sets the national policy for regulated qualifications in Australian education and training. It incorporates the qualifications from each education and training sector into a single comprehensive national qualifications framework. The AQF sets the standard for qualifications in both the VET and HE sector.[2]

Universities accredit their own courses, governed by the AQF, and make their own decisions with regards to the form and content of teaching. Professional organisations liaise with universities to specify required course content for particular courses to have professional and national recognition. Public and private VET providers, including TAFE institutes, offer competency-based, nationally accredited qualifications. Private providers include registered training organisations (RTOs) delivering VET training, and some local government organisations and professional associations have RTO status.

Eleven Industry Skills Councils (ISCs) monitor the training needs of industry, with Government Skills Australia (GSA) responsible for the government sector including local government. However, some sections of the local government workforce fall under other skills councils including Construction and Property Services Industry Skills Council (CPSISC), Innovations and Business Skills Australia (IBSA), Service Skills Australia, Community Services and Health Industry (CS&H) Skills Council, Manufacturing Skills Australia (MSA), indicating a need for coordination across the Skills Councils in the formulation of appropriate training packages. Also, NSW, WA and TAS each have an Industry Training Advisory Body (ITAB) which monitors the needs of the government sector including local government.

GSA and other skills councils review and develop VET competencies, qualifications and training packages. TAFE and private RTOs develop program content that meets the competencies for the qualifications and deliver the training. Content has tended to be state specific. Opportunities to move towards a national approach for local government training is being explored and fostered through ACELG.

Pathways from VET to HE are negotiated through a number of different arrangements, including formal articulation, recognition of prior learning and credit recognition. The integrity of qualifications and training is critical to this negotiation. The Tertiary Education Quality Standards Agency (TEQSA) has been recently established to achieve consistency of course quality and regulation across the two sectors. TEQSA assumed its full regulatory functions in January 2012. The operations of Australian University Qualities Agency (AUQA) have been integrated into TEQSA, and TEQSA and the Australian Skills Quality Agency (ASQA) have signed a Memorandum of Understanding detailing how the two regulators will work together towards a streamlined national regulatory approach for 'dual sector providers'—providers offering both vocational education and training and higher education.[3]

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[2] Australian Quality Framework Council 2011, *Australian Quality Framework* published by Tertiary Education and Employment SA.

[3] Information sourced from http://www.asqa.gov.au/about-asqa/regulatory-approach/asqa--and-teqsa.html AQUA website viewed 12.03.12

Jobs are changing at an increasingly fast pace and skills are required to evolve and respond quickly to keep abreast of these changes. Education at all levels needs to be able to respond to rapid change. Streamlining the pathways between VET and HE will assist with this response and provide increased opportunities for continuous learning.

Engineering in Local Government

The shortage of qualified engineers was considered so significant that the Australian National Engineering Taskforce (ANET) was established to broker a higher education and industry partnership to promote the needs of the engineering profession. This partnership produced two detailed reports in April 2011. The first, S*caling up: building engineering workforce capacity through education and training,* looks at supply and demand for qualified professionals and paraprofessionals to identify ways in which education and training policy can be harnessed to improve national engineering skills supply and capacity. The second, *Pathways from VET Awards to Engineering Degrees: a higher education perspective,* provides an analysis of the provision and effectiveness of pathways to engineering degrees from award programs operated by the VET sector as a strategy to increasing engineering graduate numbers.[4]

These reports reflect the perspective of the engineering faculties and schools in the higher education sector and indicate the conversations that are needed within the education sector to more closely align the VET and HE area and bring them together nationally by 2014 as required by the federal government.

The most recent estimates for VET qualifications and subject completion are presented in table 1. It must be stressed that the national data upon which these rates are based only covers publicly funded enrolments.

Table 1   Latest completion rate estimates for VET qualifications

Cohort	Commencing in	Projected qualification completion rate (%)	Subject load pass rate (%)
Students enrolled in AQF qualifications	2008	28	80
Full-time students aged 25 years and under enrolled in AQF qualifications	2008	37	78

Note: AQF = Australian Qualifications Framework
Source: NCVER (2011b).

As can be seen in table 1, the projected qualification completion rate for all students starting Australian Qualifications Framework (AQF) qualifications in 2008 over the whole of Australia is 28%. If we only consider full-time VET students aged 25 years and under, the figure rises to 37%' (NCVER 2012).

The national shortage of engineers has a particular impact on local government. In the current climate it is difficult for councils to retain and attract qualified and experienced engineers. Local government has to find new ways to develop its engineering workforce in a highly competitive environment. The local government engineering sector has been active in responding to the skill shortage needs and is well supported by the Institute of Public Works Engineering Australia (IPWEA), the professional body focused on those working in public sector engineering, especially local government.

