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Executive summary

ACIL Allen Consulting (ACIL Allen) was commissioned by Regional Development Australia (RDA) ACT to develop a skills and training gaps strategy for the Greater Capital Region based on the results of several skills audit reports.

ACIL Allen has synthesised the findings of the separate skills audits in order to develop a comprehensive profile of skills needs across the Greater Capital Region. Based on this analysis, and the collection of a range of data on the region, the skills and training needs of the region have been prioritised in order to inform the development of high level strategies that educational institutions, employer and industry groups and other relevant stakeholders (including RDAs) can use to holistically address any gaps.

Preliminary list of occupations in shortage

An initial list of occupations in shortage across the Greater Capital Region was prepared by systematically combining the findings of reports such as the 2011 report on Skills Shortages in South East NSW, the 2012 South Coast Skills Audit, the 2012 Skills Shortage List for the ACT, the 2013 Skills in Demand List – Southern Island and the 2012 Study of Skills Shortages in the ACT. This involved standardising occupations and counting the total number of times an occupation was mentioned as being in shortage in the reports.

The top five occupation groups identified in this exercise for each skill level are shown in Table ES 1.

### TABLE ES 1

<table>
<thead>
<tr>
<th>Skill level 1</th>
<th>Skill level 2</th>
<th>Skill level 3</th>
<th>Skill level 4</th>
<th>Skill level 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bachelor degree or higher</td>
<td>Associate Degree, Advanced Diploma or Diploma</td>
<td>Certificate III and 2 years training or Certificate IV</td>
<td>Certificate II or III</td>
<td>Certificate I</td>
</tr>
<tr>
<td>Medical practitioners</td>
<td>Health and Welfare Support Workers</td>
<td>Fabrication Engineering Trades Workers</td>
<td>General Clerks</td>
<td>Sales Assistants and Salespersons</td>
</tr>
<tr>
<td>Engineering Professionals</td>
<td>ICT and Telecommunications Technicians</td>
<td>Automotive Electricians and Mechanics</td>
<td>Accounting Clerks and Bookkeepers</td>
<td>Farm, Forestry and Garden Workers</td>
</tr>
<tr>
<td>Midwifery and Nursing Professionals</td>
<td>Miscellaneous Hospitality, Retail and Service Managers</td>
<td>Food Trades Workers</td>
<td>Personal Carers and Assistants</td>
<td>Hospitality Workers</td>
</tr>
<tr>
<td>Tertiary Education Teachers</td>
<td>Building and Engineering Technicians</td>
<td>Mechanical Engineering Trades Workers</td>
<td>Logistics Clerks</td>
<td>Miscellaneous Labourers</td>
</tr>
<tr>
<td>Architects, Designers, Planners and Surveyors</td>
<td>-</td>
<td>Miscellaneous Technicians and Trades Workers</td>
<td>Child Carers</td>
<td>-</td>
</tr>
</tbody>
</table>

While the preliminary list provided a starting point for identifying the priority skill shortages across the region, it was recognised that the characteristics of the region need to be considered when identifying the occupations that are most in need in the region. Demographic and labour market characteristics of the region influence which shortages will have the greatest local impact.

For example, the age profile of the region indicates that shortages for child carers are a priority in the ACT, while shortages for aged carers are a priority in the Far South Coast and Southern Inland. Diversity information shows that disability and Indigenous workers are required in the Far South Coast. Low unemployment rates in the ACT and the Southern Inland contribute to skill shortages in the region, so attracting skilled people to the region could help alleviate shortages.
Priority skills shortages in the Greater Capital Region

Based on the initial list of occupations in shortage and the analysis of the key features of the region, priority skill shortages that need to be addressed across the Greater Capital Region were identified.

Healthcare professionals

The health industry is a large employer in the region and is projected to continue growing. Although enrolments in higher education in health have grown over the last five years (by 82 per cent), a number of skill shortages were reported for professional occupations across the sector.

This study finds that the highest priority occupations in the health care sector are general medical practitioners and registered nurses across the entire Greater Capital Region. A range of other professionals are also required. Specialists such as occupational therapists and physiotherapists will be in even greater demand with the launch of DisabilityCare Australia in the ACT in 2014. In addition, given the high proportion of Indigenous people in the Far South Coast, Indigenous health workers are required in the region.

Community and care workers

The community services sector is expanding across the region. Education, health and welfare services managers were reported to be in shortage in the Southern Inland and Far South Coast. In particular, child care centre managers are in shortage in Southern Inland and health and welfare service managers in the Far South Coast.

Given the national social inclusion agenda, workers who assist marginalised groups participate in society and the workforce are a high priority for the Greater Capital Region. Psychologists and social workers with expertise in disability are in shortage on the Far South Coast.

Lower skilled occupations, requiring VET qualifications, were also reported to be in shortage. Shortages in child care workers in the ACT and Southern Inland are a concern given the growth in the proportion of children in the population. Carers and care workers are in shortage across the region. Given the ageing population in Far South Coast and Southern Inland, filling shortages for aged carers is a high priority in these regions.

Education and training professionals

Educational professionals in secondary and tertiary education are required in order to continue improving the educational attainment in the Far South Coast and Southern Inland; In addition, the child population has grown in the ACT and early childhood teachers are required to respond to the requirements of the National Quality Framework. Special education teachers were reported as being in shortage in the ACT and Southern Inland. Skilled migration has been used to fill vacancies for university lecturers and tutors.

Green skills

As carbon abatement is inherently multidisciplinary, effective and sustained abatement will require collaboration between people and organisations with complementary skills and experience.

The engineering and science professions will underpin many of the abatement opportunities. However, these professions will often work closely with trade qualified individuals in implementing and maintaining abatement related projects. Each of the engineering disciplines is important for carbon abatement opportunities, and shortages were reported across many of them in the region.
In particular, civil engineering professionals, electrical engineers and other engineering professionals were reported to be in shortage across the entire region, with regional differences in shortages for industrial, mechanical and production engineers, and mining engineers.

Electricians and plumbers with specialty skills are required to support energy efficiency improvements. Both were reported as being in current shortage in the Southern Inland and Far South Coast, with plumbers also in shortage in the ACT.

Other occupations requiring green skills that were reported to be in current shortage include Architects and Landscape Architects, Surveyors and Spatial Scientists, and Urban and Regional Planners.

Trade skills
A range of traditional trades workers are in current shortage across the region, including Automotive Electricians, Motor Mechanics, Structural Steel and Welding Trades Workers, Carpenters and Joiners, Bakers and Pastrycooks, and Chefs.

ICT skills
ICT skills that may support realisation of the benefits of the NBN in the future are in shortage in the Far South Coast region and continuation or worsening of these will affect the ability of the region to fully harness the capabilities of the NBN in the future. Occupations experiencing significant shortage include ICT Support and Test Engineers and ICT Support Technicians.

Reflecting the shortage of ICT skills, a number of occupations within the ICT professionals group are on the top 15 list of occupations filled through skilled migration in the past year.

Business and administration skills
A range of skills relevant to operating a business were reported as being in shortage across a range of sectors in Far South Coast and Southern Inland. Businesses reported skill shortages for accountants (also reported in the ACT) and advertising and marketing professionals, as well as financial and general administrative staff with social media and marketing skills.

Accountants and advertising and marketing professionals are on the list of top 15 occupations filled through skilled migration in NSW.

Recommendations for addressing skills and training gaps in the Greater Capital Region
ACIL Allen Consulting has developed a number of options for addressing the identified skills gaps. Many of these options require engagement with a range of stakeholders across the Greater Capital Region in order to develop, refine, and implement solutions to skills and training gaps.

Retain and retrain existing workers
Given the ageing workforce, coupled with shortages across many industries including healthcare and community services, mature age workers need to be retained in the workforce longer. Work practices such as offering part time employment may encourage older workers to stay in their jobs.

As poor working conditions, lower wages and lack of well-defined career paths contribute to turnover in community services, the importance of supporting improved working conditions, wage levels and establishment of career paths in healthcare and community services will be critical across the region.
Mentorship arrangements between younger and older staff could encourage retention amongst both groups through professional socialisation. There should be continuing emphasis on the importance of continuing education to help job seekers obtain employment and participate in the labour market.

**Tap into underutilised labour supply**

Given higher unemployment and lower labour force participation in the Far South Coast, there is a pool of people without work who could potentially fill lower skilled shortages in the region. Given adequate training and being matched with the right employer, groups such as unemployed youth, women with children or people with disability could fill vacancies for carers or clerks in the region.

It is important to address soft or employability skills (such as motivation, communication, enthusiasm, confidence, initiative and interpersonal skills) when placing job seekers. Removing barriers to labour force participation for people facing disadvantage requires focused engagement between employment service providers, community service organisations, local businesses and education and training providers.

**Attract domestic workers to the region**

While the ACT has experienced high population growth, the Southern Inland and Far South Coast have experienced a decline in the core working age population which is contributing to a range of skill shortages in professions.

The difficulties in attracting workers to the Southern Inland and Far South Coast regions have been clearly articulated in recent skills audit reports. Community amenity and infrastructure needs to improve to attract skilled workers to these regions, as these factors are currently combining to constrain workforce and economic growth.

Projects that engage industry, such as industry clusters, are more likely to secure multiple sources of investment, and can form part of an industry investment strategy designed to generate employment opportunities and attract professionals to the region.

**Create incentives for employers to take on apprenticeships**

A number of trades are in shortage across the region, and evidence suggests that enrolments in apprenticeships have been declining. Recruitment and training of young employees in apprenticeships tends to be cyclical, and decline during times of economic recession.

Various government programs provide incentives for businesses to take on apprentices, including the Australian Apprenticeships Incentives Program, the Apprentice Kickstart Initiative, and the Australian Apprenticeships Access Program. These programs should be actively promoted in the region.

**Increase course promotion**

Changes to course promotion by universities and VET providers could increase the supply of students flowing into key occupations in shortage. For example, enrolments in planning, spatial science, engineering and agricultural and food sciences could potentially be increased through targeted marketing to students at local high schools. The diverse career opportunities provided by the “green economy” offer a platform on which to engage young people, particularly in engineering which stakeholders reported was not attractive to students.

Promotion of courses relevant to the priority occupations in shortage requires career counsellors in both schools and tertiary institutions to be aware of regional skill shortages and relevant training pathways.
Industry engagement and articulation pathways

Universities can incorporate cadetships or internships into their programs in high need areas, so that students engage with local businesses and may be more likely to stay in the region following completion of their studies. Partnerships between education and training providers and industry bodies can help ensure the relevance of training and ameliorate skill shortages.

In the Southern Inland and Far South Coast there is a tendency towards Certificate level qualifications. Participation in higher education can be facilitated by articulation arrangements between VET and higher education providers. Strategies that support the transition from VET to higher education include TAFE degree programs, credit transfers to university and integrated dual qualifications. While articulation arrangements are in place in the region for many fields of education, it is important to ensure that students are aware of these opportunities.

Flexible modes of delivery, such as e-learning and “pop-up” regional campuses, are a key mechanism for helping students undertake their studies, and then work, in the region.

Address deficiencies in training provision

This review found that, in general, the training required for priority occupations is in place, which means that communication and collaboration are key to filling shortages. However, some potential training and education gaps with respect to the priority occupations identified were evident, so there may be opportunities to increase provision of training in specific areas such as Indigenous health at the VET level in the Far South Coast, Bachelor of Social Work at the University of Wollongong, postgraduate courses in special education at the University of Canberra, architecture courses at the University of Wollongong, and the inclusion of social media and marketing skills in clerk courses in Southern Island and Far South Coast.

International skilled migration

In the short term, temporary skilled migration from overseas is a viable option for filling urgent shortages across professionals and trades, as other strategies will take longer to implement and come into effect.

The data show that temporary skilled migrants have recently filled vacancies in the following occupations with shortages: general medical practitioners; registered nurses; university lecturers and tutors; design, engineering and science professionals; automotive and engineering trades workers; food trades workers; business, human resource and marketing professionals; and ICT professionals. It is likely that skilled migrants will continue to be available to fill vacancies in the priority shortage areas. Permanent migration can also bring long term skills to the regions, provided they can attract and retain such migrants.
1 Introduction

ACIL Allen Consulting was commissioned by Regional Development Australia (RDA) ACT to develop a skills and training gaps strategy for the Greater Capital Region based on the results of several skills audit reports.

