



CITB

Apprentice Report



2018



THE FUTURE IS YOURS TO BUILD

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Foreword

Succession planning and skills development are crucial for the building and construction industry to maintain its ability to respond to the needs of consumer demand.

To this end the Construction Industry Training Board (CITB) invests approximately ten million dollars per year in this critical area to support apprentices and their employers.

Over recent months, opinions have been presented in the media covering topics around apprentice training numbers, completion rates and funding support.

The ensuing conversations in stakeholder groups regarding apprentice trends, both at a national and state level have been both varied and welcome.

This report has been developed by CITB to articulate the trends and issues facing our state's construction sector utilising CITBs verifiable and accurate data which tracks

the life cycle of South Australian construction workers.

The report outlines the trends associated with building and construction apprentices over the past ten years.

The data provides an accurate control and a sound basis for a considered appraisal of apprenticeship completion rates, as is often not the case with other data sources, owing to the means by which commencements and completion rates are calculated.

It is hoped this report will provide accuracy and clarity in informing our stakeholders ranging from Government through to small businesses.

The importance of apprentices to the future of South Australia's construction sector cannot be overstated.

Introduction

This report provides comprehensive information about the current trends in construction apprenticeships in South Australia and presents a comparison over time.

For simplicity, in this report we use the term construction apprentices to refer to both apprenticeship and traineeship qualifications (unless otherwise specified) in the South Australian building and construction industry.



Why are apprenticeships important?

Apprenticeships have been, and continue to be the bedrock for skill development throughout the construction industry across many occupations. An estimated 30,000 people exit the construction industry nationally each year and some construction occupations are experiencing skill shortages. Therefore, facilitating and supporting employers to take on apprentices and making construction apprenticeships attractive to school leavers especially is of major importance. This is particularly so in occupations such as plumbing and electrical where trade qualifications are essential to obtain a license to practice.

What Influences Apprenticeship Trends?

The nature of the apprenticeship system means that general economic conditions and perceived future conditions remain a major determinant of apprenticeship numbers. Put simply, an employer will only take on and retain an apprentice if they believe that economic conditions will support the investment.

Government policy settings, training package reform and the level of financial support provided can also influence apprenticeship numbers.

In recognition of the importance of apprenticeships to skills development and to help offset the cost to employers taking on apprentices in Australia, both state and federal governments provide wage subsidies to employers. The cost of tuition is also subsidised. Furthermore, in recognition of the unique nature of the construction industry – being highly project-based and with a large number of sole traders and sub-contractors – CITB provides additional financial support to employers, to assist with on-the-job training and to further offset the cost of study.

The removal or reduction of government wage subsidies for employers can have a large impact on the level of apprenticeships.

A reduction in the overall number of apprenticeships across the economy may not be indicative of all sectors or all occupations.

Chart 1 below shows the trend in total apprenticeships numbers compared with construction.

As Chart 1 shows, construction apprenticeship numbers have held up considerably better in recent years than apprenticeships as a whole. This is because the major

decline in overall apprenticeships is due to the significant fall in traineeships (related in part to the withdrawal of incentives for existing worker traineeships). Existing worker traineeships are not common in the general construction sector.

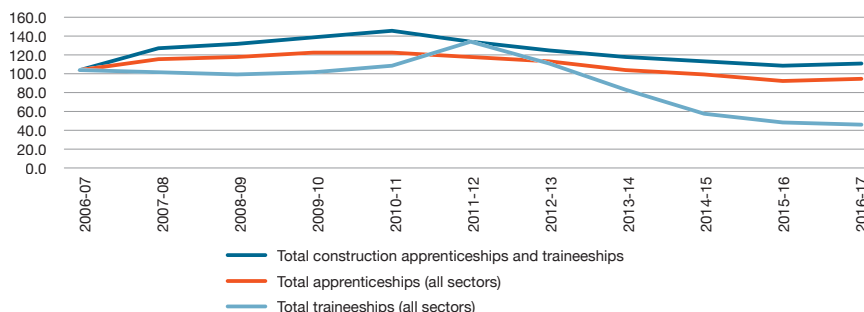
Chart 1 compares trends in the movement of construction apprenticeships in training (including traineeships) with apprenticeships and traineeships across all sectors over the past 10 years, using 2006-07 as the base. As can be seen, construction apprenticeship numbers have increased by almost 8% compared with 10 years ago, whilst apprenticeships across all sectors (down 11%) and especially traineeships (down 65%) have declined over the decade across South Australia.

