

Acknowledgements

ForestWorks acknowledges the custodians of the lands of the Central West Forestry Hub Region, the Wiradjuri and Dharug peoples. We acknowledge their elders past and present, and their connection to country.

We also acknowledge the custodians of the lands on which this report was prepared: the Boonwurrung and Kuring-gai people.

Our first nations people have managed the forests and waterways in this region for tens of thousands of years prior to colonization. We hope that this report in part contributes to a better understanding of the steps more recent arrivals in this country can make towards reconciliation.

This report was prepared for the Central West Forestry Hub. ForestWorks would like to thank the Hub Committee for their feedback and contribution to the report.

We would also like to particularly thank the contributions of all the participants in interviews, and surveys. Without them there would be no report.

Contents

Acknowledgements	1
Table of Figures	4
1 Executive Summary	6
2 What does the Central West Forestry and Wood Products Industry Look Like?	10
2.1 Geographic Distribution.....	11
2.2 Sectoral Distribution	12
2.3 Company Size.....	14
2.4 Age	15
2.5 Diversity	17
3 Current Job Roles and Skills Holdings	23
3.1 Job Roles by Occupation Groups	23
3.2 Job Roles by Industry Sector.....	29
3.3 Skills Holdings by Occupation Groups	36
4 Environment and Strategic Directions.....	40
4.1 Internal Factors Affecting Companies	40
4.2 External Factors Affecting Companies.....	41
4.3 Significant changes to the business over the last 2 years and the next 2 years.....	42
5 Future Skills Needs of Businesses in the Region.....	44
5.1 Skills Shortages in the Hub Region	44
5.2 Skills Needs in the Forest and Wood Products Industry.....	44
5.3 Skills Needs in Australia	45
5.4 Skills Shortages in NSW and Australia	47
6 How are Skills Gaps Filled?	50
6.1 Retention and Attrition of Employees.....	50
6.2 Reasons for Training of Existing Employees	52
6.3 Apprenticeships and Traineeships.....	53
7 Filling Gaps Externally.....	56
7.1 Recruitment of Experienced Workers	57
7.2 Training provided to new entrants	65
7.3 Other Perspectives on Recruitment Challenges	66
8 The Approach to Training in the Central West Region	68
8.1 Barriers to Training	68

8.2	Industry-Identified Barriers to Training	68
8.3	Accessing Accredited Training in NSW	69
8.4	Government Support for Training	79
9	Regional Workforce Development Planning	82
9.1	Skills development of the existing workforce	82
9.2	Recruitment of Apprentices and Trainees.....	82
9.3	Forest Education in Schools.....	83
9.4	Schedule of Skills Needs	83
9.5	List of Training Providers by Industry Sector and Qualification	87
10	Methodology	93
10.1	Companies identified in the Hub Region	93
10.2	Survey	93
10.3	ABS and other Data Sources.....	94
11	References	128
	Attachment One: Interview Questions.....	129

Table of Figures

Figure 1 Central West Forestry Hub region	10
Figure 2 People by Place of Work (Hub Region) and Industry Sector, 2016	11
Figure 3 People by Place of Work (Hub Region) and Industry Sector, 2016 (Hub employer survey. When comparing to the previous figure, not the change in scale.)	12
Figure 4 Distribution of Industry by sub-sector (employees in the Hub Region), 2016	13
Figure 5 Distribution of Industry by Sub-sector (employees in the Hub region), 2021.....	13
Figure 6 Change to Employment by Industry sectors over time, 2006-2016.....	14
Figure 7 Proportion of businesses in NSW by business size compared to Respondents	15
Figure 8 Percentage of workforce over 45 years of age (by Sector)	16
Figure 9 Age of workforce by Industry sector and all industries, NSW NE Hub, 2016	16
Figure 10 Women in the Hub region Workforce by Occupational Category, 2016.....	19
Figure 11 Women in the Hub region Forest and Wood Products Industry by Occupational Category, 2016	19
Figure 12 Distribution of Occupational Groups, CW Hub survey	24
Figure 13 Distribution of Occupational Groups, Census Data	24
Figure 14 People employed in the Forest and Wood Products Industry, by Occupation, Hub Region vs NSW, 2016	25
Figure 15 Occupational Groups within the Forest Growing and Management Sector (Hub region), 2016.....	29
Figure 16 Occupational Groups within the Forest Growing and Management Sector (Australia), 2016	29
Figure 17 Top Occupations within the Forest Growing and Management Sector (Hub region versus NSW), 2016..	30
Figure 18 Occupational Groups within the Harvesting and Haulage Sector, 2016	31
Figure 19 Top Occupations within the Harvesting and Haulage Sector (Hub region versus NSW), 2016.....	32
Figure 20 Occupational Groups within the Sawmilling and Processing Sector, 2016	33
Figure 21 Top Occupations within the Sawmilling and Processing Sector (Hub region versus NSW), 2016.....	34
Figure 22 Occupational Groups within the Timber Manufactured Products Sector, 2016.....	35
Figure 23 Top Occupations within the Timber Manufactured Products Sector (Hub region versus NSW), 2016	36
Figure 24 Highest Educational Attainment (proportion of each sector), Forest and Wood Products Industry, Hub Region	37
Figure 25 For each occupation group, to get a job in your business, what skills level do you require?	38
Figure 26 On a scale of 1-5, how do the following factors inside your organisation impact on your company's ability to access markets and grow?.....	41
Figure 27 On a scale of 1-5, how do the following external factors impact upon your company's ability to access markets or grow?.....	42
Figure 28 In the next 2 years, are you planning to introduce any new or improved...?	43
Figure 29 Skills Shortage and Future Demand, by occupation, NSW and Australia	47
Figure 30 How do you normally fill skills gaps in your organisation? (number of businesses)	50
Figure 31 Employment duration, 2021 (percentage of employees)	51
Figure 32 Employment duration by Industry sector, (percentage of employees)	52
Figure 33 Thinking of training other than apprenticeships and traineeships, why does your organisation support employees to undertake training? (number of responses).....	53
Figure 34 What are the most common reasons that you employ a new worker?.....	56
Figure 35 What challenges do you face when recruiting workers? Select as many as you want from the list below or add other items that are not on the list.....	57

Figure 36 What personal attributes are you looking for, when recruiting workers? Select as many as you want from the list below or add other items that are not on the list.	58
Figure 37 Incomes by industry and forestry industry sectors (Hub region)	60
Figure 38 Income, Production Managers by industry	61
Figure 39 Income, Agricultural and Forestry Scientists by industry	62
Figure 40 Income, Truck Drivers by industry	63
Figure 41 Income, Metal Fitters and Machinists by industry	64
Figure 42 Income, Product Quality Controllers	65
Figure 43 What training do you provide to new workers?.....	66
Figure 44 What barriers are there to training?	68
Figure 45 What would remove or reduce these barriers to training, skills or education?	69
Figure 46 Pathway to a career in the forest and timber industry	78
Figure 47 Significant occupations in the Central West Industry, by age group.	84

1 Executive Summary

What does the Central West Forest and Wood Products Industry Look Like?	
Geographic Distribution (Section 2.1)	The 2016 Census shows that as a whole, employment in the Industry is concentrated in the Local Government Areas (LGAs) of Oberon and Bathurst Regional, with trace employment in Orange, Upper Lachlan Shire and Goulburn Mulwaree.
Sectoral Distribution (S 2.2)	As at the last census in 2016, the largest employing Industry sector was Log Sawmilling (36%), followed by Reconstituted Wood Product Manufacturing (18%), Logging (17%) and Forestry (14%). Survey data of employers found the breakdown to be Reconstituted Wood Products Manufacturing 38.7%; Sawmilling and Processing 31.5%; Logging 18.2%; and Forestry 11.5%.
Age (S 2.4)	The industry is aging, particularly in the Harvesting and Haulage sector. Compared to all industries in the Hub region, the industry has a higher proportion of people over 45.
Diversity (S 2.5)	Women: ABS statistics indicate that the proportion of women in the Industry labour force is about 15%. Survey respondents indicate that they make up 13.5% of the labour force. The same census reported that women make up 49.8% of the regional workforce.
	Disability: One-fifth of the survey respondents reported knowingly employing a person with a disability.
	Ethnicity: Most people working in the industry were born in Australia (91.9% compared to 93.3% for all industries in the region).
	The importance of diversity in a workplace is well-established, not least of all because it broadens the pool of potential recruits to the Industry. However, across a range of dimensions, the Industry in the Hub Region lacks diversity.

Current Job Roles and Skills Holdings	
Job Roles (S 3.3)	Machinery Operators and Drivers make up 48 % of the Industry labour force. The largest categories are Paper and Wood Processing Machine Operators (13 per cent), Forklift Drivers (8 per cent) and Agricultural, Forestry and Horticultural Plant Operators (7 per cent).
	Labourers make up 19 % of the Industry labour force. The largest categories are Timber and Wood Process Workers (9 per cent), Forestry and Logging Workers (6 per cent) and Product Quality Controllers (3 per cent).
	Technicians and Trades Workers make up 19% of the Industry labour force. They are made up of Metal Fitters and Machinists (8.9 per cent of all Forest and Wood Products Industry workers in the Hub region), Electricians (5.8 per cent) and Motor Mechanics (3.1 per cent).
	Managers make up 6 % of the Industry labour force, mainly Production Managers.
	Professionals make up 4 % of the Industry labour force and are mainly Agricultural and Forestry Scientists.
	Clerical and Administrative workers make up 4 % of the Industry labour force.
Skills Holdings (S 3.3)	Three quarters of people in the Industry are employed in occupations at a skill level of 4 or 5. Jobs at a Skill Level 4 are equivalent to a Certificate II or III, or at least one year of relevant work experience. Jobs at Skill Level 5 generally require compulsory secondary education but may require no formal qualification or on-the-job training. A Skill Level 3 corresponds to a Certificate IV; Skill Level 2 corresponds to an Associate Degree, Advanced Diploma or Diploma. Occupations at Skill Level 1 have a level of skill commensurate with a bachelor degree or higher qualification.

Environment and Strategic Directions	
Internal Factors (S 4.1)	The positive factors (internal to the organisation) affecting the Industry include: • Knowledge sharing between management and other workers • Knowledge sharing between peer-level workers • Workforce skills
	The negative factors (internal to the organisation) affecting the Industry include: • An ageing workforce • The ability to attract new employees • Workplace flexibility
External Factors (S 4.2)	The positive factors (external to the organisation) affecting the Industry include: • The economy • Stewardship requirements of sustainable forest management • Community attitudes to forestry
	The negative factors (external to the organisation) affecting the Industry include: • Competitors • Access to an unskilled workforce • Government policy, legislation or regulations
Significant changes (S 4.3)	Of those making changes in the next 2 years, most were intending to introduce new technology and processes (9 out of 10 businesses), followed by new work practices (5 out of 10), products and services (4 out of 10), and sales and marketing methods (3 out of 10).

Skills Needs		
Skills Needs (S 5.0)	Seven out of ten respondents reported that they have a skills-shortage. The occupations that were reported as being of most concern to employers were: • Technical trades (including electricians, fitters, engineers, saw technicians, wood machinists); • Mobile plant operators (including truck drivers, harvesting operators, wood yard operators); • Forest scientists with skills in modelling and IT; and • Leadership skills.	
Skills Needs (S 5.1)	Skills Identified by the Forest and Wood Products industry (2019-2022): • Specialised scientists, mechanics and mobile and fixed plant operators • High level financial, middle management and ICT skills • Technology use and application • Environmental and sustainability • Language, Literacy and Numeracy • Design mindset, thinking critically, systems thinking, problem solving • Communication, collaboration, social intelligence	Emerging occupations in Australia that have relevance to the industry: • Data analysts and scientists • Pricing analysts • Logistics analysts • Digital marketing analysts and social media specialists • Energy efficiency engineers

Skills Needs		
Skills Shortages (S 5.4)	Key shortages identified Nationally and/or NSW where future demand is expected to be moderate: • ICT Business Analyst ^{NSW only} • Life Science Technician ^{NSW only} • Mechanics • Fitters, Welders and Machinists • Wood Machinist • Office Manager • Earthmoving Plant Operators • Backhoe Operator • Bulldozer Operator • Excavator Operator • Grader Operator • Loader Operator	Key shortage identified Nationally and/or NSW where future demand is expected to be strong: • Forester ^{NSW only} • Metal fabricator • Welder • Electrician
Filling Skills Gaps (S 6.0)	Skills gaps are mostly filled through Recruitment of experienced workers from another industry, or through the accredited training of existing workers.	
Retention (S 6.1)	44% of the workforce of the survey respondents have been with their current employer for more than 10 years. In contrast, ABS statistics indicate that across all NSW employers, only 31% of workers have been with the current employer for over 10 years. The difference was due to almost double the number of workers in the 10-20 years of employment bracket (33 % to 19 %).	
Reasons for Training (S 6.2)	Businesses were most likely to train their employees: • To meet highly specific training needs • To maintain a flexible and responsive workforces • For career development / in increase or update skills.	
Recruitment Challenges (S 7.1)	Despite the high retention rates in the industry, the most common reason to employ a new worker is not to replace a worker who has retired, but to replace a worker who has left voluntarily. The barriers to recruitment most reported by the survey respondents were: • Shortage of skilled and experienced people in the industry • Few applicants with the skills needed • People don't like the industry working conditions	
Limited appropriate applicants (S 7.1.1)	The attributes sought by employers to make an appropriate applicant were reported to be: • Practical / manual skills • The ability to work in a team • The ability to work without supervision	
People don't like our working conditions (S 7.1.2)	Independent research indicates that there is good support for the Industry among school students even though there is low awareness of career opportunities. Closer engagement with schoolteachers can present the greatest gains in school students' sentiment towards the Industry.	

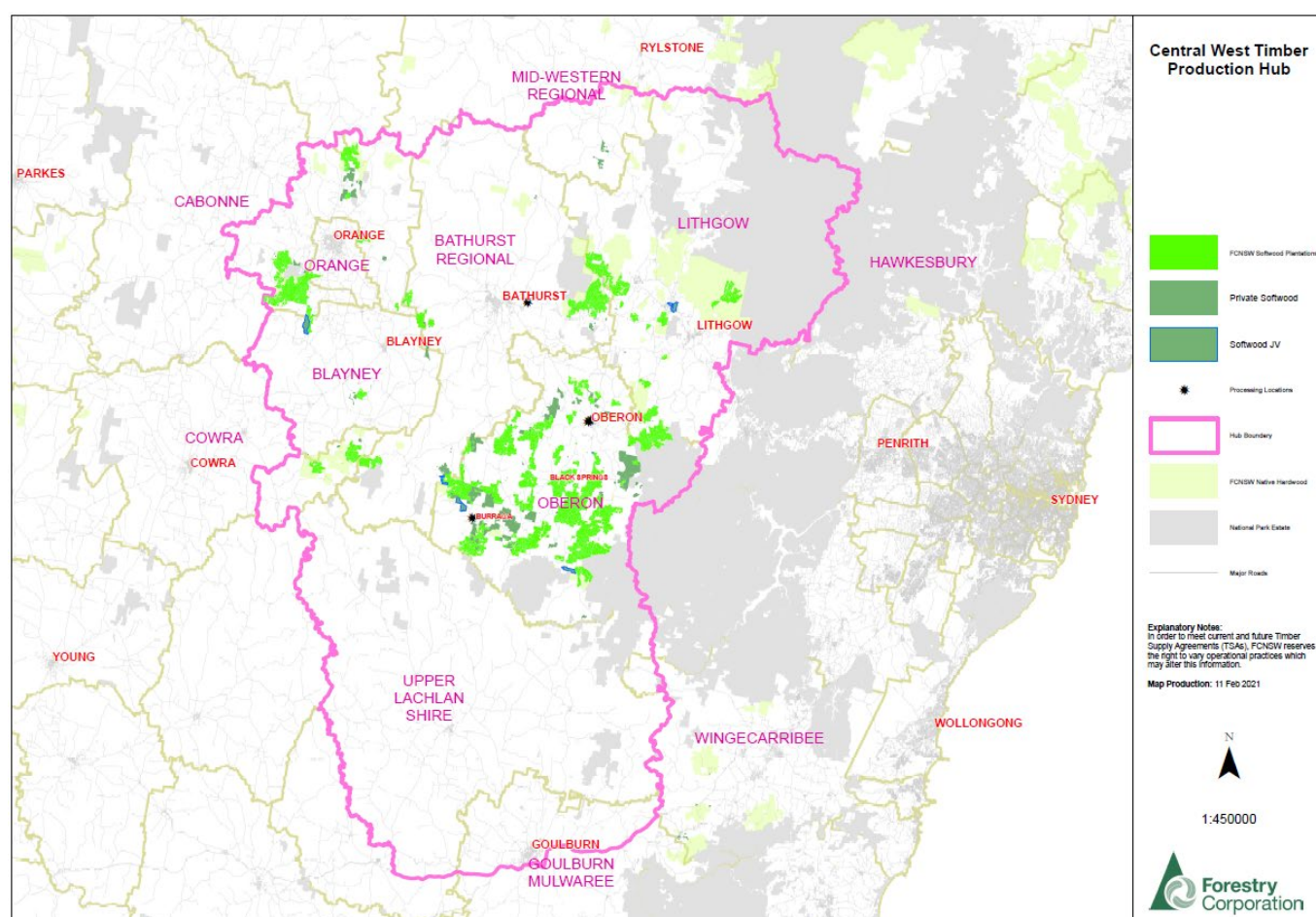
Skills Needs	
Wages considered too low (S 7.1.3)	The Timber Manufactured Products sector has a high proportion of workers earning more than \$78,000 per annum. This is exceeded by only three other industries in the region. Harvesting and Haulage, when compared to the other forest and wood products sectors, has the highest proportion of low-income workers. However, this sector still compares favourably to about half the other industries in the region. Sawmilling and Processing has a similar earnings profile to that of Transport, Postal and Warehousing or Wholesale Trade. Workers earn more in Sawmilling and Processing than in Construction, which attracts the largest number of apprentices and trainees. This suggests that current rates of pay may be a relevant barrier to attracting and retaining workers in most industry sectors, with Sawmilling and Processing being the sector most exposed to this factor.
Training for New Entrants (S 7.2)	The most used mode of training of new employees is in-house, non-accredited training. The net effect of this approach is that formal, transferable skills are not being built within the region.
Perspectives on Recruitment Challenges (S 7.3)	Issues identified in other jurisdictions are: • The Industry is competing with other primary industries which are also facing recruitment challenges. • The Industry is perceived as dangerous and hard work • Smaller businesses have limited capacity to supervise and support apprentices and trainees • Low retention rates of high schools can impact capacity to recruit and train for positions which require higher levels of literacy and numeracy

Availability of Training	
Barriers to Training (S 8.1)	The two greatest barriers to training reported by the survey respondents were: • The shortage of suitable trainers and assessors, and • The training that is available doesn't meet the needs of the employer.
Overcoming Barriers to Training (S 8.2)	Employers reported that their preferred methods of overcoming these barriers to training were: • Access to online training • More information about funding options • A better relationship with local high schools, and • Scheduled industry-wide training to create economies of scale, delivered locally
Availability of Training (S 8.3)	Employers can access accredited training as: • Part qualifications • Full qualifications (subsidised or Fee for Service) • Apprenticeships or traineeships A list of training providers is provided in Section 9.5

2 What does the Central West Forestry and Wood Products Industry Look Like?

The Central West Forestry Hub (the Hub) region extends from Orange in the west to the Blue Mountains in the east, and from Lithgow in the north as far south as Goulburn (see Figure 1). The bulk of the employers are clustered around Oberon close to the geographic centre. The Forest and Wood Products Industry (the Industry) in the region is based primarily on softwood plantations.

Figure 1 Central West Forestry Hub region



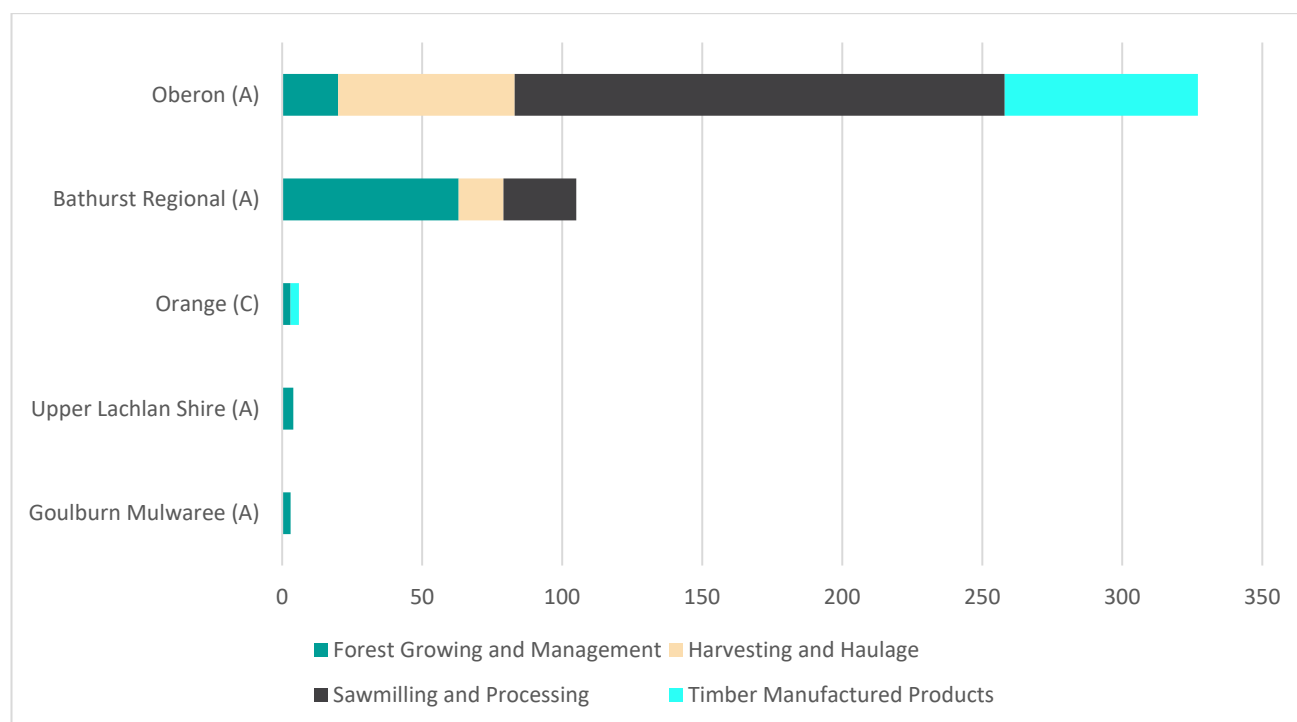
Source: Forestry Corporation of NSW

Most of the sawn product is directed into the construction industry for products such as house frames and trusses. Other solid timber products include landscape sleepers and rounds, fence products, building poles and decking. Reconstituted wood products such as medium density fibreboard (MDF) and particleboard are manufactured in Oberon for mouldings, thermocoated cabinet doors, and structural floor panels.

2.1 Geographic Distribution

The 2016 Census shows that as a whole, employment in the Industry is concentrated in the Local Government Areas (LGAs) of Oberon and Bathurst Regional, with trace employment in Orange, Upper Lachlan Shire and Goulburn Mulwaree (see Figure 2).