1.1 The Greater Capital Region

The Greater Capital Region is shown in Figure 1. It is comprised of three RDAs:
- RDA ACT, which includes Canberra and the balance of the ACT;
- RDA Southern Inland, which includes 13 LGAs (Wingecarribee, Goulburn-Mulwaree, Palerang, Queanbeyan, Cooma-Monaro, Snowy River, Bombala, Tumut, Yass Valley, Harden, Young, Boorowa and Upper Lachlan); and
- RDA Far South Coast, which includes three LGAs (Shoalhaven, Eurobodalla and Bega Valley).

FIGURE 1 MAP OF THE GREATER CAPITAL REGION

1.2 Background to the project

Within the last two years, the South East Regional Organisation of Councils (SEROC), RDA Southern Inland and Far South Coast and the ACT Government have all undertaken independent skills audits in order to identify areas of skills shortages and deficiencies across the Greater Capital Region. In addition, the Labour Market Research and Analysis Branch in the Department of Education, Employment and Workplace Relations (DEEWR) conducts regular skill shortage research across Australia and produces lists for each state and territory.

These audits provide a baseline for further analysis and discussion in developing options and strategies for alleviating skills deficiencies from across the combined Greater Capital Region. However, the documents are in various formats and use different terminology and coding systems to identify shortages. Therefore, they need to be consolidated in order to identify the common and most important shortages across the region.

1.3 This report

ACIL Allen Consulting has synthesised the results of the findings of the separate skills audits in order develop a comprehensive profile of skills needs across the Greater Capital Region. Based on this analysis, and the collection of a range of data on the region, the skills and training needs of the region have been prioritised in order to inform the development of high level strategies that educational institutions, employer and industry groups and other relevant stakeholders (including RDAs) can use to holistically address any gaps.

This report is based on the results of a comprehensive desktop review and also incorporates insights from the Greater Capital Region Skills and Training Needs Forum held on 27 June 2013. The report is structured as follows:

— Chapter 2 provides a preliminary list of occupations mentioned across all reviewed documents as being in shortage;
— Chapter 3 provides a range of information on the region in order to determine which of these occupations are a priority for the region;
— Chapter 4 identifies the priority occupations in shortage in the Greater Capital Region based on Chapters 2 and 3 and assesses the availability of relevant training; and
— Chapter 5 provides options for addressing the priority skills gaps in the region.
This chapter provides a preliminary list of occupations mentioned across all documents as being in shortage in the Greater Capital Region.

2.1 Overview of approach

An initial list of occupations in shortage across the Greater Capital Region was prepared by systematically combining the results of the following documents:

— the 2011 report on Skills Shortages in South East NSW – Part 2 prepared by Strategic Economic Solutions for RDA Southern Inland, RDA Far South Coast and SEROC;
— the executive summary of the 2012 Study of Skills Shortages in the ACT prepared by KPMG for the ACT Government;
— the 2012 South Coast Skills Audit conducted by RDA Far South Coast;
— the 2012 Skill Shortage List for the ACT developed by DEEWR; and
— the 2013 Skills in Demand List – Southern Inland developed by RDA Southern Inland.

The findings of these reports are described in terms of occupational shortages. Some of these reports are published according to the ABS’ Australian and New Zealand Standard Classification of Occupations (ANZSCO), while others are reported in a less standardised manner. Box 1 provides an overview of the ABS ANZSCO classification system.

BOX 1 THE ABS ANZSCO CLASSIFICATION SYSTEM

ANZSCO provides a basis for the standardised collection, analysis and dissemination of occupation data for Australia and New Zealand. ANZSCO was developed jointly by the ABS, Statistics New Zealand and DEEWR to improve the comparability of occupation statistics between the two countries and the rest of the world. ANZSCO is intended to provide an integrated framework for storing, organising and reporting occupation-related information in both statistical and client-oriented applications, such as matching job seekers to job vacancies and providing career information.

ANZSCO is a skill-based classification used to classify all occupations and jobs in the Australian and New Zealand labour markets. In ANZSCO there are eight major groups: managers, professionals, technicians and trades workers, community and personal service workers, clerical and administrative workers, sales workers, machinery operators and drivers and labourers. Each is assigned a code in descending order.

The structure of ANZSCO has five hierarchical levels - major group, sub-major group, minor group, unit group and occupation (detailed codes are used to assist in classification to the different levels). The categories at the most detailed level of the classification are termed ‘occupations’. These are grouped together to form ‘unit groups’; which in turn are grouped into ‘minor groups’. Minor groups are aggregated to form ‘sub-major groups’ which in turn are aggregated at the highest level to form ‘major groups’.

An example shows how the Clinical Psychologist occupation falls into each level:

— Major Group: Professionals (2)
— Sub-major Group: Legal Social and Welfare Professionals (27)
— Minor Group: Social and Welfare Professionals (272)
— Unit Group: Psychologists (2723)
— Occupation: Clinical Psychologists (272311)

In order to develop a holistic picture of shortages across the region, the results which were not already coded to ANZSCO were done so at the finest level of detail possible based on the information available. This process allowed for an Excel spreadsheet to be developed which counted, in a standardised manner, the number of times an occupation was mentioned as being in shortage across all documents. This process provided a complete list of occupations mentioned as being in shortage across the region. This initial list forms the basis of the priority list of occupations identified later in this report.

2.2 Preliminary list of occupations in shortage

The tables below provide a summary of the results of this process aggregated to the minor group ANZSCO level (three-digit). Occupations are grouped by broad skill level. The five skill levels in the ANZSCO are defined in terms of formal education and training, previous experience and on-the-job training. In Australia, the formal education and training component is measured in terms of educational qualifications as set out in the Australian Qualifications Framework.

The ‘current’ column indicates that businesses indicated the occupation was in current shortage, while ‘future’ indicates that businesses anticipated that the occupation will be in shortage in the future. It should be noted that only two documents provided information on future shortages. Further, some occupations that were only mentioned once or twice have been excluded from this list.

It is clear that professionals and trade workers were most commonly reported as being in shortage across the region, with regional differences in the types of occupations within these groups that are most in shortage.

2.2.1 Skill level 1

Table 1 presents occupations with a skill level of 1 that were mentioned as being in shortage. Occupations with a skill level of 1 usually require a level of skill commensurate with a Bachelor degree or higher qualification. In some occupations, at least five years of relevant experience may substitute for the formal qualification.
### TABLE 1  PRELIMINARY LIST OF OCCUPATIONS IN SHORTAGE ACROSS THE GREATER CAPITAL REGION – SKILL LEVEL 1

<table>
<thead>
<tr>
<th>3-digit ANZSCO occupation</th>
<th>Number of times mentioned as being in shortage</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Occupations requiring a Bachelor degree or higher (skill level 1)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Medical Practitioners</td>
<td>24 7 31</td>
<td>Specialist physicians, surgeons and GPs in shortage in Southern Inland and Far South Coast.</td>
</tr>
<tr>
<td>Engineering Professionals</td>
<td>19 6 25</td>
<td>All regions experiencing shortage. Various sectors affected.</td>
</tr>
<tr>
<td>Midwifery and Nursing Professionals</td>
<td>16 5 21</td>
<td>All regions experiencing shortages for registered nurses.</td>
</tr>
<tr>
<td>Tertiary Education Teachers</td>
<td>7 9 16</td>
<td>Shortages in SI and FSC in both university and vocational roles.</td>
</tr>
<tr>
<td>Architects, Designers, Planners and Surveyors</td>
<td>8 4 12</td>
<td>All regions experiencing shortage for surveyors, planners and architects.</td>
</tr>
<tr>
<td>Health Therapy Professionals</td>
<td>8 4 12</td>
<td>Current shortage in ACT and SI, with FSC expecting shortages in future. Range of occupations, but physiotherapists most common.</td>
</tr>
<tr>
<td>Health Diagnostic and Promotion Professionals</td>
<td>5 5 10</td>
<td>All regions experiencing shortage. Environmental health officers and OH&amp;S advisors in FSC, technicians in SI and sonographers in ACT.</td>
</tr>
<tr>
<td>Natural and Physical Science Professionals</td>
<td>6 4 10</td>
<td>Shortages for scientific food technicians in both SI and FSC.</td>
</tr>
<tr>
<td>Accountants, Auditors and Company Secretaries</td>
<td>5 3 8</td>
<td>Accountants in shortage in SI and Far South Coast.</td>
</tr>
<tr>
<td>Business Administration Managers</td>
<td>1 7 8</td>
<td>Range of industries experiencing shortage in FSC.</td>
</tr>
<tr>
<td>Social and Welfare Professionals</td>
<td>2 5 7</td>
<td>Social workers and psychologists expected to be in shortage in FSC.</td>
</tr>
<tr>
<td>ICT Network and Support Professionals</td>
<td>2 3 5</td>
<td>Shortage in FSC across hospitality, government and service sectors.</td>
</tr>
<tr>
<td>Media Professionals</td>
<td>2 3 5</td>
<td>Social media skills in demand in FSC in services and hospitality.</td>
</tr>
<tr>
<td>Sales, Marketing and Public Relations Professionals</td>
<td>2 3 5</td>
<td>Marketing skills in demand in FSC in hospitality, manufacturing and service sectors.</td>
</tr>
<tr>
<td>Information and Organisation Professionals</td>
<td>1 3 4</td>
<td>Curatorial staff in shortage in FSC.</td>
</tr>
<tr>
<td>School Teachers</td>
<td>4 0 4</td>
<td>Early childhood teachers in shortage in FSC and ACT. Special needs and secondary teachers in shortage in SI.</td>
</tr>
<tr>
<td>Construction, Distribution and Production Managers</td>
<td>2 1 3</td>
<td>Engineering and construction managers in shortage in SI and manufacturing in FSC.</td>
</tr>
<tr>
<td>Human Resource and Training Professionals</td>
<td>1 2 3</td>
<td>Employment consultants in shortage in FSC.</td>
</tr>
</tbody>
</table>

#### 2.2.2 Skill level 2

Table 2 presents occupations with a skill level of 2 that were mentioned as being in shortage. Occupations with a skill level of 2 usually require a level of skill commensurate with an Associate Degree, Advanced Diploma or Diploma, or at least three years of experience.
Table 2 presents occupations with a skill level of 2 that were mentioned as being in shortage. Occupations with a skill level of 2 usually require a level of skill commensurate with Certificate III including at least two years of on-the-job training, or Certificate IV or at least three years of relevant experience.

**Table 2** PRELIMINARY LIST OF OCCUPATIONS IN SHORTAGE ACROSS THE GREATER CAPITAL REGION – SKILL LEVEL 2

<table>
<thead>
<tr>
<th>3-digit ANZSCO occupation</th>
<th>Number of times mentioned as being in shortage</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Current</td>
<td>Future</td>
</tr>
<tr>
<td>Occupations requiring a Diploma or Advanced Diploma (skill level 2)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Health and Welfare Support Workers</td>
<td>2</td>
<td>6</td>
</tr>
<tr>
<td>ICT and Telecommunications Technicians</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>Miscellaneous Hospitality, Retail and Service Managers</td>
<td>0</td>
<td>3</td>
</tr>
<tr>
<td>Building and Engineering Technicians</td>
<td>1</td>
<td>0</td>
</tr>
</tbody>
</table>

2.2.3 **Skill level 3**

Table 3 presents occupations with a skill level of 3 that were mentioned as being in shortage. Occupations with a skill level of 3 usually require a level of skill commensurate with Certificate III including at least two years of on-the-job training, or Certificate IV or at least three years of relevant experience.

**Table 3** PRELIMINARY LIST OF OCCUPATIONS IN SHORTAGE ACROSS THE GREATER CAPITAL REGION – SKILL LEVEL 3

<table>
<thead>
<tr>
<th>3-digit ANZSCO occupation</th>
<th>Number of times mentioned as being in shortage</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Current</td>
<td>Future</td>
</tr>
<tr>
<td>Occupations requiring a Certificate III or IV (skill level 3)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fabrication Engineering Trades Workers</td>
<td>7</td>
<td>5</td>
</tr>
<tr>
<td>Automotive Electricians and Mechanics</td>
<td>7</td>
<td>3</td>
</tr>
<tr>
<td>Food Trades Workers</td>
<td>6</td>
<td>3</td>
</tr>
<tr>
<td>Mechanical Engineering Trades Workers</td>
<td>5</td>
<td>1</td>
</tr>
<tr>
<td>Miscellaneous Technicians and Trades Workers</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>Bricklayers, and Carpenters and Joiners</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>Animal Attendants and Trainers, and Shearers</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Miscellaneous Clerical and Administrative Workers</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>Electricians</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Plumbers</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>Personal Service and Travel Workers</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Panelbeaters, and Vehicle Body Builders, Trimmers and Painters</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Wood Trades Workers</td>
<td>1</td>
<td>0</td>
</tr>
</tbody>
</table>

2.2.4 **Skill level 4**

Table 4 presents occupations with a skill level of 4 that were mentioned as being in shortage. Occupations with a skill level of 4 usually require a level of skill commensurate with Certificate II or III, or at least one year of relevant experience.
TABLE 4  PRELIMINARY LIST OF OCCUPATIONS IN SHORTAGE ACROSS THE GREATER CAPITAL REGION – SKILL LEVEL 4

<table>
<thead>
<tr>
<th>3-digit ANZSCO occupation</th>
<th>Number of times mentioned as being in shortage</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Current</td>
<td>Future</td>
</tr>
<tr>
<td>Occupations requiring a Certificate II or III (skill level 4)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>General Clerks</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>Accounting Clerks and Bookkeepers</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Personal Carers and Assistants</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Logistics Clerks</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Child carers</td>
<td>2</td>
<td>0</td>
</tr>
</tbody>
</table>

2.2.5  Skill level 5

Table 5 presents occupations with a skill level of 5 that were mentioned as being in shortage. Occupations with a skill level of 5 usually require a level of skill commensurate with Certificate I, or compulsory secondary education.