Chart 1 uses index numbers as its comparative measure. This converts actual numbers to 100 in a base year (in this case 2006-07) and then tracks movement from this comparative base year. As an example, if there were 100 total traineeships in South Australia in 2006-07, by 2016-17 there were just 35.4.

Other influencers on the level of apprenticeships in construction include:

- The level of government infrastructure spending
- Trends in dwelling approvals and commencements
- Trends in retail spending and
- The level and rate of population growth.

Chart 1: Comparison of Trends in Construction and Total Apprentices and Trainees (index numbers – base 2006-07).



Source: CITB estimates from data provided by Department for Industry and Skills (ATIS dataset special data request, March 2018). Construction apprenticeships are defined as those that have been supported by CITB for all years in the 10-year period.

Data note: Over time, the list of construction qualifications/vocations that have been supported has changed (i.e. new ones replaced a number of qualifications that have been removed from the supported list). Therefore, the time series comparisons in the charts relate to the qualifications/vocations that have been supported by CITB over the reporting period. The list of qualifications that currently most directly relate to the construction sector are listed in Appendix 2 (noting that not all of them have been supported for the past 10 years). The total number of construction apprentices in training in South Australia in 2016-17 is 5,240.



Defining the Construction Apprentice

This report focuses on qualifications directly connected with the core business of building and construction – such as plumbing, bricklaying and plant operations. The current list of qualifications that relate to construction apprentices is shown in Appendix 2.

People who work in the construction industry (as defined by the Australian Bureau of Statistics - ABS) can also work in a number of roles that are non-site-based trades. Simple counts of construction industry apprentices will capture these supporting occupations (such as office administration, information technology). However, these roles have been excluded from the analysis. The list of vocations most aligned to the construction sector are listed as Appendix 1. They are directly associated with the relevant qualification.

However, very few qualifications are exclusively linked to construction – an electrical apprentice for example, could be working exclusively on a construction site for a construction company or in an industrial site for a manufacturing company. Therefore, the analysis in this report focuses on apprentices *who are available for employment in the construction industry or who undertake a construction-related qualification (unless otherwise specified)*.

Not all apprentices working towards a construction-related qualification work for an employer in the construction sector (and are therefore not eligible for CITB funding support). For example, apprentices may be employed by an organisation in the manufacturing or mining sectors. As such, the CITB list of eligible apprenticeships (filtered from the Department for Industry and Skills [DIS]), represents a truer representation of the current number of apprentices in the sector, notwithstanding that workers regularly move between industries, as mentioned previously. CITB-supported apprentices represent around 85% of all apprentices studying a construction-related qualification.

Apprentices across all sectors can be employed either directly through an employer (direct indenture) or through a Group Training Organisation (GTO). Around 1,300 CITB-supported apprentices are employed through GTOs (30% of the total). The Australian Bureau of Statistics (ABS) classifies all GTO apprentices (regardless of the industry of their host employer) as being in the Rental, Hiring and Real Estate Services industry division. Therefore, a carpentry apprentice employed through a GTO is not classified as working in the construction industry.


Construction apprentices come from many sources, and therefore the pipeline of apprentices has many entry points, such as:

- School leavers
- Existing workers in the construction sector who have no post-school qualifications (e.g. builder labourers).

Data Sources used in this Publication

There are 3 data sources used in this publication, namely:

- Data provided to the CITB by the Regulation and Contract Management section of the Department for Industry and Skills (DIS) for current qualifications that most directly relate to the construction sector (as listed in Appendix 2).
- CITB data filtered from DIS data, which removes apprenticeships that are not eligible for CITB support.
- National Centre for Vocational Education Research (NCVER), which is the national professional body responsible for collecting, managing, analysing and communicating research and statistics on the Australian vocational education and training sector. The apprenticeship data it collects is provided by all State Governments.



48% of all 4-year apprenticeships in South Australia are in the **construction sector.**



Construction's Share of Total Apprentices

As mentioned previously, the term 'apprenticeships' is used in this report to describe both apprenticeships and traineeships. However, a traditional four-year apprenticeship is the dominant contract of training model within construction, rather than a shorter traineeship.