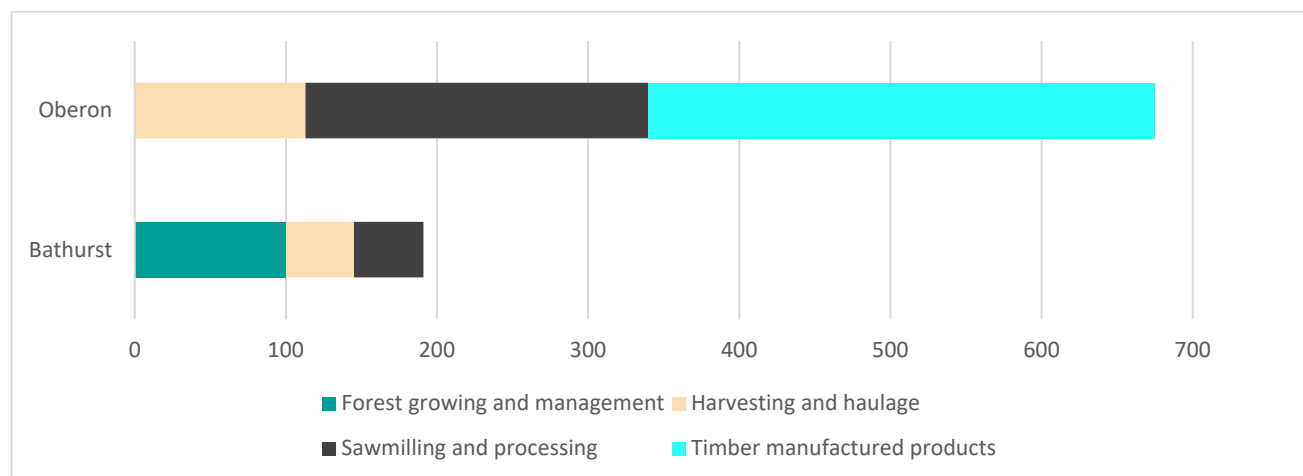
Figure 2 People by Place of Work (Hub Region) and Industry Sector, 2016



Source: Census of Population and Housing, 2016, TableBuilder

However, data gathered in employer surveys as part of this project indicate zero employment in Orange, Upper Lachlan Shire and Goulburn Mulwaree LGAs. The industry is held entirely in Oberon and Bathurst LGAs (see Figure 3). The ABS and survey data are consistent in that there are about 3.5 employees working in Oberon for every 1 working in Bathurst, however the absolute number of employees in the region reported in the survey (866) is almost double that of the ABS data for the same region (455).

Figure 3 People by Place of Work (Hub Region) and Industry Sector, 2021



Source: Hub interview data 2021

Possible reasons for this discrepancy are:

1. The ABS data is five years out of date. Employers may have undertaken expansion activities in that time.
2. ABS data is based on workers self-declaring their industry of employment on their census form. Some workers may have declared that they belong to a different industry. For example, a truck driver may have indicated that they work in Transport and Logistics, rather than for an employer that belongs to Timber Reconstituted Products sector.

ForestWorks has identified 10 businesses operating in the study region. All have participated in the interviews. They have been listed in Section 10.1 along with the industry sector to which they belong.

2.2 Sectoral Distribution

As at the last census in 2016, the largest employing Industry sector was Log Sawmilling (36%), followed by Reconstituted Wood Product Manufacturing (18%), Logging (17%) and Forestry (14%). See Figure 3.

For the purposes of this report:

- Forest Growing and Management refers to Forestry and Forestry Support Services;
- Harvesting and Haulage refers to Logging;
- Sawmilling and Processing refers to Log Sawmilling plus Timber Resawing and Dressing; and
- Timber Manufactured Products refers to Veneer and Plywood Manufacturing plus Reconstituted Wood Product Manufacturing.

Figure 4 Distribution of Industry by sub-sector (employees in the Hub Region), 2016

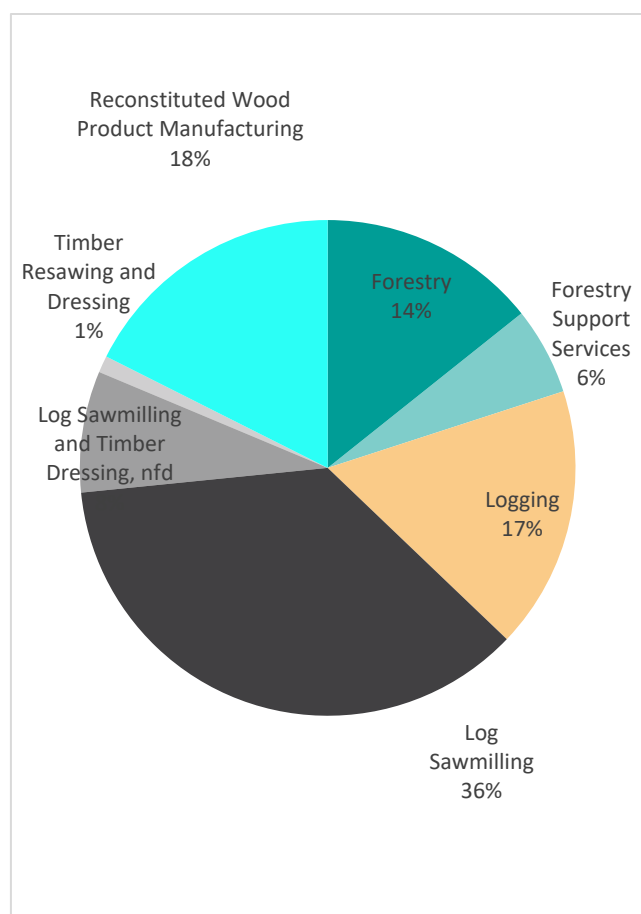
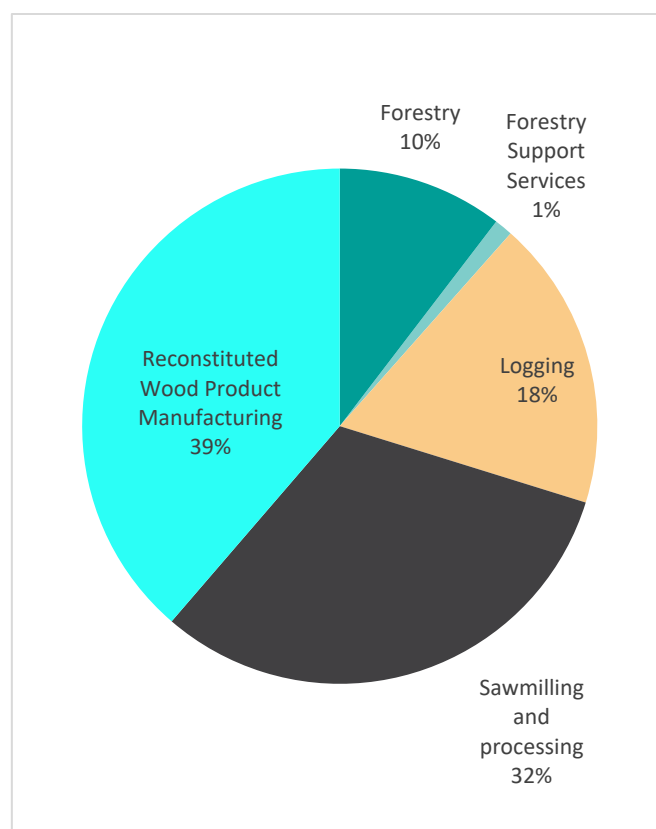


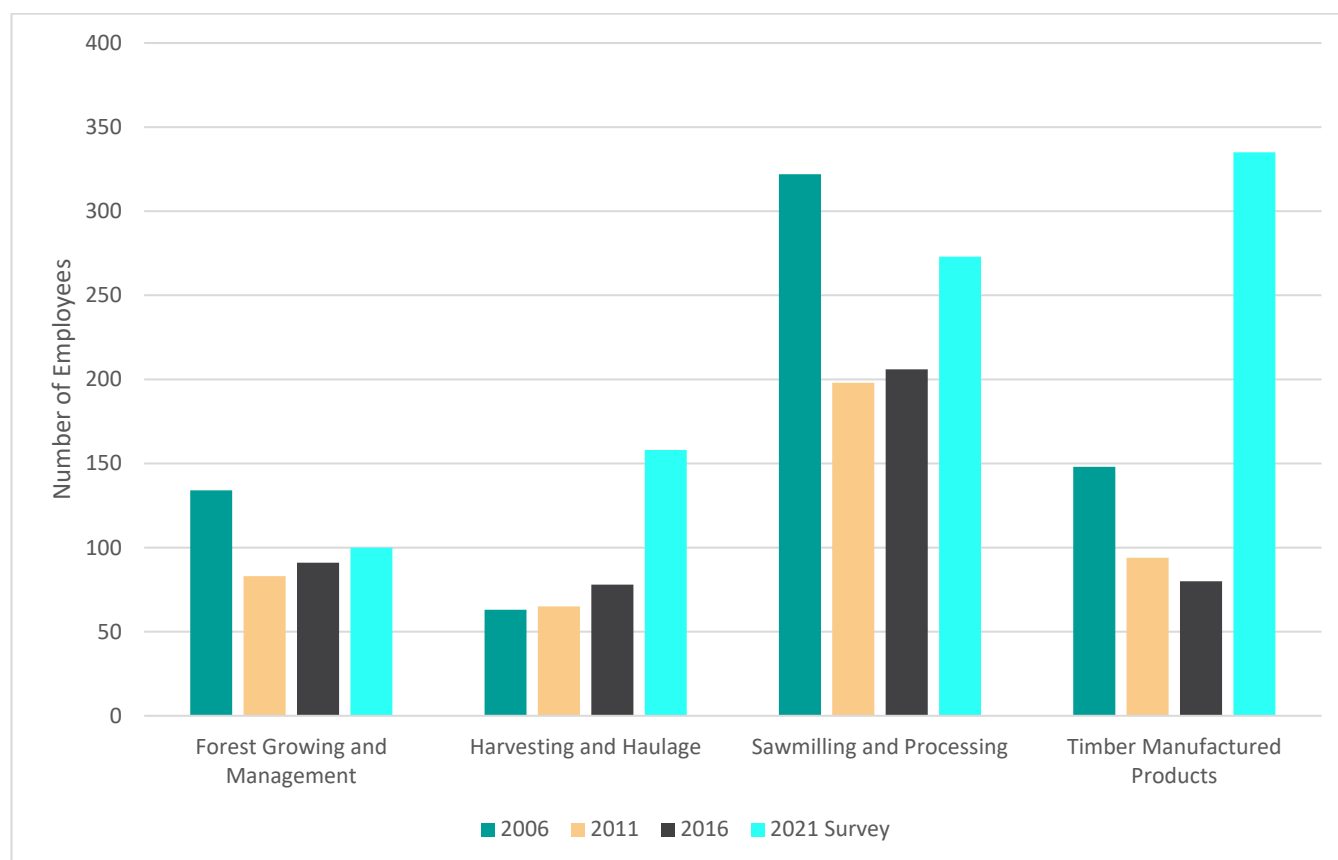
Figure 5 Distribution of Industry by Sub-sector (employees in the Hub region), 2021



Source: Census of Population and Housing, 2016, TableBuilder

Over the last three censuses, all sectors except Harvesting and Haulage have decreased their numbers of employees – by about one-third (Forest Growing and Management and Sawmilling and Processing) and one-half (Timber Manufactured Products). The Harvesting and Haulage Sector grew by about one-fifth over the same period. See Figure 6.

Figure 6 Change to Employment by Industry sectors over time, 2006-2016



Source: Census of Population and Housing, 2016, TableBuilder

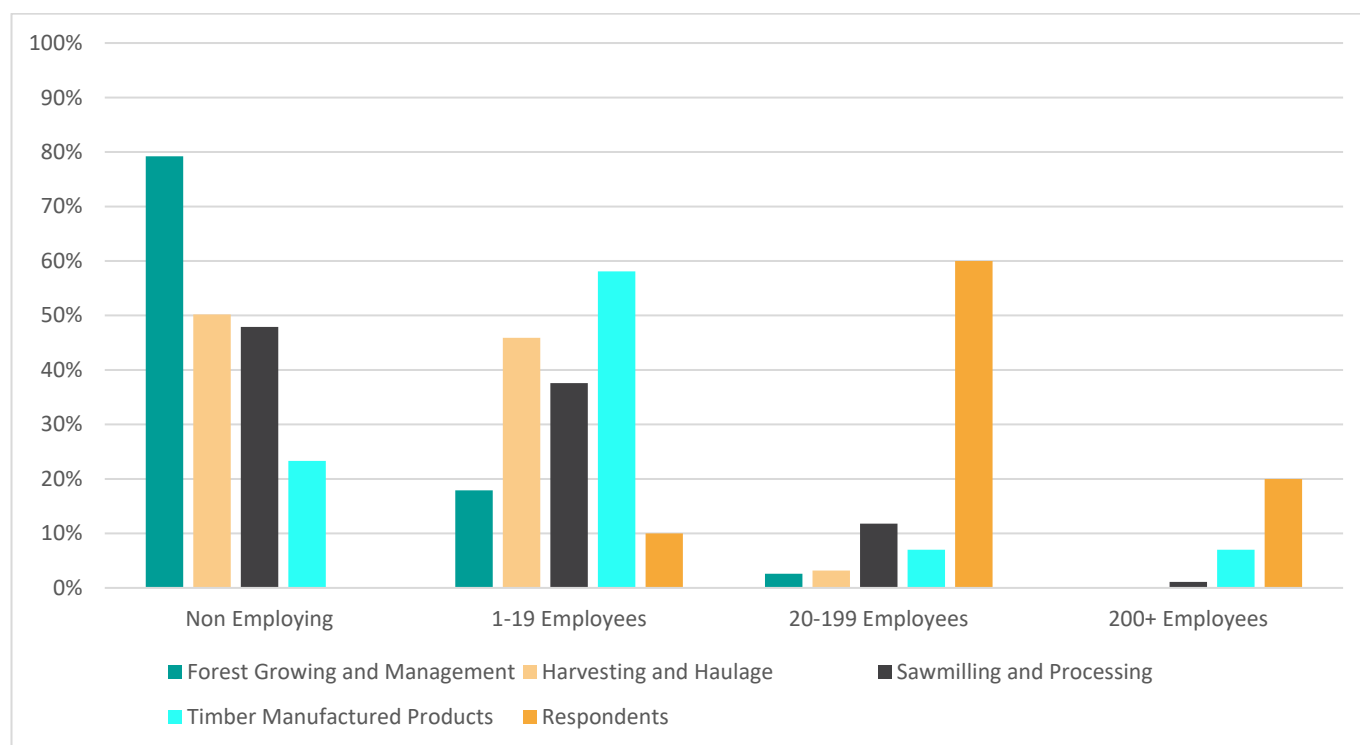
- The sectors most responsible for the disparity between the ABS employment data and employee numbers reported in the employer survey were Timber Manufactured Products and Harvesting and Haulage. This is consistent with Truck drivers self-reporting in the 2016 census as part of the transport and logistics industry, not Agriculture, Fisheries and Forestry;
- An expansion in the capacity of the Borg Manufacturing panel mill;
- A discrepancy between the ABS and Borg Manufacturing in the counting of panel mill employees by LGA of employment.

2.3 Company Size

Overall, the most common business size in the Industry in NSW¹ is a non-employing business (64.5 per cent), followed by small businesses employing 1-19 people (30.0 per cent). By comparison, the most common business size in the industry in the Hub region were medium sized businesses employing 20-199 employees (7 out of 10 respondents), and all of these employed less than 100 people. “Non-employing businesses” are sole proprietorships and partnerships without employees. They may be consultants or individual contractors. No interviews were conducted with non-employing businesses for this project.

¹ Information on business size by industry sector is only disaggregated at the State level.

Figure 7 Proportion of businesses in NSW by business size compared to Respondents



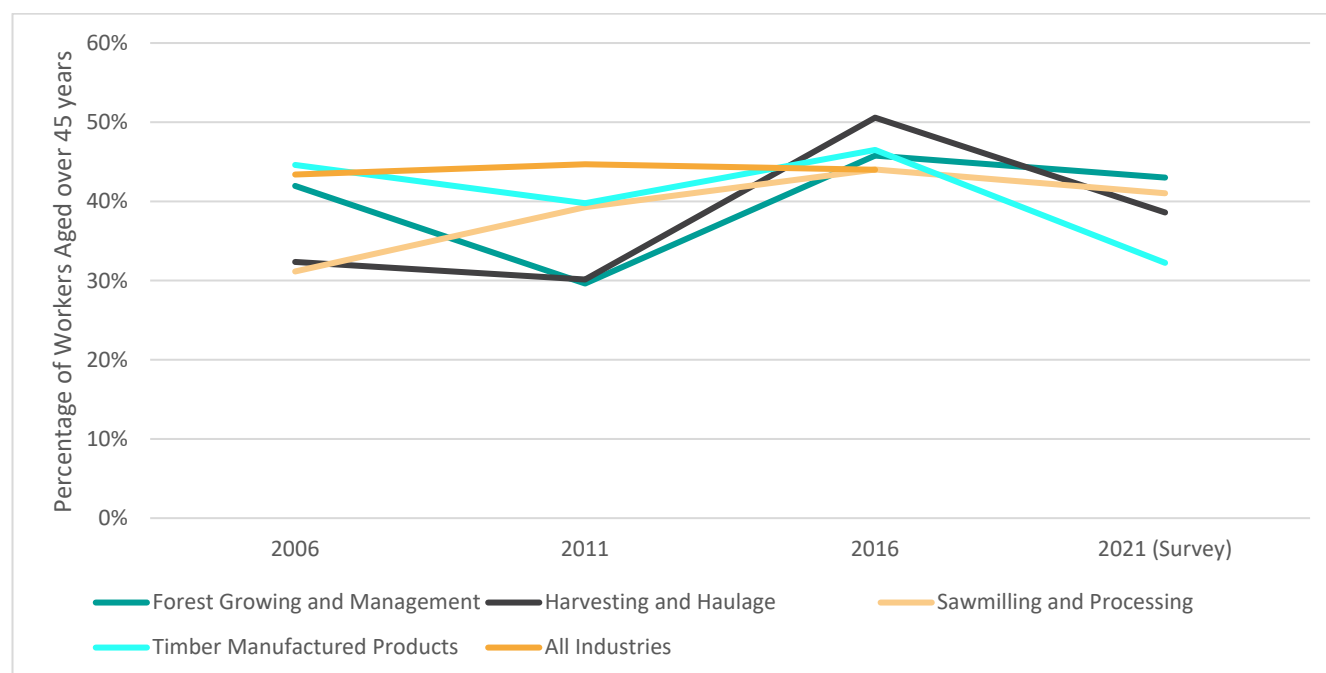
Source: 8165.0 ABS Counts of Australian Businesses June 2020, Hub interview data 2021

2.4 Age

Looking at the ABS data, all sectors in forestry and wood products are seeing an ageing workforce. Figure 8 shows the proportion of the forest and wood products industry workforce in each sector over 45 years of age at the time of the census. While the age of workers in all industries in the region has been relatively constant since 2006, the proportion of people over 45 in the Harvesting and Haulage sector and to a lesser extent Sawmilling and Processing has increased more than other industries in the region.

The survey of employers conducted in 2021 as part of this project indicates that the proportion of employees over the age of 45 is only slightly lower than that indicated by the ABS data. This observation is most significant in the sectors of Harvesting and Haulage and Forest Growing and Management. It could be an indication of recent retirements in those sectors since 2016, or active recruitment of those sectors over the previous five years.

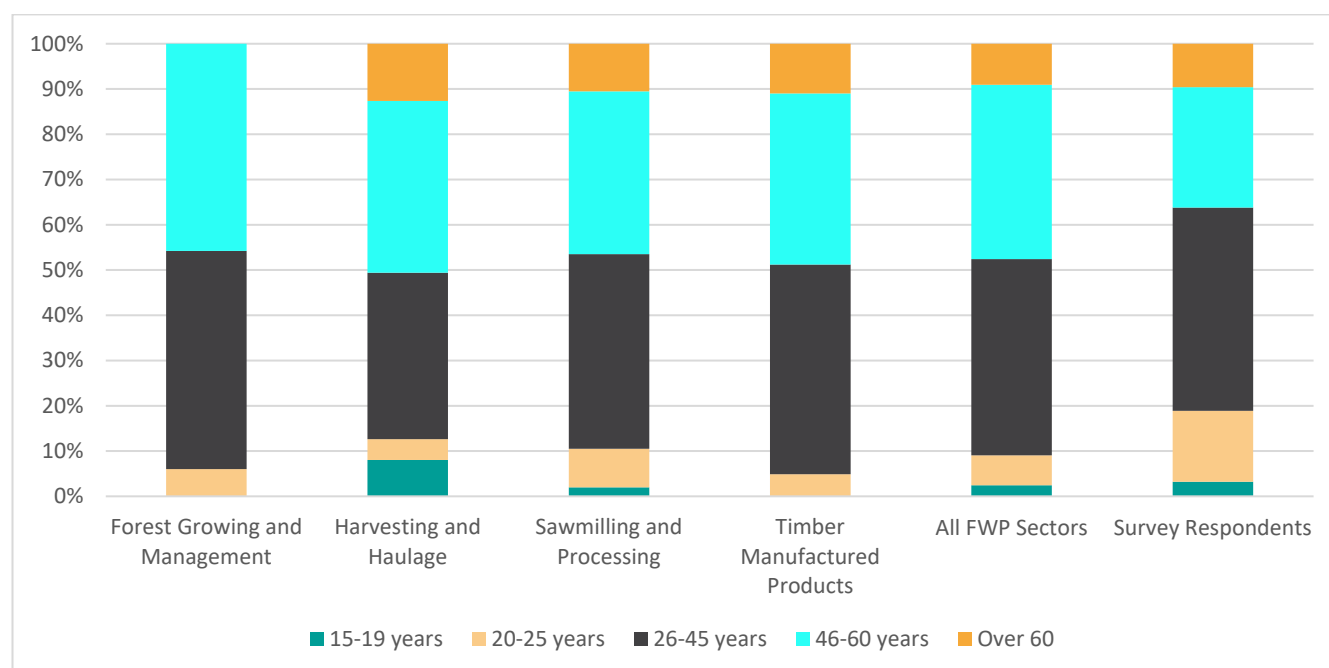
Figure 8 Percentage of workforce over 45 years of age (by Sector)



Source: Census of Population and Housing, 2006, 2011 and 2016, TableBuilder

Figure 9 uses ABS statistics to compare the age distribution within the four FWP industry sectors, and the distribution reported by the Survey Respondents. The Harvesting and Haulage sector has a larger proportion of very young workers compared to other FWP sectors. The Survey Respondents reported their proportion of 20-25 year old workers is much higher than indicated by the ABS statistics.

Figure 9 Age of workforce by Industry sector and all industries, Central West Forestry Hub region, 2016



Source: Census of Population and Housing 2016, TableBuilder, and Survey Respondents

Half the respondents in the group interviewed indicated an ageing workforce is a factor affecting their business. Only three employers indicated that the ageing workforce was having a slight positive impact on their business. This suggests that the general ageing in the workforce has abated since the last census, but the concerns over ageing have not.

Table 1 Proportion of workforce over the age of 45, 2006-2021

Industry Sector	2021 (Interviews)	2016 (Census)	2011 (Census)	2006 (Census)
Forest Growing and Management	43.0	45.8	29.6	42.0
Harvesting and Haulage	38.6	50.6	30.1	32.4
Sawmilling and Processing	41.0	44.0	39.3	31.2
Timber Manufactured Products	32.2	46.5	39.8	44.6
All Forest and Wood Products Industry	36.2			
All Industries		48.8	44.7	43.4

Source: Census of Population and Housing, 2006, 2011 and 2016, TableBuilder; CW Hub Interviews 2021

Census data reports that only 2.4 per cent of forest and wood products employees were aged 19 and under. Some possible reasons for this may be that:

- Young people are encouraged to stay in school until they complete Year 12 at age 17 or 18. They may not have the personal maturity to be ready to enter the workforce and choose to travel, take a gap year, or try convenient jobs in industries that they are familiar with.
- Younger workers may not have a driver's license in an area that is poorly serviced by public transport. This presents a challenge in getting to the workplace in regional and rural locations, particularly if they are working in the bush or in a sawmill located some distance out of town. They are then reliant on a work colleague or family member for transport.
- Employers are reluctant to take on people that cannot demonstrate a commitment to working hard, in an environment very different to that of the classroom, with a cohort of people that does not resemble the cohort that of the schoolyard. This suggests the need for greater exposure of school students to real workplaces.