TABLE 5  PRELIMINARY LIST OF OCCUPATIONS IN SHORTAGE ACROSS THE GREATER CAPITAL REGION – SKILL LEVEL 5

<table>
<thead>
<tr>
<th>3-digit ANZSCO occupation</th>
<th>Number of times mentioned as being in shortage</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Current</td>
<td>Future</td>
</tr>
<tr>
<td>Occupations requiring a Certificate I (skill level 5)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sales Assistants and Salespersons</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td>Farm, Forestry and Garden Workers</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Hospitality Workers</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>Miscellaneous Labourers</td>
<td>3</td>
<td>1</td>
</tr>
</tbody>
</table>
3 Characteristics of the Greater Capital Region

The list provided in the previous chapter provides a starting point for identifying the priority skill shortages across the region, based on the number of times that they were mentioned as being in shortage across the relevant documents. However, the characteristics of the region need to be considered when identifying the occupations that are most in need in the region. Demographic and labour market characteristics of the region influence which shortages will have the greatest local impact.

This chapter provides a statistical overview of the Greater Capital Region. It discusses the population, labour force and educational attainment profile of the regions to provide the context for the priority occupations identified in the next chapter. In acknowledgement of the diversity across the region and the impact this diversity has on the occupations that are required, this chapter presents data for all three regions within the scope of the Greater Capital Region.

3.1 Population

3.1.1 Age profile

Compared with NSW and Australia, the ACT has experienced higher than average population growth over the five years to 2011, while there has been lower than average population growth in the Far South Coast region (see Table 6). The population of the Far South Coast is older than the other regions with 16 per cent of the population aged over 70, while the ACT has a younger profile with only 7 per cent aged over 70.

<table>
<thead>
<tr>
<th>Statistic</th>
<th>ACT</th>
<th>SI</th>
<th>FSC</th>
<th>GCR total</th>
<th>NSW</th>
<th>Aus.</th>
</tr>
</thead>
<tbody>
<tr>
<td>5-year total population growth (%)</td>
<td>10</td>
<td>6</td>
<td>4</td>
<td>7</td>
<td>6</td>
<td>8</td>
</tr>
<tr>
<td>Total population</td>
<td>356,585</td>
<td>195,275</td>
<td>160,499</td>
<td>712,359</td>
<td>6,917,656</td>
<td>21,507,719</td>
</tr>
<tr>
<td>Adult population</td>
<td>290,299</td>
<td>156,150</td>
<td>138,029</td>
<td>579,328</td>
<td>5,598,142</td>
<td>17,363,688</td>
</tr>
<tr>
<td>Working Age Population (15 – 64)</td>
<td>252,165</td>
<td>124,228</td>
<td>94,942</td>
<td>471,335</td>
<td>4,566,961</td>
<td>14,351,399</td>
</tr>
<tr>
<td>Proportion of adult population who are of working age</td>
<td>87</td>
<td>80</td>
<td>72</td>
<td>81</td>
<td>82</td>
<td>83</td>
</tr>
<tr>
<td>Proportion of total population 9 years or under (%)</td>
<td>13</td>
<td>13</td>
<td>11</td>
<td>12</td>
<td>13</td>
<td>13</td>
</tr>
<tr>
<td>Proportion of total population 70 years or over (%)</td>
<td>7</td>
<td>11</td>
<td>16</td>
<td>10</td>
<td>10</td>
<td>10</td>
</tr>
</tbody>
</table>

Figure 2 shows how the population growth between 2006 and 2011 in each region was distributed by age group. It shows that:

— in the ACT, the proportion of the population represented by the young adult population has grown, while the proportion represented by older people has decreased. The proportion of the population represented by children aged nine years or under has also grown; and
— in contrast, in the Southern Inland and Far South Coast, the older population represents a much higher proportion of the population than five years ago, while younger adults represent a much lower proportion of the population.
3.1.2 Diversity

Diversity information has implications for the type of community service workers that may be required in the region.

The Far South Coast has a higher proportion of people with need for assistance with core activities (which measures the number of people with a profound or severe disability) and a higher proportion of Indigenous people (see Table 7). The ACT has a lower proportion on both counts, but has a higher proportion of the population not born in Australia.

### TABLE 7 DIVERSITY STATISTICS FOR THE GREATER CAPITAL REGION

<table>
<thead>
<tr>
<th>Statistic</th>
<th>ACT</th>
<th>SI</th>
<th>FSC</th>
<th>GCR total</th>
<th>NSW</th>
<th>Aus.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Proportion of the population with need for assistance with core activities (%)</td>
<td>3.5</td>
<td>5.0</td>
<td>7.1</td>
<td>4.7</td>
<td>5.2</td>
<td>4.9</td>
</tr>
<tr>
<td>Proportion of population who were not born in Australia (%)</td>
<td>25.2</td>
<td>13.4</td>
<td>13.7</td>
<td>19.4</td>
<td>27.2</td>
<td>26.0</td>
</tr>
<tr>
<td>Proportion of population Indigenous (%)</td>
<td>1.5</td>
<td>2.6</td>
<td>4.6</td>
<td>2.5</td>
<td>2.6</td>
<td>2.7</td>
</tr>
</tbody>
</table>

3.1 Labour force participation

Table 8 below shows the unemployment and labour force participation rates for the regions, and how they compare with NSW and Australia.

There is a high degree of variability between the regions and across the indicators. The ACT has higher participation for adults, compared with the other regions. Participation in the Southern Inland is in line with the NSW and Australia average, however unemployment is lower. The Far South Coast has the overall weakest labour market, with very low participation and high unemployment, especially for teenagers. While a low level of unemployment contributes to skills shortages, it is possible for unemployment and skill shortages to co-exist (due to skills mismatch and other reasons), as seen in the Far South Coast.

<table>
<thead>
<tr>
<th>TABLE 8 LABOUR FORCE STATISTICS FOR THE GREATER CAPITAL REGION</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Type of labour force statistic</strong></td>
</tr>
<tr>
<td>Labour force participation rate (%)</td>
</tr>
<tr>
<td>- Males</td>
</tr>
<tr>
<td>- Females</td>
</tr>
<tr>
<td>Unemployment rate (%)</td>
</tr>
<tr>
<td>Teenage full-time unemployment rate (%)</td>
</tr>
</tbody>
</table>


It should be noted that 2011 Census data has been used because LGAs can be perfectly aggregated to form the RDA Southern Inland and RDA Far South Coast boundaries and it allows for the examination of differences by age and sex. However, recent changes in the labour market will not be reflected using this data source.

In particular, more recent data extracted from the Labour Force Survey for the ACT shows that the teenage fulltime unemployment rate is currently much higher than the 12.5 per cent shown above, at 27.8 per cent (compared with 24.2 per cent for NSW and 24.9 per cent for Australia) (ABS 2013). It should be noted that ABS Labour Force Survey estimates at the regional level, particularly for teenage unemployment, are subject to high levels of sampling error, and as such should be used with caution.

3.2 Employment by industry

In the ACT, the industry employing the largest proportion of people working in the region is, by far, public administration and safety, followed by professional, scientific and professional services (see Table 9).
In the Southern Inland and Far South Coast\(^1\), *retail trade, health care and social assistance* and *accommodation and food services* employ the most people. In the Southern Inland, *agriculture, forestry and fishing* also represents a higher than average proportion of employment compared with the other regions and NSW and Australia.

---

\(^1\) Recognising that cross-border employment occurs in this region, the sections on employment by industry and occupation are based on Census data that is calculated by place of work rather than place of usual residence in order to obtain a more accurate picture of employer needs in each RDA catchment area.
### 3.2.1 Historical change in employment by industry

Between 2006 and 2011, employment grew by 8 per cent across the region, with the highest growth in the ACT (12 per cent), followed by Far South Coast (6 per cent) and Southern Inland (1 per cent).

Between 2006 and 2011, *health care and social assistance, education and training,* and *public administration and safety* have grown in all three regions, while employment in *agriculture, forestry and fishing* and *manufacturing* has declined in all three (see Figure 3).

**Figure 3 Growth in employment between 2006 and 2011 by industry**

*Electricity, gas, water and waste services,* in which renewable energy generation falls, has grown across the region. *Mining* has grown in the Southern Inland, but declined in the other regions. *Construction* has experienced significant growth in the ACT.
3.2.2 Forecasts of employment by industry

According to DEEWR’s (2012a) employment projections for the ACT and the South Eastern labour force regions (LFRs), over the five years to 2016 to 2017, healthcare and social assistance, public administration and safety, professional, scientific and technical services, education and training and construction are projected to experience the most growth across the region, while manufacturing will experience consistent decline across the region (see Figure 4).

FIGURE 4 PROJECTED EMPLOYMENT GROWTH BY INDUSTRY OVER THE FIVE YEARS TO 2016-17

Agriculture, forestry and fishing is forecast to decline in the South Eastern LFR while mining is forecast to grow. It should be noted that these projections have not accounted for changes that have occurred in the economy over the past year.

2 The South Eastern LFR covers a large proportion of both the Southern Inland and Far South Coast regions, however part of the Far South Coast region falls within the Illawarra excluding Wollongong LFR, and part of the Southern Inland region falls within the Murray-Murrumbidgee LFR. Only the ACT and South Eastern LFRs are presented here for simplicity.
3.2.3  Age of employed persons by industry

Figure 5 shows the age distribution of the workforce by industry for the Greater Capital Region overall.

It shows that the health care and social assistance, education and training, agriculture, forestry and fishing and transport, postal and warehousing industries have a higher proportion of people over 60 years of age.

3.3  Employment by occupation

There is a higher proportion of employment in managerial and professional occupations in the ACT compared with the other regions, NSW and Australia (see Table 10).

Technicians and trades workers, community and personal service workers, sales workers and labourers are over-represented in the Far South Coast (compared with NSW and Australia). In the Southern Inland, managers, community and personal service workers and labourers are over-represented.
TABLE 10  PROPORTION OF EMPLOYED PEOPLE AGED 15 YEARS AND OVER BY OCCUPATION (%)

<table>
<thead>
<tr>
<th>Occupation group</th>
<th>ACT</th>
<th>SI</th>
<th>FSC</th>
<th>GCR total</th>
<th>NSW</th>
<th>Aus.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Managers</td>
<td>17.0</td>
<td>17.4</td>
<td>13.2</td>
<td>16.5</td>
<td>13.3</td>
<td>12.9</td>
</tr>
<tr>
<td>Professionals</td>
<td>31.4</td>
<td>15.8</td>
<td>17.9</td>
<td>26.0</td>
<td>22.7</td>
<td>21.3</td>
</tr>
<tr>
<td>Technicians and Trades Workers</td>
<td>8.7</td>
<td>14.5</td>
<td>14.8</td>
<td>10.9</td>
<td>13.2</td>
<td>14.2</td>
</tr>
<tr>
<td>Community and Personal Service Workers</td>
<td>9.1</td>
<td>11.8</td>
<td>13.0</td>
<td>10.3</td>
<td>9.5</td>
<td>9.7</td>
</tr>
<tr>
<td>Clerical and Administrative Workers</td>
<td>21.0</td>
<td>12.6</td>
<td>13.1</td>
<td>18.0</td>
<td>15.1</td>
<td>14.7</td>
</tr>
<tr>
<td>Sales Workers</td>
<td>6.8</td>
<td>10.0</td>
<td>11.9</td>
<td>8.3</td>
<td>9.3</td>
<td>9.4</td>
</tr>
<tr>
<td>Machinery Operators and Drivers</td>
<td>2.1</td>
<td>6.9</td>
<td>5.4</td>
<td>3.6</td>
<td>6.4</td>
<td>6.6</td>
</tr>
<tr>
<td>Labourers</td>
<td>3.9</td>
<td>10.8</td>
<td>10.9</td>
<td>10.9</td>
<td>8.7</td>
<td>9.4</td>
</tr>
</tbody>
</table>

SOURCE: ABS 2011 (PLACE OF WORK). NOTE: THE TOP TWO EMPLOYING OCCUPATIONS IN EACH REGION ARE IN BOLD.