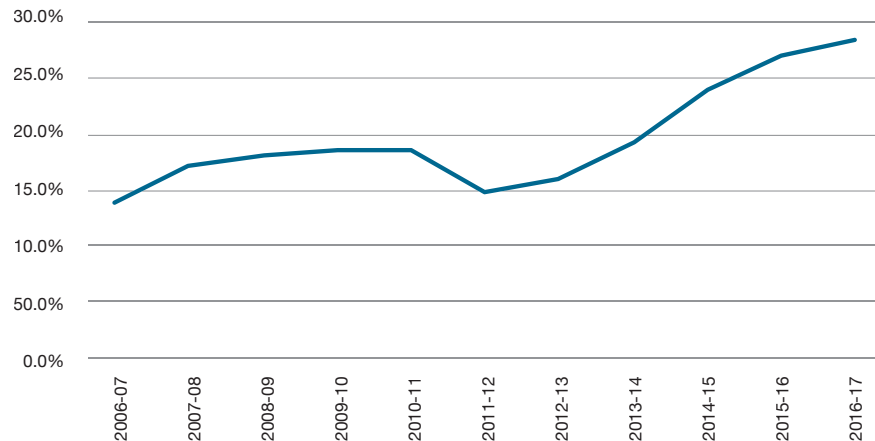
Of all 30 current construction-related qualifications, 20 are apprenticeships, while 10 are traineeships. The number of these 4 year construction apprenticeships in training (both direct indenture and GTO) represent approximated 48% of all 4 year apprentices in training across all sectors in South Australia, demonstrating the relevance of the construction sector in entry level skills development.

Even using a broader measure (construction apprenticeships and traineeships as a share of total apprenticeships and traineeships), the construction sector now accounts for almost 30% in South Australia and the share has doubled over the past 10 years – see Chart 2.

Current Apprenticeship Trends

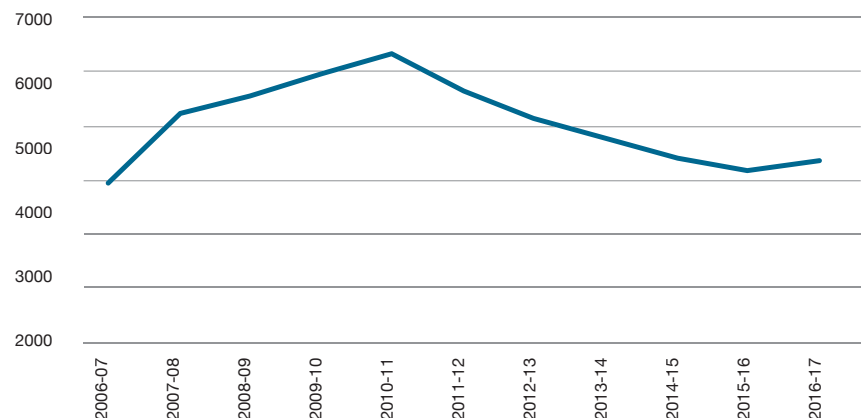
The number of construction apprenticeships (i.e. people studying a construction-related qualification) rose by more than 100 between 2015-16 and 2016-17 – the first annual rise in 5 years – see Chart 3. Despite this increase, construction apprenticeships are more than 25% below their peak of 2010-11. As mentioned previously, this decline is of a lower magnitude than for apprenticeships as a whole in South Australia.

Chart 2: Construction Share of Total Apprenticeships and Traineeships in South Australia.



Source: CITB estimates from data provided by the Department for Industry and Skills (ATIS dataset special data request, March 2018). Construction apprenticeships are defined as those that have been supported by CITB for all years in the 10-year period.

Chart 3: Number of Construction Apprentices in Training South Australia.



Source: CITB estimates from data provided by Department for Industry and Skills (ATIS dataset special data request, March 2018). Construction apprenticeships are defined as those that have remained in scope for all years in the 10-year period.

The peak in construction apprenticeships in around 2010-11 coincided with the rollout of the Building the Education Revolution (BER) program funded by the Australian Government as a stimulus measure in response to the Global Financial Crisis.