2.5 Diversity

The importance of diversity in a workplace is well-established, not least of all because it broadens the pool of potential recruits to the Industry. However, across a range of dimensions, the Industry in the Hub Region lacks diversity.

2.5.1 Gender

Women are significantly under-represented in the companies interviewed. The survey respondents reported that 13.5% of the workforce were women, which is a lower proportion than suggested by the 2016 census which suggested that 15.2 per cent of employees were women.

While the proportion of women working in all industries in the Hub region has increased from 46.2 per cent in 2006 to 49.8 per cent in 2016, there is no such increase in the Forest and Wood Products Industry. In fact, there appears to be a slight decrease in the proportion of women in the Forest and Wood Products Industry, although this may be within the margin of error as the workforce is relatively small.

Table 2: Proportion of women in the workforce in the Hub region by Industry sector

Industry Sector	2021	2016	2011	2006
Forest Growing and Management	21.0%	18.7%	21.7%	17.2%
Harvesting and Haulage	8.0%	9.0%	21.5%	4.8%
Sawmilling and Processing	15.2%	16.5%	14.1%	16.8%
Timber Manufactured Products	12.5%	13.8%	14.9%	15.5%
All Forest and Wood Products Industry	13.5%	15.2%	16.8%	15.4%
All Industries		49.8%	49.2%	46.2%

Source: Census of Population and Housing, 2006, 2011, 2016, TableBuilder and Hub Interviews, 2021

At the time of the 2016 census, just over one-quarter of the women working in the Industry performed Clerical and Administrative roles (27.9 per cent). Labourers made up the next largest group (25.0 per cent), followed by Machinery Operators and Drivers (19.1 per cent), Professionals (17.6 per cent), Technicians and Trades Workers (5.9 per cent) and Managers (4.4 per cent). This is a very different profile to women working elsewhere in the Hub region. The industry has proportionately fewer female Managers, Professionals and more Machinery Operators and Drivers and Labourers than in all industries in the Hub region.

Figure 10 Women in the Hub region Workforce by Occupational Category, 2016

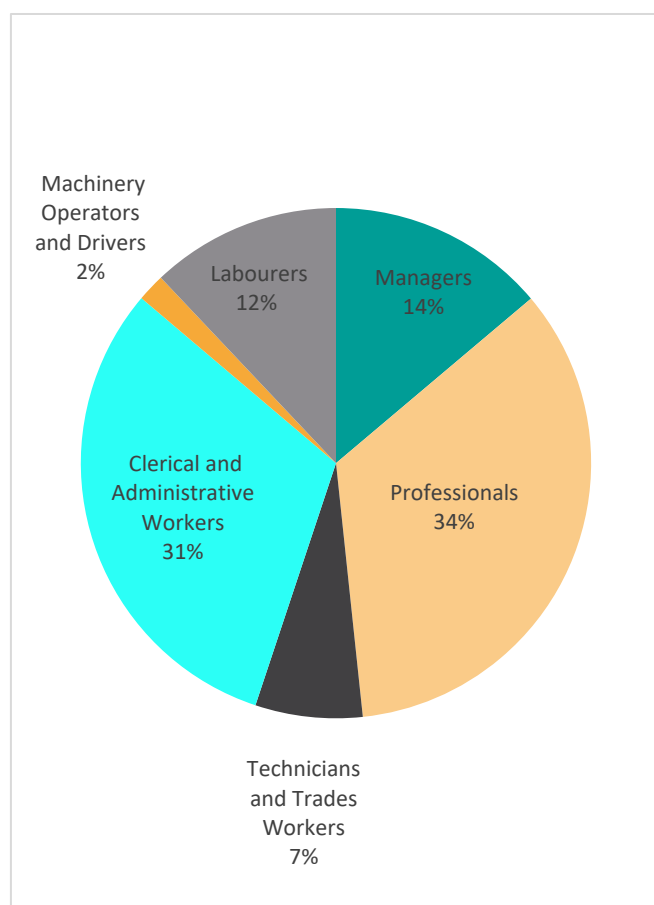
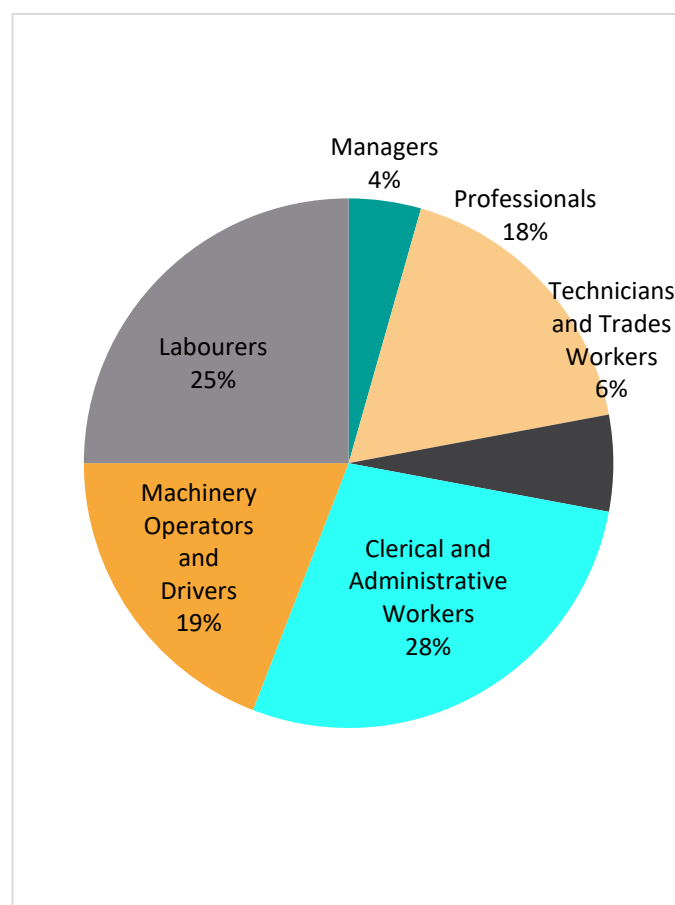


Figure 11 Women in the Hub region Forest and Wood Products Industry by Occupational Category, 2016



Source: Census of Population and Housing, 2016, TableBuilder

2.5.2 Aboriginal and Torres Strait Islander (ATSI)

The Census suggests that around 3.2 per cent of the Hub region workforce are of Aboriginal and/or Torres Strait Islander descent. This figure matches that of the Forest and Wood Products Industry (3.2 per cent) and is broadly consistent with the figures reported by the survey respondents.

However, it is worth noting that the employment rate for Aboriginal people can be unreliable due to many factors including:

- The data may overstate the number of people in the workforce of Aboriginal or Torres Strait Islander background as cells can be randomly adjusted by the ABS to avoid the release of confidential data. This means no reliance should be placed on small cells.
- Reluctance of Aboriginal people to identify as Aboriginal in the workforce.

- Census data in relation to counts of Australia's Indigenous population, which may be significantly understated.²

Three out of ten respondents reported that they did not know how many of their employees are Aboriginal or Torres Strait Islander; another three indicated that they had none. Given the reasons listed above, it is entirely possible that the real level of Aboriginal employment in the region may be higher but that individual workers are reluctant to identify as Aboriginal in the workforce due to workplace cultural norms that display unconscious biases.

Unconscious biases are social stereotypes about groups or individuals from outside their own conscious awareness. Everybody holds unconscious beliefs about various social and identity groups and when it impacts on decisions being made (or results in statements as above) it is detrimental to the ability to make fair and equitable judgement.

How to make the workplace better for Aboriginal employees – Gari Yala (Speak the Truth)

A recent report³ has documented the challenges faced by indigenous people in Australian workplaces. This national survey of 1,033 Aboriginal and Torres Strait Islander Workers found that although the majority (78 per cent) of Aboriginal people say that it is important to identify as Indigenous within their workplace:

- 63 per cent experience stress when they, or others, view that their identity is not meeting the norms or expectations of the dominant culture in the workplace;
- 59 per cent received comments about the way they look or 'should' look as an Aboriginal or Torres Strait Islander person;
- 44 per cent hear racial slurs sometimes, often or all of the time;
- 39 per cent carry the burden of cultural load – where extra work in the form of educating others in the organisation on indigenous culture;
- 38 per cent reported being unfairly treated due to their Indigenous background.

The report provided ten actions that organisations can take to foster a more inclusive workplace:

1. Commit to unearthing and acting on workplace truths – however uncomfortable this may be.
2. Ensure any Aboriginal and Torres Strait Islander-related work is Indigenous led and informed.
3. Develop organisational principles to make it clear how Indigenous community engagement and employment should work in practice.
4. Focus on workplace readiness (cultural safety) rather than worker readiness. This means being able to practise your culture free of ridicule or condemnation. It occurs when a workplace acknowledges, respects and accommodates difference.

² Moran, A., "Census 2016: Indigenous population could have been undercounted again", 28 June 2017, <https://www.abc.net.au/news/2017-06-28/concerns-over-undercount-of-indigenous-population-in-census/8660972>

³ Jumbunna Institute for Indigenous Education and Research Gari Yala Speak the Truth Synopsis Report, 2021, available at: https://www.dca.org.au/sites/default/files/dca_synopsisreport_web_0.pdf last accessed 15 June 2021

5. Recognise identity strain and educate non-Indigenous staff about how to interact with their Indigenous colleagues in ways that reduce this.
6. Recognise and remunerate cultural load as part of an employee's workload.
7. Consult with Indigenous staff on how to minimise cultural load while maintaining organisational activity. That is, *"nothing about us, without us"*.
8. Focus on sustainable careers and career development, rather than just short-term appointments.
9. Take action to address workplace racism.
10. Look to high-impact initiatives - those that research shows are linked to better wellbeing and retention for Indigenous staff.

Employers may also consider the following actions⁴:

1. Build an appropriate Reconciliation Action Plan to turn your organisation's good intentions into action by formalising your organisation's commitment to reconciliation. Additional advice from Reconciliation Australia can be found here: <https://www.reconciliation.org.au/reconciliation-action-plans/>
2. Review your Indigenous employment policies. Additional information can be found here: <https://www.reconciliation.org.au/wp-content/uploads/2017/11/2013-Everybodys-Business-Employer-Handbook.pdf>
3. Consider the importance of the use of Indigenous language in the workplace.
4. Create mentorship programs for Indigenous employees. Support for this is provided through the NSW Government *Skilling for Employment Initiative* <https://education.nsw.gov.au/skills-nsw/apprentices-and-trainees/support-and-services/aboriginal-and-torres-strait-islander-peoples/barranggirra>

2.5.3 Ethnic Diversity

Based on 2016 census data, the industry was slightly more ethnically diverse than all other industries in the Hub region, although most people born outside Australia were from New Zealand and England.

Country of Birth	Whole of Region	FWP
Australia	93.3%	91.9%
New Zealand	2.2%	4.7%
England	1.4%	2.1%
Thailand	0.9%	0.0%
Vietnam	0.6%	0.0%
Philippines	0.4%	0.0%
China (excludes SARs and Taiwan)	0.2%	0.0%
India	0.2%	0.0%

⁴ HRM, "How employers can address cultural load in the workplace", available at: https://www.hrmonline.com.au/diversity-and-inclusion/addressing-cultural-load/?utm_source=Informz&utm_medium=email&utm_campaign=EDM, last accessed 26 July 2021

Korea, Republic of (South)	0.2%	0.0%
All others	4.3%	0.0%
Total	100.0%	100.0%

2.5.4 People with Disabilities

One-fifth of employers (2 out of 10 respondents) reported that they have employees with a disability, impairment or long-term condition, but the survey did not quantify the number of employees affected. ABS data indicates that 1% of the participants in the labour force in the region have the need for assistance with core activities. Informal conversations conducted with the surveys indicated that some employers believe that their job roles are unsuitable for people with a disability, given the physically demanding and high-risk nature of many of the job roles that work outdoors in the elements, such as fire-fighting and four-wheel driving. However, the diversity of job roles within the Industry in the region, and appropriate workplace accommodations, still present opportunities for people with a disability, impairment or long-term condition.

“Benefits of Employing a Person with a Disability”⁵

The business case for hiring people with disability is strong. There are real cost savings through reduced staff turnover and lower recruitment and retraining costs. What’s more, because people with disability have fewer compensation incidents and accidents at work, compared to other employees, insurance cover and workers’ compensation costs are often lower.

Employing people with disability can also ensure that your team best reflects the community in which it operates. Like all employees, people with disability bring a range of skills, talents and abilities to the workplace. They work in all sorts of jobs, with many holding tertiary or trade qualification

- People with disability generally take fewer days off, take less sick leave and stay in jobs longer than other workers.
- Employment costs for people with disability can be as low as 13 per cent of the employment costs for other employees.
- Workers’ compensation costs for people with disability are as low as four per cent of the workers’ compensation costs for other employees*.
- Once in the right job, people with disability perform as well as other employees.
- People with disability build strong connections with customers.
- People with disability boost staff morale and enhance a sense of teamwork.
- Hiring people with disability enhances an organisation’s image in the general community.”

⁵ Australian Government, “Benefits of employing people with disability”, available at: <https://www.jobaccess.gov.au/employers/benefits-employing-people-with-disability>, last accessed 23 July 2021

3 Current Job Roles and Skills Holdings

Section 3 looks at the types of job roles which exist in the Hub region, in the Industry and in each sector. It also examines the skills levels that exist in the Hub region, and the skills levels employers require from workers in the different occupational categories.

3.1 Job Roles by Occupation Groups

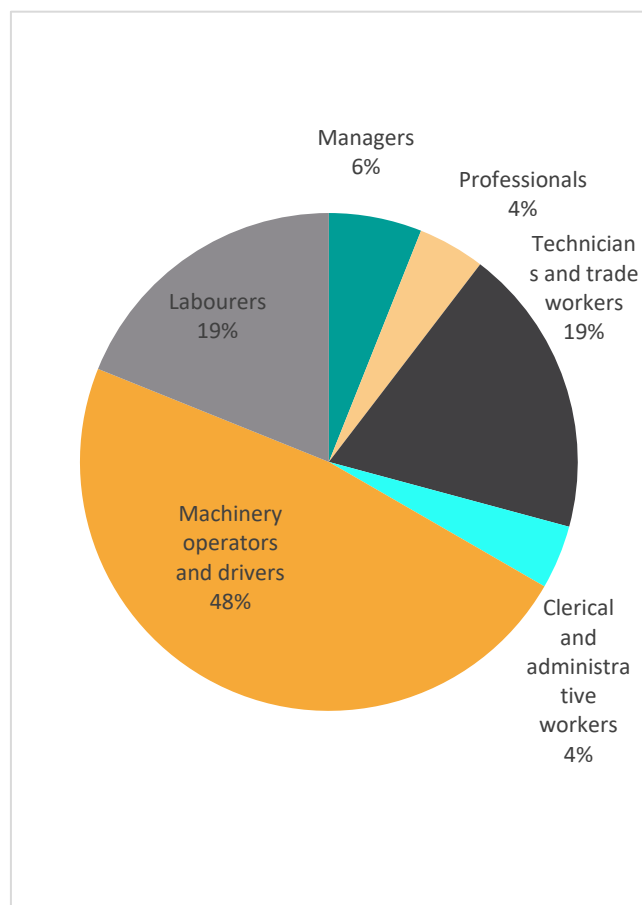
Employers were asked about the breakdown of their employees into occupation groups. The interview data indicated that the largest group of workers was Machinery Operators and Drivers (48 per cent) followed by Labourers (19 per cent) and Technicians and Trades Workers (also 19 per cent). See Figure 11 below.

The 2016 Census shows that the largest occupational group in the Industry in the hub region is Machinery Operators and Drivers (35 per cent) followed by Labourers (21 per cent). See Figure 12 below.

The difference between the two charts may be due to (1) the ABS data being five years old, and the survey data is current, and (b) the labour force represented in the ABS data is half the size of that of the 2021 survey and is accompanied with a warning on relying on small cells.

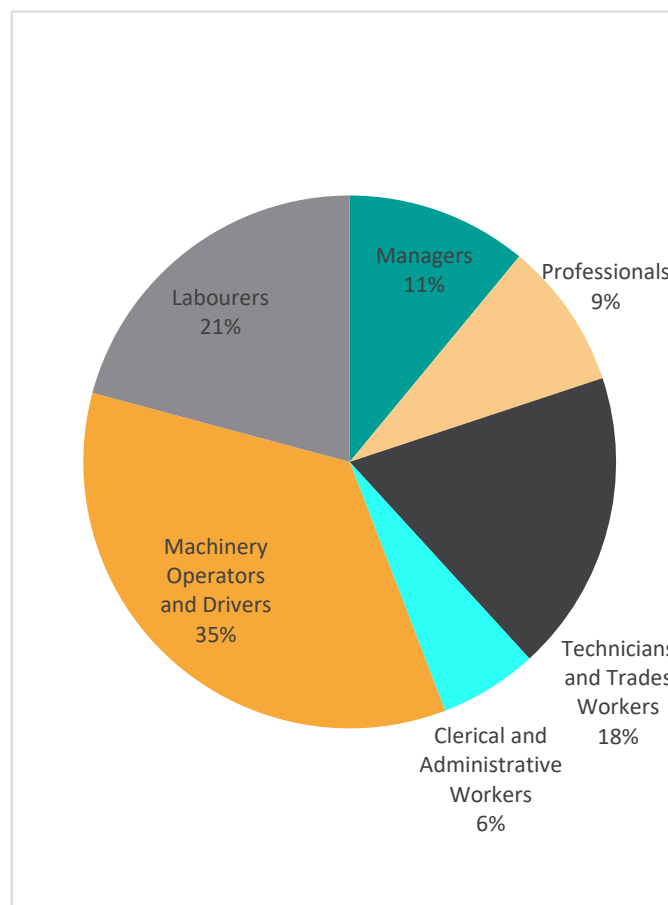
For respondents, Machinery Operators and Drivers included log truck drivers, forest harvesting crews, sawmill loader operators and timber workers within sawmills. Respondents indicated that formal vocational qualifications were not a requirement to conduct these job roles, however formal qualifications may have provided additional skills and a pathway to roles with greater responsibility.

Figure 12 Distribution of Occupational Groups, CW Hub survey



Source: Hub interview data 2021

Figure 13 Distribution of Occupational Groups, Census Data



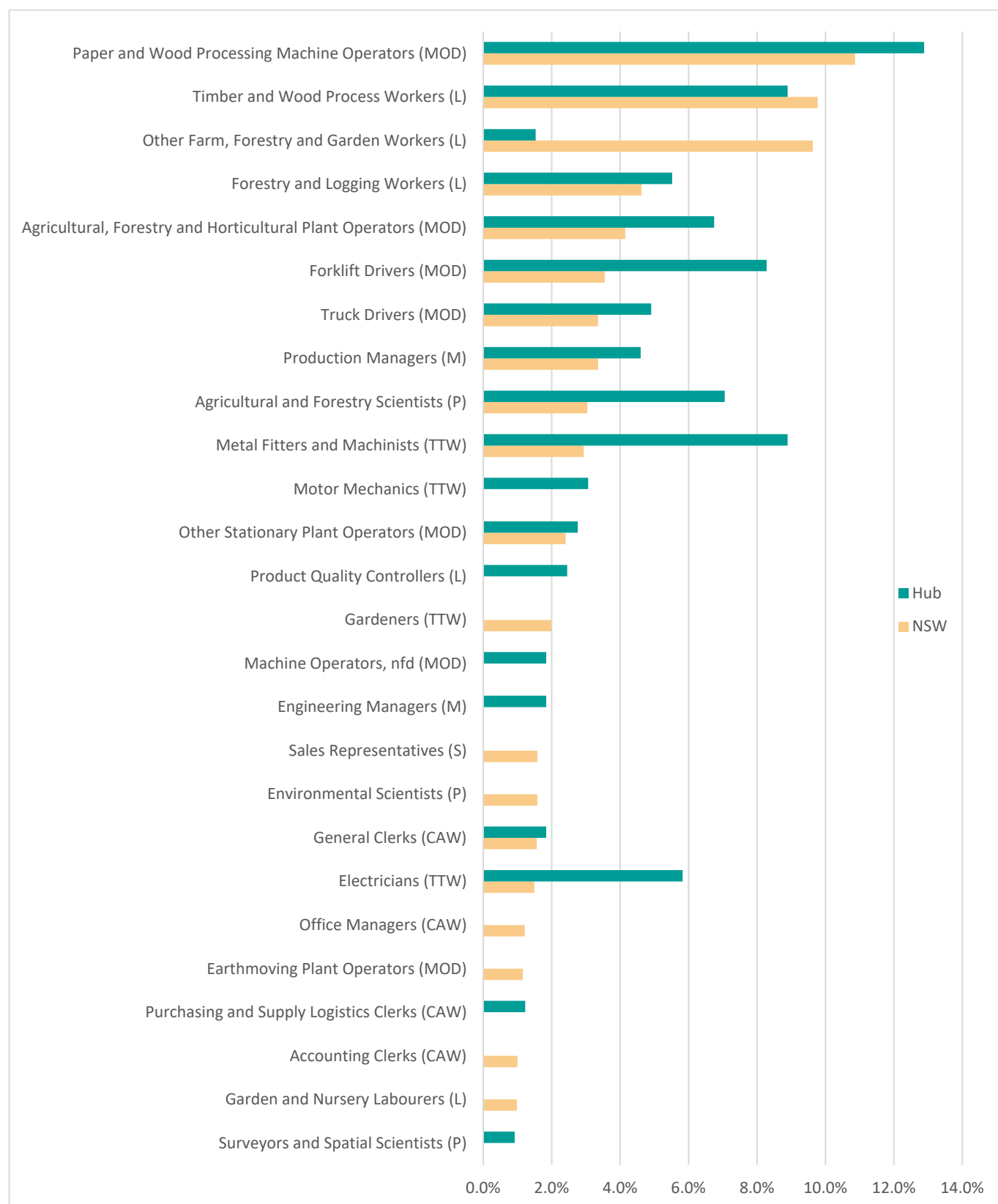
Source: Census of Population and Housing, 2016, TableBuilder

Technicians and Trades Workers made up 18 per cent of workers in the ABS data, which is consistent with the figure reported in the Hub surveys (19 per cent). Respondents indicated that the key technicians and trade workers included fitters, mechanics, electricians, wood machinists and saw doctors (saw technicians). The specific roles identified by respondents also appeared in the ABS data shown in Figure 14.

ABS data was then further interrogated to identify the key job roles within the occupation groups. Each job role was expressed as a fraction of the Central West regional Industry labour force. The scale of each Industry job role within the Central West region was compared to its scale in the NSW Industry labour force. This provided a useful comparison as to how well aligned the Central West Industry to the whole-of-NSW Industry labour force. Figure 14 shows the distribution of people employed in the Forest and Wood Products Industry in the Hub region at the time of the census. It shows the wide variety of job roles that are available in the Industry across the range of occupational categories and skills levels. The occupational group (refer to Figure 12 and Figure 13 above) is bracketed after the occupation.⁶

⁶ (M) Manager; (P) Professional; (TTW) Technicians and Trades Workers; (CPSW) Community and Personal Service Workers; (CAW) Clerical and Administrative Workers; (S) Sales Workers; (MOD) Machinery Operators and Drivers; (L) Labourers

Figure 14 People employed in the Forest and Wood Products Industry, by Occupation, Hub Region vs NSW, 2016



Source: Census of Population and Housing, 2016, TableBuilder

When compared to the whole-of-NSW forest and wood products industry, the industry in the Hub region has a disproportionately higher number of Forklift Drivers, Agricultural and Forestry Scientists, Metal Fitters and Machinists, Electricians and Surveyors and Spatial Scientists. This indicates that the FWP industry in the region has a higher-than-average proportion of scientists, skilled tradespeople and machinery operators and drivers, which may reflect a higher level of value-adding compared to the FWP industry in other parts of NSW.