3.3.1 Historical change in employment by occupation

In line with the growth in the health care and social assistance industry across the region, between 2006 and 2001, the highest growth in employment was in the community and personal service workers occupation group, followed by professionals (see Figure 6). Consistent with shortages reported by employers in the region, employment in labourers has declined across the entire region.

FIGURE 6  GROWTH IN EMPLOYMENT BETWEEN 2006 AND 2011 BY OCCUPATION GROUP

3.4 Trends in migration

In assessing mechanisms for filling skill shortages, it is relevant to consider both skilled migration from overseas and internal migration from within Australia.

3.4.1 Top occupations attracting skilled migrants

The Department of Immigration and Citizenship (DIAC) publishes detailed data on trends in 457 visa applications at the state/territory level.\(^3\)

Table 11 shows the top 15 nominated occupations for 457 visa applications granted in the last year and whether there has been an increase or decline in applications for that occupation since the previous year. It shows that in the ACT, university lecturers was the most common occupation filled through 457 applications.

<table>
<thead>
<tr>
<th>Occupation</th>
<th>ACT Number 2012-13 to 30/04/13</th>
<th>% increase since previous year</th>
<th>Occupation</th>
<th>NSW Number 2012-13 to 30/04/13</th>
<th>% increase since previous year</th>
</tr>
</thead>
<tbody>
<tr>
<td>University Lecturer</td>
<td>60</td>
<td>30</td>
<td>Program or Project Administrator</td>
<td>910</td>
<td>8</td>
</tr>
<tr>
<td>Physicist</td>
<td>30</td>
<td>-19</td>
<td>Developer Programmer</td>
<td>850</td>
<td>-4</td>
</tr>
<tr>
<td>Resident Medical Officer</td>
<td>30</td>
<td>-16</td>
<td>Marketing Specialist</td>
<td>830</td>
<td>4</td>
</tr>
<tr>
<td>Registered Nurse (Medical)</td>
<td>30</td>
<td>-75</td>
<td>Cook</td>
<td>780</td>
<td>92</td>
</tr>
<tr>
<td>Cook</td>
<td>30</td>
<td>86</td>
<td>Cafe or Restaurant Manager</td>
<td>630</td>
<td>251</td>
</tr>
<tr>
<td>Cafe or Restaurant Manager</td>
<td>30</td>
<td>213</td>
<td>ICT Business Analyst</td>
<td>570</td>
<td>26</td>
</tr>
<tr>
<td>ICT Business Analyst</td>
<td>20</td>
<td>-58</td>
<td>Software Engineer</td>
<td>520</td>
<td>26</td>
</tr>
<tr>
<td>Registered Nurse (Critical Care)</td>
<td>20</td>
<td>-11</td>
<td>Accountant (General)</td>
<td>520</td>
<td>31</td>
</tr>
<tr>
<td>Carpenter</td>
<td>20</td>
<td>88</td>
<td>Customer Service Manager</td>
<td>510</td>
<td>255</td>
</tr>
<tr>
<td>General Medical Practitioner</td>
<td>10</td>
<td>-44</td>
<td>Management Consultant</td>
<td>430</td>
<td>-16</td>
</tr>
<tr>
<td>Developer Programmer</td>
<td>10</td>
<td>-71</td>
<td>University Lecturer</td>
<td>410</td>
<td>6</td>
</tr>
<tr>
<td>Program or Project Administrator</td>
<td>10</td>
<td>-7</td>
<td>Sales and Marketing Manager</td>
<td>400</td>
<td>0</td>
</tr>
<tr>
<td>Systems Administrator</td>
<td>10</td>
<td>-24</td>
<td>Specialist Managers nec</td>
<td>400</td>
<td>-11</td>
</tr>
<tr>
<td>Chef</td>
<td>10</td>
<td>160</td>
<td>Recruitment Consultant</td>
<td>340</td>
<td>-24</td>
</tr>
<tr>
<td>Environmental Research Scientist</td>
<td>10</td>
<td>20</td>
<td>General Medical Practitioner</td>
<td>330</td>
<td>14</td>
</tr>
<tr>
<td>Other occupations</td>
<td>430</td>
<td>18</td>
<td>Other occupations</td>
<td>11 260</td>
<td>2</td>
</tr>
<tr>
<td>Total</td>
<td>750</td>
<td>21</td>
<td>Total</td>
<td>19 680</td>
<td>7</td>
</tr>
</tbody>
</table>

Source: DIAC 2013A. Note: DIAC rounds all numbers to the nearest 10.

Regional stakeholders indicated that this may be a result of the ability of local universities to devote resources to the application process and to navigate the system. Other industries, particularly those with a high proportion of SMEs, may not be as capable at utilising the Skilled Migration program to their advantage, due to the resources required by the complex process.

While a number of health care professions were in the top 15 nominated occupations, the number of applications granted has decreased since last year. There were also a number of hospitality workers included on the list, and the number of application granted for these occupations has increased since last year, indicating the current severity of shortages in the hospitality sector.

\(^3\) Other skilled migration programs exist, however detailed data (at the industry and occupation level) is not publically available.
3.4.2 Industries attracting skilled migrants

In the ACT, employers in the health care and social assistance and education and training industries sponsored the highest number of primary applications for 457 visas, while in NSW sponsorships are highest in the information media and telecommunications industry (see Figure 7).

FIGURE 7 PRIMARY APPLICATIONS GRANTED IN 2012-13 TO 30 APRIL 2013 BY SPONSOR INDUSTRY - NOMINATED POSITIONS LOCATED IN NSW AND ACT

3.4.3 Internal mobility by industry

Figure 8 shows which industries those people who lived outside the region (but within Australia) five years prior to the 2011 Census now work in in the Greater Capital Region. Overwhelmingly, people moved to the ACT to work in public administration and safety. People who moved to the Southern Inland and Far South Coast work in a range of industries, but with a slightly higher proportion working in public administration and health care and social assistance in Southern Inland, and health care and social assistance in Far South Coast.
3.5 Educational attainment

There is a strong relationship between educational attainment and employment outcomes. People with higher levels of education have higher rates of labour force participation and lower unemployment rates. As a result of a diverse economy and employment profile across the region, a range of education is required with respect to both the field of course and the level of qualification.

In 2011, 26 per cent of the adult population in the overall region had attained a Bachelor degree or higher, as shown in Table 12. This rate is higher compared with NSW (23 per cent) and Australia (21 per cent); however the very high rate in the ACT masks lower attainment in the Southern Inland and Far South Coast regions.

### TABLE 12 EDUCATIONAL ATTAINMENT FOR THE ADULT POPULATION

<table>
<thead>
<tr>
<th>Qualification level</th>
<th>ACT</th>
<th>SI</th>
<th>FSC</th>
<th>GCR total</th>
<th>NSW</th>
<th>Aus.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Proportion completed year 12 (%)</td>
<td>71</td>
<td>45</td>
<td>35</td>
<td>56</td>
<td>52</td>
<td>52</td>
</tr>
<tr>
<td>Proportion with no non-school qualification (%)</td>
<td>39</td>
<td>50</td>
<td>52</td>
<td>44</td>
<td>48</td>
<td>50</td>
</tr>
<tr>
<td>Proportion attained Certificate level (%)</td>
<td>15</td>
<td>24</td>
<td>27</td>
<td>20</td>
<td>20</td>
<td>20</td>
</tr>
<tr>
<td>Proportion attained Adv Diploma, Diploma (%)</td>
<td>10</td>
<td>9</td>
<td>8</td>
<td>9</td>
<td>9</td>
<td>9</td>
</tr>
<tr>
<td>Proportion attained Bachelor Degree or higher (%)</td>
<td>37</td>
<td>18</td>
<td>13</td>
<td>26</td>
<td>22</td>
<td>21</td>
</tr>
</tbody>
</table>

*NOTE: TOTAL FOR NON-SCHOOL QUALIFICATION MAY NOT SUM TO 100 PER CENT DUE TO ROUNDING.*

*SOURCE: ABS 2011.*
Educational attainment in the ACT reflects a tendency towards higher education while in the Southern Inland and Far South Coast regions it reflects a tendency towards Vocational Education and Training (VET), with a higher proportion of the population, compared with NSW and Australia, completing certificate level qualifications.

3.5.1 Change in educational attainment

The qualifications profile of the Australian workforce has been changing, with a trend toward more people holding qualifications and at higher levels. In 2001, 54.2 per cent of the working age population held qualifications and 52.6 per cent of these qualifications were at a Diploma or higher level. By 2011, 62.7 per cent held qualifications and 59.6 per cent of the qualifications were at the higher levels.

The number of people with qualifications in the workforce has been increasing at a higher rate than overall employment - 3.7 per cent compared to 2.2 per cent per year. In particular, the number of people holding Diploma or Certificate IV increased by about 10 per cent per year. On the other hand, the number holding Certificate I level qualification declined by 9 per cent per year. These trends indicate substantial skills deepening in the workforce (e.g. see Shah (2010)).

Between 2006 and 2011, all areas in the Greater Capital Region have followed state and national trends in improved educational attainment, with an increase in the proportion of the population with post-school qualifications (see Figure 9). In the ACT, the largest improvement was seen in the proportion of adults who attained a Bachelor degree or higher, while in the other regions the biggest improvement was at the Certificate III or IV level.

FIGURE 9 CHANGE IN EDUCATIONAL ATTAINMENT, 2006 TO 2011

3.5.2 Field of study for tertiary education

Across the whole region, the most common fields of study for individuals who are completing Bachelor degrees or higher were teacher education, nursing and business and management (see Table 13). At the Advanced Diploma and Diploma level, qualifications are most commonly completed in the teacher education and
business management fields. At the Certificate level, building, mechanical and industrial engineering and technology and business and management are the most popular.

Across the region, there appears to be an overall trend away from qualifications in teaching, nursing and mechanical and industrial engineering and technology, and a trend towards business and management and human welfare studies and services. While this may indicate demand from students for courses in a particular field has declined or increased, it may also indicate that people with qualifications in that field education have either left or moved to the region.

<table>
<thead>
<tr>
<th>Narrow field of study</th>
<th>Bachelor degree or higher</th>
<th>Advanced Diploma and Diploma Level</th>
<th>Certificate Level</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Current most common</td>
<td>Difference in % represented 2011 - 2006</td>
<td>Current most common</td>
</tr>
<tr>
<td>RDA ACT</td>
<td>Teacher Education</td>
<td>-1</td>
<td>Business and Management</td>
</tr>
<tr>
<td></td>
<td>Business and Management</td>
<td>1</td>
<td>Information Technology, nfd</td>
</tr>
<tr>
<td></td>
<td>Information Technology, nfd</td>
<td>0</td>
<td>Teacher Education</td>
</tr>
<tr>
<td></td>
<td>Law</td>
<td>0</td>
<td>Human Welfare Studies and Services</td>
</tr>
<tr>
<td></td>
<td>Accounting</td>
<td>1</td>
<td>Nursing</td>
</tr>
<tr>
<td>RDA Southern Inland</td>
<td>Teacher Education</td>
<td>-1</td>
<td>Business and Management</td>
</tr>
<tr>
<td></td>
<td>Nursing</td>
<td>0</td>
<td>Teacher Education</td>
</tr>
<tr>
<td></td>
<td>Business and Management</td>
<td>-1</td>
<td>Nursing</td>
</tr>
<tr>
<td></td>
<td>Accounting</td>
<td>0</td>
<td>Human Welfare Studies and Services</td>
</tr>
<tr>
<td></td>
<td>Law</td>
<td>1</td>
<td>Office Studies</td>
</tr>
<tr>
<td>RDA Far South Coast</td>
<td>Teacher Education</td>
<td>0</td>
<td>Teacher Education</td>
</tr>
<tr>
<td></td>
<td>Nursing</td>
<td>-1</td>
<td>Business and Management</td>
</tr>
<tr>
<td></td>
<td>Business and Management</td>
<td>1</td>
<td>Human Welfare Studies and Services</td>
</tr>
<tr>
<td></td>
<td>Accounting</td>
<td>3</td>
<td>Nursing</td>
</tr>
<tr>
<td></td>
<td>Studies in Human Society</td>
<td>0</td>
<td>Accounting</td>
</tr>
</tbody>
</table>

Enrolment trends will be examined in the next section.