The sheer volume of projects funded through the BER meant that once this demand had peaked a decline in industry activity (including apprentice take up) was inevitable.



Industry Take up of Apprentices

According to the Australian Bureau of Statistics data, approximately one in 12 employed South Australians work in the construction industry. Whilst there are many pathways into the construction industry there are also a number of occupations at various skill levels, some of which are not related to apprenticeships. The decline in construction apprenticeship numbers since 2010-11 has followed a similar trend in construction employment overall (as defined by the ABS).

Chart 4 shows that the apprentice uptake among construction sector employers in South Australia has remained relatively stable over the last 10 years (as a share of total construction sector employment).

Note that as Group Training Organisations are not classified by the ABS as being part of the construction sector, this comparison only relates to direct indentured CITB-supported apprentices.

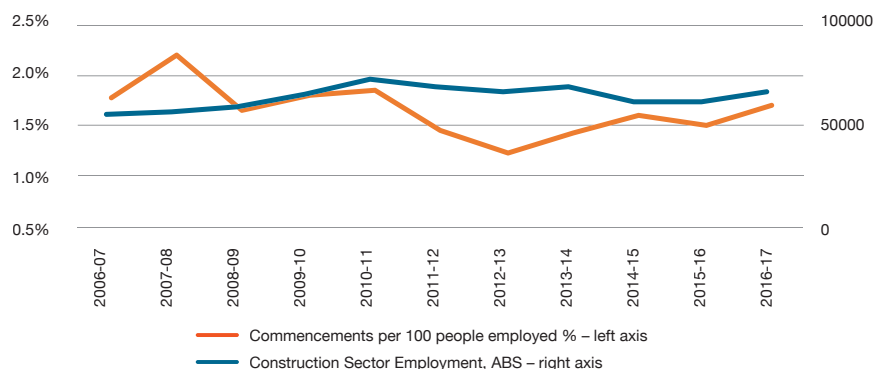
The construction sector is the third largest industry in terms of apprentices per 100 people employed. From an occupational perspective, construction trades workers and electricians have the highest training rates¹ of all occupational groups in South Australia.

Table 1 provides estimates of the number of employers and group training organisations that have taken on apprentices over the past 10 years. After peaking in 2010-11, due to some one-off factors such as the Federal Government's Economic Stimulus Package (as previously mentioned), the number of employers taking on construction apprentices has declined, but remains higher than 10 years ago.

Occupational and Sector Trends

Table 2 illustrates that carpenters and joiners and electricians are the most common vocational fields for CITB-supported construction apprenticeships.

Chart 4: Annual Apprenticeship Intake – South Australian Construction Apprentices Commenced per 100 Workers.



Source: CITB estimates (eligible apprenticeships only) derived from DIS ATIS database, and ABS labour force data. Commencement data includes recommencements.

Table 1: Number of Employers of Construction Apprentices

As at 30 June	Number of Private Employers	Number of GTOs	Total Employers	Total Number of Apprentices in training
2007	1,586	16	1,602	4,478
2008	1,901	16	1,917	5,567
2009	2,081	17	2,098	5,822
2010	2,128	18	2,146	6,176
2011	2,241	18	2,259	6,483
2012	2,103	17	2,120	5,878
2013	1,999	18	2,017	5,460
2014	1,899	19	1,918	5,160
2015	1,835	18	1,853	4,869
2016	1,818	18	1,836	4,680
2017	1,886	17	1,903	4,826

Source: CITB estimates from data provided by the Department for Industry and Skills (ATIS dataset special data request, March 2018). Construction apprenticeships are defined as those that have been supported by CITB for all the years in the 10-year period.

Table 2: Apprentices in Training by Occupation (top 9 occupations only)

Occupation	Number	% construction apprentices
Carpenters and Joiners	1,256	26.8
Electricians	1,115	23.8
Plumbers	928	19.8
Civil Construction and Maintenance Worker/ Supervisor	321	6.8
Air-conditioning and refrigeration mechanics	260	5.5
Bricklayers and stonemasons	147	3.1
Cabinet Making – Kitchen and Bathrooms	137	2.9
Painting trades workers	137	2.9
Wall and floor tilers	113	2.4

Source: CITB – TALAS database (CITB-supported apprenticeships).