3.1.1 Labourers

ABS data indicates that within the Labourers group, the largest categories are Timber and Wood Process Workers (9 per cent), Forestry and Logging Workers (6 per cent) and Product Quality Controllers (3 per cent). The specific occupations in each category are described in Table 3.

Most of the **Timber and Wood Process Workers** were working in Sawmilling and Processing (83 per cent) the **Forestry and Logging Workers** mostly worked in Harvesting and Haulage (55 per cent) and Forest Growing and Management (26 per cent).

Table 3 Labourers, ANZSCO Occupations (6 digit)

Timber and Wood Process Workers	
Sawmill or Timber Yard Worker <i>Timber Mill Worker</i> <i>Wood Processing Worker</i>	Performs routine tasks in a sawmill or timber yard such as sorting and stacking timber, assisting timber machinists, assembling orders and racking offcuts. Skill Level 5
Wood and Wood Products Factory Worker <i>Wood and Wood Products Labourer</i> <u>Specialisations:</u> Hardboard Factory Worker; Plywood Factory Worker	Performs routine tasks in a wood processing and timber product factory such as placing logs on equipment and conveyors, assisting with measuring and cutting of materials, and setting up and operating plant equipment. Skill Level 5
Forestry and Logging Workers	
Forestry Worker <u>Specialisations:</u> Fire Lookout, Tree Planter	Assists with cultivating, maintaining and protecting forests. Registration or licensing may be required. Skill Level 4
Logging Assistant	Assists with logging, felling and sawing of trees in forests. Skill Level 4
Tree Faller <i>Tree Feller</i> <u>Specialisations:</u> Hardwood Faller, Softwood Faller	Fells trees in forests, and trims and saws them into logs. Registration or licensing may be required Skill Level 4

Product Quality Controllers	
Product Examiner	Examines products to ensure conformity to specifications and standards of presentation and quality. Skill Level: 4
Product Grader <u>Specialisations:</u> Timber Grader	Grades primary produce by evaluating individual items or batches against established standards and records results. Skill Level: 4
Product Tester	Collects product samples, conducts tests to determine quality of produce and maintains records of results. Skill Level: 4

Source: ABS, 1220.0 ANZSCO – Australian and New Zealand Standard Classification of Occupations

3.1.2 Machinery Operators and Drivers

Within the Machinery Operators and Drivers group (see Table 4), the largest categories are **Paper and Wood Processing Machine Operators** (13 per cent), **Forklift Drivers** (8 per cent) and **Agricultural, Forestry and Horticultural Plant Operators** (7 per cent).

Most of the **Paper and Wood Processing Machine Operators** are working in Sawmilling and Processing (89 per cent) with a small number also working in each of Forest Growing and Management (3 per cent), Harvesting and Haulage (4 per cent) and Timber Manufactured Products (4 per cent).

Most of the **Agricultural, Forestry and Horticultural Plant Operators** are working in Harvesting and Haulage (56 per cent), as are most of the **Truck Drivers** (55 per cent). The second largest sector for both occupations is Sawmilling and Processing (23 per cent and 29 per cent respectively).

Table 4 Machinery Operators and Drivers, ANZSCO Occupations (6 digit)

Paper and Wood Processing Machine Operators	
Wood Processing Machine Operator <u>Specialisations:</u> Band Saw Operator, Beam Saw Operator, Cant Gang Sawyer, Debarker Operator, Docking Saw Operator, Log Preparer, Plywood and Veneer Repairer, Resawyer, Ripsaw Operator, Sawmill Moulder Operator, and Veneer Production Machine Operator.	Operates sawing, rolling, pressing and other machines to manufacture logs, timber poles and pieces, plywood, particle board, solid laminate and similar products. Skill Level 4
Agricultural, Forestry and Horticultural Plant Operators	
Logging Plant Operator <u>Specialisations:</u> Forwarder Operator; Skidder Operator; Tree Feller Operator	Operates plant to fell trees and drag, transport and load logs onto trucks. Registration or licensing may be required. Skill Level 4
Forklift Driver	
Forklift Driver <u>Specialisation:</u> Reach Truck Operator	Operate forklifts to move bulk materials, containers, crates, palletised goods, cartons and bales. Skill Level 4

Source: ABS, 1220.0 ANZSCO – Australian and New Zealand Standard Classification of Occupations

3.1.3 Technicians and Trades Workers

There are a small number of Technicians and Trades Workers in a small variety of categories:

- **Metal Fitters and Machinists** (8.9 per cent of all Forest and Wood Products Industry workers in the Hub region),

- **Electricians** (5.8 per cent) and
- **Motor Mechanics** (3.1 per cent)

Several other trades were also identified but the numbers were so small that they cannot be used with any confidence.

The trades are most prevalent in the Sawmilling and Processing sector (58.9 per cent).

Table 5 Technicians and Trades Workers, ANZSCO Occupations (6 digit)

Metal Fitters and Machinists	
323211 Fitter (General) <u>Specialisations:</u> Diesel Fitter- Mechanic; Fitter-Machinist; Fitter-Mechanic; Maintenance Fitter Mechanic (Diesel and Heavy Earthmoving Equipment); Plant Mechanic	Fits and assembles metal parts and subassemblies to fabricate production machines and other equipment. Skill Level 3
323212 Fitter and Turner	Fits, assembles, grinds and shapes metal parts and subassemblies to fabricate production machines and other equipment. Skill Level 3
323213 Fitter-Welder	Fits, assembles and welds metal parts and subassemblies to fabricate production machines and other equipment. Skill Level 3
323214 Metal Machinist (First Class) <u>Specialisations:</u> Automotive Machinist; Metal Machine Setter; Metal Turner; Milling Machinist; Vertical Borer	Sets up and operates machine tools to shape and form metal stock and castings to fine tolerances, using detailed drawings and specifications. Skill Level 3
Electricians	
3411 Electrician	Design, assemble, install, test, commission, diagnose, maintain and repair electrical networks, systems, circuits, equipment, components, appliances and facilities for industrial, commercial and domestic purposes, and service and repair lifts, escalators and related equipment.. Skill Level 3

Motor Mechanics

321211 Motor Mechanic (General)

Maintains, tests and repairs petrol engines and the mechanical parts of lightweight motor vehicles such as transmissions, suspension, steering and brakes. Registration or licensing may be required.

Skill Level 3

321212 Diesel Motor Mechanic

Maintains, tests and repairs diesel motors and the mechanical parts of trucks, buses and other heavy vehicles such as transmissions, suspension, steering and brakes. Registration or licensing may be required.

Skill Level 3

321214 Small Engine Mechanic

Specialisations: Chainsaw Mechanic

Maintains, tests and repairs engines of chainsaws, lawn mowers, garden tractors and other equipment with small engines. Registration or licensing may be required.

Skill Level 3

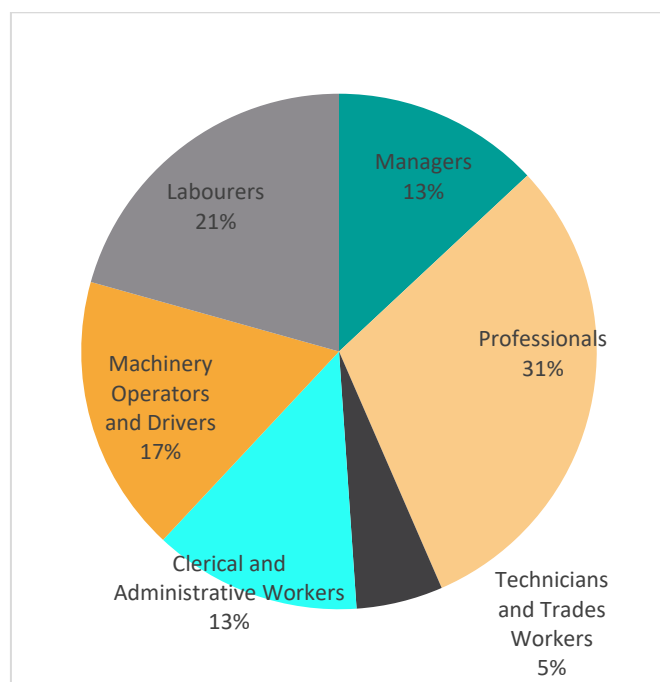
Source: ABS, 1220.0 ANZSCO – Australian and New Zealand Standard Classification of Occupations

3.2 Job Roles by Industry Sector

3.2.1 Forest Growing and Management

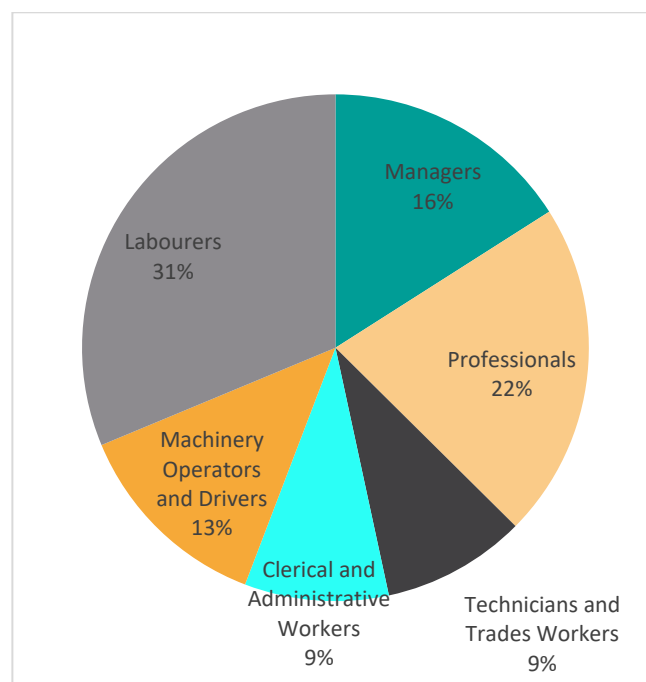
The largest group of workers in Forest Growing and Management are Professionals (see Figure 15). This compares reasonably well with the proportion of occupation groups in the national forest growing and management sector (see Figure 16). Professionals are predominantly **Agriculture and Forestry Scientists** (see Figure 17).

Figure 15 Occupational Groups within the Forest Growing and Management Sector (Hub region), 2016



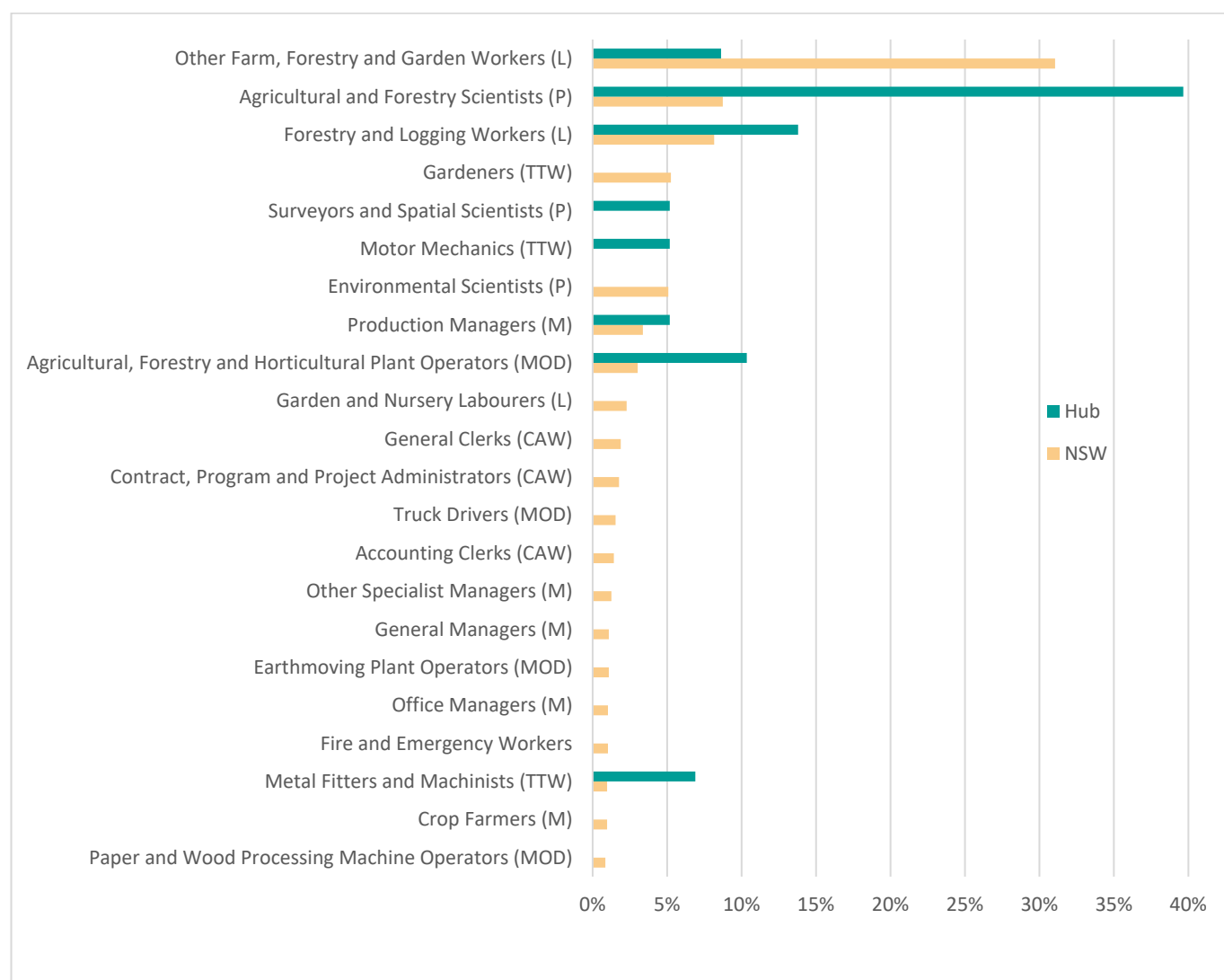
Source: Census of Population and Housing, 2016, TableBuilder

Figure 16 Occupational Groups within the Forest Growing and Management Sector (Australia), 2016



Source: Census of Population and Housing, 2016, TableBuilder

Figure 17 Top Occupations within the Forest Growing and Management Sector (Hub region versus NSW), 2016

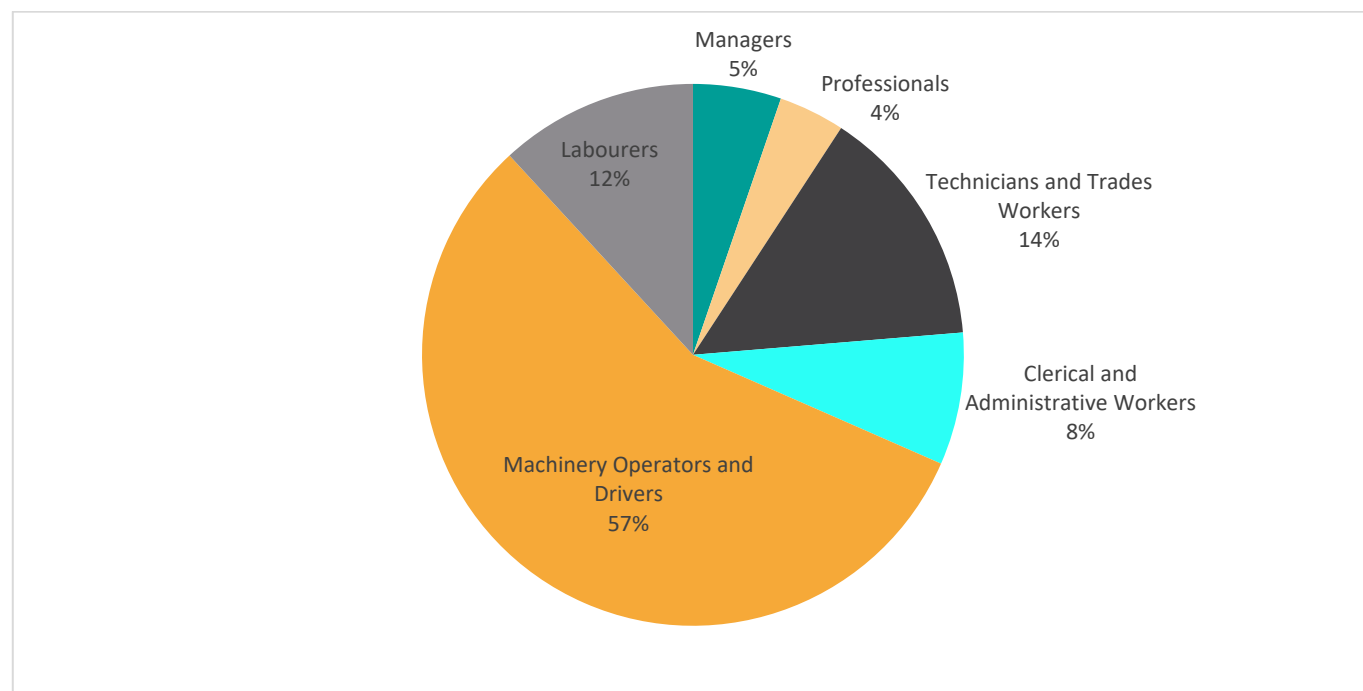


Source: Census of Population and Housing, 2016, TableBuilder

3.2.2 Harvesting and Haulage

In Harvesting and Haulage, the key occupational group is Machinery Operators and Drivers (see Figure 17).

Figure 18 Occupational Groups within the Harvesting and Haulage Sector, 2016

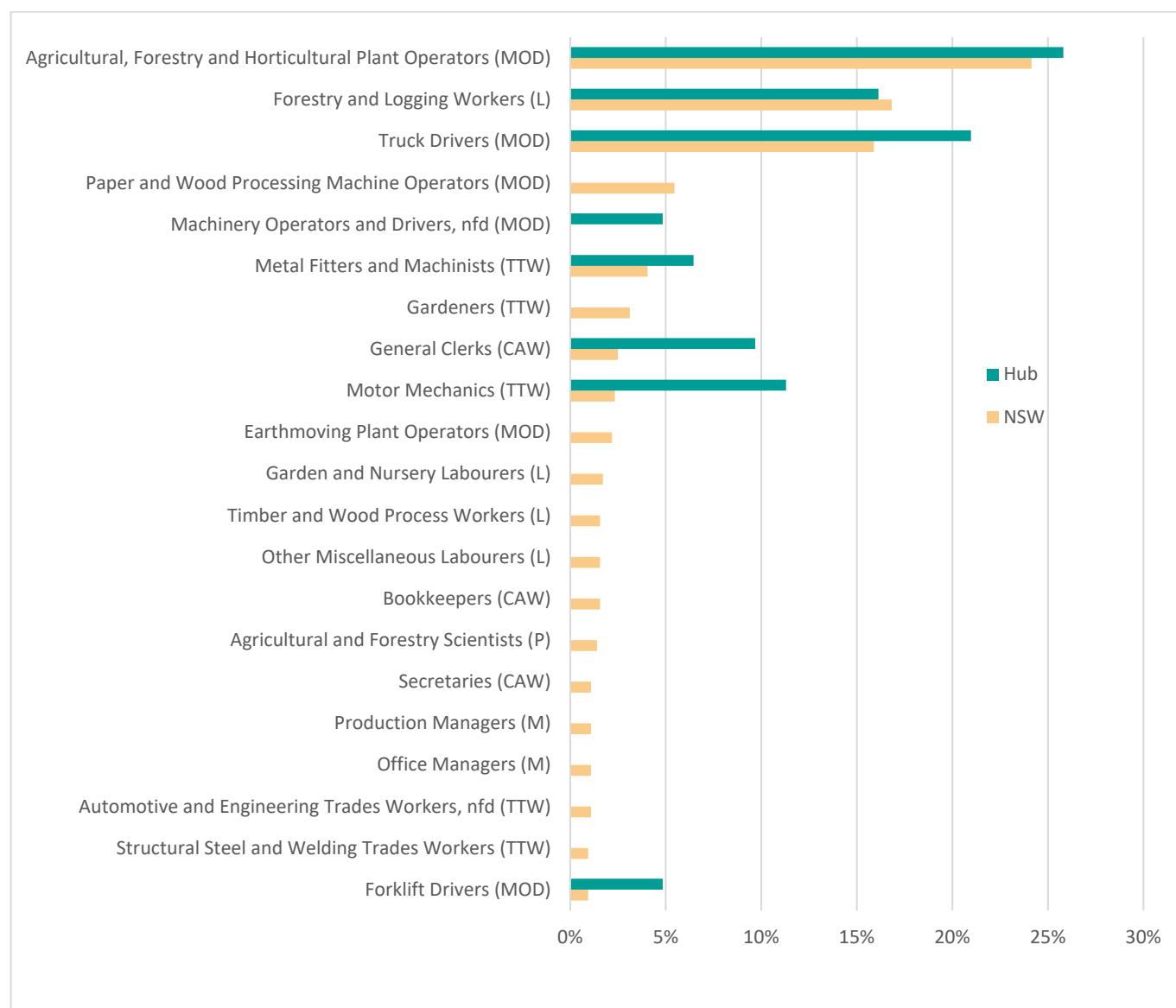


Source: Census of Population and Housing, 2016, TableBuilder

In respect of Machinery Operators and Drivers the most significant occupations were: Agricultural, **Forestry and Horticultural Plant Operators**; and **Truck Drivers** (see Figure 18).

Motor Mechanics were the largest group of Technicians and Trades Workers supporting the sector.