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[4] Both reports are located at http://www.anet.org.au/

The engineering sector has also been successful in initiating a Senate Inquiry focussed on the nexus between the delivery of infrastructure and the shortage of professional engineers and related employment skills. IPWEA made a submission to this Inquiry which supports and adds to the ANET report outcomes. The Senate Inquiry released its report in July 2012.[5]

Civil engineering and engineering technician courses provide the training and skills most relevant for engineers working in local government. University courses (37) are available in all states with distance components only available in Queensland. TAFE offers an Associate Degree in Civil Engineering (2 TAFEs listed), qualifications in Civil and Construction Engineering, Civil Construction Design and Engineering Drafting. These courses fall under the Construction and Property Services Industry Skills Council. GSA lists a Certificate 1 through to Advanced Diploma of Local Government Operational Works which is offered by nearly 30 private RTOs and TAFEs in all states but not in the Northern Territory. The distribution of engineering courses available in 2011 is shown in the following table 2:

Table 2

Engineering	Post Graduate*	Under Graduate*	TAFE	Private RTOs
Queensland	1 1	7	1 AdvDip 2 Assoc Degree 1 Cert IV LGOW** 1CertII LGOW 1CertI LGOW	1 AdvDip LGOW 1 Dip LGOW 1CertIV LGOW 2 Cert II LGOW
South Australia		5	1CertIV L GOW	1 Cert IV LGOW
Victoria	1	9	3 AdvDip 3 Dip	1 Dip LGOW 1 Cert IV LGOW 2 Cert III LGOW 1 Cert II LGOW
New South Wales	1	5	4 Dip 3CertIV LGOW 4CertIII LGOW 3CertII LGOW	1 Dip LGOW 3 Cert IV LGOW 7 Cert III LGOW 5 Cert II LGOW
Tasmania		1	3 Dip 3 AdvDip	1 Cert II LGOW
Northern Territory		2		
Western Australia	1	3	2 AdvDip 3 Dip Dip (Public Works)	2Dip LGOW

*Courses accredited by Engineers Australia; **LGOW Local Government Operational Works; NOTE: Certificate II to Advanced Diplomas in Civil Construction offered by VET sector.

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[5] Education, Employment and Workplace Relations 2012 Reference Committee – The shortage of engineering and related employment skills Commonwealth of Australia http://www.lgma.org.au/downloads/File/SenEngSkills[1].pdf

The GSA Local Government Training Package Report released in July 2011 looks at the take-up of local government qualifications and includes a suggestion to discontinue the Advanced Diploma level qualification in Operational Works as it is rarely used. It goes on to suggest 'developing this into a generalist Advanced Diploma qualification that would likely be well utilised' (p.46).

Some of the issues in relation to training for engineers which emerge from this report include:

• Attracting more students to study engineering
• Improving access to training outside larger urban areas
• Flexibility of the delivery of training
• Improving completion rates
• Improving interest in and levels of high school maths and science
• Supporting VET sector students to transition into undergraduate engineering degrees.

In November 2011, TAFE released a paper called *Rethinking Skills in Vocational Training and Education and Training: From Competencies to Capabilities*. This paper 'provides a new way of thinking about skill in VET. It proposes a move away from competencies to capabilities…. Rethink the nature of vocational knowledge so that it incorporates vocational disciplines. These would deepen the knowledge basis of occupational practice recognising the importance of the applied academic disciplines to vocational practice and vocational qualifications' (p.32).

Supporting Para-professional Development

Inefficiencies have also been identified by IPWEA in the utilisation of the skills of qualified engineers in local government. IPWEA has proposed the role of a para-professional 'engineering administration' position to work alongside professional engineers (ANET 2007). This is in response to the finding that the 'loudest complaint of engineering staff concerns the time they spend on administration rather than exercising their technical ability as engineers' (ANET 2007). Such a position would free engineers to perform the tasks that require qualifications while overseeing para-professionals to complete other work requiring less qualification. This would increase the job satisfaction of professional engineers and provide mentoring for local government staff into engineering positions.

This para-professional qualification would require a lower level of competency in maths to that required for a traditional undergraduate engineering degree. This level of training could appeal to people with an interest in engineering who after sufficient relevant work experience, may be ready to progress to higher levels of qualification.

IPWEA has suggested the Diploma in Public Works developed in collaboration with the Central Institute of Technology (CIT) WA as a model for this new qualification. This is a nationally accredited Diploma Course. IPWEA (WA Division) report that WA councils are benefiting from the Diploma in Public Works trained Engineers filling management roles within councils.

