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Foreword

This document provides a snapshot of skills demand for the residential construction sector in Victoria. For the purposes of this snapshot, the residential construction sector includes businesses building and renovating detached dwellings, medium density townhouses, and residential buildings of up to three stories and a basement, as well as those engaged in maintenance and repair works. This snapshot provides a genuine understanding of the current and future (1-3 year horizon) skills and training requirements of the sector, with a focus on the element of the workforce using VET courses and their career pathways. It also considers the impact of the COVID-19 pandemic on the future jobs and skilling needs of the sector.

The success of this work relied on insights from experienced businesses within this sector to provide a sector-wide view of skills requirements and workforce challenges. A small representative group of businesses, spanning a range of services and market segments, were engaged in an employer roundtable to develop this snapshot. Insights from public data on the residential construction sector were presented and validated with participants.

The roundtable provided the opportunity for residential construction businesses to input their view of priorities and requirements from the VET system in addressing sector skills issues. As such, this presents a picture of the demand side of the training market. This snapshot can be used by TAFE and training providers to better understand the residential construction sector's priorities in terms of occupation and skill demand to ensure the supply side responds appropriately to VET opportunities.

The Victorian VET system aims to deliver 'real training for real jobs' by providing up to date training for new challenges in the sector. This report is part of a series of sector snapshots which are being developed by the Office of the Victorian Skills Commissioner (OVSC). The set of snapshots complements the Commissioner's Regional Skills Demand Profiles to provide a richer picture of the skills needs of Victorian businesses. Insights from consultations will inform Government decisions around funding for accredited training. A collaborative effort between Government, businesses and training providers is required to address these challenges.

This snapshot represents a summary of the views of consulted businesses and sector representatives on the foreseeable current and future skilling needs of the residential construction sector. As such, the OVSC has prepared the report with care and diligence, based on information provided through consultations. Information in the snapshot has not subsequently been independently verified or audited.

Acknowledgments

The OVSC would like to acknowledge the time, contribution and insights of participating businesses, the Master Builders Association of Victoria and the Housing Industry Association in supporting this process. The findings in this report would not be possible without their shared knowledge, openness, generosity, expertise and commitment.

Table 1: Participating Businesses

Member	Organisation
Dan McNamara	GJ Gardiner Homes
Scott Doughty	Mornington Peninsula Homes
Greg Cole	Nuform Steel Fabrications
Megan Vuillermin	SJ Vuillermin Master Builders
Sharon Hedger	Hedger Constructions
Adrian Nicolazzo	ADCO Property Inspections
Scott Davies	Technique Construction Group
Catie Paterson	Catie Paterson Consulting
Steve Bright	Excelcon
Venise Reilly	Studio Property
Stuart Allen	Stuart Allen Building

SUMMARY

VICTORIA'S RESIDENTIAL CONSTRUCTION SECTOR

Approximately 207,000 construction workers across Victoria¹

Substantial impact of COVID-19 on the sector outlook

Possible skills shortage in some trades

Three validated pathways to employment

Potential for high earnings for talented workers

Licensing of workforce to be introduced from 2022 under existing proposal

CAREER PATHWAYS AND TRAINING



SECTOR WORKFORCE PRIORITIES

- Government, employers and providers continue to work to secure a pipeline of future apprenticeships by promoting trades in schools, assessing the effectiveness of initiatives such as Head Start and monitoring emerging skills shortages through COVID recovery.
- Proceed with the pilot initiative of independent assessment for carpentry and other building trades.
- Validate employers' preference for apprenticeship pathways for individuals seeking a career in the building industry, and whether employers prefer apprentices to start early or complete a high school certificate first.
- Explore the effect of mandating on-site experience (gained either prior or during study) to obtain a Certificate IV in Building and Construction (Building).
- Support TAFEs to increase the share of apprenticeship training delivered on-site and lift the quality of classroom-based training within apprenticeships and explore options for improving availability in regional areas.