3.6 Training market analysis

3.6.1 Higher education enrolment trends

The main providers of higher education (Bachelor degree or higher) in the Greater Capital Region are:
- The Australian National University (ANU);
- University of Canberra (UC); and
- University of Wollongong.

Looking at the domestic student enrolment trends for these three providers combined shows that society and culture is the most popular field of education, followed by management and commerce (see Figure 10). The least popular fields are architecture and building and agriculture, environmental and related studies, although both fields have seen enrolments increase by around 30 per cent over the five years to 2011.

**FIGURE 10 TRENDS IN HIGHER EDUCATION ENROLMENTS**

![Graph showing enrolment trends for various fields of education from 2006 to 2011.](image-url)
The largest growth in enrolments by far was in health, while the only field in which enrolments decreased over the five years was information technology. Overall, domestic enrolment growth between 2006 and 2011 for the three providers was 29 per cent.

Figure 11 shows each of the main provider’s market share by field of education. Compared with Wollongong, the Canberra-based universities have a substantially higher number of students enrolled in:

- natural and physical sciences;
- architecture and building (noting that only UC offers relevant courses);
- agriculture, environmental and related studies; and
- society and culture.

Wollongong has a substantially larger number of students enrolled in engineering and related technologies courses compared with ANU and UC.

It should be noted that the Australian Catholic University (ACU) has a campus in Canberra. It is not possible to obtain information of enrolments at the Canberra campus using publicly available databases, but the courses provided by the ACU in the ACT will be considered in the next chapter.
3.6.2 VET enrolment trends

The main VET providers in the region are:

— The Canberra Institute of Technology;
— The Riverina Institute (TAFE NSW); and
— The Illawarra Institute (TAFE NSW).

As shown in Figure 12, both the Riverina Institute and the Illawarra Institute have campuses throughout the Greater Capital region, however, provider level data at the regional level is not publicly available.

While the higher education dataset was filtered by institution, the VET dataset was filtered by student location. This is understandable as the student catchment area for VET providers tends to be much smaller than that for higher education providers. As a result of different data sources for obtaining higher education versus VET data, the higher education enrolments are not directly comparable with VET enrolments.
With respect to enrolments in VET qualifications (Advanced Diploma, Diploma and Certificate level), management and commerce is the most popular field for students from the Greater Capital Region (see Figure 13).

Between 2006 and 2011, total enrolments have grown by 13 per cent, with the highest growth seen in society and culture, architecture and building and management and commerce. Enrolments have declined in information technology and agriculture, environmental and related studies.

Because it is not possible to identify the Riverina Institute or the Illawarra institute, and the regional campuses of each in the dataset, to create a picture of regional VET training the analysis has combined provider type (NSW TAFE, which includes both the Riverina Institute and Illawarra Institute, and CIT) with student location (ACT, Southern Inland and Far South Coast) to indicate where students from each region are studying, and what they are studying.

Nearly all students from the ACT are studying at CIT, as opposed to a campus of NSW TAFE. The opposite pattern is seen amongst Far South Coast students, with most students attending NSW TAFE and few travelling to CIT. For students from the Southern Inland, 60 per cent are studying at CIT, with 40 per cent at NSW TAFE.
NSW TAFE has a higher proportion of local students in engineering and related technologies and agriculture, environmental and related studies, while CIT has a much higher proportion of students in architecture and building, information technology and natural and physical sciences (see Figure 14).

3.7 Summary and implications

The diversity within the Greater Capital Region affects the skills and training requirements across the region, now and into the future.

The age profile of the region, shown previously in Table 6, indicates that shortages for child carers are a priority in the ACT, while shortages for aged carers are a priority in the Far South Coast and Southern Inland. Diversity information shows that disability and Indigenous workers are required in the Far South Coast. Low unemployment rates in the ACT and the Southern Inland contribute to skill shortages in the region, so attracting skilled people to the region could help alleviate shortages.

Labour force participation is low on the Far South Coast – increasing participation could help fill shortages at the lower skill levels. Filling shortages for recruitment consultants in employment service providers is therefore a priority in this region in order to help place job seekers in employment and improve labour force participation. As labour force participation is consistently lower for females across the region, increasing female participation could help fill vacancies, particularly in

**FIGURE 14** VET MARKET SHARE BY FIELD OF EDUCATION
areas that traditionally have a higher proportion of female workers, such as aged care, child care and social services.

The *health care and social assistance* and *education and training* industries are major employing industries in the region and offer employment opportunities for job seekers, and there is evidence they attract both overseas and domestic migrants. However, there are substantial differences in the industry profile between the individual regions. *Public administration and professional services* dominate in the ACT. There has been significant growth in *construction* which increasingly requires a broad range of “green skills” across both professionals and trades workers given the environmental pressures facing the industry. *Electricity, gas water and waste services* has grown in the region, increasing the demand for renewable energy skills.

*Accommodation and food services* is a large employer in the Southern Inland and the Far South Coast, and there has been significant growth in the sector in the ACT. *Agriculture and manufacturing* have declined in both the Southern Inland and Far South Coast regions, but they remain important. This means that professionals and technicians are required to drive innovation and productivity, as well as energy efficiencies, in the food production and manufacturing sector.

The ageing workforce across many industries in the region indicates that skill shortages may be exacerbated into the future as workers retire. Workplace practices which encourage mature age workers to stay in employment and mentor younger staff should be encouraged.

Between 2006 and 2011, all areas in the Greater Capital Region have followed state and national trends in improved educational attainment, with an increase in the proportion of the population with post-school qualifications. In the ACT, the largest improvement was seen in the proportion of adults who attained a Bachelor degree or higher, while in the other regions the biggest improvement was at the Certificate III or IV level. This may mean that shortages for higher education qualified jobs will be harder to fill in the Southern Inland and Far South Coast, while jobs that require vocational training may be harder to fill in the ACT.

In line with higher educational attainment, enrolments in tertiary education have increased in the region. *Society and culture* and *management and commerce* are the most commonly enrolled in fields of education across both the university and VET sectors. *Architecture and building* and *agriculture, environmental and related studies* are the least popular courses at the university level, while *natural and physical sciences* and *education* are the least popular fields at the VET level. Growth has varied substantially between each field of education across both sectors, but with a consistent decline in enrolments in *information technology* observed. The implications of training provision are discussed with specific reference to the priority occupations identified in the next chapter.
Based on the initial list of occupations in shortage presented in Chapter 2 and the features of the region described in Chapter 3, this chapter identifies the priority skill shortages that need to be addressed across the Greater Capital Region. The results are presented at the unit group ANZSCO occupational level (four-digit) because these can be linked to specific qualifications and training courses. The availability of local training for each occupation in shortage was assessed using the Job Outlook and MyFuture websites, as well as the websites of individual providers in the region. Lower skilled occupations which do not usually require formal training, such as sales assistants and labourers, have not been included in the priority occupation list.

4.1 Healthcare professionals

The health industry is a large employer in the region and is projected to continue growing. Although enrolments in higher education in health have grown over the last five years (by 82 per cent), a number of skill shortages were reported for professional occupations across the sector. Skill shortages in health care affect patient outcomes and service delivery; therefore addressing skill shortages in occupations in this industry is a priority for the region.

While local training is available, migration data shows that employers have utilised the skilled migration program to fill vacancies for medical practitioners and registered nurses. This indicates the severity of the shortage. As a result, this study finds that the highest priority occupations in the health care sector are general medical practitioners and registered nurses across the entire Greater Capital Region.

A range of other professionals are also required. Specialists such as occupational therapists and physiotherapists will be in even greater demand with the launch of DisabilityCare Australia in the ACT in 2014. Given the high proportion of Indigenous people in the Far South Coast, Indigenous health workers are required in the region.

A scan of available training for the priority occupations in the health sector showed that there was a range of training available (see Table 14). However, some deficiencies were evident:

— While medical imaging professionals were required in the ACT and Southern Inland, relevant courses are only available in Wollongong. However, this should be placed in the context that there are limited universities offering qualifications in medical imaging across Australia as a whole.

---

4 The KPMG report was used to inform the ACT Government’s Occupation List for skilled migration. Given that only the executive summary of the KPMG report was provided as part of this project, the ACT Occupation List was used to cross-check and supplement the findings regarding priority occupations in the ACT.
While there are relevant Bachelor degrees available at the University of Wollongong for *Indigenous health workers*, there is a lack of relevant VET qualifications available.

### Table 14: Priority Occupations in the Health Sector

<table>
<thead>
<tr>
<th>Priority occupation</th>
<th>Shortage timeframe</th>
<th>Affected regions</th>
<th>Local training available</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Current Future ACT SI FSC</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Occupations requiring higher education qualifications</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Medical Imaging Professionals (2512)</td>
<td>X X X X Wollongong</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Occupational and Environmental Health Professionals (2513)</td>
<td>X X X UC, Wollongong</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Occupational Therapists (2524)</td>
<td>X X X UC</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Physiotherapists (2525)</td>
<td>X X X UC</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Medical Practitioners (2531, 2532, 2533, 2535, 2539)*</td>
<td>X X X X ANU, Wollongong</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Registered Nurses (2544)*</td>
<td>X X X X UC, ACU, Wollongong</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Occupations requiring VET qualifications</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Indigenous Health Workers (4115)</td>
<td>X</td>
<td>X</td>
<td>(Higher ed courses offered at Wollongong)</td>
</tr>
</tbody>
</table>

*NOTE: GENERAL MEDICAL PRACTITIONERS IS ONE OF THE TOP 15 OCCUPATIONS ON THE ACT AND NSW SKILLED MIGRATION LISTS. REGISTERED NURSES IS ON THE ACT LIST

#### 4.2 Community and care workers

The community services sector is expanding across the region. This study has found that there a number of occupations within community services that are in shortage across the region.

Education, health and welfare services managers were reported to be in shortage in the Southern Inland and Far South Coast. In particular, *child care centre managers* are in shortage in Southern Inland and *health and welfare service managers* in the Far South Coast (see Table 15). Relevant higher education training is available in the region. However, stakeholders report that the sector is not attractive to those seeking managerial positions, while short funding periods provide disincentives for some employers to engage in workforce planning. Improving the qualification profile of the workforce is required to respond to an increasing complexity of need.

*Human resource professionals* are in shortage in the Far South Coast – in particular, recruitment consultants in employment service providers. Shortages in these occupations are a priority because they are integral to addressing low labour force participation in the region and matching job seekers to employer needs. A range of qualifications in business, commerce, management and social science offered in the region may lead to employment as a recruitment consultant, so it may be a matter of promotion of the employment services pathway to graduates.

Given the national social inclusion agenda, workers who assist marginalised groups participate in society and the workforce are a high priority for the Greater Capital Region. *Psychologists* and *social workers* with expertise in disability are in shortage on the Far South Coast. These occupations are required to increase social inclusion and labour force participation in the region. The University of Wollongong offers undergraduate and postgraduate qualifications in psychology, as well as a graduate certificate in community counselling, however there may be scope to widen provision to a Bachelor of Social Work.

Lower skilled occupations, requiring VET qualifications, were also reported to be in shortage. Shortages in *child care workers* in the ACT and Southern Inland are a
concern given the growth in the proportion of children in the population. Shortages in child carers affect the ability of the region to respond to regulatory changes in the childcare sector. They also impact on the labour force participation of young adults, especially females.

Carers and care workers are in shortage across the region. Given the ageing population in Far South Coast and Southern Inland, filling shortages for aged carers is a high priority in these regions.

The ACT will be one of the launch sites of DisabilityCare Australia, so shortages in disabled carers and personal care workers will need to be addressed in the ACT. The Far South Coast has a higher proportion of the population needing assistance, so disabled carers are required there too.

While VET training is available for carers across the region, lower skilled workers in the sector receive relatively low wages and it is hard to attract new students. The carer workforce is older and occupations suffer from higher than average turnover, so in the face of shortages, it is important to retain current staff and implement flexible workforce policies that encourage mature workers to stay in the sector.