The Local Government Training Package qualification in 'Local Government Operational Works' was developed to respond to the engineering needs particular to the local government sector. GSA is currently undertaking a review of the Operational Works qualifications. This review could include consideration of the development of VET units that support the proposed para-professional position as a pathway to a Civil Engineering degree.

Improving Degree Completion Rates

Improved completion rates would increase the number of qualified engineers, and generate improved efficiencies for HE. One of the main reasons identified for the high drop-out rate relates to inadequate capacity in maths and science to manage the course content.

'The problem of attraction and retention of students in tertiary education as a whole begins in primary and secondary education, with a declining uptake of key mathematics and science prerequisite courses affecting the number of secondary students eligible to apply for tertiary engineering courses, including higher level mathematics, physics and chemistry' (Pearce et al 2010).

Pathways into university through school and the VET sector have the capacity to improve skill levels, particularly foundation skills, that can bring students to the level required to commence university courses. Universities also offer foundation studies and intensives that can be designed to fill this identified knowledge gap.

Building Surveying in Local Government

A shortage of building surveyors is anticipated with 80% of building surveyors in New South Wales and 90% in Queensland eligible for retirement in 2014 (LGAQ 2007). Nationally, training the building surveying / certification profession is supported by the Australian Institute of Building Surveyors (AIBS). The AIBS negotiates with universities to ensure that course content can be professionally recognised and accredited to deliver qualified building surveyors / certifiers. According to the AIBS, existing training courses have the capacity to cater for current demand.

The following issues which impact on demand were highlighted in 2011 in research for this review:

- The need to attract young people, particularly women, into the profession
- Constant changes to regulatory requirements
- The level of required knowledge which is leading building certifiers to specialise
- Providing the training needs of accredited certifiers to support upgraded accreditation
- Industry issues in relation to the quality of certification work being undertaken
- The current review in NSW of the Planning Act and the Building Professionals Act which could result in changes to certification requirements
- A review of the certification process in Queensland
- Council support for continuing professional development for local government building surveyors / certifiers

These challenges demonstrate the range of areas the local government sector needs to consider to promote an increase in the supply of skilled building surveyors / certifiers. The training needs of increasing numbers of building surveyors and accredited certifiers within local government need to be monitored for the timely provision of additional courses.

Accreditation Levels and the Implications for Education

A National Accreditation Framework (NAF) for Certifiers has been established by the Australasian Building Certification Forum (ABCF). This framework sets the standards and levels of accreditation. There is variation among the states in relation to the levels of accreditation recognised within state systems although stakeholders are currently working towards a national agreement on standards. At the moment NSW has 4 levels of certification with level A4 of particular relevance for local government. This level was created to recognise council officers entering the accreditation system through experience or with an environmental health and building qualification and students undertaking accredited training.

In NSW many local government building surveyors / certifiers with substantial professional experience have undertaken training through the Building Professionals Board (BPB) over the last few years to become accredited as A4 certifiers. From August 2013 this training will no longer be available and all certifiers will be subject to the same training requirements for accreditation.

Accreditation levels are determined based on qualifications and demonstrated experience. While A1 and A2 level certifiers tend to be concentrated in urban areas, it is proving difficult for council officers to gain experience in certifying complex buildings with private certifiers attracting most of this work. The lack of this experience makes it difficult for officers to move up the levels of

accreditation as well as to remove conditions from their accreditation. This is also a problem for smaller councils and in rural and regional areas where there are fewer applications for complex buildings, large commercial and industrial developments. NSW is considering ways to provide this experience using simulated training. This training could have national applicability and be particularly useful for local government staff in regional and remote.

VET and Higher Education – Articulation and Pathways

The AIBS is promoting degree qualified officers as the national standard for building certifiers / surveyors. The Queensland Skills Needs Report (2011) identified 'changes to state and federal legislation [that] continually raise the bar for regulatory standards and professional accountability' (p.41) as an emerging issue impacting on the need for increased skills. The imperative for councils to mitigate risk can also strengthen the demand to employ degree qualified staff and to encourage staff with industry experience to acquire relevant qualifications. Over time this may raise the status of the profession and increase its capacity to attract and retain workers. The building surveying courses shown in table 3 were found to be on offer during this review in 2011.

Table 3

Building Surveying	Post Graduate	Under Graduate	Assoc Degree	TAFE	Private RTO Adv Dip	Private RTO Dip
Queensland	3*	2*	1*			
South Australia	1*	2*	1*			
Victoria		1*		2AdvDip 3 Dip	6	4 & 1LGH&B
New South Wales	1*	*				1 (OTEN)* 1 and 1LGH&B
Tasmania				1AdvDip *&1Dip*		
Northern Territory						
Western Australia		1*		1AdvDip *&1Dip*	1	1

Courses accredited by AIBS National; courses vary in the qualification level they provide for graduates and some courses have provisional accreditation.