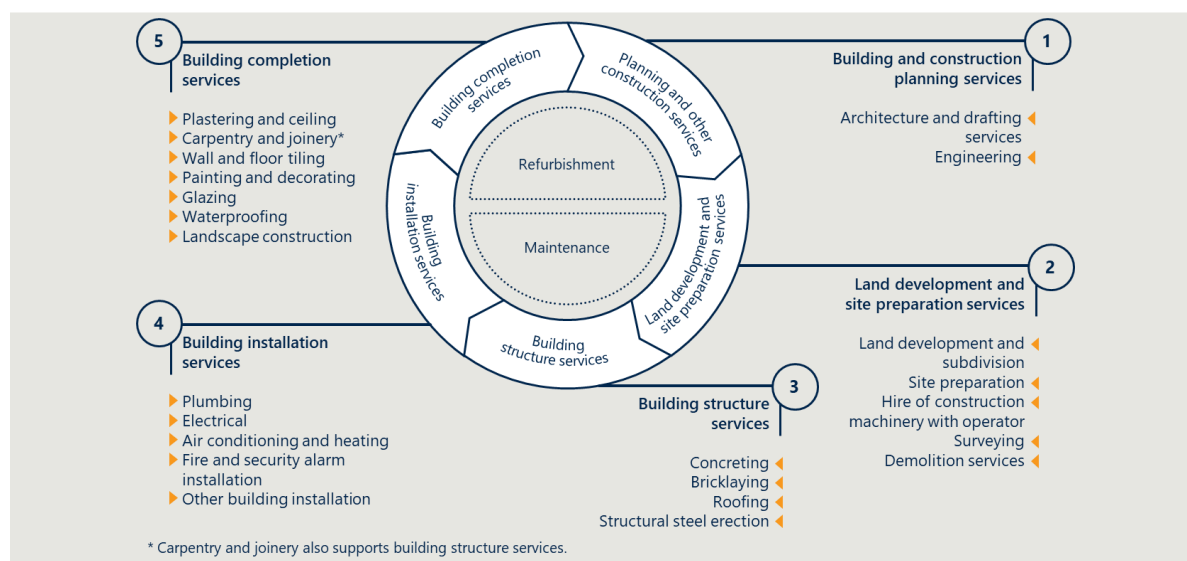
¹ Source: Housing Industry Association, "The Residential Building Workforce". This estimate also includes some upstream roles, such as timber frame manufacturing and prefabricated home manufacturing. It excludes non-construction roles in the sector.

1 Sector Overview

The residential construction sector has grown over the past 10 years

The residential construction sector includes businesses building and renovating detached dwellings, medium density townhouses, and residential buildings of up to three stories and a basement, as well as those engaged in maintenance and repairs works. In addition to builders, the sector includes tradespeople working in construction services, some of whom are employed directly by builders. Most are subcontracted and some do not work exclusively in residential construction. As shown in Figure 1, there are a broad variety of workers employed in the residential construction sector.

Figure 1 | Workers supporting the residential construction sector



There are numerous drivers of demand for residential construction. Population growth stimulates construction of homes and creates demand for rental properties, therefore immigration is key to residential construction because of its inherent importance to population growth. Household income and employment also drive demand for purchasing and renting properties, along with the cost of building materials. Finally, policies and schemes such as first home buyer grants, the recent Homebuilder scheme and negative gearing all stimulate investment. Government investment in public housing, affordable housing and community housing can also drive substantial demand for residential construction. The Victorian Government has recently announced \$5.3 billion in spending on new and refurbished public housing, estimated to create approximately 10,000 jobs per year for the next four years. Demand for renovations is largely driven by household income and the age of dwelling stock but may also be influenced by government incentive schemes.

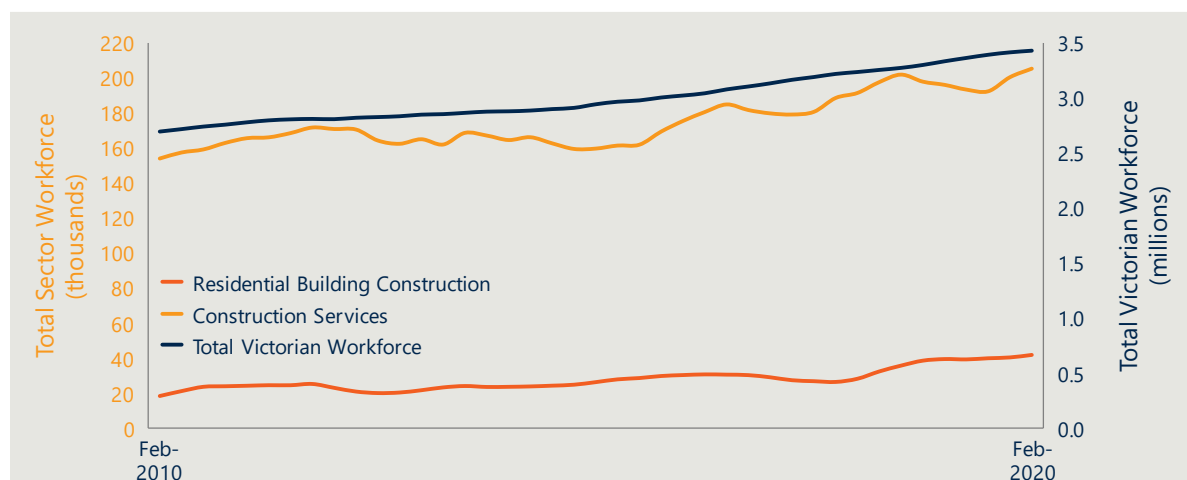
The residential building construction workforce, including builders of large apartment complexes as well as the smaller developments described in this snapshot, has grown steadily since 2010, with an average annual growth rate of 5.5%¹ (see Figure 2). This is higher than the total Victorian workforce, which has grown at 2.4% year on year. Construction Services, which includes trades associated with construction, such as plumbing, concreting, plastering and electrical work, has grown by 2.6% annually over the last 10