¹ Training rates are derived by calculating the number of apprentices and trainees (aged 15 years and over) in-training as at 30 June (NCVER data) as a percentage of employed persons (aged 15 years and over) as at May (ABS data).



Approximately **1 in 12 employed**
in South Australia,
work in the
construction industry.

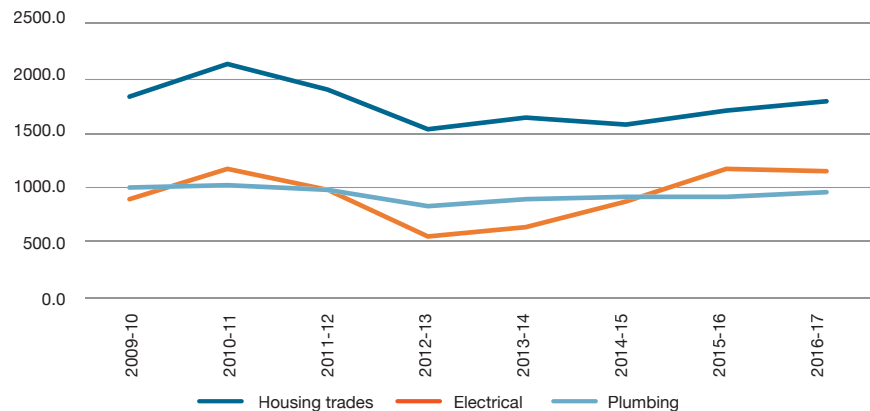
From their peak in 2010-11, housing trades² have experienced a decline in 15.9% in the number of apprentices in training, with more modest declines for electricians and plumbers – see Chart 5.

Nevertheless, housing remains by far the largest sector for construction apprenticeships – see Chart 6.

Age at Commencement – South Australian Construction Apprentices

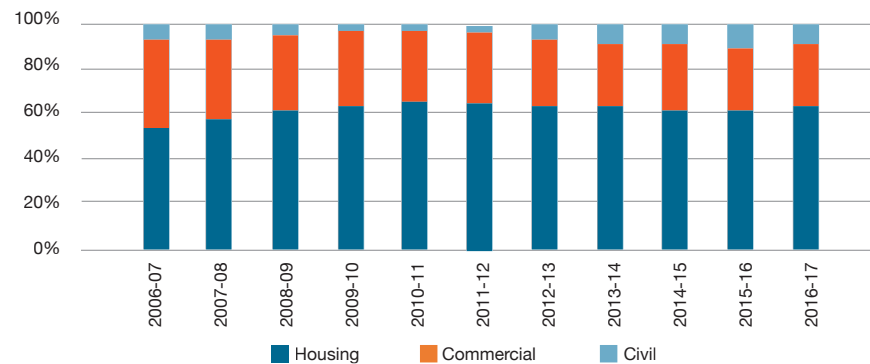
Approximately 60% of apprentice commencements in construction are school leavers – see Chart 7. This percentage has not changed significantly over the past 10 years.

Chart 5: Comparison of CITB Supported Apprentices – Housing Trades, Electrical and Plumbing.



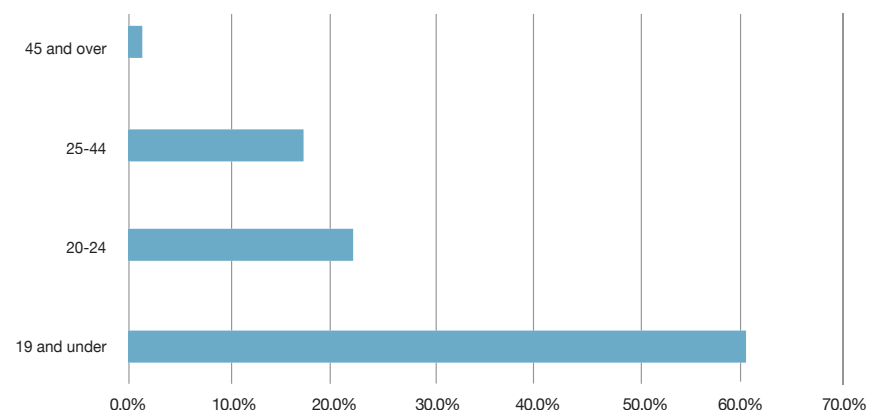
Source: CITB estimates (eligible apprenticeships only) derived from DSD ATIS database.