Currently there are 2O university and VET courses with AIBS recognised accreditation levels offered in VIC, WA, QLD, SA and NSW. Queensland and Victoria offer distance learning options. Depending on the building regulation content of courses they may be recognised at level A3, which restricts certification to Class 1 and 10 buildings (dwellings and garages), through to A2 to A1, which permits accreditation of Class 2 to 9 buildings.

The profession of building surveying comes under the Construction and Property Industry Services Skills Council (CPSISC) rather than GSA. CPSISC is reviewing all its training packages and is about to commence a review of the Building Surveying Diploma and Advanced Diploma qualifications. The changing needs of the sector and the particular needs of local government can be addressed as part of this process with input from all relevant stakeholders.

Specialist Short Courses

In NSW the BPB completed consultation meetings in March 2012 to gather suggestions on changes to the NSW planning system and the Building Professional Act 2005 (BP Act) relating to the certification system and required training. To facilitate entry into the profession consideration is being given to ways to package required building surveying material as a supplementary qualification for a range of building and project management courses and other building professional qualifications. New resources and programs would need to be developed in order to facilitate this process which may be transferable to other states and territories.

The HE needs of local government building professionals are being addressed by the UTS Centre for Local Government (CLG) through its Building Regulations and Advanced Building Regulations short courses that form part of a Graduate Certificate in Development Assessment. UTS CLG also offers a Certification Short Course developed in consultation with the BPB which is an alternative to the BPB exam and must be completed within six months of applying for accreditation.

Combined Health and Building Officers in Small Councils

The role of Environmental Health and Building Officer still exists mainly in NSW where the work- load of smaller city councils, as well as, regional and remote councils, does not warrant a full-time position for each profession and where there is difficulty recruiting staff. This combined position is now rare in other states. Performing a dual role requires officers to have an extensive range of knowledge and skills to perform their duties effectively.

The Local Government Package includes a Diploma of Local Government (Environmental Health and Building Assessment), a VET qualification. In NSW this Diploma currently has A3 accreditation from the NSW BPB. Accreditation will no longer be available for students commencing this qualification after September 2013. The demand for this qualification is limited to NSW, with training currently delivered through the Local Government Training Institute (LGTI) The LGTI considers this a useful qualification.

In continuous improvement changes to the Local Government Training Package in 2012, the new Diploma of Local Government includes a Building Surveyor Support specialist stream which allows for multiskilling in environmental health units if chosen as an elective.

Environmental Health in Local Government

Environmental Health Australia (EHA) is advocating for all staff working in the environmental health area to become degree qualified. Current entry into the environmental health profession requires a higher education qualification. The profession of EHO requires promotion to foster a greater understanding of the essential role officers play in maintaining the health of communities and to attract people to enter the profession.

Environmental Health Officers (EHOs) can enter the profession through an undergraduate or post graduate degree accredited by EHA. EHA accredits university courses in all states. The Diploma of Local Government (Environmental Health), a VET qualification, is currently provided in the Local Government Package. This Diploma qualifies staff to work as environmental health technicians and as support workers for EHOs.

Historically environmental health positions in local government were linked with building officer positions. The Environmental Health and Building Officer was a combined position requiring a VET qualification and practical experience. Since the 1980s the increasing level of knowledge that EHOs (as well as Building Surveyors/Certifiers) require has supported the progression to degree level skill requirements and the need for discrete positions.

When considering workforce requirements for environmental health positions councils need to factor in the extensive level of knowledge required for the potential high level of responsibility these positions carry, as well as the benefits to council of employing a professional EHO in terms of reduced risk and improved community health. At the same time, continual changes to state and federal legislation are raising the bar for regulatory standards and professional accountability (LGAQ 2011). These issues, together with risk management considerations, increase the need to employ fully qualified staff.

EHA advise that EHOs work is expanding to include environmental protection and sustainability. Where this occirs it will broaden the tasks that are captured under this position.

The issue of capacity to fund a separate EHO position still exists for local government. Larger councils have the capacity and work load to support discrete positions, while smaller city councils, as well as regional and remote councils, may struggle to fund EHO positions. SA Health has developed a model that creates a pool of professional EHOs which councils can draw on to undertake specialist work when it arises ifcurrent staff are not suitably qualified. Some WA councils are also utilising this approach.

To assist council in quantifying the workforce demand for EHO positions, EHA is developing a modelling tool with LGAQ that will allow councils to predict the number of EHOs required to undertake the range of Council tasks indentified. Three large councils are participating initially, with medium and small councils to follow.