¹ This growth line also includes those associated with the construction of large residential complexes like apartment towers.

years but has been more volatile than residential construction. The value of work done in the total residential construction sector, including apartments, was \$31.5 Billion in 2019-20².

Figure 2 | 12-month rolling average workforce size, 2010-2020

Source: ABS Labour Force Survey



Industry identifies three major types of business in the residential construction space. Volume builders can produce many hundreds or thousands of homes each year. Smaller businesses are usually classified as custom or bespoke builders, who build homes that are more likely to be one offs. The third major type of construction business is renovators, who specialise in modifying and improving existing homes. In addition to the three primary business models, the production of “kit homes” or prefabricated homes has grown rapidly in recent years.

Businesses shift their focus to project management as they grow

As of June 2019, there were approximately 23,000 businesses in the Victorian residential building construction industry, as well as 79,000 businesses in construction services. Most businesses are relatively small. 55% of residential construction businesses and 57% of construction services have an annual turnover of less than \$200k, while 89% and 95% respectively turn over less than \$2m. This is likely due to the popularity of sub-contracting.

Builders are usually specialised, focusing on either detached dwellings, medium density townhouses or larger residential buildings. Work is typically sourced through referrals from existing relationships and physical and online marketing, but some builders also utilise residential construction lead generators, who charge per lead. Larger projects, such as mid-rise dwellings, may be put to competitive tender.

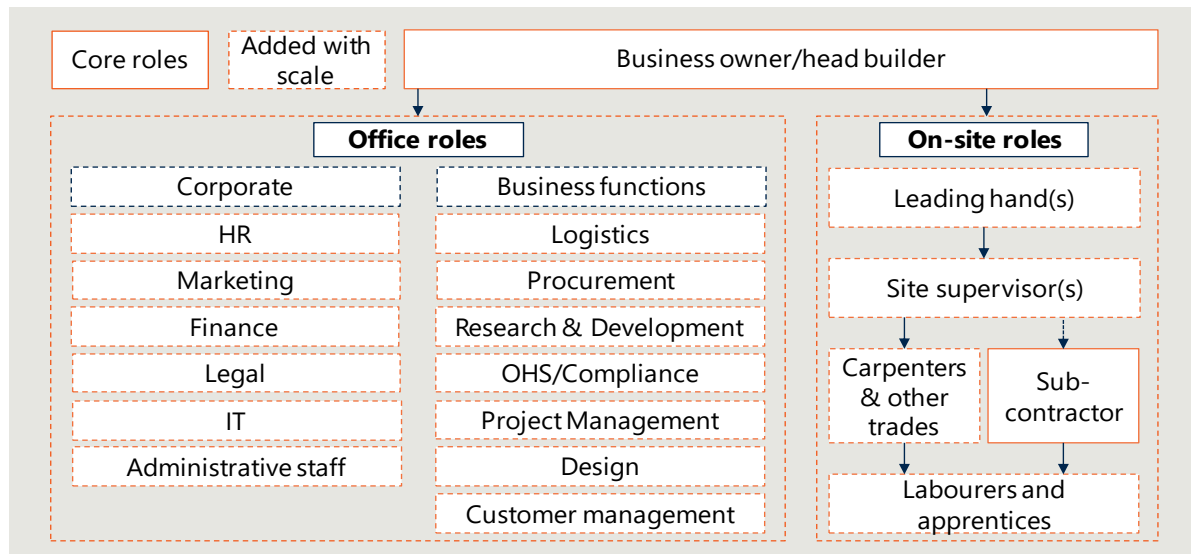
Most businesses start as a sole trading builder who utilises subcontractors for discrete tasks and builds 1-2 houses per year. As the business grows to build up to 10 houses a year, the builder will likely hire on-site help such as carpenters or labourers, who are typically the builder’s most critical staff. Eventually the business may also hire concreters or bricklayers, rather than subcontracting. However, subcontracting is the dominant work arrangement in the residential building industry as it allows the industry to more easily manage the ebb and flow of the housing cycle over time. Therefore, builders in the housing industry are not typically direct employers of most tradespeople but are reliant on their skills.