Chart 6: Apprentice Count by Sector - South Australia Construction Apprentices.



Source: CITB – TALAS database (CITB-supported apprenticeships).

Chart 7: Age at Commencements – South Australian Construction Apprentices 2016-17.



Source: NCVER VocStats. Construction apprenticeships defined as those in Appendix 2. Note, in this series, commencements do not include recommencements.

² Defined as bricklaying, carpentry, painting and decorating, roof tiling, wall and ceiling lining and wall and floor tiling.



Female Participation

Between 2006-07 and 2015-16, the share of female construction apprentices in training in South Australia ranged from just 1.0% to 1.3% of the total. Encouragingly, there has been an increase in 2016-17, to 1.7% (refer Chart 8). This appears to be the result of a spike in female electrical apprenticeships.

While the recent increase in female participation is welcome it comes from a low base:

- Across all apprenticeships and traineeships, females made up 27.2% of all trade and non-trades in training as at 30 June 2017;
- In the past 10 years, according to DIS data, some construction trades such as concreting, fire protection systems and roof tiling have not had a female apprenticeship.

Aboriginal Participation

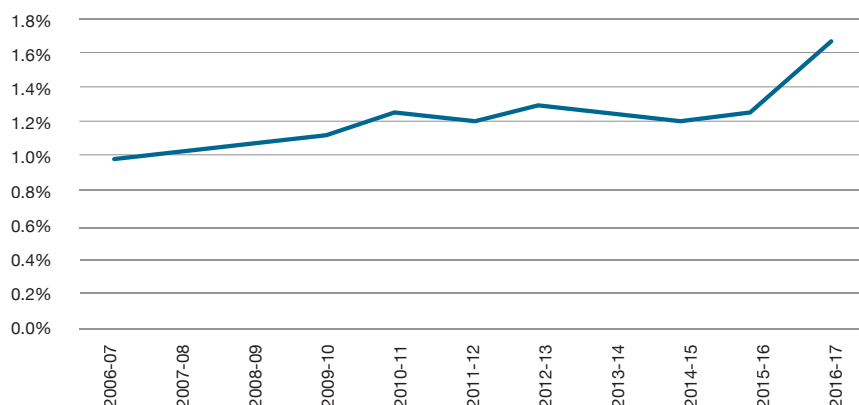
Aboriginal people account for approximately 2.1% of all construction apprentices in training, a rate that is similar to 10 years ago – refer Chart 9. This rate of 2.1% is higher than representation in the construction workforce in South Australia (1.1% at the time of the 2016 Census) and across all industries (1.2%).

Commencements by Region

Approximately three quarters of construction apprentice commencements in South Australia are in the greater Adelaide Region, while the remaining 25% are dispersed across regional South Australia (as defined by the ABS), namely:

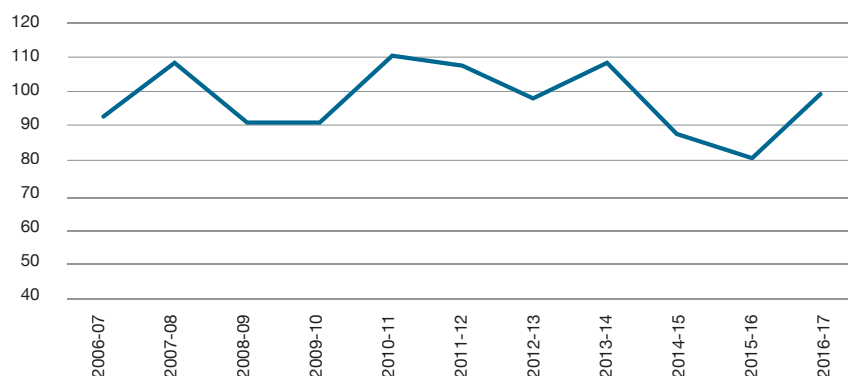
- Barossa Yorke Mid North (6.2% of total)
- Outback South Australia (6.6%)
- and South East South Australia (11.6%).