### TABLE 15 PRIORITY OCCUPATIONS IN THE COMMUNITY SERVICES SECTOR

<table>
<thead>
<tr>
<th>Priority occupation</th>
<th>Shortage timeframe</th>
<th>Affected regions</th>
<th>Local training available</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Current</td>
<td>Future</td>
<td>ACT</td>
</tr>
<tr>
<td>Occupations requiring higher education qualifications</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Child Care Centre Managers (1341)</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Health and Welfare Services Managers (1342)</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Human Resource Professionals (2231)</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Psychologists (2723)</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Social Workers (2725)</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Occupations requiring VET qualifications</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Welfare Support Workers (4117)</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Child Carers (4211)</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Aged and Disabled Carers (4231)</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Nursing Support and Personal Care Workers (4233)</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
</tbody>
</table>

### 4.3 Education and training professionals

Skills shortages in occupations in the education and training sector are a priority for the region for three reasons:

— *educational professionals* in secondary and tertiary education are required in order to continue improving the educational attainment in the Far South Coast and Southern Inland; and

— the sector has experienced substantial growth and is a major employer in the region;

— the child population has grown in the ACT and *early childhood teachers* are required to respond to the requirements of the National Quality Framework (ACECQA 2013).

There is a range of courses currently available in education and teaching across the region (see Table 16) and enrolments in higher education courses in education have
increased by 34 per cent over the past five years. However, skilled migration has been used to fill vacancies for university lecturers and tutors. This may be because lecturers and tutors require expertise in a particular field, which may also be in shortage. Local universities could provide incentives for their postgraduate research students to remain at the institution following completion of their degree.

Special education teachers were reported as being in shortage in the ACT and Southern Inland. While there are post graduate courses in special education available at the University of Wollongong, there are not in Canberra. The University of Canberra could add this to their suite of courses in teaching and education.

**TABLE 16 PRIORITY OCCUPATIONS IN THE EDUCATION SECTOR**

<table>
<thead>
<tr>
<th>Priority occupation</th>
<th>Shortage timeframe</th>
<th>Affected regions</th>
<th>Local training available</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Current</td>
<td>Future</td>
<td>ACT</td>
</tr>
<tr>
<td>Occupations requiring higher education qualifications</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Early Childhood (Pre-primary School) Teachers (2411)</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Secondary School Teachers (2414)</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Special Education Teachers (2415)</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>University Lecturers and Tutors (2421)*</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Vocational Education Teachers (2422)</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
</tbody>
</table>

*NOTE: UNIVERSITY LECTURERS AND TUTORS IS ONE OF THE TOP 15 OCCUPATIONS ON THE ACT AND NSW SKILLED MIGRATION LISTS

**4.4 Green skills**

A range of occupations that require green skills were reported to be in current shortage (see Table 17). Green skills are an emerging need for the future, across all regions of Australia, and this is evident in the results of the various reports. Green skills are those required to ensure that individuals, businesses and communities adjust to, and prosper in, a sustainable, low-carbon economy.

Carbon abatement is inherently multidisciplinary. Effective and sustained abatement will require collaboration between people and organisations with complementary skills and experience (Allen Consulting Group 2011). Furthermore, while some job roles have a strong relationship to a particular abatement opportunity, in most cases, relevant job roles recur across many abatement opportunities and sectors.

Architects, planners and spatial scientists require skills to interpret key policy decisions. While the Universities of Canberra and Wollongong both offer courses in planning, only the University of Canberra offers undergraduate and postgraduate courses in Architecture (completion of both is required for registration as an architect). The field has one of the lowest numbers of higher education enrolments in the region. Given the shortage of architects reported in both the Southern Inland and the Far South Coast, there could be scope to widen course provision in the region.

Scientist roles are becoming increasingly important in the green skills sector; however enrolments in science courses are not keeping up with demand. Shortages were reported in a range of scientist occupations including agriculture and food science. These roles which will be important in driving innovation and productivity in both the agriculture and manufacturing sectors, and reducing their environmental impact – both are important industries in the Southern Inland and Far South Coast but are experiencing declines.
TABLE 17  PRIORITY OCCUPATIONS REQUIRING GREEN SKILLS

<table>
<thead>
<tr>
<th>Priority occupation</th>
<th>Shortage timeframe</th>
<th>Affected regions</th>
<th>Local training available</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Current</td>
<td>Future</td>
<td>ACT</td>
</tr>
<tr>
<td>Occupations requiring higher education qualifications</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Architects and Landscape Architects (2321)</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Surveyors and Spatial Scientists (2322)</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Urban and Regional Planners (2326)</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Civil Engineering Professionals (2332)</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Electrical Engineers (2333)</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Industrial, Mechanical and Production Engineers (2335)</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Mining Engineers (2336)</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Other Engineering Professionals (2339)</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Agricultural and Forestry Scientists (2341)</td>
<td></td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Chemists, and Food and Wine Scientists (2342)</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Other Natural and Physical Science Professionals (2349)*</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Occupations requiring VET qualifications</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Civil Engineering Draftspersons and Technicians (3122)</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Plumbers (3341)</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Electricians (3411)</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
</tbody>
</table>

*NOTE: OTHER NATURAL AND PHYSICAL SCIENCE PROFESSIONALS IS ONE OF THE TOP 15 OCCUPATIONS ON THE ACT SKILLED MIGRATION LIST

Skilled migration has been used to fill vacancies in the ACT, but longer term solutions are needed. All three major universities in the region offer a Bachelor of Science. Industry could work with the universities to incorporate specific required knowledge and promote careers within the agrifood and green energy sectors.

The *engineering and science professions* will underpin many of the abatement opportunities. However, these professions will often work closely with trade qualified individuals in implementing and maintaining abatement related projects. Each of the engineering disciplines is important for carbon abatement opportunities, and shortages were reported across many of them in the region.

In particular, *civil engineering professionals*, *electrical engineers* and *other engineering professionals* were reported to be in shortage across the entire region, with regional differences in shortages for *industrial, mechanical and production engineers*, and mining engineers.

Both ANU and the University of Wollongong offer courses in engineering and enrolments have been steadily rising, but enrolments are still relatively low and there is unmet demand. The University of Wollongong represents about 70 per cent of enrolments in the region. UC scoped the possibility of offering engineering, but the cost of delivery was too high to make provision financially viable.

*Electricians* and *plumbers* with specialty skills are required to support energy efficiency improvements. Both were reported as being in current shortage in the
Southern Inland and Far South Coast, with plumbers also in shortage in the ACT. Plumbing falls within the architecture and building field of education, which has increased by 27 per cent since 2006, which is higher than the overall increase in VET enrolments of 13 per cent over the same time period. However, plumbing specifically has only increased by 13 per cent since 2007, and apprenticeships in plumbing have declined by 17 per cent overall for the region.

Fields of study for electricians fall within engineering and related technologies, for which enrolments have increased in line with the average. Enrolments in electrician-specific courses, by contrast, have increased by 47 per cent in the region; however, apprenticeships have only increased by 21 per cent, with apprenticeships in the Far South Coast lower than the other regions. Without appropriate incentives, at times of economic uncertainty or difficulty, employers are less likely to take on apprentices, and this trend is evident in the Greater Capital Region.

4.5 Trade skills

A range of traditional trades workers are in current shortage across the region (see Table 18). The occupations in shortage reflect growth in the construction and accommodation and food services industries.

<table>
<thead>
<tr>
<th>Priority occupation</th>
<th>Shortage timeframe</th>
<th>Affected regions</th>
<th>Local training available</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Current</td>
<td>Future</td>
<td>ACT</td>
</tr>
<tr>
<td>Automotive Electricians (3211)</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Motor Mechanics (3212)</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Sheetmetal Trades Workers (3222)</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Structural Steel and Welding Trades Workers (3223)</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Carpenters and Joiners (3312)*</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Bakers and Pastrycooks (3511)*</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Chefs (3513)</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Cooks (3514)*</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Cabinetmakers (3941)</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
</tbody>
</table>

*NOTE: CARPENTERS AND JOINERS AND CHEFS ARE IN THE TOP 15 OCCUPATIONS ON THE NSW ACT SKILLED MIGRATION LISTS, COOKS IS ON THE ACT LIST

While there are relevant courses available across the region for the identified priority occupations below, overall, there has been a decline in apprenticeships since 2007 for the occupations listed below. For example, cabinetmakers are in shortage in the ACT. Overall enrolments have decreased by 24 per cent, and apprenticeships have decreased by 77 per cent.

The Illawarra Institute has recently committed to delivering a new carpentry and joinery workshop at Cooma TAFE. Skilled migration has been used to fill vacancies for carpenters and joiners in both the ACT and NSW. Chefs and cooks have also been filled through skilled migration. Skilled migration could be used to fill other shortages. However, in the long term, there is a role for increasing enrolments, especially in apprenticeships, for trades occupations.
4.6 ICT skills

ICT skills that may support realisation of the benefits of the NBN in the future are in shortage in the Far South Coast region and continuation or worsening of these will affect the ability of the region to fully harness the capabilities of the NBN in the future. Businesses in a range of sectors reported shortages for both high and lower skilled ICT staff.

Providers of both higher education and VET qualifications in the region currently offer relevant courses (see Table 19). However enrolments in information technology in both sectors have declined substantially over the past five years. A number of occupations within the ICT professionals group are on the top 15 list of occupations filled through skilled migration in the past year, indicating that the shortage in the Far South Coast may expand from the short list provided below. While skilled migration can be used to fill vacancies in the short-term, education and training providers could use targeted promotion of courses and career pathways in ICT in the Far South Coast to increase the intake of students.

**TABLE 19 PRIORITY OCCUPATIONS REQUIRING ICT SKILLS**

<table>
<thead>
<tr>
<th>Priority occupation</th>
<th>Shortage timeframe</th>
<th>Affected regions</th>
<th>Local training available</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Current</td>
<td>Future</td>
<td>ACT</td>
</tr>
<tr>
<td>ICT Support and Test Engineers (2632)</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>ICT Support Technicians (3131)</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
</tbody>
</table>

*NOTE: A NUMBER OF ICT PROFESSIONALS ARE ON TOP 15 OCCUPATIONS ON THE SKILLED MIGRATION LIST IN THE ACT AND NSW*

4.7 Business and administration skills

A range of skills relevant to operating a business were reported as being in shortage across a range of sectors in Far South Coast and Southern Inland (see Table 20). Businesses reported skill shortages for accountants (also reported in the ACT) and advertising and marketing professionals, as well as financial and general administrative staff with social media and marketing skills. These shortages need to be addressed because these skills are all central to the operation of a successful business and the growth of the private sector in the regions.

**TABLE 20 PRIORITY BUSINESS AND ADMINISTRATION OCCUPATIONS**

<table>
<thead>
<tr>
<th>Priority occupation</th>
<th>Shortage timeframe</th>
<th>Affected regions</th>
<th>Local training available</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Current</td>
<td>Future</td>
<td>ACT</td>
</tr>
<tr>
<td>Accountants (2211)*</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Advertising and Marketing Professionals (2251)*</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>General Clerks (5311)</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Payroll Clerks (5512)</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
</tbody>
</table>

*NOTE: ACCOUNTANTS AND ADVERTISING AND MARKETING PROFESSIONALS ARE ON THE TOP 15 OCCUPATIONS ON THE NSW SKILLED MIGRATION LIST*
Accountants and advertising and marketing professionals were on the list of top 15 occupations filled through skilled migration in NSW. Accounting falls within the management and commerce field of education. Management and commerce has the second highest number of higher education domestic student enrolments in the region, but enrolments have increased less than the average over the past five years (12 per cent compared with 29 per cent).

With respect to advertising and marketing professionals, relevant Bachelor degrees in communication are offered in Canberra and Wollongong. These courses fall within the creative arts field of education, which has also experienced average growth in student enrolments.

Management and commerce is the most commonly enrolled in field of education amongst VET students in the region. VET providers in the region offer a range of certificates relevant to administrative and financial support staff occupations. The reports emphasised the increasing prevalence of basic online media and marketing tasks in these roles, and the need for applicants to be able to perform both traditional and these emerging administrative tasks.
5 Recommendations for addressing skills and training gaps in the Greater Capital Region

Across the whole Greater Capital Region, health care and community services are important in addressing the national social inclusion agenda. Skills related to achieving the government’s renewable energy targets and supporting implementation of the NBN are also important. ACT has a role in supporting the other regions in these areas through education and training provision, as well as in the promotion of the Far South Coast and Southern Inland as food producers and manufacturers.