Figure 19 Top Occupations within the Harvesting and Haulage Sector (Hub region versus NSW), 2016

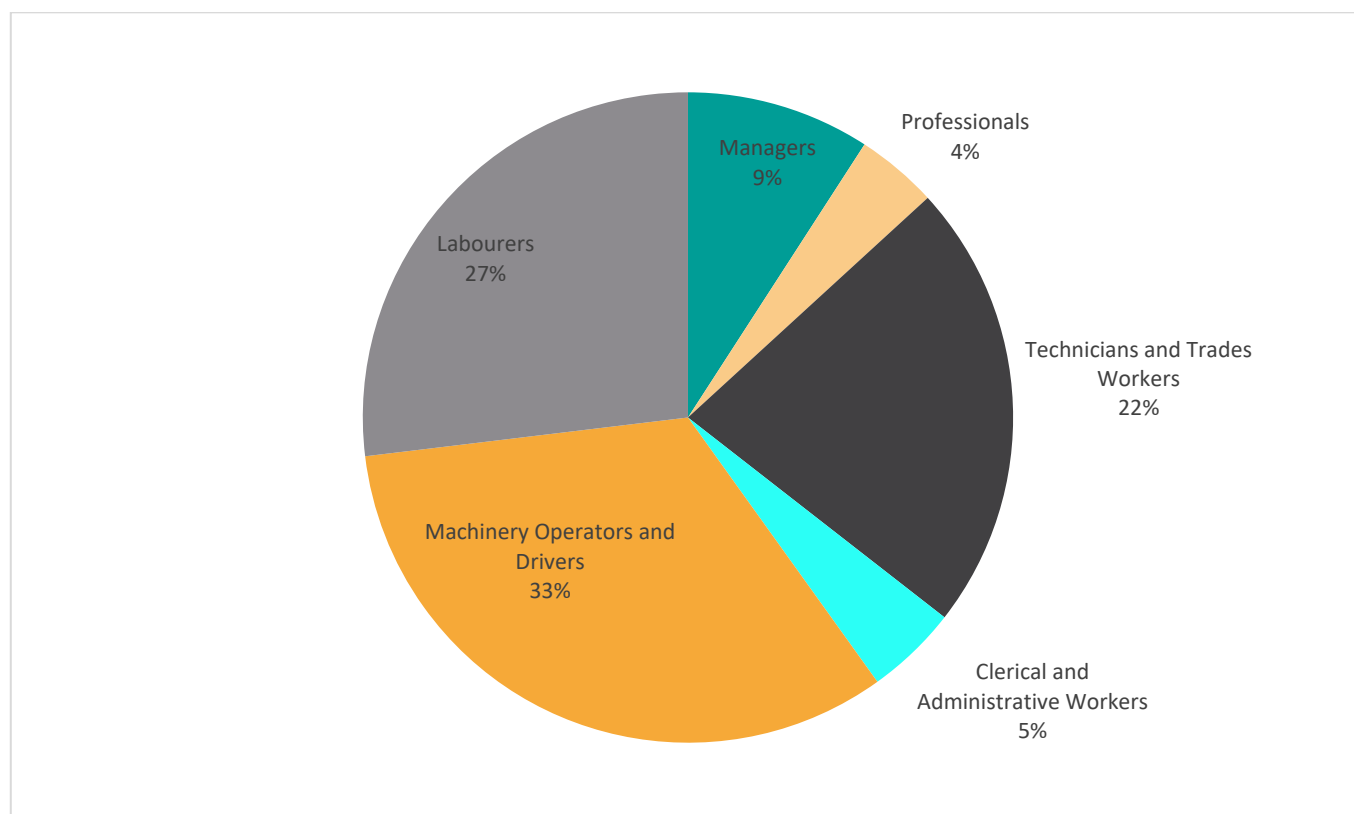


Source: Census of Population and Housing, 2016, TableBuilder

3.2.3 Sawmilling and Processing

Figure 19 shows that Labourers and Machinery Operators and Drivers make up the largest groups in Sawmilling and Processing (as is the case in Harvesting and Haulage).

Figure 20 Occupational Groups within the Sawmilling and Processing Sector, 2016



Source: Census of Population and Housing, 2016, TableBuilder

Figure 20 shows the largest employing occupations in the Sawmilling and Processing sector. Labourers are likely to be **Timber and Wood Process Workers** performing tasks such as sorting and stacking timber, assembling orders and racking offcuts.⁷

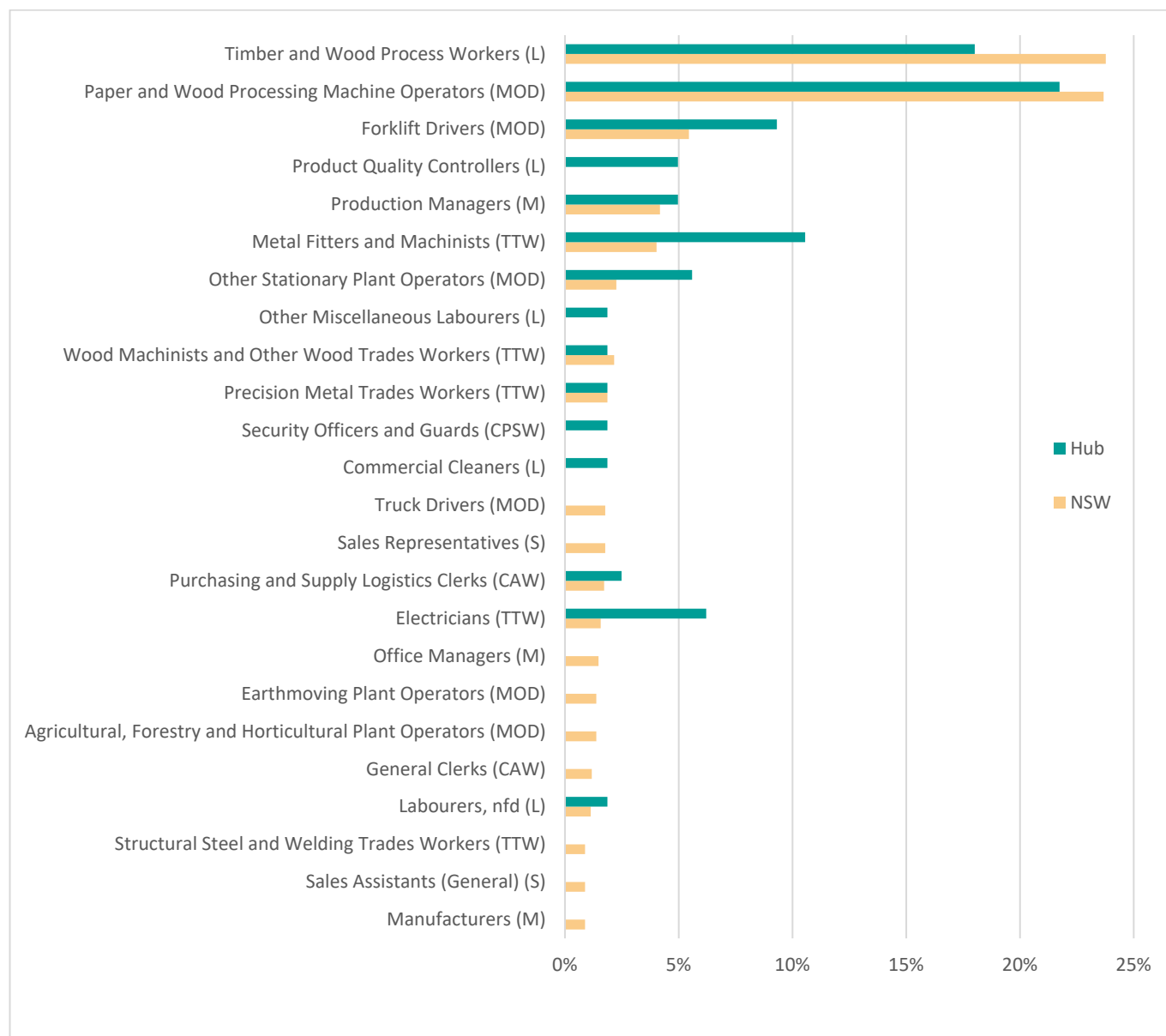
Machinery Operators and Drivers are primarily **Paper and Wood Processing Machine Operators** operating sawing, rolling, pressing and other machines to manufacture logs, timber poles and pieces and other products.⁸

The Sawmilling and Processing sector also had the largest proportion of Technicians and Trades Workers of all the sectors including **Metal Fitters and Machinists, Wood Machinists, Electricians, and Precision Metal Trades Workers (Saw Maker and Repairers)**.

⁷ ABS, 1220.0 ANZSCO – Australian and New Zealand Standard Classification of Occupations

⁸ ABS, 1220.0 ANZSCO – Australian and New Zealand Standard Classification of Occupations

Figure 21 Top Occupations within the Sawmilling and Processing Sector (Hub region versus NSW), 2016

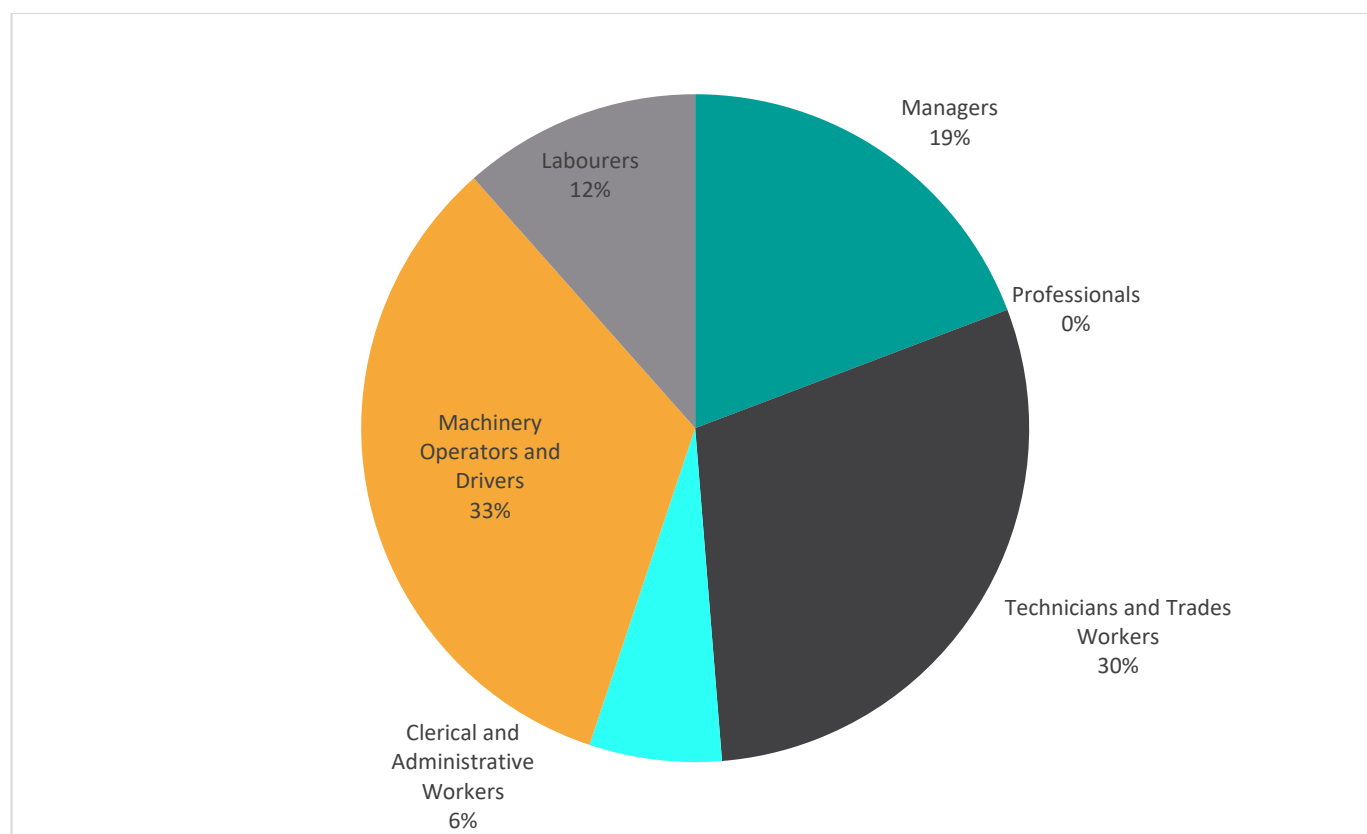


Source: Census of Population and Housing, 2016, TableBuilder

3.2.4 Timber Manufactured Products

Machinery Operators and Drivers were the most significant occupational group working in Timber Manufactured Products (Figure 21), primarily the occupations of **Forklift Drivers** and **Paper and Wood Processing Machine Operators**.⁹

Figure 22 Occupational Groups within the Timber Manufactured Products Sector, 2016

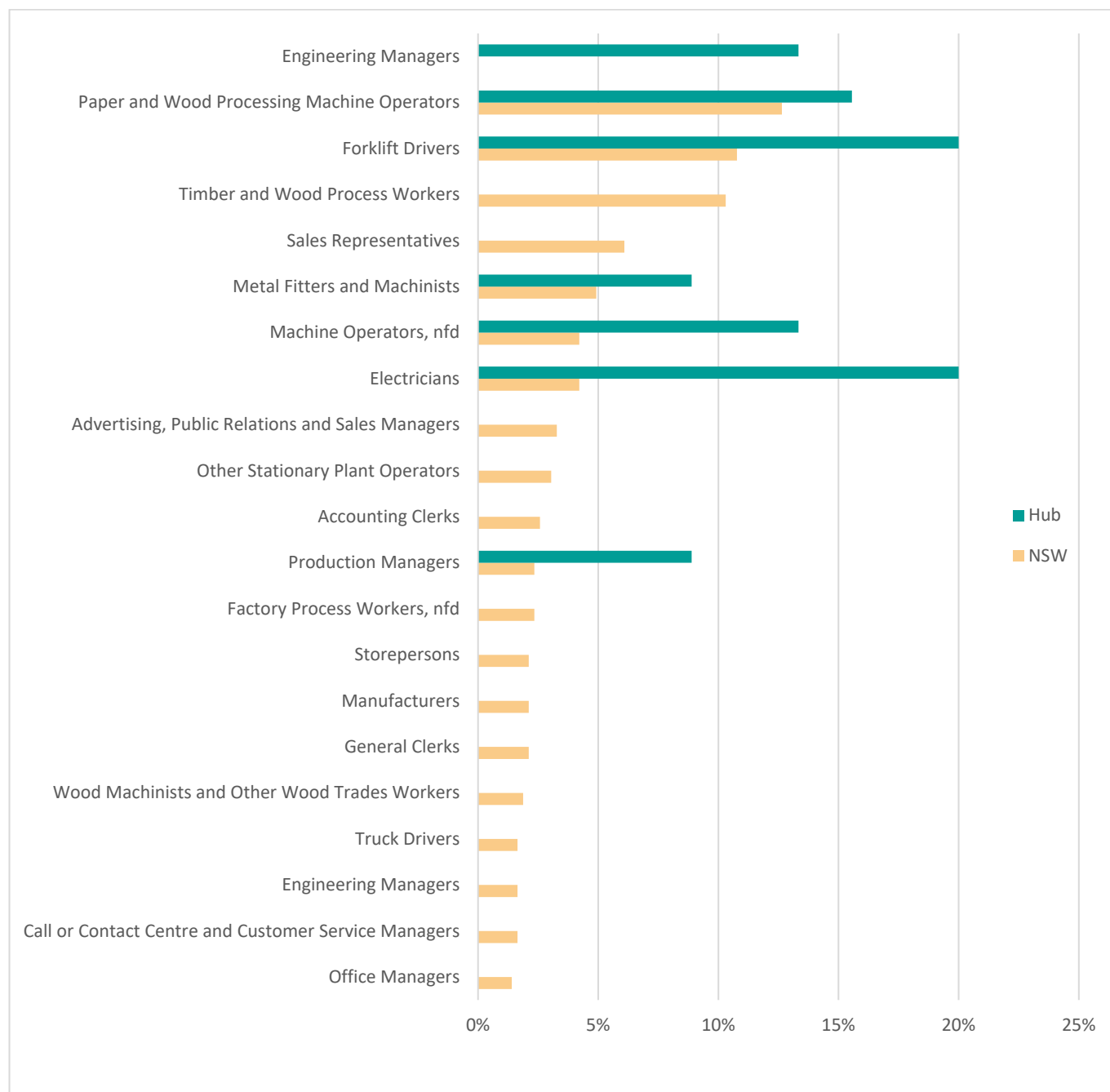


Source: Census of Population and Housing, 2016, TableBuilder

This sector also employs many Technicians and Trades Workers: **Electricians** and **Metal Fitters and Machinists**. Figure 22 shows the other key occupations in the Timber Manufactured Products sector.

⁹ ABS, 1220.0 ANZSCO – Australian and New Zealand Standard Classification of Occupations

Figure 23 Top Occupations within the Timber Manufactured Products Sector (Hub region versus NSW), 2016



Source: Census of Population and Housing, 2016, TableBuilder

3.3 Skills Holdings by Occupation Groups

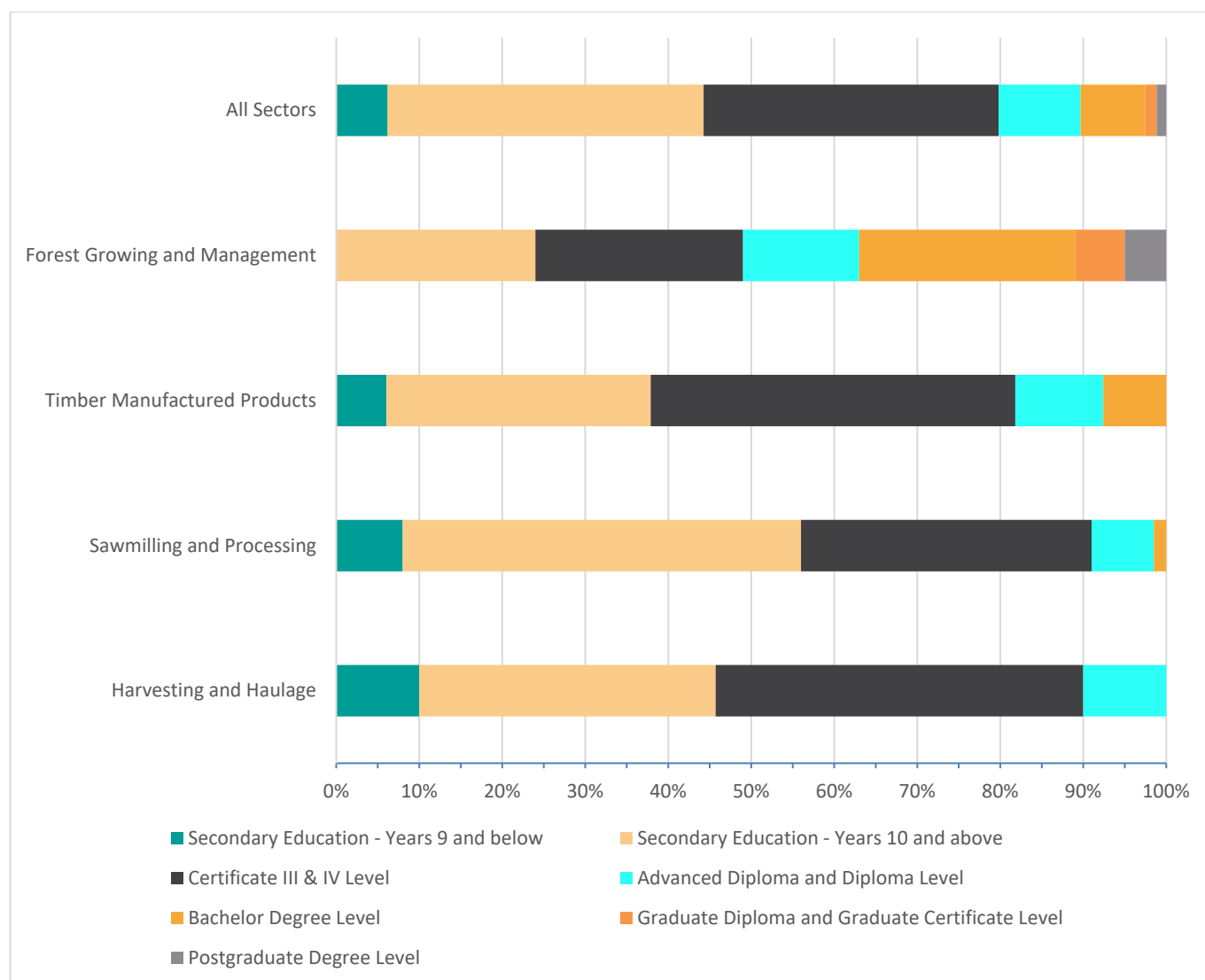
Based on the data in 3.1, three quarters of people in the Industry are employed in occupations at a skill level of 4 or 5. Jobs at a Skill Level 4 are equivalent to a Certificate II or III, or at least one year of relevant work experience. Jobs at Skill Level 5 generally require compulsory secondary education but may require no formal qualification or on-the-job training.

Figure 23 shows that when it comes to vocational education and training around 35% of workers in the Industry have a Certificate III or Certificate IV Qualification.

Workers with a secondary school education make up 56 per cent for Sawmilling and Processing workers, 45 per cent for Harvesting and Haulage workers and 37 per cent for Timber Manufactured Products workers.

Worker in Forest Growing and Management tend to have the highest levels of educational attainment – with around a quarter (26 per cent) having a Bachelor's degree, followed by an Advanced Diploma or Diploma (11 per cent).

Figure 24 Highest Educational Attainment (proportion of each sector), Forest and Wood Products Industry, Hub Region



Source: Census of Population and Housing, 2016, TableBuilder

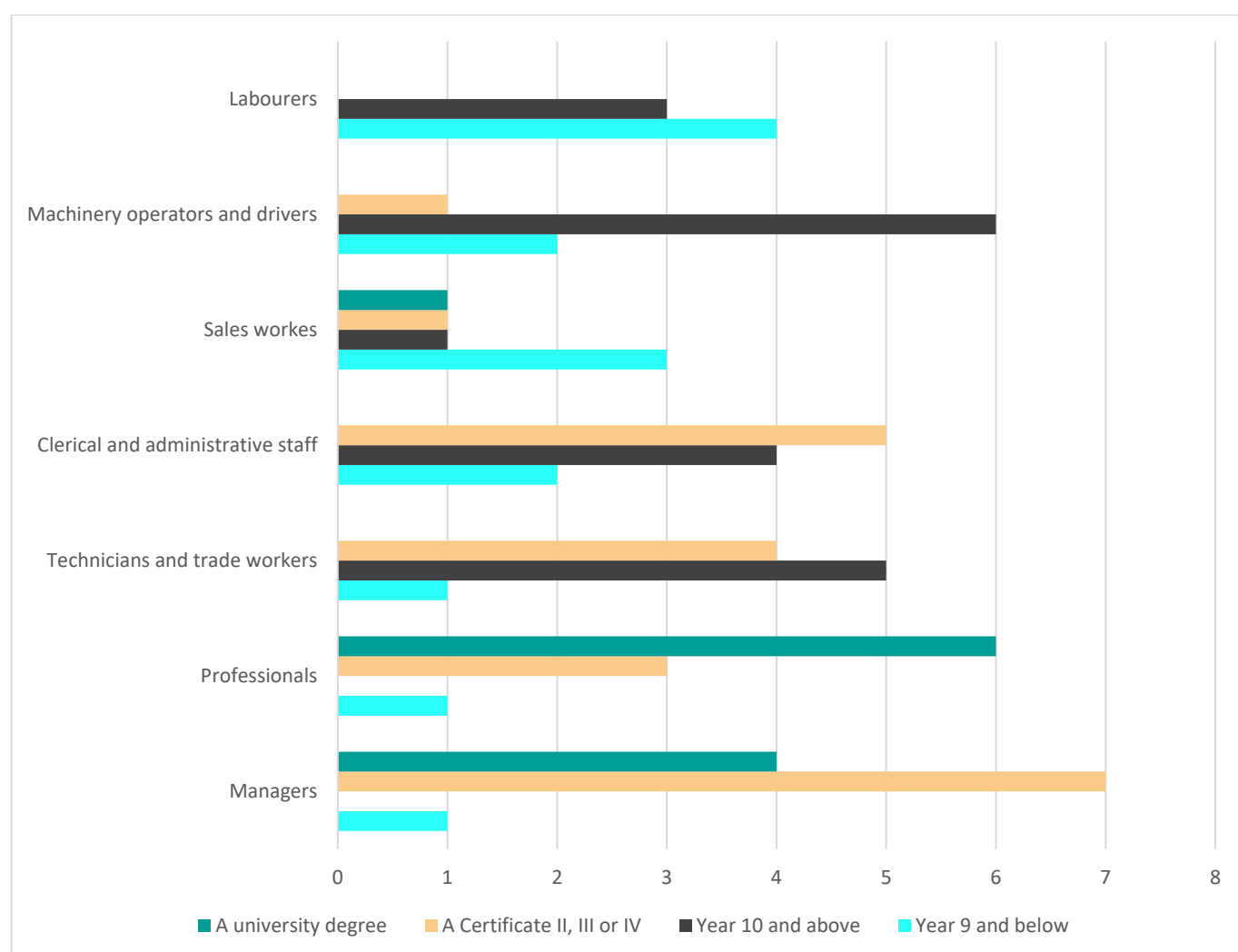
Considering this, it is not surprising that 70 per cent of respondent employers reported that they have a small number of employees with literacy or numeracy issues.