Chart 8: Female Participation Rate - South Australian Construction Apprentices.



Source: CITB estimates from data provided by the Department for Industry and Skills (ATIS dataset special data request, March 2018). Construction apprenticeships are defined as those that have been supported by CITB for all the years in the 10-year period.

Chart 9: Aboriginal Apprentices in Training – South Australian Construction Apprentices.



Source: CITB estimates from data provided by the Department for Industry and Skills (ATIS dataset special data request, March 2018). Construction apprenticeships are defined as those that have been supported by CITB for all the years in the 10-year period.

Note: ABS includes the Adelaide Hills region in metropolitan Adelaide.

The metropolitan/non-metropolitan share of construction apprentice commencements has not changed significantly in the past 10 years.

Completions

Completion numbers can be difficult to accurately estimate for apprenticeships. As Construction Skills Queensland states;

“Apprentices may commence an apprenticeship with one employer, move to another employer in a subsequent year, and complete their apprenticeship with yet another employer. Also, an apprentice who commences in a particular trade may choose to switch trades — say from carpentry to plumbing — in the course of their apprenticeship. These examples of “contract phoenixing” are often counted as cancellations (and therefore non-completions) in official statistics, which leads to an understatement of real completion rates. These distortions in the data are behind many of the inflated claims of poor completion rates among apprentices and trainees.”³

³ Construction Skills Queensland, *Apprentice Annual 2017*.



Women accounted
for **1.7%** of
all **construction**
apprentices in 2016-17



The number of completers from construction-related qualifications is shown in Chart 10. CITB calculates completion for construction apprentices on a 'person' basis. This means that an apprentice is counted as 'completed' regardless of how many employers they worked with during their apprenticeship. Therefore, it measures the proportion of people who commenced a construction apprenticeship and were ultimately qualified as construction tradespeople, regardless of how many contracts were commenced during the apprenticeship period. This is different to other calculations of completion rates, e.g. those prepared by DIS or NCVER.

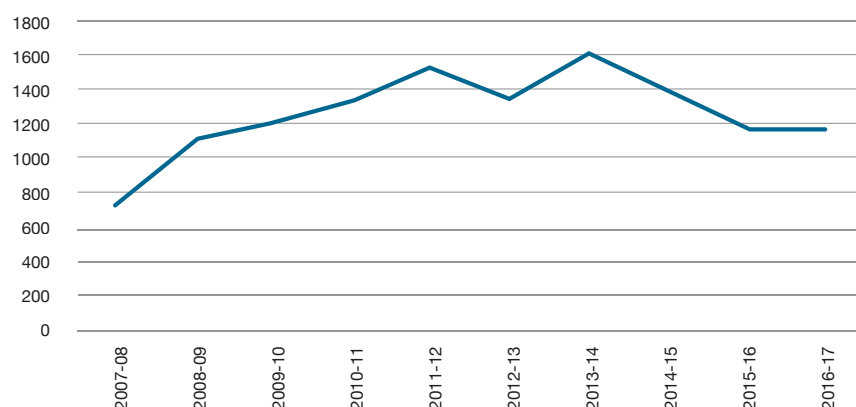
CITB has prepared estimates of completion rates of CITB-eligible apprentices who commenced in 2011 (either undertaking 3-year traineeships or 4-year apprenticeships). In 2015, this commencing cohort has the following outcomes – refer Table 3:

- As at 2015, 77.4% of this commencing cohort had completed their apprenticeship
- The remainder had either terminated (i.e. cancelled or withdrawn) their contract of training (17.1%), or were still in training (5.6%).

The data in Table 3 includes people who transferred from a direct indenture employer to a GTO to complete their training contract (and vice versa) as well as people who transferred from one direct indenture employer to another one.

CITB-supported construction apprentices have higher completion rates than those in other trades. This is in part related to the completion payment that employers receive, as well as the support that CITB Field Officers provide employers.

Chart 10: Apprentice Completions – South Australian Construction Sector.



Source: DIS – ATIS database. Construction apprenticeships are defined as that have been supported by CITB for all years in the 10-year period.