As businesses grow to build more than 10 houses a year, they often shift towards a project management and logistics approach, focussing on hiring site managers and leading hands for on-site work and building up back-end capability in procurement, logistics, research and development, occupational health and safety, project management, design and customer management. As a construction company grows

² HIA, *Residential Construction November Outlook*

further, it will build a corporate services function comprising marketing, HR, legal, finance, IT and administrative staff (see Figure 3).

Figure 3 | Indicative residential construction organisational structure

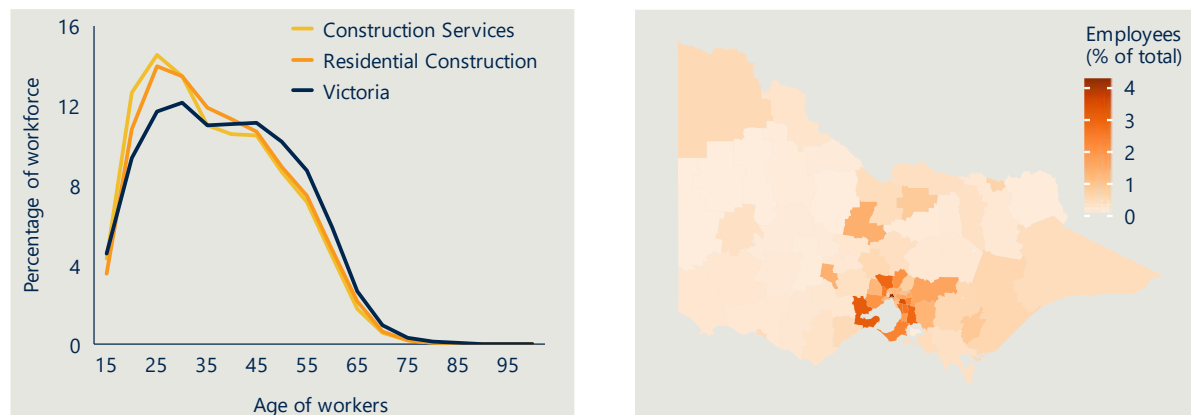


The workforce is young and spread throughout the state

Residential building construction directly employs 42,500 people (February 2020³), but there are also a substantial number of tradespeople working in the sector. The Housing Industry Association (HIA) estimates that there are approximately 207,000 people employed in construction roles in residential construction and a further 83,000 workers in non-construction roles. This estimate includes some upstream workers involved in the industry such as prefabricated house manufacturers⁴. The workforce is dispersed throughout the state, with no single LGA accounting for more than 5% of the total workforce. 25% of the workforce has no fixed address as their place of work, because many builders have no head office and move around worksites as demand requires⁵. Due to the physical nature of the work, the workforce has a higher proportion of 20-30-year-old workers than the Victorian average and 88% of workers across the two workforces are male⁵.

Figure 4 | Age and Geospatial Distribution of Workforce

Source: ABS Census 2016



³ ABS Labour Force Survey, Quarterly, August 2020
⁴ Housing Industry Association, *The Residential Building Workforce*, 2020
⁵ ABS Census 2016

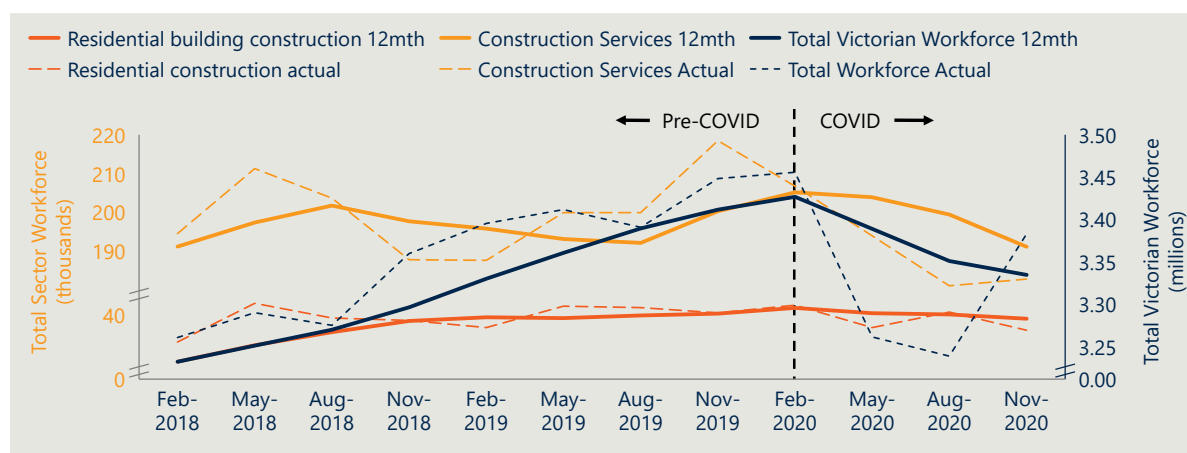
2 Sector outlook and workforce implications