The ABS data is also consistent with the experience of respondents who were asked about the minimum entry level qualifications for new employees by occupation grouping. Respondents were able to indicate more than one

response. The results are presented in Figure 24 below. Remembering there were a small number of respondents to the survey, the trends are:

- University degrees prepare people for roles as Managers and Professionals;
- People with a secondary school education are suited to roles as technicians and trade workers, clerical and administrative workers, sales workers, machinery operators and drivers, and labourers;
- A VET qualification enables people with secondary education to access occupations of managers and professionals.

Figure 25 For each occupation group, to get a job in your business, what skills level do you require?



Source: Hub interview data 2021

3.3.1 Managers

Only four respondents reported that they sought Managers and supervisors with a Bachelor's degree or postgraduate qualification. One employer was also willing to employ Managers with a vocational education, or no post-secondary education.

Informal responses suggested that while completion of vocational qualification was not necessary, it would have been viewed favourably.

3.3.2 Technicians and Trade Workers

Four employers indicated that they required a certificate qualification for their technicians and trade workers, and only one of these indicated they would also accept work experience or high school completion.

Informally employers indicated that technicians and trade workers were reported to be in demand but short supply. This is the reason that employers would take on an unskilled worker, have them work in the job role under supervision, and then consider enrolling them into a Certificate III qualification – if they could access a local training provider to support the learner.

3.3.3 Machinery Operators and Drivers

While only one employer indicated that they required machinery operators with a certificate qualification, they were also prepared to employ machinery operators with work experience, or with high school completion and no post-school qualification.

3.3.4 Clerical and Administrative Workers

Five out of ten employers requested that clerical and administrative workers had a VET qualification the highest qualification being a Certificate IV. All other employers accepted high school completion or no post school qualification.

3.3.5 Sales

The few responses received in respect of sales workers indicated that only work experience was required.

3.3.6 Labourers

Labourers were generally required to have completed high school or had no post school qualification.

4 Environment and Strategic Directions

Section 4 examines the internal and external factors affecting industry businesses in the hub region. It also looks at business changes in the recent past and changes intended soon. These elements of the report are intended to inform workforce development planning.

4.1 Internal Factors Affecting Companies

The businesses were asked about the *internal* factors that affect their ability to access markets and grow. The responses were allocated to a list of themes (see Figure 25), and respondents had the ability to provide further clarification of these themes.

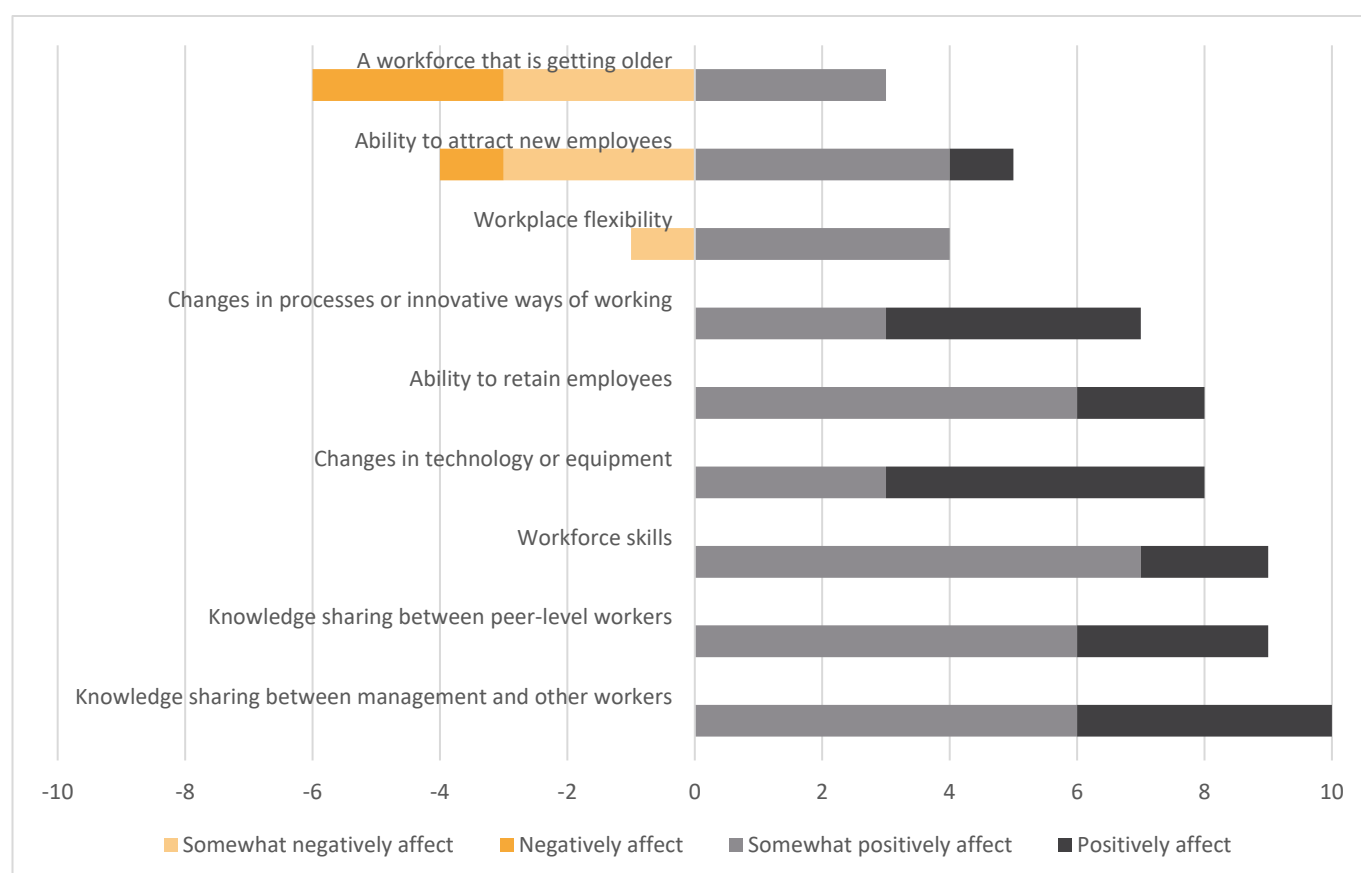
“Knowledge sharing between management and other workers” was seen as positive factor by all businesses. Forest Growing and Management businesses were most likely to identify this more positively than other businesses. Almost all businesses surveyed also saw “Knowledge sharing between peer level workers”, “Workforce skills”, “Changes in technology or equipment” and the “Ability to retain employees” as positives.

Forest Growing and Management businesses were also most positive about knowledge sharing between peer level workers. Sawmilling and Processing businesses were most likely to identify changes in technology and equipment as having a stronger positive effect.

The factors with a negative effect for the largest number of businesses were in relation to an ageing workforce and the ability to attract new employees. Interestingly these factors were also seen as positives by other businesses.

An older workforce was seen as having a bigger negative affect in Forest Growing and Management and the ability to attract new employees was seen most negatively by Harvesting and Haulage businesses. Sawmilling and Processing businesses generally saw both these issues as positive.

Figure 26 On a scale of 1-5, how do the following factors inside your organisation impact on your company's ability to access markets and grow?



Source: Hub interview data 2021

4.2 External Factors Affecting Companies

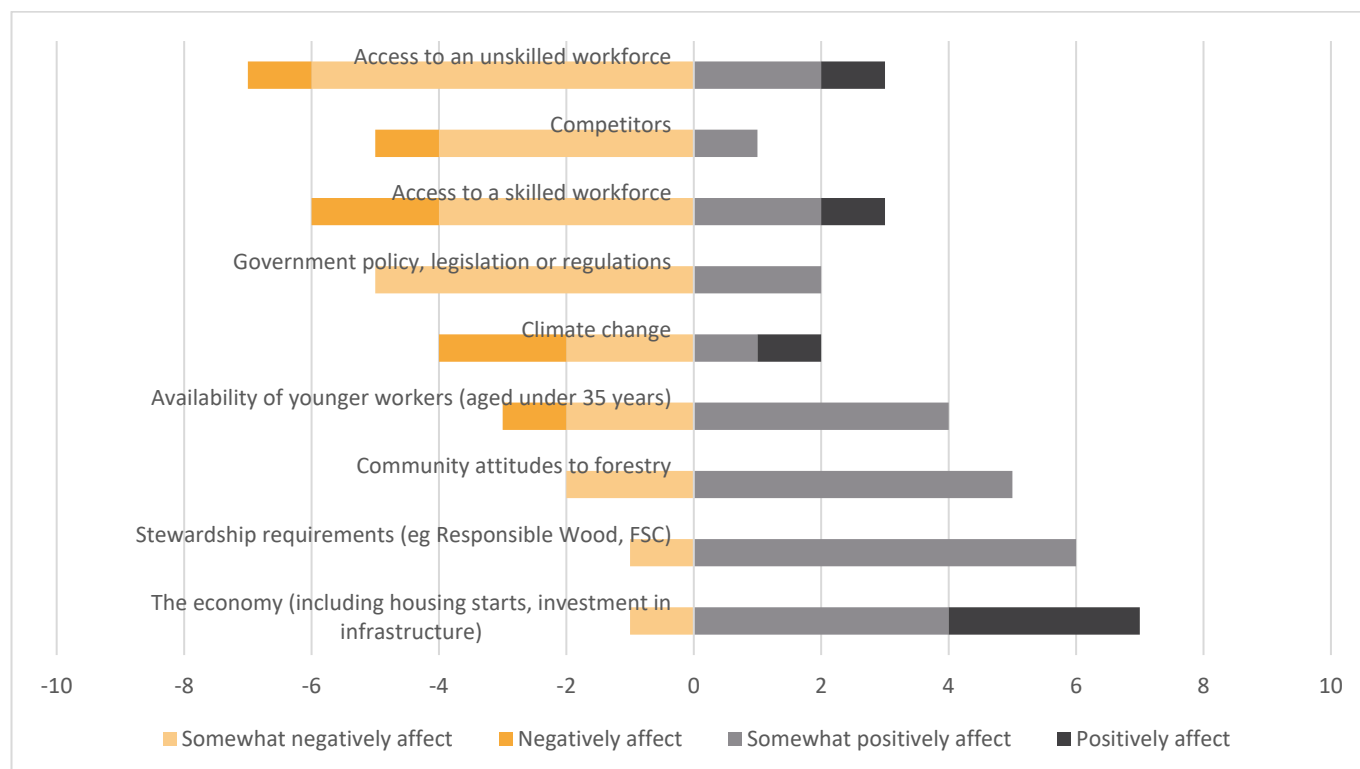
The businesses were asked about the *external* factors that affect their ability to access markets or grow. The responses were allocated to a list of themes, and respondents had the ability to provide further clarification of these themes (see Figure 26).

Overall, businesses were more negative about external factors. The most positive sector was Sawmilling and Processing.

The issues perceived as having the greatest negative effects were access to a skilled and unskilled workforce. All Forest Growing and Management were negative about access to an unskilled workforce. All Harvesting and Haulage businesses were negative about competitors. There was no single view of negative impacts in the Sawmilling and Processing Sector.

The economy was perceived as having a positive effect for most of respondent companies. Community attitudes to forestry was also perceived as positive by most of companies, however a small number reported this as a negative, particularly when engaging with the community outside the study region. Stewardship requirements were generally perceived positively. The "Availability of younger workers" was also seen as a positive factor by just under half of respondents.

Figure 27 On a scale of 1-5, how do the following external factors impact upon your company's ability to access markets or grow?

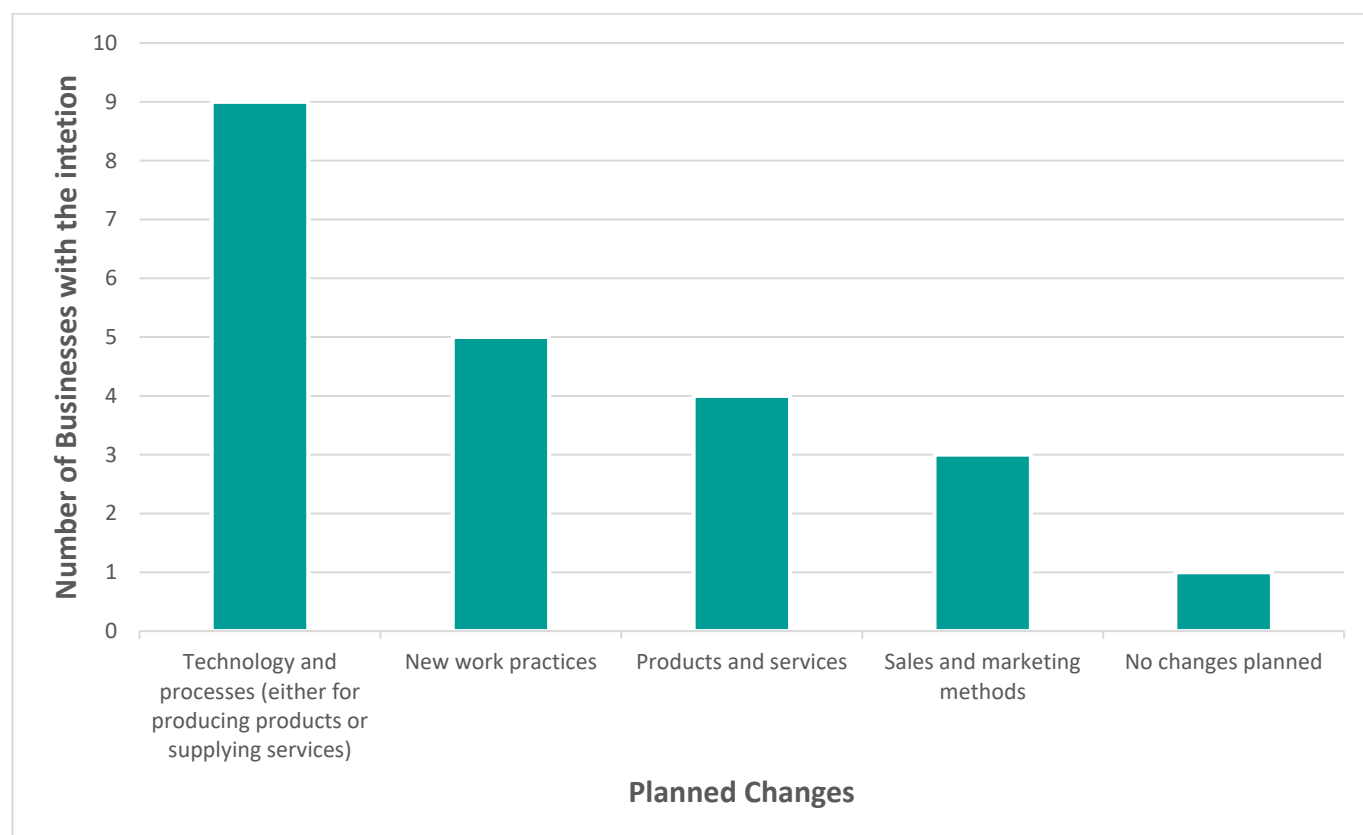


Source: Hub interview data 2021

4.3 Significant changes to the business over the last 2 years and the next 2 years

Of those who were intending to make changes to their business in the next 2 years most were intending to introduce new technology and processes (9 out of 10 businesses), followed by new work practices (5 out of 10), products and services (4 out of 10), and sales and marketing methods (3 out of 10). One company reported that they did not intend any changes in the next two years, however this was due to “wanting things to settle” after two years of implementing innovative technology and processes as well as dealing with bushfires, fire recovery and the Covid response. A summary of responses is provided in Figure 27 below.

Figure 28 In the next 2 years, are you planning to introduce any new or improved...?



Source: Hub interview data 2021

5 Future Skills Needs of Businesses in the Region

Section 5 examines the skills needs and skills shortages at the level of the Hub region and the Industry. It also examines how skills needs and shortages nationally may affect the Hub region.

5.1 Skills Shortages in the Hub Region

Seven out of ten respondents reported that they have a skills-shortage. The occupations that were reported as being of most concern to employers were:

1. Technical trades (including electricians, fitters, engineers, saw technicians, wood machinists);
2. Mobile plant operators (including truck drivers, harvesting operators, wood yard operators);
3. Forest scientists with skills in modelling and IT; and
4. Leadership skills.

5.2 Skills Needs in the Forest and Wood Products Industry

For the Industry as a whole, priority skills have been identified for the period 2019-2022 by Industry Reference Committees¹⁰:

- Specialised skills, including scientists, mechanics and mobile and fixed-plant operators; and
- Workers with high level financial, middle management and information and communications technology (IC) skills.¹¹

The Commonwealth Department of Education and Training has also identified 13 generic skills which the industry has ranked from most-least important. The top five are outlined in Table 6.

Table 6 Priority Generic Skills for the Forest and Wood Products Industry

Generic Skill	Description
Technology use and application	Ability to create and/or use of technical means understand their interrelation with life, society and the environment. Ability to understand and apply scientific or industrial processes, inventions, methods, etc. Ability to deal with increasing mechanisation and automation and computerisation. Ability to do work from mobile devices rather than from paper.
Environmental and sustainability	Ability to focus on problem-solving and the development of applied solutions to environmental issues and resource pressures at local, national and international levels
Language, Literacy and Numeracy (LLN)	Foundation skills of literacy and numeracy.
Design mindset Thinking critically Systems thinking Problem-solving	Ability to adapt products to rapidly shifting consumer tastes and trends. Ability to determine the deeper meaning or significance of what is being expressed via technology. Ability to understand how things that are regarded as systems influence on another within a complete entity, or larger system. Ability to think holistically

¹⁰ Industry Reference Committees are the formal channel within the VET system for considering industry skills requirements in the development and review of training packages. They ensure training packages meet the needs and concerns of employers, employees, training providers, and people seeking training qualifications.

¹¹ Skills Impact, *Forest and Wood Products Industry Sector IRC Skills Forecast and Proposed Schedule of Work 2019-2022*, available at: https://www.skillsimpact.com.au/site/skilliampactmedia/uploads/2019/05/ISF.FWP_IRCSkillsForecast.2019-2022.Final_.pdf?x98929 last accessed 28 July 2021

Communication	Ability to understand and apply the principle of creating more value for customers with fewer resources
Collaboration	(lean manufacturing) and collaborative skills. Ability to critically assess and develop content that uses new
Social Intelligence	media forms and leverage these media for persuasive communications. Ability to connect with others deeply and directly, to sense and stimulate reactions and desired interactions.

Source: IRC Skills Forecast 2019-2022

The most recent update to the forecast has identified two areas of skills need. The first is associated with changing technology in the Sawmilling and Processing and Timber Manufactured Products sectors and the other is associated with the role played by the industry in fighting fires.

The IRCS have identified the need for skills to work with new technologies and produce innovative products such as cross-laminated timber (CLT) and glue laminated timber (GLT). The IRCs have also said that

“demand for skills to monitor, maintain, optimise and troubleshoot highly specialised automated equipment that moves, grades, assesses, scans, cuts and assembles timber pieces and products is surpassing the need for operators to pass, move, lift, grade, assess, stack and sort timber and wood products”¹².

The IRCs have highlighted the importance of forestry operators having effective bushfire-related skills as they are increasingly involved in bushfire management (including mechanical thinning), mitigation and firefighting. These roles are distinct from their forestry operations roles and include:

- Defending resource and forestry assets
- Salvage operations after the fire has passed
- Fire suppression efforts in land use such as farms and national parks
- Make-safe operations and road clearing
- Re-establishing plantations

5.3 Skills Needs in Australia

The National Skills Commission has identified 25 “emerging occupations”, which did not exist at the time of the last classification of occupations.¹³ Of most potential relevance to the Forest and Wood Products Industry are the occupations identified in Table 7. Potential implications of those emerging occupations have been identified in Column 4.

¹² Skills Impact, *Forest and Wood Products Industry Sector Annual Update 2021 IRC Skills Forecast and Proposed Schedule of Work*, available at: https://www.skillsimpact.com.au/site/skilliampactmedia/uploads/2021/07/ISF.FWP_IRCSkillsForecast.2021AnnualUpdate.pdf?x98929 last accessed 28 July 2021

¹³ National Skills Commission, *25 Emerging Occupations*, available at: <https://www.nationalskillscommission.gov.au/25-emerging-occupations> last accessed 28 July 2021

Table 7 Emerging Occupations relevant to the Forest and Wood Products Industry

Occupation	Description	Task	Implications
Data analysts	Import, inspect, clean, transform, validate, model, or interpret data. They ensure that data sources and repositories provide consistent and reliable information. Data analysts use algorithms and IT tools to prepare visualisations such as graphs, charts, and dashboards	Gathering and analysing data, developing data visualisations or dashboards, writing data reports, and conducting statistical analysis	Forestry roles may relate to mapping, forest inventory and productivity.
Data scientists	Find and interpret rich data sources, manage large amounts of data, merge data sources, ensure consistency of data-sets, and create visualisations to aid in understanding data. They build mathematical models, present and communicate data insights and findings, and recommend ways to apply data	Developing machine learning models, data mining, data analytics, visualisation, reporting and consultation	Forestry roles may include modelling of fire behaviour and communicating this in real-time
Pricing Analysts	Analyse production prices, market trends and competitors to establish the right price, taking brand and marketing concepts into consideration	Analysis and setup of product prices, revenue and scenario forecast modelling, and coordinating and reviewing pricing agreements	Long term modelling of forest productivity and revenues
Logistics Analysts	Analyse product delivery or supply chain processes to identify or recommend changes. They may manage route activity including invoicing, electronic bills, and shipment tracing	Identifying areas for efficiency improvement in supply chains, analysing logistics data to provide insights and recommendations, liaising with different business areas to implement changes and new systems, planning logistics and forecasting and monitoring inventory	Log truck marshalling services
Digital Marketing Analysts	Responsible for analysing statistics and looking for ways that businesses can improve online marketing efforts. These efforts include things like social media ads, website banner ads, and online branding	Online marketing, social media marketing and campaign monitoring (e.g. through web analytics).	Industry associations may use these roles for campaigning, community engagement in the pursuit of social licence
Social Media Specialists	Provide and maintain an interactive environment facilitated by applications such as social media, forums and wikis. They maintain relationships between different digital communities	Developing, implementing and managing social media strategy, content and campaigns.	Industry associations may use these roles for campaigning, community engagement in the pursuit of social licence

Occupation	Description	Task	Implications
Energy Efficiency Engineers	Design, develop, or evaluate energy-related projects or programs to reduce energy costs or improve energy efficiency during the designing, building, or remodelling stages of construction. They may specialise in electrical systems, green buildings, lighting, air quality, energy procurement or Heating, Ventilation, and Air-conditioning (HVAC) systems	Designing controls for energy systems, designing and coordinating construction activities with energy considerations, implementing programs to reduce energy waste, and analysing and reporting on energy data.	Design and construction of timber buildings for residential and commercial purposes.

Source: National Skills Commission, 25 Emerging Occupations

5.4 Skills Shortages in NSW and Australia

The Australian Government National Skills Commission has published a Skills Priority List which considers which occupations (at a six digit level) in Australia are in demand and/or in shortage (see Figure 28).

Technicians and Trades Workers is the occupational group in greatest shortage with 15 occupations in shortage in NSW, of which 14 were also in shortage Nationally. Of these, 6 are expected to have strong future demand. Interestingly the National Skills Commission has not identified Saw Technicians as being an occupation in shortage, although strong future demand is expected.

Of the occupations in shortage Wood Machinist and Forester are the only two which it will fall solely on the Industry to solve. For all the other occupations in shortage, the Industry will be competing with other industries to attract talent.