The environmental health courses shown in table 4 were found to be on offer in 2011 during this review:

Table 4

Environmental Health	Post Graduate*	Undergraduate*	TAFE	Private RTO
Queensland	1	4		1 CertIII 2 Cert IV 1 Diploma EnvironHealth
South Australia	1			
Victoria		2		
New South Wales		2	1 Dip EnvHealthBuilding 3 AdvDip	2 CertIII 1 CertIV
Tasmania		1	1 CertIII-DipHealthEnv BachHealthScience	1 Cert IV 1 CertIII
Northern Territory		1		
Western Australia	1	2	1 DipHealthEnv	

Courses accredited by EHA National

Currently there is one post graduate environmental health qualification and no undergraduate qualification offered in South Australia. Central Queensland University and University of Western Sydney take students from other states for undergraduate training.

The Diploma of Local Government (Health & Environment) trains Environmental Health technicians to work within local government. There is also a Diploma in Environmental Health offered through Tasmanian Polytechnic, and the combined Local Government Health and Building Diploma offered through the LGTI in NSW, mentioned on page 16. Rural and remote students have good education choices with cadetships linked with external studies at the undergraduate and post graduate level.

Portability of qualifications is an issue, e.g. if you obtain a degree in QLD then you are not recognised in SA to work. Nationally recognised qualifications would provide flexibility across the workforce.

Degree trained Environmental Health Officers working in smaller and remote councils are often required to perform building surveying /certification functions in addition to environmental health functions and require additional training for this purpose. Currently the VET building surveying qualification is A3 accredited by the NSW BPB and can fill this requirement. There are no combined degrees in Environmental Health and Building and, given the level of skills required for each position, as well as the trend towards specialisation, there is unlikely to be significant demand for such a program. EHA does not recognise the VET Local Government Health and Building Diploma for practice as an EHO.

Competition from Other Sectors

The availability of EHOs varies across Australia with cities and major regions facing far fewer challenges. Currently there is a surplus of EHOs in Victoria with undergraduate courses attracting healthy enrolment numbers. However, local government is experiencing recruitment difficulties in states with a resources boom, in regional areas and in smaller councils. Thus the problem for local government is mainly one of location and competition from other sectors for this kind of professional. On the other hand, the variety of work involved in the role of EHO in local government, including hands-on as well as policy work,[6] is well regarded compared with the more limited range of work offered by state government positions. The local government shortage of EHOs is also exacerbated by councils advertising positions below parity with other positions and attracting few or no applicants.

In addition to undergraduate degrees, postgraduate qualifications are providing an additional pathway into the EHO profession. There has been an influx of overseas migrants from England, Ireland and South Africa that has also boosted the number of EHOs in the labour market. This has not alleviated the shortage in regional areas as these migrants are seeking jobs in cities and major centres. Councils also recruit EHOs through the 457 visa process.

Cadetships

As part of the *Local Government Skills Formation Strategy Report* (LGAQ and Queensland Government 2007) the Environmental Health Sub Group surveyed Queensland practitioners to identify issues affecting attraction and retention, defined the role of a para-professional and promoted cadetship arrangements. One of this group's outcomes was to encourage councils to 'grow their own' through the adoption of cadetship arrangements (p.7). Cadetships are now promoted on the EHA website together with a pathway map from diploma to postgraduate qualification within Queensland (see Attachment 1). The findings and resources from this work have been circulated to state EHA bodies nationally.

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[6] Conversation LGAT

Town Planning in Local Government

The DEEWR data for skill shortages refers to a shortage of Urban and Regional Planners in Western Australia and Victoria and regional recruitment difficulties in NSW for local government in inland towns. Retention of planners in the profession is an issue. The Harrison Research 2010, *Workforce and Retention Study*, undertaken for the Planning Institute of Australia (SA Division) provides valuable insight into the Built Environment Workforce including retention issues. This report identified that the numbers of male and female graduands from planning courses are equal, yet after five years there are approximately 50% more males in the profession. This attrition is contributing to a shortage of *experienced*, qualified planners.

The planning courses shown in table 5 were found to be on offer in 2011 during this review:

Table 5

Town Planning	Post Graduate*	Undergraduate*	TAFE	Private RTO
Queensland	7	8		1Dip
South Australia	3	1	1Dip 1Cert IV	1Dip
Victoria	6	5	1Cert IV 1Dip	1Dip 1CertIV
New South Wales	7	3	1Introduction to Planning	1Dip 1CertIV
Tasmania	2		1Dip	
Western Australia	2	4	2Cert IV	
Northern Territory				

Courses accredited by PIA National

Undergraduate tertiary courses are available in all states except Tasmania, and VET courses are also offered in each state through either TAFEs or private RTOs. As with EHOs, the wide availability of post graduate courses provides a range of pathways into the planning profession from a range of related undergraduate degrees.