Supply and demand for residential construction workers were close to equilibrium before COVID impacted demand

Demand for residential construction workers has grown steadily over the past 10 years with some minor fluctuation in demand for the construction services workforce. However, since 2018, workforce demand has softened because of the natural cycle of the housing market in addition to external factors such as the banking royal commission and falling house prices, which limited demand for residential construction⁶. Demand has also fluctuated since the outset of the COVID-19 pandemic. There was a slight national undersupply of skilled tradespeople in construction services in the June quarter⁷, which moved to a slight oversupply in the September quarter⁶. In metropolitan Victoria, the oversupply has been greater. The HIA's Trade Availability Index shows that the surplus of skilled trades in Melbourne in the September quarter is more than twice the national average and triple the average in regional Victoria⁶. Additionally, Figure 5 shows that the COVID-19 pandemic reduced employment in construction services in Victoria and slightly impacted employment in residential building construction. Following an easing of restrictions in November, the broader Victorian workforce began to rebound – however, the construction services workforce only grew slightly from August-November while the residential construction workforce underwent a contraction.

Figure 5 | 12-month rolling average workforce size, Feb 2018- August 2020

Source: ABS Labour Force Survey



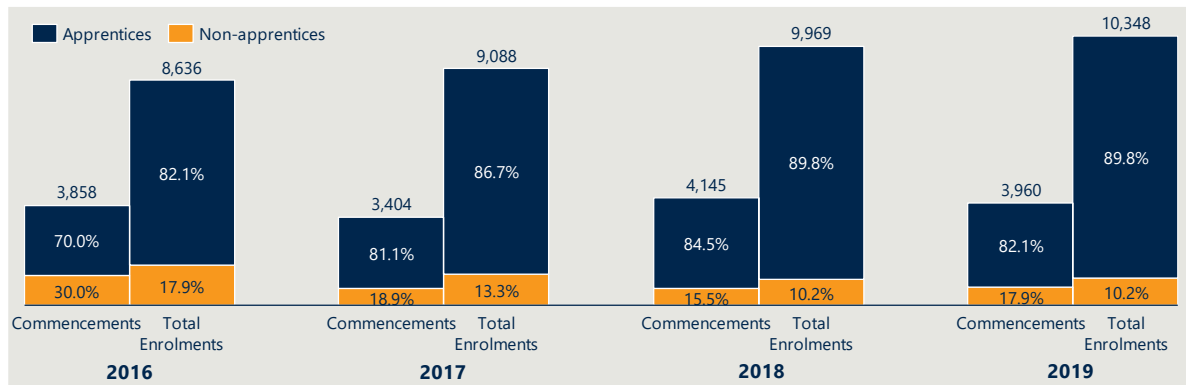
Interest has been growing in apprenticeships and the current supply pipeline for carpenters is relatively strong. Between 2016 and 2019 the number of enrolled apprentices increased by 9.5% per annum (Figure 6). Over the same period, annual commencements have increased by only 0.9%. This stagnation in new commencements may not prove problematic in the immediate term as demand contracts due to the COVID-19 pandemic, but limited growth in commencements will mean that over the next few years the number of enrolled apprentices is unlikely to grow significantly.

⁶ Housing Industry Association, *HIA Trades Report – September 2020 Quarter*, October 2020

⁷ Housing Industry Association, *HIA Trades Report – June 2020 Quarter*, July 2020

Figure 6 | Enrolments and Commencements in Certificate III in Carpentry, 2016-19

Source: DET



Most businesses and industry groups in the residential construction sector report relatively steady utilisation through 2020 despite lockdowns triggering a brief downturn in demand for new homes. At the outset of the first and second Victorian lockdowns, many projects were forced to pause, and some were cancelled. However, after the first four weeks had cleared and some stability was reached, some work was able to restart. For many builders and construction services workers the backlog of work booked in before lockdowns was sufficient to maintain a solid pipeline of work. Businesses and industry believe that government stimulus is one of the reasons the overall sector has remained stable through COVID, both through broad economic stimuli such as JobKeeper and JobSeeker and targeted initiatives such as the HomeBuilder grant.