While aged care and tourism are important employers in the Far South Coast region and will continue to grow, RDA Far South Coast is encouraging diversification of the local economy. Therefore addressing skills gaps outside of the core industries will be important. RDA Far South Coast notes the growing interest in business and marketing skills in relation to the local food sector. Despite the decline in employment in the agriculture industry, RDA Southern Inland recognises the importance of agriculture to the regional economy, and the need for education and training to support growth in the sector.

5.1 Options for addressing skills gaps

ACIL Allen Consulting has developed a number of options for addressing the skills gaps:

- retain and retrain existing workers;
- tap into underutilised labour supply;
- attract domestic workers to the region;
- create incentives for employers to take on apprenticeships;
- increase course promotion;
- industry engagement and articulation pathways;
- address deficiencies in training provision; and
- international skilled migration.

These options are discussed in turn in some detail below.

5.1.1 Retain and retrain existing workers

Given the ageing workforce, coupled with shortages across many industries including healthcare and community services, mature age workers need to be retained in the workforce longer. Work practices such as offering part time employment may encourage older workers to stay in their jobs.

However, it should be acknowledged that poor working conditions, lower wages and lack of career paths in the sector contribute to turnover in community services. The importance of supporting improved working conditions, wage levels and establishment of career paths in healthcare and community services will be critical across the region. Improvements in these areas has the potential of filling gaps now
and into the future, while also ensuring this sector is strong enough to support future growth in demand from the population in the region.

In the current fiscal climate, though, it may be difficult for organisations to overcome these problems. However, employers can foster career pathways and provide continuing professional development (CPD) to staff, which can be tax deductible. CPD supports the employer’s workforce and also provides a personal benefit to the employee which might encourage them to stay.

Stakeholders recognise the value that current workers can derive from further training. The Investing in Experience (Skills Recognition and Training Program) is an Australian Government program that commenced on 1 July 2012 (DIICCSRTE 2013c). The program supports mature age workers (aged 50 years and over) to gain nationally recognised qualifications. It is designed to provide an opportunity for mature age workers to have their current capabilities recognised and to receive training to fill any knowledge or skills gaps so they can obtain a nationally recognised qualification at the Certificate III to Advanced Diploma level. Employers can apply for grants of up to $4,400 (including GST) to assist their mature age workers to undertake a skills assessment and obtain gap training if the skills assessment identifies a need.

Mentorship arrangements between younger and older staff could encourage retention amongst both groups through professional socialisation. Mentoring provides mentees with an environment where they see themselves achieving their career goals and receiving the guidance they need to grow. Mentors are provided with a formal and direct opportunity to share their knowledge and experience while developing their leadership skills, teamwork, ability to compromise and self-awareness.

There should be continuing emphasis on the importance of continuing education to help job seekers obtain employment and participate in the labour market. Lower skilled workers could be encouraged to undertake further study to fill vacancies in higher skilled occupations. For example, welfare support workers, and health and welfare service managers are in shortage in the Far South Coast. The pathway through these occupations could be facilitated by collaboration between employers and education and training providers in both the university and VET sectors, pending a supply of workers at the lower skill levels.

**5.1.2 Tap into underutilised labour supply**

Given higher unemployment and lower labour force participation in the Far South Coast, there is a pool of people without work who could potentially fill lower skilled shortages in the region. Given adequate training and being matched with the right employer, groups such as unemployed youth, women with children or people with disability could fill vacancies for carers or clerks in the region.

It is important to address soft or employability skills (such as motivation, communication, enthusiasm, confidence, initiative and interpersonal skills) when placing job seekers. Employability skills are becoming increasingly important in the decision making process when hiring staff and employment service providers and educators need to explicitly address the development of these skills (DEEWR 2012b, 2012c, ABS 2009). Curriculum developers and employers need to more clearly articulate the employability skills required for certain occupations or careers.

In the ACT, recent evidence shows that there is high teen unemployment, declining completion of certificate level qualifications and shortages in several trade and carer occupations. Trade and career pathways, where there are identified shortages, could be promoted to high school students and younger job seekers. This would
require action by employers, state education departments, VET providers and employment service providers. It is important that school career counsellors and employment service providers are aware of key areas of skill shortages, so they can then advise school leavers and job seekers on relevant training pathways.

It should be noted that often those without a job face struggles against employment and educational barriers, combined with a range of personal issues such as mental health problems, substance abuse, criminal records, physical health problems, homelessness, and family breakdown (Perkins 2006). Removing barriers to labour force participation for people facing disadvantage requires focused engagement between employment service providers, community service organisations, local businesses and education and training providers. In the ACT, the Priorities Support Program provides funding to providers of VET who provide support for students who cannot readily access, or who do not have a high chance of success in, other government funded training programs (ACT Government 2013).

5.1.3 Attract domestic workers to the region

While the ACT has experienced high population growth, the Southern Inland and Far South Coast have experienced a decline in the core working age population which is contributing to a range of skill shortages in professions.

The difficulties in attracting workers to the Southern Inland and Far South Coast regions have been clearly articulated in the skills audit reports conducted by the relevant RDA committees and SEROC. Community amenity and infrastructure needs to improve to attract skilled workers to these regions, as these factors are currently combining to constrain workforce and economic growth.

In Newcastle, professionals in health and engineering are attracted to the region because of research and innovation centres that partner academia with industry to achieve practical solutions. In April 2013, the University of Newcastle received Commonwealth Government funding of $30 million through the Education Investment Fund Regional Priorities Round to develop a city campus. The space will host a range of University-supported activities including collaborative learning and research spaces, facilities for industry, professional and community engagement, and social space which will revitalise the Newcastle CBD.

While the University of Wollongong has a number of research strengths, creation of more formalised research and innovation clusters in high need areas of health and engineering could attract students and professionals to the region. Creating a physical presence of such clusters in the CBD, as is planned for Newcastle, could provide regional development opportunities and flow on effects to other businesses.

Projects that engage industry, such as the clusters mentioned above, are more likely to secure multiple sources of investment, and can form part of an industry investment strategy designed to generate employment opportunities. Securing investment in community amenity and infrastructure projects is key to attracting skilled workers to the region.

It is possible that the labour market in the ACT will soften following the 2013 Federal election and shortages in the ACT will ease. In the shorter term, RDA Southern Inland and Far South Coast could take advantage of a possible downturn in the ACT by promoting lifestyle factors that make living in regional Australia attractive to graduating university and VET students, as well as existing workers, in Canberra.

Other regions in Australia have successfully used this method. Robinvale in the Loddon Mallee region in Victoria has struggled to attract skilled resources in the agriculture sector due to wage competition with the mining industry (Allen Consulting Group 2012). The Mildura Regional Development Corporation produced a marketing
campaign for the agriculture and food manufacturing industry which promoted the benefits of living in the region, outlined the range of career paths available, and provided a positive case study on someone who moved to the region to work in the industry. Further, given the drain of young people from the Southern Inland and Far South Coast, employers could promote career paths and offer graduate programs or internships to encourage younger workers to the regions. These types of campaigns can form part of a broader, long term, marketing strategy for the regions.

5.1.4 Create incentives for employers to take on apprentices

A number of trades are in shortage across the region, and evidence suggests that enrolments in apprenticeships have been declining. Recruitment and training of young employees in apprenticeships tends to be cyclical, and decline during times of economic recession (Brunello 2009). Without appropriate incentives, at times of economic uncertainty or difficulty, employers are less likely to invest in apprentices (thus leading to a skills shortage when the economy rebounds), and this trend is evident in the Greater Capital Region. To fill shortages in trades, enrolments in apprenticeships need to increase across the region; otherwise long term growth will be impeded.

Government programs provide incentives to take on apprentices and could be more actively promoted in the region. The objective of the Australian Apprenticeships Incentives Program is to contribute to the development of a highly skilled and relevant Australian workforce that supports economic sustainability and competitiveness. There are a number of incentives currently available to employers of eligible Australian apprentices. Each incentive payment has a number of eligibility criteria that is assessed by an Australian Apprenticeship Centre. Current incentives include:

- Commencement incentives;
- Recommencement incentives;
- Completion incentives;
- Incentives for existing workers;
- Rural and Regional Skills Shortage Incentive;
- Declared Drought Area Incentives;
- Mature Aged Workers Incentives;
- Australian School-based Apprenticeship Incentive;
- Assistance for Australian Apprentices with Disability;
- Tools for Your Trade payments; and
- Support for Adult Australian Apprentices.

The Apprentice Kickstart Initiative is an employer incentive designed to increase the number of Australian Apprenticeship commencements in skills shortage areas of the building and construction industries and in skills shortage engineering trades (Australian Government 2013a). Small and medium enterprises and eligible Group Training Organisations may attract the Apprentice Kickstart Initiative. The payments are in addition to the suite of employer incentives already available under the Australian Apprenticeships Incentives Program.

Another example is the Australian Apprenticeships Access Program which provides vulnerable job seekers facing barriers to skilled employment with individualised pre-vocational training, job search and post-placement support (DIICSRTE 2013b). It helps participants find and keep an Australian Apprenticeship, other employment or further education. Employers may be eligible for an Australian Government incentive if Access Program job seekers are placed in an Australian Apprenticeship.
5.1.5 Increased course promotion

Changes to course promotion could increase the supply of students flowing into key occupations in shortage. For example, while primary school teachers are in oversupply, secondary school and vocational education teachers are in shortage. It is becoming increasingly common for secondary school teachers to hold a combined degree, or complete a postgraduate teaching qualification following an undergraduate degree in a different field.

The University of Canberra could promote post-graduate courses in education to non-education undergraduates in order to increase the supply of secondary and vocational education teachers in the region. The academic career pathway could also be promoted for PhD graduates throughout the region so that demand for university lecturers and tutors can be met.

Enrolments in planning, spatial science, engineering and agricultural and food sciences could be increased through targeted marketing to students at local high schools. Spatial information services are becoming increasingly in demand in a variety of sectors. The diverse career opportunities provided by the “green economy” offer a platform on which to engage young people, particularly in engineering which stakeholders reported was not attractive to students.

A number of Commonwealth Government and State/Territory programs target the development of green skills (e.g. Commonwealth National Workforce Development Fund, the Clean Energy and Other Skills Package, Critical Skills Investment Fund; NSW Green Skills and Energy Efficiency Strategy).

With respect to human resource and marketing professionals, the career pathway to the specific occupations that are in shortage (employment consultants, marketing specialists in non-advertising businesses) needs to be promoted to students. A range of courses could lead to both of these occupations, but the courses also provide students with a diverse range of employment options and they may not be aware of the niche roles that are in demand in the region. Attendance by employers or industry bodies at career fairs could increase awareness.

Enrolments in ICT have decreased across the region and shortages in ICT were reported in the Far South Coast. There may be scope for targeted promotion of the ICT pathway in the region and internships in ICT could “bond” students to the region following graduation.

At the VET level, the Australian Government ICT Apprenticeship Program targets students who are currently completing their Year 12 Certificate and people who are looking for a career change (Australian Government 2013b). ICT Apprentices work the equivalent of four days per week within an Australian Government agency, with the remainder of their time dedicated towards completing a Certificate III or IV or a Diploma. This program could be actively promoted in the Far South Coast. Once students complete the program they could fill vacancies in local businesses.

There may be scope to increase domestic enrolments in accounting in the Far South Coast. Management and commerce is traditionally popular with international students. In 2011, there were 10,400 international students enrolled in management and commerce at the three major universities in the region, compared with 8,000 domestic students.

While education and training providers could strengthen links to industry in order to encourage a higher proportion of international students to remain in Australia following completion of their accounting degree (subject to their ability to obtain permanent residence in the country), there is still a substantial risk that international students leave the region following completion of their degree. A targeted
promotional campaign to Year 12 students in the Southern Inland and Far South Coast could increase domestic demand for accounting degrees.

Promotion of courses relevant to the priority occupations in shortage requires career counsellors in both schools and tertiary institutions to be aware of regional skill shortages and relevant training pathways.

5.1.6 Industry engagement and course delivery

Stakeholders indicated that there is a problem with students leaving the region, including the ACT, following completion of their studies. Changes to course delivery could assist with many of the skills gaps identified. The importance of incorporating work experience elements in higher education training is increasing (DEEWR 2012b). Universities can incorporate cadetships or internships into their programs in these high need areas, so that students engage with local businesses and may be more likely to stay in the region following completion of their studies.

Partnerships between education and training providers and industry bodies can ensure the relevance of training and help with skill shortages. Stakeholders reported that some students graduate without skills that are relevant to the workforce. Industry can work with education and training providers to ensure that courses cover the knowledge and skills required for practice in the sector.

While noting that VET providers have limited scope to modify delivery of nationally recognised training packages, partnerships between TAFE and industry peak bodies in the agricultural sector in Victoria have helped to fill key skills gaps in regional areas (Allen Consulting Group 2012).