Graduates into Local Government

Opinions gleaned in preparing this report suggest that graduates who enter local government are not 'job ready'. Working as a planner in local government requires academic learning to be blended with on the job experience. Opinion is divided on whether there should be specific local government units included in university qualifications and how well these would prepare professionals for work in local government. The integrity of HE academic thinking should not be compromised.

VET qualifications or specialised postgraduate programs such as the UTS CLG Graduate Certificate in Development Assessment currently offer a structured framework that provides professionals with a pathway to combine on-the-job training with applied knowledge to achieve a qualification. LGAQ have developed strong links between training and the workplace through requiring local government students undertaking VET courses to have the signed agreement of council's CEO, their manager as a mentor, and to undertake agreed work-place projects that benefit council. In NSW, LGTI courses have similar strong links to the workplace.

To some extent the idea of 'job ready' graduates seems to relate to an unrealistic and counterproductive desire of employers to employ staff that can 'hit the ground running'. Professionals may be better prepared for their work in local government through structured mentoring, with managers exercising leadership by mentoring staff into positions within teams. Such an approach would positively support the culture of the council and strengthen the image of local government as an employer of choice.

PIA national have partnered with Queensland University to develop experiential training over two years for planning lecturers and students. The goal of this project is to provide students with realistic experience that will support their future entry into the work force. The outcomes of this project could address some of the 'job ready' concerns raised by local government.

Regional Availability of Courses

Urban and regional planners can enter the profession through an undergraduate Planning Degree, or through a range of undergraduate courses in Environmental Science, Geography, Urban Design, Economics, Architecture, etc. combined with a post graduate qualification in planning. The Planning Institute of Australia (PIA) accredits university courses in all states except Tasmania and Northern Territory. Courses tend to be offered in major cities. There are also well regarded distance education options available for rural and remote students.

As suggested for Building Qualifications, core planning units could be developed and completed as part of a range of related degrees offered nationally to widen access to planning qualifications. The demand for such units needs to be tested as post graduate qualifications are currently providing this access. At present, courses have the capacity for additional students. Again, the challenge is to attract more students to study planning.

The Local Government package includes the qualifications of Certificate IV and Advanced Diploma in Local Government (Planning). Tasmania Polytechnic offers this Diploma via distance, as does the LGTI in NSW. The VET planning qualification appears to work well as a pathway to HE training in Urban and Regional Planning.

Suggesting Improvements

Mapping Qualifications to Roles in Local Government

The federal government imperative to streamline the education sector by more closely aligning the VET and HE sectors will support the Local Government sector. The capacity to develop flexible training that integrates practical skills and academic thinking will positively support the upskilling of local government staff and the image of local government. The recognised AQF qualification levels are listed in table 6.

Table 6: Qualification levels under the strengthened AQF

Level	Traditional vocational education and training (VET) qualifications	Traditional higher education (HE) qualifications
1	Certificate I	
2	Certificate II	
3	Certificate III	
4	Certificate IV	
5	Diploma	
6	Advanced Diploma	Associate Degree
7		Bachelor Degree
		Bachelor Honours Degree
8	Vocational Graduate Certificate / Graduate Certificate	Vocational Graduate Diploma / Graduate Diploma
9		Masters Degree (Research)
		Masters Degree (Coursework)
10		Doctoral Degree (Research)
		Doctoral Degree (Professional)

Source: AQF 2011

The AQF Council argues that the descriptor for these two different streams 'allows for either an academic or vocational focus depending on the purpose of the qualification accredited' (Watson and McIntyre 2011). The levels are designed to support the required flexibility between the sectors being promoted by the federal government.

At the heart of each of the skill shortage professions which are the subject of this report is the need to balance practical knowledge and experience. Consideration needs to be given to education and training that maintains this balance. An integrated approach needs to be fostered that creates pathways for professionals with detailed practical knowledge to acquire higher academic qualifications, while at the same time ensures that university students graduating into the professions can gain supporting practical knowledge.

The ANET reports (July 2010) (Watson and McIntyre 2011) analysis of the provision and effectiveness of pathways to engineering degrees from award programs operated by the VET sector, provide insight for increasing engineering graduate numbers. The emphasis is on the pathways from engineering related VET Diplomas and Advanced Diplomas into Bachelor of Engineering degrees. The ANET report also maps the qualification pathways available for the engineering profession and examples of related occupations. There is potential to replicate this hierarchy for other professions within local government.