While broad sectoral performance has been steady through COVID, not all parts of the industry have had the same experience. Performance has been particularly stable in regional areas, where lockdowns have been less stringent than Melbourne and builders have seen increased demand from Melbourne residents looking to relocate to the regions. However, some metropolitan businesses have not had adequate demand for their services. The pace at which builds can be undertaken has also been limited due to social distancing and hygiene requirements, as well as site visit limits for tradespeople. Subsectors of residential construction that rely on home visits, such as renovations and maintenance have also been limited. Businesses that have been impacted by COVID have been forced to restructure and in some cases re-size their workforce, mostly by reducing the number of administrative staff.

Businesses expect a workforce shortfall in 2021, but this may be disrupted by a COVID-related drop in demand

The outlook for the sector in the medium to long term is uncertain but there will likely be a downturn, especially following the cessation of government support packages such as JobKeeper and HomeBuilder. Further uncertainties exist in supply chains, depending on levels of international trade and the broader impact of an economic recession. It is possible that some essential materials could be in short supply at times. Forecasts by the National Australia Bank (NAB) in July 2020 predicted a soft national construction market in the coming years. NAB project a fall of 20% in dwelling construction, with the first impacts taking place in March 2021 and demand not expected to return to pre-COVID levels until September 2022⁸. With weaker demand due to the cessation of overseas migration, the loss of student and tourist demand and the move of Melbournians to Regional Victoria, the HIA expects to see a decline in multi-unit starts of almost 70 per cent in Victoria in the 2021-2022 financial year compared to the state's 2017/18 peak. Businesses fear this contraction will trigger a "squeezing" in the sector, forcing larger companies to focus on smaller projects and driving some smaller businesses out of the market. However, some more

⁸ NAB, *AMW: Residential Construction Outlook*, 21 July 2020

recent indicators suggest that the housing market may recover better than previously anticipated, including stimulus from the Reserve Bank, rising confidence levels and investment from government.

Pre-COVID, businesses expected that there would be an undersupply of skilled apprentices in 2021. The percentage of younger workers has remained constant over the last 20 years, so the need to find more young workers to replace outgoing experience has been increasing⁹. Some expected that this shortage could be more severe in regional Victoria than in metropolitan Melbourne. A large proportion of the skills shortages in the residential construction sector may come because of challenges in attracting apprentices and carrying them through to completion. Businesses highlighted the impact of schools' and students' attitudes towards apprenticeships, suggesting some viewed apprenticeships as a "backup option". According to businesses, one of the key influences on a young person's decision to undertake an apprenticeship is the social incentive; that is, whether schools and society as a whole view apprenticeships as a valuable career path. Both the quantity and quality of apprentices are key issues, and government, schools and other bodies will continue to play a role in regulating and adjusting the way in which apprentices are sought and trained.

Since the COVID-19 pandemic the outlook for the sector has shifted substantially and the medium-term demand profile has reduced. Thus, it is likely that the predicted skills shortage in that timeframe is likely to be less severe. Regardless, the sector is expected to rebound to pre-COVID levels by 2022⁸, and apprenticeships typically require 1-4 years of training depending on the trade¹⁰. As such, it is possible that the impending skills shortage has been delayed somewhat and additional workers in most trades are still urgently required. HIA data shows that the biggest shortages are in the trades of bricklaying and ceramic tiling, followed by roofing and plastering. Further, the medium to long term impact of COVID on immigration could drive a shortage of migrant workers, who are often employed as labourers. For this reason, the supply of labourers should be closely monitored.

Skilled workers in finishing trades and site managers are in high demand

Prior to the COVID pandemic, businesses were concerned about the supply of quality apprentices and tradespeople. Businesses believed that the skill set and quality of apprentices had been slowly declining over the last 20 years. While there is likely to be a skills shortfall across all trades, businesses believe some trades are at a higher risk than others. The carpentry workforce remains relatively strong, as are some other major trades such as electricians and plumbers. Most felt it was challenging to source finishing trades such as plasterers, painters and tilers.

Employers also highlighted the importance of finding skilled site supervisors capable of managing people and logistics effectively and efficiently, alongside the necessary on-site experience. Site supervisors also require some technical skills such as site estimating and budgeting. The sentiment from employers was that most supervisors either have general skills or trades skills, and rarely both. This was especially true for those working in the custom build/bespoke construction sector. In part, employers believed this is because there is limited compulsory upskilling for builders or tradespeople seeking to progress their career into this role, and limited training in on-site work for those joining the sector from other industries.

In job advertisements, the top generic skills requested of incoming workers to the construction industry are language, literacy and numeracy, intellectual autonomy and self-management, problem solving and critical thinking, communication skills, and technological literacy. Other skills requested are time management, organisational skills, adaptability, work ethic, workplace health and safety and resilience¹¹. Many employers also seek prior knowledge of the construction industry (depending on the role level), and

⁹ Australian Industry and Skills Committee, *Construction | National Industry Insights Report*

¹⁰ Fair Work Ombudsman, *Guide to Starting an Apprenticeship*

¹¹ Australian Industry and Skills Committee, *National Industry Insights Report | Construction*

skills in project management, cost control, quality assurance and conflict management for those in more senior positions¹².