In the Southern Inland and Far South Coast there is a tendency towards Certificate level qualifications. Participation in higher education can be facilitated by articulation arrangements between VET and higher education providers. Strategies that support the transition from VET to higher education include TAFE degree programs, credit transfers to university and integrated dual qualifications (NSW Government 2012a). Stakeholders reported that articulation arrangements are in place in the region for many fields of education, so it is important to ensure that students are aware of these opportunities.

Flexible modes of delivery were reported by stakeholders to be a key mechanism for helping students undertake their studies, and then work, in the region. Flexible modes of delivery include e-learning and “pop-up” regional campuses. Education and training providers are already using these methods in some fields, but there may be scope to examine the applicability of these delivery methods to other courses.

5.1.7 Address deficiencies in training provision

This review found that, in general, the training required for priority occupations is in place, which means that communication and collaboration are key to filling shortages. However, some potential training and education gaps with respect to the priority occupations identified were evident, so there may be opportunities to increase provision of training in the specific areas listed below.

— Indigenous health at the VET level in the Far South Coast.
— Bachelor of Social Work at the University of Wollongong.5

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5 Stakeholders advised that the University of Wollongong is already considering offering a Bachelor of Social Work.
— Postgraduate courses in special education at the University of Canberra.
— Architecture courses at the University of Wollongong.
— Inclusion of social media and marketing skills in clerk courses in Southern Inland and Far South Coast.

Stakeholders from the Canberra campus of the Australian Catholic University indicated that it was looking to expand its course provision. There may be scope to build upon its existing courses in health, targeting the occupations in shortage such as occupation therapy and physiotherapy.

As shown by the case of UC and engineering where the cost of delivery was too high for provision to be financially viable, the risks posed by a lack of skills need to be weighed against the resources available for recruitment or training. Changes in course provision should be carefully considered by the relevant institutions. A detailed estimate of student demand for courses and resultant supply levels should be developed. Education and training providers operate in a competitive environment so the impact of potential changes in course provision on revenue and expenditure needs to be examined.

Additional considerations are the issue of professional recognition and accreditation of courses for some fields (such as architecture and many health professions) and the fact that public VET providers currently have limited control over the courses they can offer. Further, the difficulty faced by the regions in retaining skilled people and the importance of investment in infrastructure needs to be considered here. Developing skills locally and then losing them to another region will not solve the skill shortages in the regions.

5.1.8 International skilled migration

In the short term, temporary skilled migration from overseas is a viable option to fill several urgent shortages across professionals and trades, as other strategies will take longer to implement and come into effect. The data show that skilled migrants have recently filled vacancies in the following occupation groups which were found to be in current shortage in the region:

— general medical practitioners;
— registered nurses;
— university lecturers and tutors;
— design, engineering and science professionals;
— automotive and engineering trades workers;
— food trades workers;
— business, human resource and marketing professionals; and
— ICT professionals.

It is likely that skilled migrants will continue to be available to fill vacancies in the priority shortage areas.

The Skilled Occupation List, which defines the specific occupations within the above groups that can be filled through 457 visa applicants, will be updated in July 2013 and can be found on the DIAC website (DIAC 2013b). It should be noted that in June 2013, the Commonwealth Government proposed new laws regarding tightening of the 457 visa system (Office of Brendan O’Connor MP 2013). A new ‘Local Jobs Check’ would require all employers to prove that they have advertised for labour locally before sponsoring workers form overseas.

Skilled migration through 457 visas is a short-term solution for a short-term or an urgent problem. Improvements in training are the preferred solution over time for
persistent shortages. However, permanent migration can bring long term skills to the regions, provided they can attract and retain such migrants.

DIAC coordinates a range of other skilled migration programs that could be considered as mechanisms for permanent migration. The following visa categories are currently open.

- **Skilled Independent (subclass 189)** — This points-based visa is for skilled workers who are not sponsored by an employer, a state or territory, or a family member.

- **Skilled – Nominated (subclass 190)** — This points-based visa is for skilled workers who are nominated by a state or territory.

- **Skilled – Nominated or Sponsored (Provisional) (subclass 489)** — This points-based visa is for skilled workers who are nominated by a state or territory or sponsored by an eligible relative living in a designated area in Australia. The visa is valid for four years, and a visa holder must live and work in a specified regional area.

- **Employer Nomination Scheme (subclass 186)** — This visa is for skilled workers from outside Australia or skilled temporary residents who live and work in Australia. It has three streams.

- **Regional Sponsored Migration Scheme (subclass 187)** — This visa is for skilled workers from outside Australia or skilled temporary residents who live and work in regional Australia. It has three streams.

### 5.2 Considerations in addressing skills gaps

Cross-jurisdiction issues and engagement methods need to be considered in developing or implementing the options described above. Further, the issue of seasonal low skilled workers in supporting the Southern Inland and Far South Coast workforce is discussed briefly.

#### 5.2.1 Cross-jurisdictional issues

The ACT and NSW Governments have a close relationship as a result of unique cross-border circumstances. Canberra’s physical location in the centre of the South East NSW region renders it the principal service centre for the surrounding local government areas in NSW. The VET market analysis for the Greater Capital Region in Chapter 3 demonstrates this - nearly two thirds of students from the Southern Inland region of NSW are studying at the CIT in the ACT. This also occurs in the school system – the School Participation Rate for young people was 81 per cent in NSW and 107 per cent for the ACT, reflecting cross-border enrolments from neighbouring centres in regional NSW (ABS 2010).

The *Economic Opportunities Scanning Project*, conducted as the first part of the *Greater Capital Region Strategy*, identified an unfocussed approach to coordinating skills and training across the region as a barrier to economic development (ACT Chief Minister and Treasury Directorate and NSW Department of Premier and Cabinet 2013).

In 2012, the respective ACT and NSW education agencies met to identify future areas of work regarding schools education and a Memorandum of Understanding was signed between the Illawarra Institute and CIT. Collaborative work should continue and include discussion of training provision and course promotion for the occupations in shortage identified in this review.

Significant sources of concern, with respect to cross-border provision of VET, are problems related to sharing of funding between jurisdictions for cross-border
trainees and apprentices (NSW Government 2012b) as well as inconsistent pricing and different markets and regulation between the ACT and NSW.

Regional stakeholders indicated that the restructuring of funding and changing of course priorities within the NSW TAFE system has resulted in some students having to unnecessarily travel long distances because places are not available to them at the closest cross-border facility.

Although the VET data shows that NSW students are enrolled at ACT providers, the reverse situation is less common. In the NSW Cross-Border Commissioner’s Listening Tour Report, a case study is presented of a NSW training provider, located in Queanbeyan, unable to offer training to a student on the ACT side of the border. As a result, the student has to travel further away in Canberra.

Given the number of skill shortages that were reported across the region and the importance of the VET system in filling those gaps, the exploration of reciprocal training arrangements is vital and requires further collaboration between the Education and Training Directorate in the ACT and the NSW Department of Education and Communities. The impact of the implementation of an entitlement model in NSW’s VET system in 2014 (NSW Department of Education and Communities 2013) will need to be considered.

### 5.2.2 Engagement issues

The RDA committees are important facilitators of cross-border collaboration. Their networks enable them to engage with all stakeholders in the region and bring different groups together.

Many of the options identified in the previous section require engagement with a range of stakeholders across the Greater Capital Region in order to develop, refine, and implement solutions to skills and training gaps. Strategies for engaging different stakeholder groups on workforce issues should be considered.

**Employers**

Most businesses are not likely to see the world in terms of public policy objectives. Consequently, programs or complex systems and questions that are framed through that lens will receive less useful responses than those framed in a way that employers relate to.

While it may seem surprising, many businesses do not see workforce planning as a priority. Rather, they are focussed on day to day management and operational issues. In this environment, staffing matters are but one area which may require attention. They are generally not viewed as something requiring a longer term view or strategy, and staff and employees are not seen as a workforce requiring development. There are of course many businesses which have a more considered approach, but based on observations from a number of recent ACIL Allen projects, workforce development is not well understood or actively undertaken.

Businesses, in the main, think about business needs and the job roles required to meet those needs. They in turn relate this to the capabilities of existing and potential employees. This has important implications for the design of discussion guides and other consultation tools, and the design of engagement processes.

Businesses may have only a limited understanding of the training market, although many businesses will have at least a general understanding of the established providers in their region. They will also usually know of the major higher education providers.
Businesses will have a keen understanding of skills shortages and vacancies based on direct experience and are likely to discuss both the availability of labour in general and shortages in terms of the skills required for specific jobs and functions.

**Industry peak bodies**

Industry peak bodies, like individual employers, tend to approach issues relating to skills with a focus on the overall availability of labour to ensure that businesses can operate effectively and profitably. They form their views of these matters based on feedback from members. Some have more structured and systematic methods for obtaining feedback (such as periodic surveys etc.), just as some are more engaged in policy development processes.

Peak bodies are interested in holistic approaches to skills development and skills shortages and to whole of government approaches. Engagement with peak bodies in relation to skills will be most effective when framed in this context. This also assists in managing the risk of consultation fatigue, which can occur if different departments or levels of government seek to engage with the same community on different projects in a short space of time.

The capacity of peak bodies to address specific issues related to skills demand and supply will depend to a large extent on the extent to which key individuals in leadership and appointed roles have been engaged in advisory and decisions making processes in the education and training system.

**Local and regional bodies**

Local and regional bodies, including those supported by departmental officers, can be a valuable source of information regarding skill and workforce needs and issues. Local and regional bodies can be well placed to make informed judgements about the issues under consideration, particularly where the bodies and individuals were engaged in industry and economic development.

Local and regional bodies see issues related to skills in terms of local and regional economic development and capacity, in particular the characteristics of local and regional labour markets and demographic characteristics such as workforce ageing and population drift.

As such, issues and questions, even those relevant to specific sectors, are best addressed in terms of regional and local skills and workforce needs and the economic, social and environmental challenges facing the region. Local and regional bodies are well placed to assist in the validation of analysis and findings.

In regional Australia, business success is inextricably linked to infrastructure and capacity, and credible local and regional bodies are an important source of, advice to, and information from, individual businesses. Local and regional bodies can, and should, be used as a primary source of engagement with individual businesses to complement state-wide surveys and engagement with peak bodies.

**Education and training providers**

Education and training providers are a useful source of information about training and workforce needs in the regions under consideration. Generally, education and training providers are able to deal with far more complex issues and levels of detail than other stakeholders. However where possible, data should be accessed from administrative sources and verified with the provider rather than relying on discussions alone.
Providers are best placed to address specific questions related to the uptake of, and demand for, specific qualifications as well as gaps in provision. They are also best placed to address issues related to the broader learning needs of individuals, linkages with other sectors, preferred delivery strategies and thin markets. They also have a strong sense of changes in the operating environment and the way they are impacting on the supply of education and training. These forces can include those resulting from policy change at a state and federal level.

Larger and multi campus providers also may have a broader perspective across and outside of the region. Specialist campuses within providers often have a good appreciation of emerging trends and how specific needs might be addressed. They can often have an early sense of changing labour market conditions particularly through apprenticeship and traineeship intakes and in relation to displaced workers. They are also useful sources of information about student perceptions and attitudes towards particular industries and occupations.

5.2.3 Low-skilled seasonal workers

While this report has primarily focused on occupations for which formal training at the Certificate II level and above is usually required, it is worth briefly considering low skilled occupations. The seasonal nature of employment was highlighted as an issue in recruiting labourers and hospitality workers in the Southern Inland and Far South Coast.

In Victoria, the Mildura Regional Development Corporation (RDC) addressed this problem in its region by working with RTOs and key businesses, to develop a “skills passport” scheme. Research by the Mildura RDC highlighted a need for greater connections between industry and training providers in creating a pool of employees whose skills are relevant, recognised and transferrable across the wine, olive and beverage industries. One of the major outcomes in addressing these issues was the development of a Skills Passport, which would contain a base set of skills and training required by industry for their seasonal workers including Occupational Health and Safety (OH&S) and Hazard Analysis and Critical Control Points (HACCP).

The Skills Passport Food and Beverage is a program to help provide a pool of people who have transferrable skills for working across the different sectors of the agriculture industry. The program aims to assist employers in these industries by providing job ready people, increasing local labour pool for these industries and addressing seasonal workforce issues in these industries. Additionally, the Skills Passport aims to value and document employee’s competencies through the Skills Passport website. A scheme such as this could be considered by the RDAs of the Greater Capital Region.


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