Table 3: Completion Rates of CITB-Eligible Construction Apprentices Commencing

	Total Commenced 2011	Completions 2015		Terminated		In Training	
GTO	400	336	84.0%	45	11.3%	19	4.8%
Direct Indenture	1,130	848	75.0%	216	19.1%	66	5.8%
Total	1,530	1,184	77.4%	261	17.1%	85	5.6%

Source: CITB estimates (eligible apprenticeships only) derived from DIS ATIS database.

2017 Employer and Apprentice Research Survey

In 2017, CITB commissioned McGregor Tan to undertake a survey to gather feedback from construction apprentices and employers regarding their satisfaction and the effectiveness of the services and support they have received. The results identified gaps and areas for change.

Of the 400 completed surveys from apprentices and a further 400 from employers of apprentices (either through direct indenture or GTOs), the results emphasised the importance and value of the apprenticeship system for the industry. Specifically:

- Employers surveyed stated that they take on apprentices primarily to meet business needs.
- Almost 80% of employers stated they have not had any difficulty in sourcing apprentices.

- Four in five employers (80%) stated they would employ another apprentice in the future.
- Employers with two or more apprentices and with apprentices in their first year were more likely to indicate they would employ another apprentice in the future.
- Most of the direct indenture employers surveyed (80%) and 78% of hosted employers indicated they would be likely to recommend employing an apprentice to someone else.
- Almost 75% of employers stated that the Training Support Funding they receive from CITB makes a difference in their decision to employ an apprentice.
- Almost all apprentices (97%) indicated they learn the relevant skills for the trade on the job with their boss, while four in five (83%) are also learning the relevant skills at trade school.



Four in five employers

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Almost **75%** of
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Appendix 1: List of Relevant Vocations for Construction Apprentices

Air-conditioning and Refrigeration Tradesperson
Bricklayer
Builder
Building Site Supervisor
Cabinet Maker (Bathrooms and Kitchens)
Carpenter and or Joiner
Civil Construction and Maintenance Worker
Civil Construction and Maintenance Worker - Supervisor
Concreter
Data and Voice Communications Servicing Tradesperson
Electrical Tradesperson (Distribution Overhead)
Electrician
Fire Protection Systems Technician
Glazier
Painter & Decorator
Plasterer (Solid and or Fibrous)
Plasterer (Wall and Ceiling Lining)
Plumber and or Gasfitter
Roof plumber
Roof tiler
Scaffolder
Steelfixer
Stone Mason
Tiler (Wall and Floor)

Appendix 2:

(A) Apprenticeship (T) Traineeship

Qualification	Duration / Type
Certificate III in Air-conditioning and Refrigeration	48 Months (A)
Certificate III in Bricklaying/Blocklaying	48 Months (A)
Certificate IV in Building and Construction (Building)	48 Months (T)
Certificate IV in Building and Construction (Site Management)	48 Months (T)
Certificate III in Cabinet Making	48 Months (A)
Certificate III in Carpentry	48 Months (A)
Certificate III in Shopfitting	48 Months (A)
Certificate III in Joinery	48 Months (A)
Certificate III in Carpentry and Joinery	48 Months (A)
Certificate II in Civil Construction	18 Months (T)
Certificate III in Civil Construction	36 Months (T)
Certificate III in Civil Construction Plant Operations	36 Months (T)
Certificate IV in Civil Construction Supervision	48 Months (T)
Certificate III in Concreting	24 Months (T)
Certificate III in Data and Voice Communications	48 Months (A)
Certificate III in ESI - Power Systems – Distributed Overhead	48 Months (A)
Certificate III in Electrotechnology Electrician	48 Months (A)
Certificate III in Fire Protection	48 Months (A)
Certificate III in Glass and Glazing	48 Months (A)
Certificate III in Painting and Decorating	48 Months (A)
Certificate III in Civil Construction (Pipe Laying)	36 Months (T)
Certificate III in Solid Plastering	48 Months (A)
Certificate III in Wall and Ceiling Lining	48 Months (A)
Certificate III in Plumbing	48 Months (A)
Certificate III in Roof Plumbing	48 Months (A)
Certificate III in Roof Tiling	36 Months (A)
Certificate III in Scaffolding	24 Months (T)
Certificate III in Steelfixing	24 Months (T)
Certificate III in Stonemasonry	48 Months (A)
Certificate III in Wall and Floor Tiling	48 Months (A)

Notes

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