Trends in regulation will drive skills needs

In residential construction, there are changes to the National Construction Code (NCC) planned for 2022 that will require upskilling of the workforce. New building requirements include changes to airtightness standards, condensation management, cavity fixing of cladding and the potential for emphasis on accessible housing. These new standards will mean distinct changes to the way homes are designed and built and the workforce will require new skills. Governmental regulations relating to building standards frequently shift, and the training system should be prepared to upskill the workforce when needed.

Amendments the Victorian Government has made to the *Building Act 1993* mean that further changes to licensing regulations for carpenters are currently underway, which will mandate registration and licensing of building trades. These changes, due to commence in 2022, will require carpenters to have a robust understanding of contracts, permits and estimating. The next stage of changes will include trades such as bricklayers, tilers and concreters, and future changes will eventually further expand licensing arrangements across all building trades. Under the new regulations, tradespeople in nominated trades will need to become licensed to be an employee and registered to operate as a contractor or manage a construction site. This will affect the training landscape substantially as certain qualifications may become mandatory. The specific conditions under which licensing will be obtained, such as qualifications, skills or experience requirements, are still under consideration.

¹² Burning Glass Technologies

3 The role of training

Most builders enter the sector through an apprenticeship, but alternative pathways exist

The residential construction sector requires a broad workforce to support construction activity. Workers generally fall into two categories, builders who are responsible for the property and trades which are subcontracted to provide specific services.

Most workers start in the residential construction industry through an apprenticeship or as a labourer. While apprenticeships are preferred by most employers as the primary pathway there are an increasing number of builders, particularly in finishing trades, which look to labourers to fulfil entry level roles.

Apprentices can come from a range of backgrounds, including mature age, school-leavers and Victorian Certificate of Applied Learning (VCAL) graduates, with an apprenticeship generally taking up to 4 years to complete. On completion of an apprenticeship, workers have a choice to continue to specialise in their respective trade or to broaden their skill base to become a licenced or registered builder. Those that specialise may choose to stay with their employer or become a sub-contractor. With experience they can progress into more senior roles such as leading hand or site supervisor. Progression typically requires 5-10 years' experience and skills in logistics, planning and communication.

The most common pathway to becoming a builder is a carpentry apprenticeship. However, anyone can become a builder as long as they have the experience, technical qualifications, skills and knowledge to meet licencing or registration requirements. Those seeking to take this step must register with the Victorian Building Authority (VBA). Registration depends on qualifications, work experience, competencies and technical referees. Some applicants are required to sit an exam. Often, individuals will choose to complete a Certificate IV in Building and Construction (Building) or Diploma of Building and Construction (Building) to develop their skills in preparation for operating their own business.

From 2022 a new licensing scheme for building trades is being introduced by government that will require individuals to be registered to undertake certain types of carpentry work. Individuals will need to demonstrate qualifications and experience. Carpentry is the first trade that will be subject to these changes, but registration will also ultimately apply to many other trades such as bricklaying, waterproofing, concreting and landscaping.

On the job training is valued for entry level roles

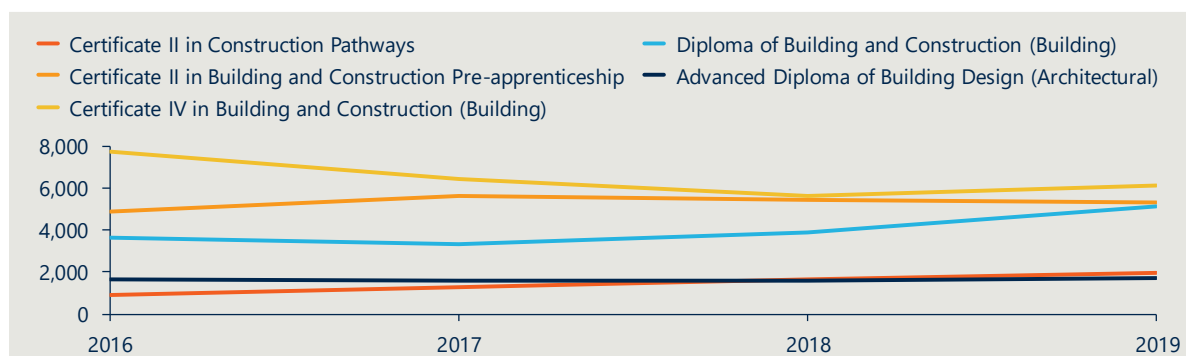
Carpenters and labourers do most of their learning on the job and traits such as work ethic and attitude are important to builders. For those entering the sector through the carpentry pathway, builders prefer apprenticeships as the mode of training. As shown in Figure 6, the vast majority of enrolments in the Certificate III in Carpentry are apprenticeships (89.8%), and this proportion has been increasing over the past four years. Builders do not value non apprenticeship-based carpentry courses. Further, the majority (93%) of enrolments in the Certificate III in Carpentry receive a government funded place. Qualifications such as the Certificate II in Construction Pathways and the Certificate II in Building and Construction Pre-Apprenticeship can be a useful preparatory course for new entrants seeking an apprenticeship. Labourers wishing to progress through the sector are also expected to learn and develop on the job, but builders do not expect labourers to complete any formal qualification.