Table 7 Hierarchy of Engineering-related Qualifications

Qualification (sector)	Duration of f/t study	Brief general description of how knowledge and skills acquired through education and training and applied in workplace at this level	Examples of Engineering - related Occupations
Certificates III (VET)	6 months – 1 year	Basic fundamental knowledge and technical skills to function in a supervised workplace	Trainee / Apprentice
Certificate III (VET)	1 – 3 years	Technical and procedural knowledge and communication skills to apply known solutions to predictable problems within a defined area	Plant Operator
Certificate IV (VET)	6 months – 2 years	Technical and procedural knowledge that can be applied to address non-routine or unpredictable problems within a specialised area	Tradesperson (e.g. mechanic); supervisor (of plants, works etc.)
Diploma of Engineering (VET/HE)	1–2 years	Focus on practical applications, such as testing and installing equipment and systems, managing plant, and supervising plan operators, experts in interpreting Standards and Codes of Practice	Engineering Associate, Engineering Officer, Technical Officer, Project Co-ordinator, Technician
Advanced Diploma (VET)	1-2 years	Undertake functions and responsibilities within a well-defined technical environment, usually within a specialist field	
Assoc. Degree in Eng. (HE)	2 years	Undertake functions and responsibilities within a well-defined technical environment, with responsibility and accountability for further learning	
Bach. of Eng. Technology (HE)	3 years	Undertake functions and responsibilities within a well-defined technical environment, usually within a specialist field	Engineering Technologist with specialisation
Bach. of Eng. (HE)	4 years	Responsibility for engineering project management, drawing on theoretical and technical knowledge, using judgement and adaptability to diverse contexts	Professional Engineer with specialisation e.g. Civil Engineer

Source: Kaspura 2010

In 2011, GSA introduced an initiative called *QC Builder* which enables students to search the national competencies by occupation, sector, qualification or skill set. Currently there are 16 occupations listed under local government. GSA estimates that there are over 150 possible occupations in local government. The QC Builder offers the opportunity to broaden the appreciation of the scope of occupations in local government and strengthen links to available VET training. Again, there may be scope to extend this mapping initiative to encompass other HE programs with identified pathways.

Workforce data

Better data is needed to profile local government skill shortage areas and assist with monitoring changes in skill shortage areas over time. Local government needs to be able to develop an accurate picture of its workforce situation. Improved data will have a range of uses including supporting the case for highlighting areas of skill shortage and access to relevant funding. Current initiatives regarding the collection of workforce data by ACELG and also the information collected by professional associations will assist in describing the national picture.

The Promise of Distance Learning

Often the availability of formal training is limited to major cities. Access to face-to-face teaching for students in rural and remote areas is not easily available. Increased and improved distance learning options are required to support the local government sector generally by providing greater flexibility for staff to choose times to undertake training.

Work Placements and Cadetships

Universities nationally place students to undertake work placements required as part of their courses. Local government continues to be a significant work placement option for undergraduate engineers, and can offer a broader range of work than many other employers. Training through work experience is an opportunity to support students to complete degrees and gain valuable experience working within local government.

The IPWEA senate inquiry submission (2012) suggests increasing the opportunities for work placement of student engineers so councils can capture their skills while they are training and before they are employed by the private sector. Mentoring of new and emerging engineers can be part of a workforce retention strategy creating a role for engineers planning to retire from the workforce.

This would seem a sensible approach to take in all skill shortage areas. Successfully mentoring students could encourage them to remain part of local government and utilise the skills of experienced staff to act as mentors.

Transitioning from VET to Higher Education

The TAFE demographic appears to be shifting to younger students who have just missed out on getting into university and away from predominantly older part-time students balancing work and families (Watson and McIntyre 2011). Pathways that deliver students with suitable foundation skills that match degree requirements would support the attraction of students to degrees and assist students with completion.

Promoting transition from VET to HE raises a number of issues: clarity of relationship of recognised prior learning to proposed degree; ensuring foundation subjects for the degree are covered; and supporting students to be more university ready. Strengthened VET sector pathways may also help universities to improve degree completion rates.

Pathways are also needed to up skill workers with extensive experience in local government or a trade – for example building or carpentry students could be offered an explicit pathway into Building Surveying.

Tailored Local Government Content

In all of the skills shortage areas there also appears to be a need to develop more local government specific course material, as well as new delivery modes that address the needs of smaller and rural and remote councils. The EH course has a local government focus as EHA appreciate that most EHO graduates find government jobs with the majority moving into local government. Professional associations and training providers could develop ways of adding material to existing degrees and trade qualifications to facilitate training to meet local government's needs. In addressing the training needs of local government, caution needs to be taken to ensure that any solutions retain the integrity of HE academic thinking and the skills and competencies of VET sector training.