Of the occupations with strong future demand expected Logging Plant Operator and Saw Maker are the only two which are specific to our Industry. For all other occupations expecting strong future demand, the Industry will again be competing with other industries to attract talent.

Figure 29 Skills Shortage and Future Demand, by occupation, NSW and Australia

Future Demand	No shortage	Shortage in NSW	National Shortage
Moderate	Manager		
	Manufacturer		
	Production Manager (Forestry)		
	Production Manager (Manufacturing)		
	Transport Company Manager		
Moderate	Professional		
	Conservation Officer	ICT Business Analyst	
	Environmental Consultant		
	Environmental Research Scientist		

Future Demand	No shortage	Shortage in NSW	National Shortage
Moderate	Technicians and Trades Workers		
	Systems Analyst	Life Science Technician	
	Chemistry Technician	Motor Mechanic	Motor Mechanic
	Earth Science Technician	Diesel Motor Mechanic	Diesel Motor Mechanic
	Construction Estimator	Small Engine Mechanic	Small Engine Mechanic
	Surveying and Cartographic Technician	Fitter (General)	Fitter (General)
		Fitter and Turner	Fitter and Turner
		Fitter-Welder	Fitter-Welder
		Metal Machinist (First Class)	Metal Machinist (First Class)
		Wood Machinist	Wood Machinist
Moderate	Clerical and Administrative Worker		
	Data Entry Operator	Office Manager	
	Word Processing Operator	Bookkeeper	
	Accounts Clerk	Production Clerk	
	Cost Clerk	Purchasing Officer	
	Payroll Clerk		
	Order Clerk		
	Stock Clerk		
	Warehouse Administrator		
	Sales		
Moderate		Sales Representative (Building and Plumbing Supplies)	
Moderate	Machinery Operators and Drivers		
	Wood Processing Machine Operator	Earthmoving Plant Operators (General)	Earthmoving Plant Operators (General)
	Crane, Hoist or Lift Operator	Backhoe Operator	Backhoe Operator
	Engineering Production Systems Worker	Bulldozer Operator	Bulldozer Operator
	Boiler or Engine Operator	Excavator Operator	Excavator Operator
	Bulk Materials Handling Plant Operator	Grader Operator	Grader Operator
		Loader Operator	Loader Operator
	Forklift Driver		
	Labourers		
	Product Examiner		
Moderate	Product Grader		
	Forestry Worker		
	Logging Assistant		
	Tree Faller		

Future Demand	No shortage	Shortage in NSW	National Shortage
Strong	Managers		
	Finance Manager Environmental Manager Laboratory Manager	Supply and Distribution Manager	Quality Assurance Manager
	Professionals		
Strong	Management Consultant Advertising Specialist Market Research Analyst Cartographer	Organisation and Methods Analyst Marketing Specialist Forester	Surveyor
	Technicians and Trades Workers		
	Maintenance Planner Saw Maker and Repairer	Metal Fabricator Pressure Welder Welder (First Class) Electrician (General) Electrician (Special Class) Arborist	Metal Fabricator Pressure Welder Welder (First Class) Electrician (General) Electrician (Special Class) Arborist
Strong	Clerical and Administrative Worker		
	General Clerk		
	Machinery Operators and Drivers		
Strong	Logging Plant Operator Truck Driver (General) Storeperson		

Source: National Skills Commission, 2021

6 How are Skills Gaps Filled?

Section 6 considers the duration of employment of staff in the Hub region. It also looks at the training of those existing staff, including the reasons for investing in training.

Generally, businesses in the hub region are medium sized businesses (the majority employ 45-70 people). One business was a small business and two employed more than 200 people.

Having identified the skills needs and skills shortages we consider how skills gaps can be filled. In short, skills gaps can be filled by recruiting people from outside the organisation (external), or by skilling people up within the organisation (internal).

Respondents have indicated that skills gaps are primarily filled from their existing workforce or a mix of existing workforce and external applicants (see Figure 30). This is consistent with the reported shortage of suitably experienced and competent candidates available in the local area.

Figure 30 How do you normally fill skills gaps in your organisation? (number of businesses)



Source: Hub interview data 2021

Skills gaps are mostly filled through recruitment of experienced workers from another industry.

Technicians and trade workers included those with formal qualifications that were not directly involved in the processing of wood products. This included fitters, electricians and diesel mechanics. These job roles do require the completion of an apprenticeship. Most employers reported that finding qualified candidates is difficult in regional areas with a relatively small labour pool.

6.1 Retention and Attrition of Employees

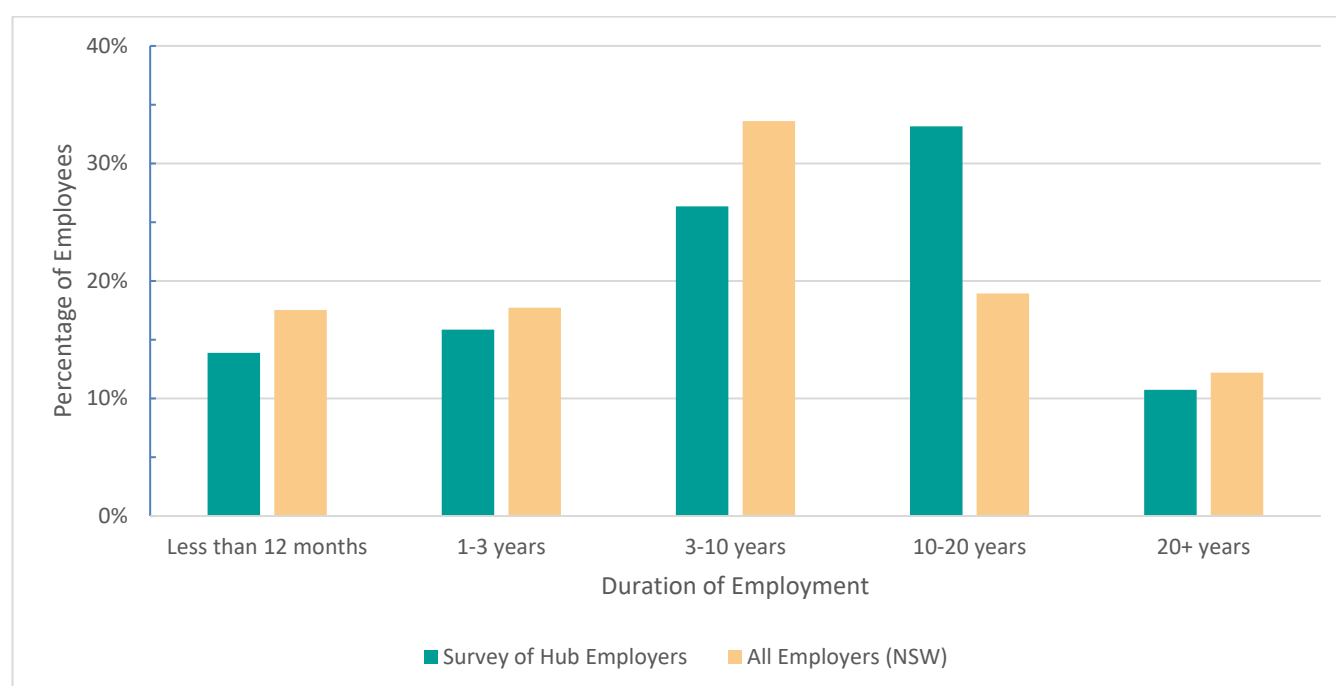
Respondents provided a breakdown of the number of their current employees and their employment duration (see Figure 31). 44% of the workforce of the survey respondents have been with their current employer for more than 10 years. In contrast, ABS statistics indicate that across all NSW employers, only 31% of workers have been with the current employer for over 10 years. The difference was due to almost double the number of workers in the 10-20 years of employment bracket (33 % to 19 %).

Although good retention of mature workers provides the advantage of a reliable, skilled workforce, it does have some disadvantages:

- There are fewer opportunities to recruit young people and foster their skills development.
- There is reduced need for employers to prepare and cater for the training of new entrants, which means that their internal induction and training processes are not well maintained (particularly for small businesses); and
- The whole-of-industry does not generate a sufficiently large, regular stream of learners to support a local training provider based in the region.

The general NSW population has about a third employed in their current role less than 3 years, a third in the category 3-10 years, and a third longer than 10 years. This indicates a relatively low retention of recent employees: if they make it through the first 3 years of employment, then they stay for more than 10 years. This window of the first 3-years of employment is important for both employers and employees to establish if they are the 'right fit' for each other.

Figure 31 Employment duration, 2021 (percentage of employees)



Source: ABS 6291.0.55.001 EQ02 August 2021, Hub interview data 2021

Looking at the data by sector of the respondents (see Figure 32), it is apparent that Forest Growing and Management has the highest proportion of workers who have been with the business less than three years (31 per cent) whereas the Timber Manufactured Products business has the highest proportion of people employed in the business for more than 10 years (67 per cent).

Figure 32 Employment duration by Industry sector, (percentage of employees)

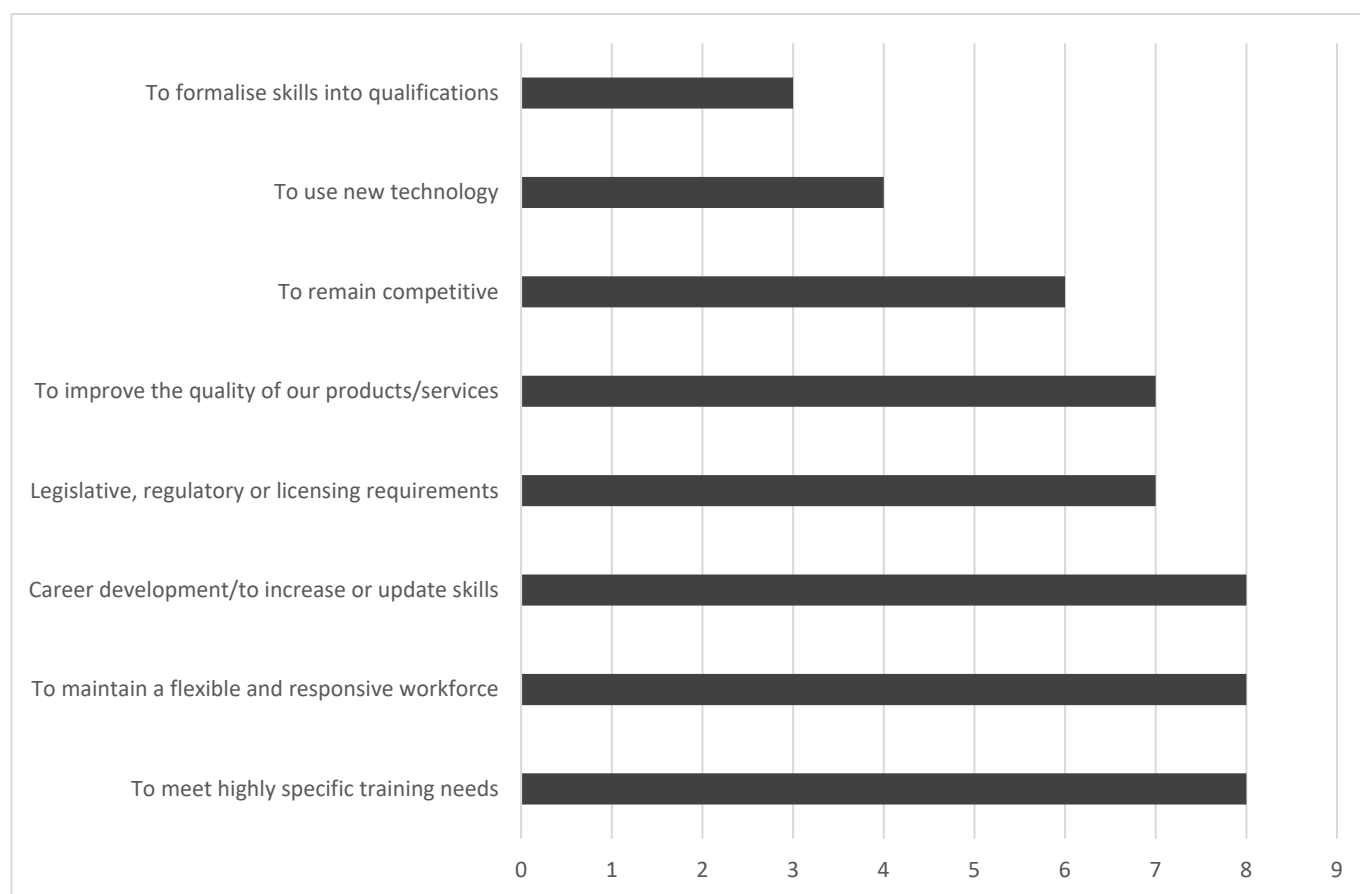


Source: Hub interview data 2021

6.2 Reasons for Training of Existing Employees

As discussed at 5.5 skills gaps are mostly filled through training existing workers and mostly through non-accredited (in-house) training. Figure 32 shows the reasons why respondents chose to invest in training. Employers were provided a shortlist of reasons which they indicated applied to them. Employers were able to select as many that applied to them.

Figure 33 Thinking of training other than apprenticeships and traineeships, why does your organisation support employees to undertake training? (number of responses)



Source: Hub interview data 2021

Responses suggest organisations see a return on investment for their businesses from training and that businesses value training for the impact it has on productivity and commercial outcomes. The reasons identified most frequently for investing in training were:

- Meeting highly specific training needs
- Developing and maintaining a flexible and responsive workforce
- Career development of individuals / to increase or update their skills.

These reasons were as more significant than the need to meet legislative, regulatory or licensing requirements (training because they had to).

The least common reason for training was to formalise skills into qualifications. This indicates that most employers are interested in gaining skills that address the organisational need of the employer and the personal needs of the learner, which is not necessarily the same as a formal qualification.

6.3 Apprenticeships and Traineeships

Training Services NSW data for apprenticeships and traineeships in the Central West region (Table 8) shows that there has been a total of 4,888 approvals in the five years 2017 and 2021 (inclusive and to date). The industry

with the highest number of approvals is the Building and Construction industry with 896. The Forest Industry had 23 approvals. The average age of the people commencing the apprenticeship or traineeship in the Forest Industry was over 38 years.

Table 8 Apprentices and Trainees in the Central West Region (2017 - 2021).

Industry	Sum of Apprenticeships and Traineeships	Average Commencement Age
Building and Construction	896	24.4
Finance, Insurance and Business Services	582	27.9
Automotive	578	25.8
Community Services and Health	522	27.0
Retail and Wholesale	432	22.8
Manufacturing Engineering	396	26.3
Utilities and Electro-technology	366	24.9
Primary Industry	278	30.6
Tourism	256	25.0
Transport and Distribution	116	35.7
Property Services	103	34.3
Furnishing, Light Manufacturing, Textile	86	27.8
Food Industry	75	26.3
Information Technology	43	26.1
Sport and Recreation	38	22.1
Process Manufacturing	36	26.3
Mining	29	39.5
Forest Industry	23	38.3
Communications	16	31.4
Racing	10	21.9
Arts and Entertainment	4	20.8
Public Sector Industry	3	32.7
Grand Total	4888	26.4

Source: Training Services NSW Tableau data, 2021.

A closer look at the commencements in the forest and wood products industry shows that the most popular qualification is the Certificate III in Harvesting and Haulage (16 commencements over five years) (see Table 9).

Interestingly, the average age of the 2 commencements in the Certificate III in Woodmachining apprenticeship was 49.5 years. From the data reported to Training Services NSW, school-leavers are not being recruited into apprenticeships or traineeships in forestry and timber-specific qualifications, however they are being recruited into other trades such as electricians and mechanics.

Table 9 Apprenticeships and traineeships in the forest and wood products sector in the Central West Region, 2017-2021.

Industry	Sum of Apprenticeships and Traineeships	Average Commencement Age
Certificate III in Harvesting and Haulage	16	41.3
Certificate III in Sawdoctoring	4	25.3
Certificate III in Woodmachining	2	49.5
Certificate III in Timber Truss and Frame Design and Manufacture	1	19.0

Source: Training Services NSW Tableau data, 2021.

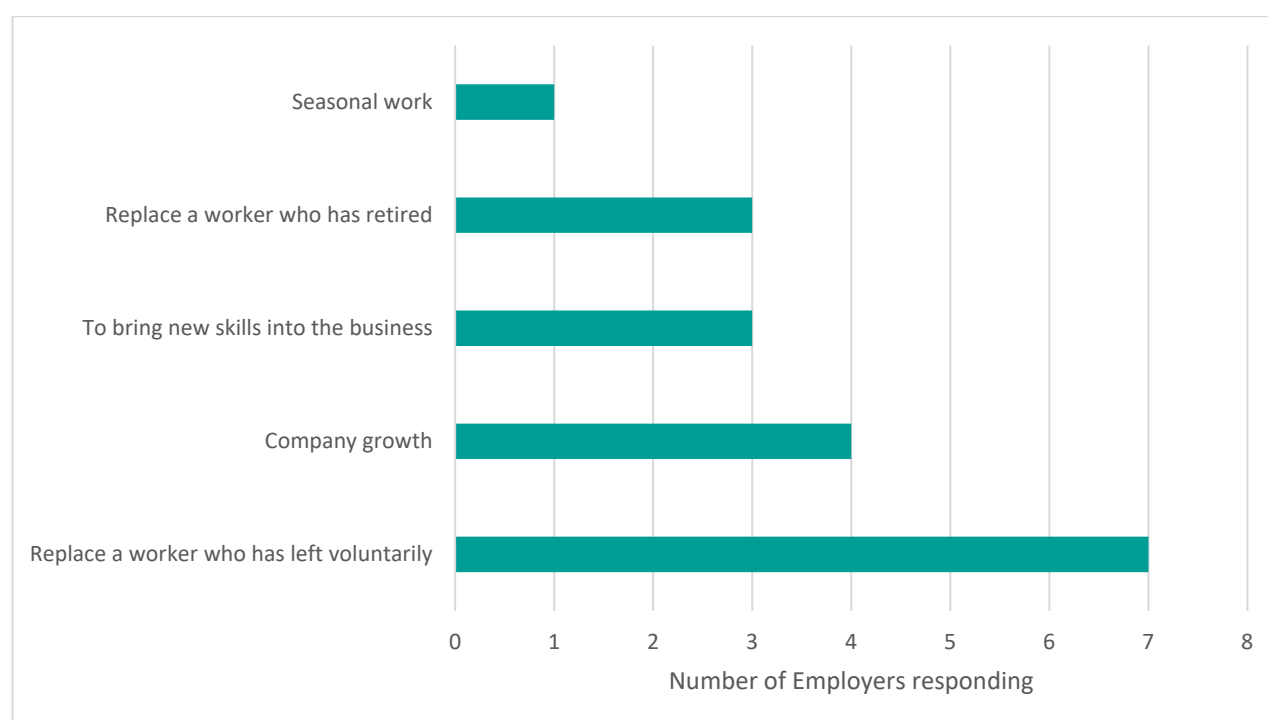
Of the survey respondents, 6 out of 10 had put on an apprentice or trainee in the past 12-months. Apprenticeships included industry specific apprenticeship like saw doctors and wood machinists as well as more general apprenticeships such as mechanics, fitters and electricians. Traineeships were mostly in Harvesting and Haulage with one in Forest Growing and Management. Although most apprenticeships and traineeships are thought of as new entrants, apprentices and/or trainees may also be existing workers.

7 Filling Gaps Externally

Part 7 looks at the challenges associated with filling gaps externally – in general, but also specifically by school leavers and people in other industries. This part also looks at the industry's perceptions of the reasons for recruitment challenges and digs into those reasons in more detail, looking at experiences in other jurisdictions, other research, and other objective data sources.

Despite the retention rates described in 6.1, and the aging workforce described in 2.4, the most common reason to employ a new worker is not to replace a worker who has retired, but to replace a worker who has left voluntarily (see Figure 35). The second most common reason for employing a new worker was for company growth.

Figure 34 What are the most common reasons that you employ a new worker?



Source: Hub interview data 2021

Respondents were also asked to rank the difficulty recruiting from 0 (least difficult) to 100 (most difficult). This question was answered by 9 out of 10 respondents. The average score for each industry sector is presented in Table 10 below, summarising the responses for the industry sector of the respondents.

Table 10 How much difficulty do you have in recruiting staff? (scored out of 100)

Industry Sector	Average
Forest growing and management	40.7
Harvesting and haulage	68.5
Sawmilling and processing	86.7
Timber manufactured products	85.0

Industry average	67.1
------------------	------

Source: Hub interview data 2021

7.1 Recruitment of Experienced Workers

Although one of the most common methods of filling a skills gap is to recruit an experienced worker from another industry, employers are faced with the additional challenge of the shortage of skilled and experienced people in the industry (see Section 5.5, Figure 30). The second greatest challenge was “*few applicants with the skills needed*”. These two issues indicate the presence of a skills shortage both within the industry and among the people applying to enter the industry. That is, there are insufficient applicants that hold the skills sought by employers.

Figure 35 What challenges do you face when recruiting workers? Select as many as you want from the list below or add other items that are not on the list.



Source: Hub interview data 2021

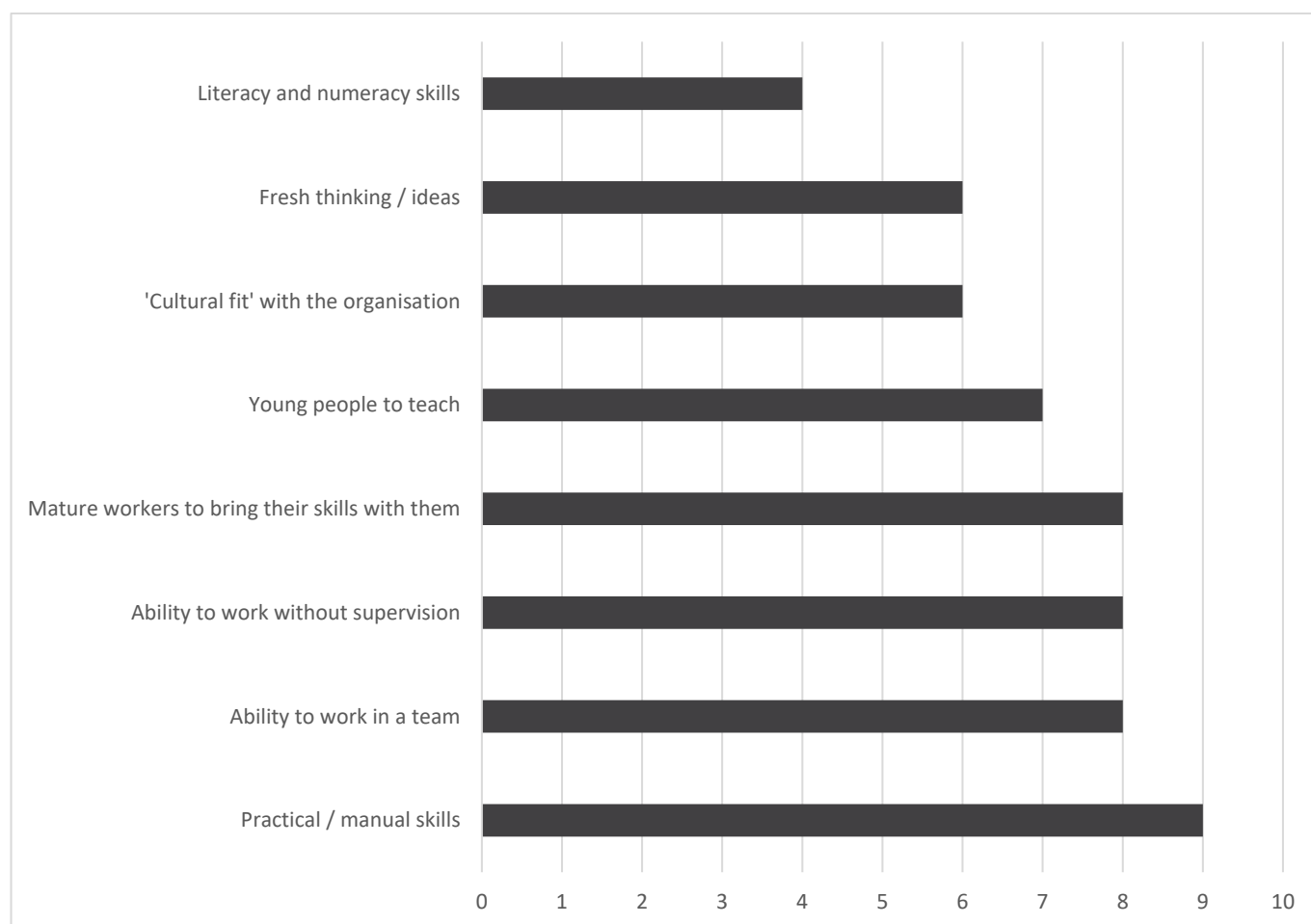
This problem reported by employers in the forest and timber industry is consistent with findings from all employers in the Central West region¹⁴. The shortage of qualified skilled and unskilled workers to fill current job vacancies is evident in industries including aged and disability care, tourism and hospitality, construction, retail, engineering and seasonal agriculture, and exacerbated by a shortage of overseas workers due to border closures in response to COVID-19 and the re-opening after lockdown.