Classroom-based qualifications, such as the Certificate IV in Building and Construction (Building) and the Diploma of Building and Construction (Building) can be valuable in certain contexts for more senior employees. Builders believe there is value in these qualifications for those seeking to upskill into supervisory roles or business ownership. Industry also believes that these courses are valuable for prospective builders looking to join the sector from another industry such as real estate. Enrolment

numbers in the Certificate IV in Building and Construction (Building) (6135 in 2019) and the Diploma of Building and Construction (Building) (5157 in 2019) are relatively high.

Figure 7 | Enrolments in Building and Construction courses, 2016-19

Source: DET



There are opportunities to improve the delivery and regulation of apprenticeships

Employers believe the quality of apprenticeships and apprentices are in decline, in part due to an increased emphasis on classroom education. Most feel that classroom learning is not beneficial for apprentices. Some felt that teachers were lacking currency of industry experience, while others thought apprentices' attitude towards classroom sessions was not conducive to success.

Classroom education must be effective at upskilling apprentices for this off-site time to be of value to employers. As such, providers and government should continuously review the role and effectiveness of classroom education by consulting with industry and employers to determine when this is a useful part of an apprenticeship and provide advice on where it can be improved. This may include further strengthening of teacher quality in this sector. Teacher quality and availability remains a concern with some businesses observing a shortage of qualified and capable teachers. This shortage was not limited to apprenticeships with other qualifications such as the Certificate IV in Building and Construction also cited.

Employers also expressed interest in better enabling students to commence their apprenticeship earlier. Employers felt VCAL graduates were no more likely to succeed in the construction industry than those who began an apprenticeship earlier, with several employers expressing a preference for an individual to commence an apprenticeship earlier rather than complete year 12 studies. Employers also noted the need to improve the system that is used to sign up apprentices to make the process simpler for apprentices and employers.

Some employers felt that apprentices are increasingly unlikely to complete their apprenticeship or are likely to leave for a higher-paying employer at the completion of their apprenticeship. For some apprentices this may be due to financial reasons, particularly for adult-age apprentices, however there are diverse motivations for apprentices. Where apprentices are more likely to complete their apprenticeship early, this reduces the incentive for an employer to invest in an apprentice's education, since they are less likely to see a return on investment. Consequently, employers believe that some apprentices are not receiving quality training as employers have been incentivised to treat apprentices as low-cost labour rather than a strategic investment. As an example, employers suggested that some builders teach apprentices a narrow range of repeatable skills, such as framing. This benefits the employer because the apprentice will reliably execute that task on a lower wage than a full-time carpenter but means the apprentice will not develop a broad skill set. Some employers also perceive a pressure to sign off an apprentice after as little as 18 months, despite the usual timeline of 3-4 years. As there are a variety of challenges confronting the apprenticeship model, it is important to note that there is not a single solution. Substantial further review, investigation and consultation is required to determine an approach to apprenticeships that is beneficial for builders, apprentices and customers.

To alleviate employers' concerns regarding early signoffs and apprentice attrition, some feel that sign-off processes and the incentives in place for completing an apprenticeship should be reviewed. A pilot program for independent assessment is currently underway, with both a practical and theory test conducted in a specified venue such as a TAFE. According to employers, independent assessment of completions may be useful for improving the apprenticeship completion process. A standardised approach to signing off an apprentice would incentivise employers to ensure their apprentices meet the standards required of independent assessors. Rates of early signoff should also be monitored closely to ensure these only happen where the apprentice is appropriately skilled. Further, raising the standard of the apprenticeship process both in and out of the classroom is likely to improve the experience for apprentices and hence increase retention.

For higher level qualifications (Cert IV and Diploma), employers identified an opportunity to have a stronger focus on the interpretation of the NCC and the importance of onsite experience prior to completion. Outside of these opportunities, there was general support for these qualifications.

A final issue highlighted by employers was the accessibility of TAFE in some regional areas, which may exacerbate regional skill shortages.



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