Gaps in Course Provision

Preliminary analysis of data obtained 2.on provision of courses in skills shortage areas suggests that the following opportunities warrant further exploration:

- An Associate Diploma in Engineering to promote a para-professional pathway into university training;
- Specialist short courses in Building Surveying to be included in related degrees such as Building and Project Management and Building Professional qualifications;
- Articulate EHO pathways between VET and HE;
- Map information on external course providers for local government and prospective students;
- Specialist local government units offered in broader Town Planning qualifications; and
- The delivery of face-to-face training in regional locations needs to be considered to address skills shortages in the Northern Territory.

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Attachment 1

Source: Environmental Health Officer Cadetship Program May 2010

Appendix E
Flow Chart of Queensland EHO Pathways

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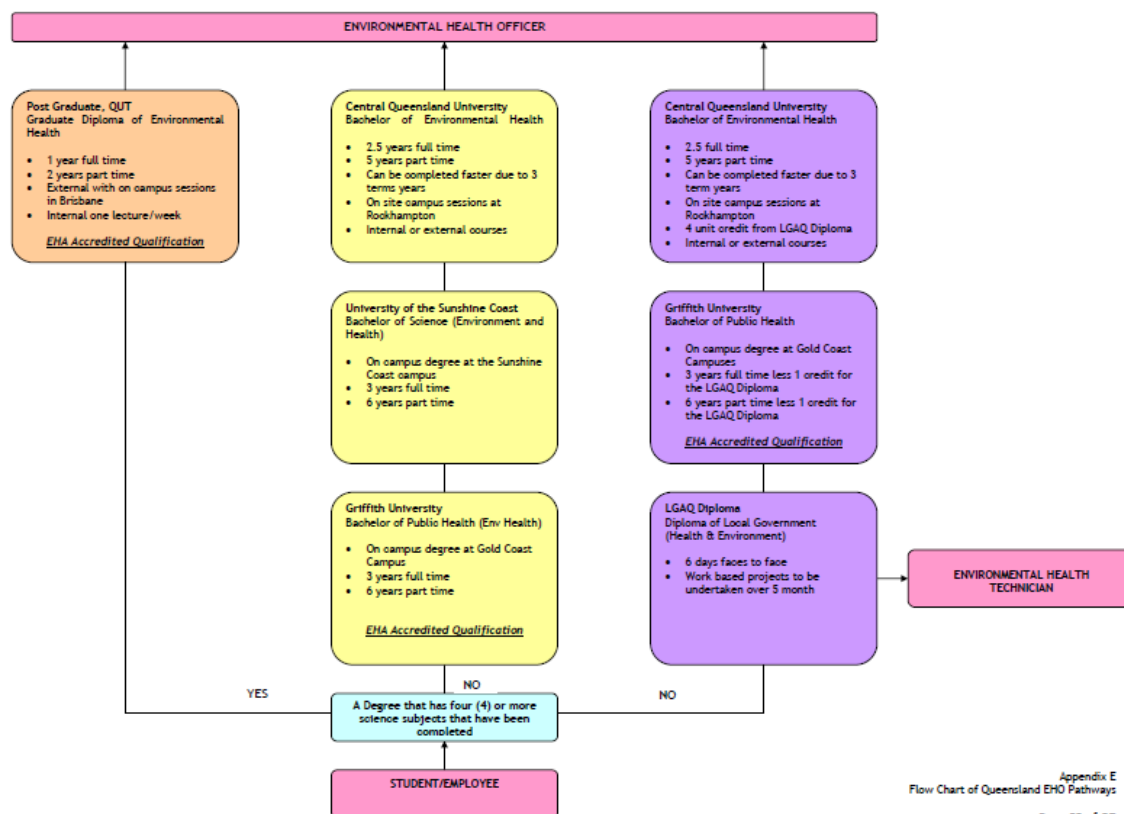
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ABOUT ACELG

ACELG is a unique consortium of universities and professional bodies that have a strong commitment to the advancement of local government. The consortium is led by the University of Technology Sydney's Centre for Local Government, and includes the University of Canberra, the Australia and New Zealand School of Government, Local Government Managers Australia and the Institute of Public Works Engineering Australia. In addition, the Centre works with program partners to provide support in specialist areas and extend the Centre's national reach. These include Charles Darwin University and Edith Cowan University.

PROGRAM DELIVERY

ACELG's activities are grouped into six program areas:

- Research and Policy Foresight
- Innovation and Best Practice
- Governance and Strategic Leadership
- Organisation Capacity Building
- Rural-Remote and Indigenous Local Government
- Workforce Development

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