¹⁴ Department of Education, Skills and Employment, Australian Government, <https://www.dese.gov.au/local-jobs-program/resources/central-west-local-jobs-plan>, accessed 4 February 2022.

7.1.1 Limited appropriate applicants

Respondents were provided a shortlist of attributes they were looking for when recruiting workers and given the opportunity to add attributes that were not on the shortlist. The results are presented in Figure 36 below. One employer indicated that they are seeking analytical and IT skills, another mentioned that they “*recruit for the role, so the attributes we seek are variable*”.

Figure 36 What personal attributes are you looking for, when recruiting workers? Select as many as you want from the list below or add other items that are not on the list.



Source: Hub interview data 2021

Most employers are seeking candidates with practical or manual skills. At the other end of the spectrum, literacy and numeracy skills are the attributes least sought after (this is different to saying that they are not important, but not as desirable). The other attributes sought by employers are the Ability to work in a team; Ability to work without supervision; and Mature workers to bring their skills with them. Two of these three imply personal maturity in the candidate which contribute to the larger quality of Work Readiness which includes qualities such as working as a team member, motivation, communication skills, problem solving and reliability. A more detailed definition of Work Readiness is that it is a mixture of values, behaviours and skills.

7.1.2 “People don’t like our working conditions”

Three respondents thought that recruitment difficulties might be attributable to a negative perception of our industry. However, work conducted by the Primary Industries Education Foundation Australia, *Food, Fibre and Our Future 2020*¹⁵ suggests that this may not be a significant factor. Researchers asked over 1,100 students about their knowledge and perceptions of a range of primary industries. The results showed that:

- 43 per cent of students considered that Australian forestry is renewable: harvesting of trees in productive forests is followed by replanting for the long term, and 26 per cent of students considered this to be false.
- 65 per cent considered that Forests can be managed to produce wood at the same time as protecting the environment, and only 17 per cent of students believed this statement to be false.
- When asked about forestry within the larger question ‘*how do you feel personally about the following industries involved in producing Food and Fibre in Australia?*’, 53 per cent were somewhat or very positive, 27 per cent were ambivalent, and 20 per cent were somewhat or very negative.
- The greatest influencers of the students on this topic were schoolteachers (59 per cent), media (51 per cent), family and friends (44 per cent) and social media (34 per cent).
- Only 22 per cent of school students had knowledge of the job role referred to as ‘forester’.

This indicates that there is good support for the Industry among school students even though there is low awareness of career opportunities. Closer engagement with schoolteachers can present the greatest gains in school students’ sentiment towards the Industry.

7.1.3 “Wages considered too low”

We have examined the role income might play in recruitment and retention, looking at a number of occupations where competition may exist between the Industry and other sectors of the economy. Figure 37 shows the income distribution of full-time workers in the Central West NSW Hub region.

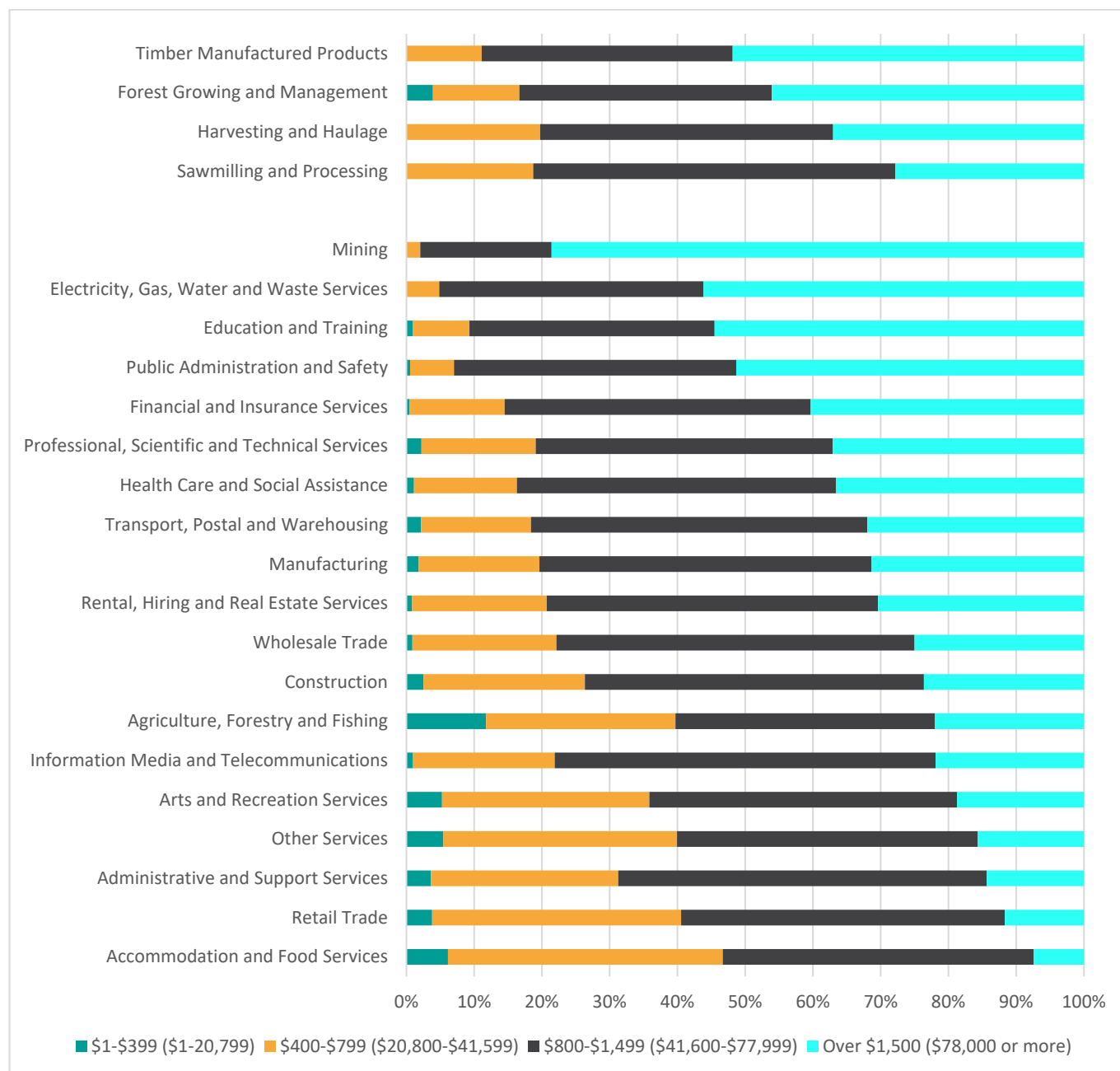
It shows that:

- the Timber Manufactured Products sector has a high proportion of workers earning more than \$78,000 per annum. This is exceeded by only three other industries in the region;
- Harvesting and Haulage, when compared to the other forest and wood products sectors, has the highest proportion of low income earners. However, this sector still compares favourably to about half the other industries in the region;
- Sawmilling and Processing has a similar earnings profile to that of Transport, Postal and Warehousing or Wholesale Trade. Workers earn more in Sawmilling and Processing than in Construction, which attracts the largest number of apprentices and trainees (see Table 12);
- Forest Growing and Management is ranked 5th in terms of having the highest proportion of those earning above \$77,999 and having the lowest proportion earning less than \$41,600.

This suggests that current rates of pay may be a relevant barrier to attracting and retaining workers in most industry sectors, with Sawmilling and Processing being the sector most exposed to this factor.

¹⁵ Primary Industries Education Foundation Australia, 2020, *Food, Fibre and Our Future 2020*.

Figure 37 Incomes by industry and forestry industry sectors (Hub region)



Source: Census of Population and Housing, 2016, TableBuilder

At a more granular level we have looked at a selection of occupations that are significant to the Industry in the Central West Hub Region. This analysis should be treated cautiously, given the age of the data, and the limitations of small sample sizes.

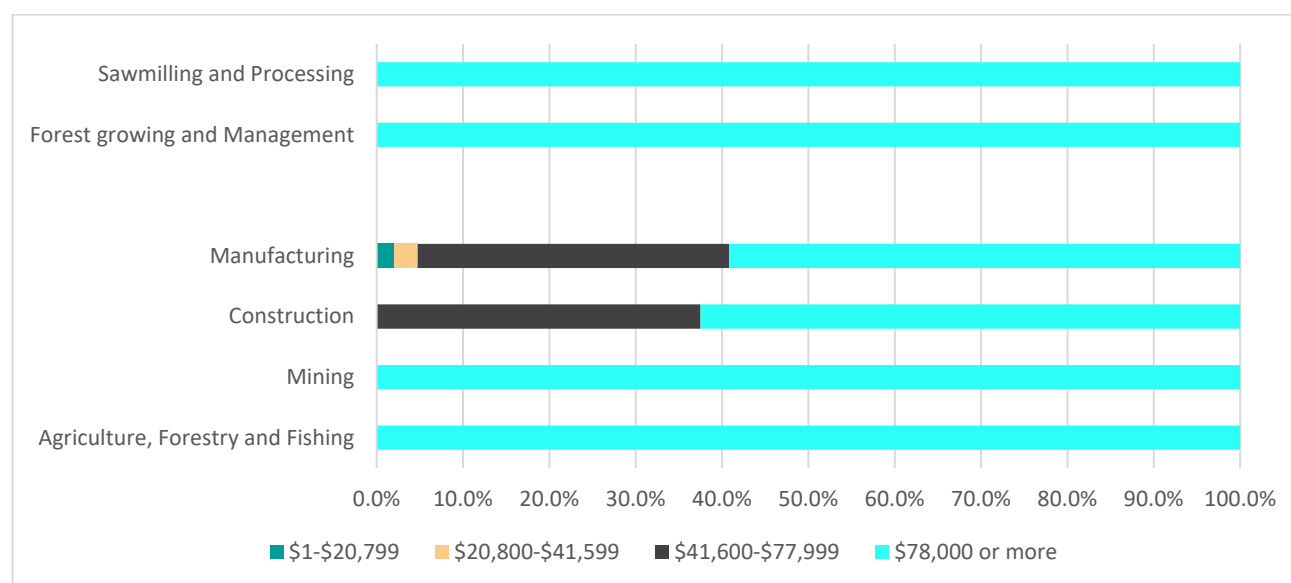
Production Managers

The largest group of Managers in the Industry which are also employed in significant proportion outside of the Industry are Managers working in the occupation *Production Managers*.

According to the 2016 ABS statistics, the industry employs 15 production managers out of 326 (3.4 per cent of the Industry workforce). Most of these work in Sawmilling and Processing and Timber Manufactured Products and are therefore counted as part of the Manufacturing Industry. The remainder work in Forest Growing and Management and would be counted as part of Agriculture, Forestry and Fishing. Significant industries employing Production Managers in the region are Manufacturing (74 per cent), Mining (11 per cent), Construction (4 per cent) and Agriculture, Forestry and Fishing (4 per cent).

As Figure 38 shows, Production Managers in the forest and wood products industry have earnings that are comparable to other industries in the same region.

Figure 38 Income, Production Managers by industry

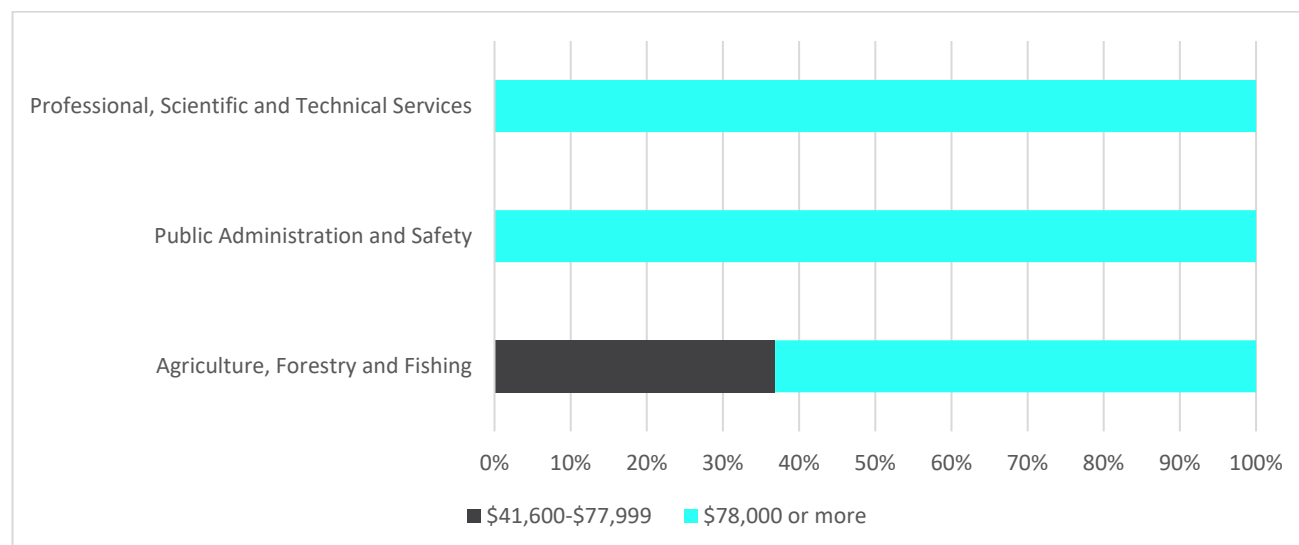


Source: Census of Population and Housing, 2016, TableBuilder

Agricultural and Forestry Scientists

The largest group of professionals in the Industry which are also employed in significant proportion outside of the Industry are *Agricultural and Forestry Scientists*. Forest Growing and Management employs 19 people in this occupation, out of 38 in the region (50 per cent). Other significant employing industries are Public Administration and Safety (37 per cent) and Professional, Scientific and Technical Services (13 per cent). As Figure 39 shows, while the Agricultural, Forestry and Fishing industry may be more competitive compared to Public Administration, there are still significant opportunities to earn more in other industries.

Figure 39 Income, Agricultural and Forestry Scientists by industry



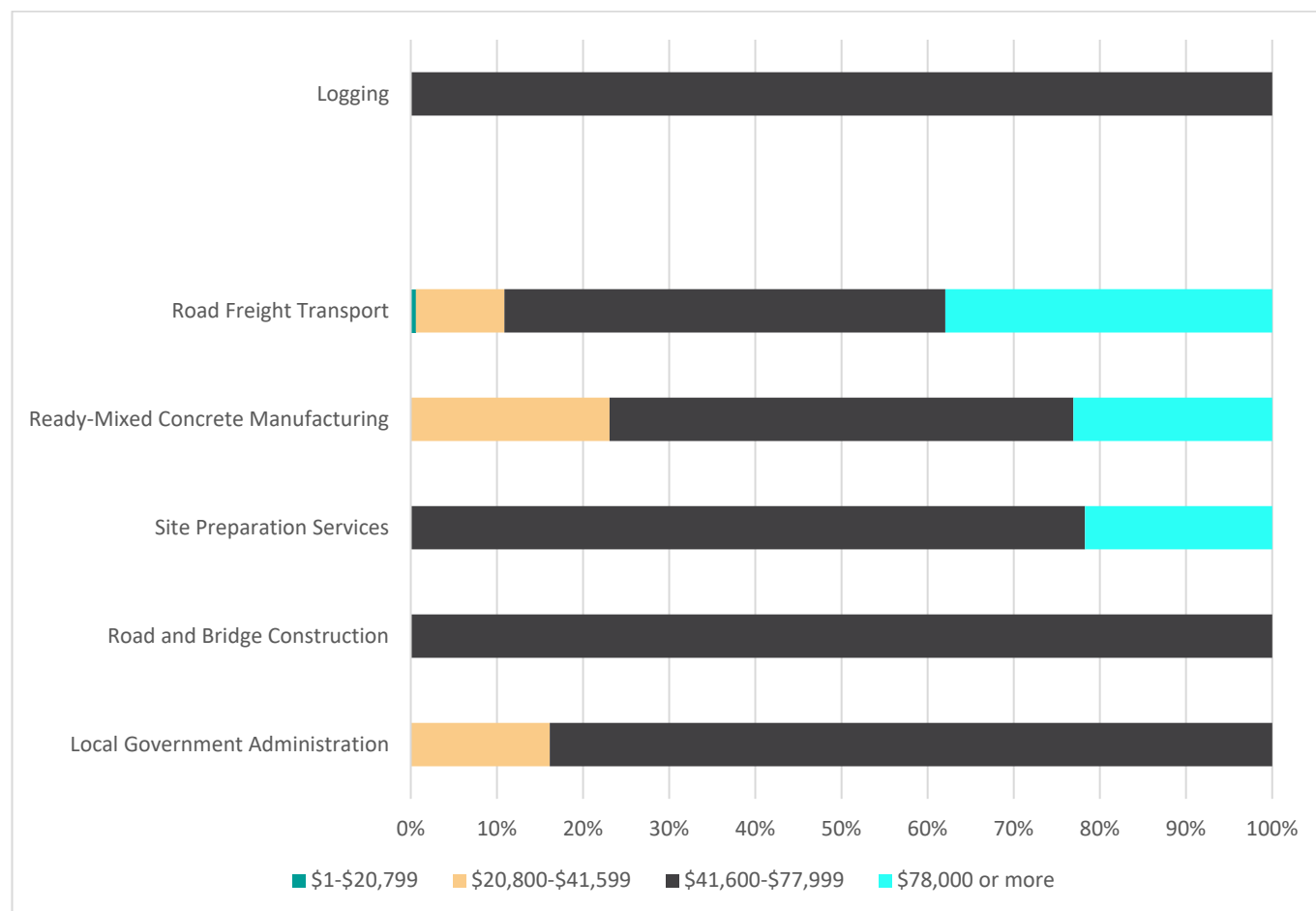
Source: Census of Population and Housing, 2016, TableBuilder

Truck Drivers

The largest group of Machinery Operators and Drivers in the Industry which are also employed in significant proportion outside of the Industry are people working in the occupation *Truck Drivers*.

Harvesting and Haulage employs 11 people in this occupation, and all other industries in the region employing 815. Significant employing industries in the region are Road Freight Transport (62.1 per cent of truck drivers in the region), Local Government Administration (7.6 per cent), Ready-Mixed Concrete Manufacturing (3.2 per cent), Site Preparation Services (2.8 per cent) and Road and Bridge Construction (2.7 per cent). As Figure 40 shows, the Industry may not be offering competitive wages compared to opportunities in other industries in the region.

Figure 40 Income, Truck Drivers by industry

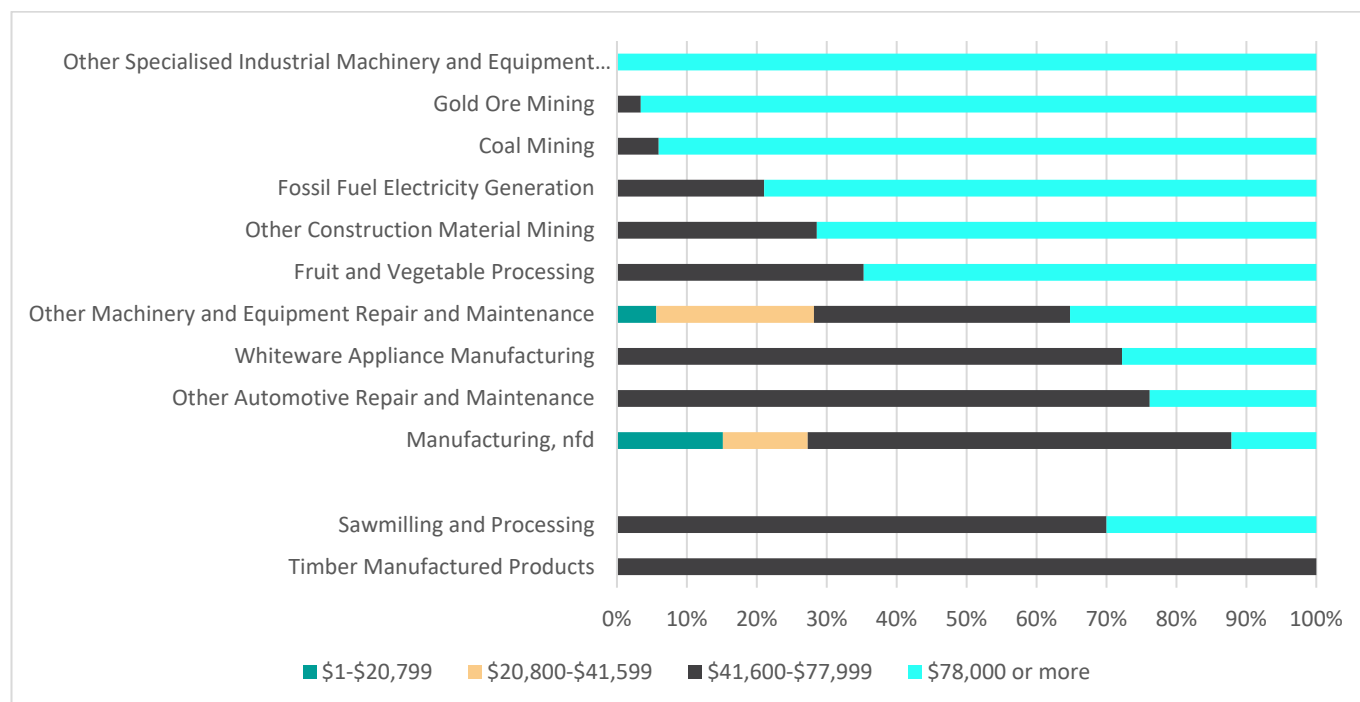


Source: Census of Population and Housing, 2016, TableBuilder

Metal Fitters and Machinists

There are 13 Metal Fitters and Machinists working in the Industry, mainly in Sawmilling and Processing (part of the Manufacturing industry, statistically). There are 544 Metal Fitters and Machinists working in all industries and sectors in the Central West NSW Hub region: Gold Ore Mining (16 per cent of all Metal Fitters in the region), Other Machinery and Equipment Repair and Maintenance (13 per cent), Coal Mining (12 per cent), Manufacturing (no further distinction) (6 per cent), and Wholesale Trade (5 per cent). Figure 41 shows that higher incomes may be available in significant competing industries in the same region.

Figure 41 Income, Metal Fitters and Machinists by industry



Source: Census of Population and Housing, 2016, TableBuilder

Product Quality Controllers

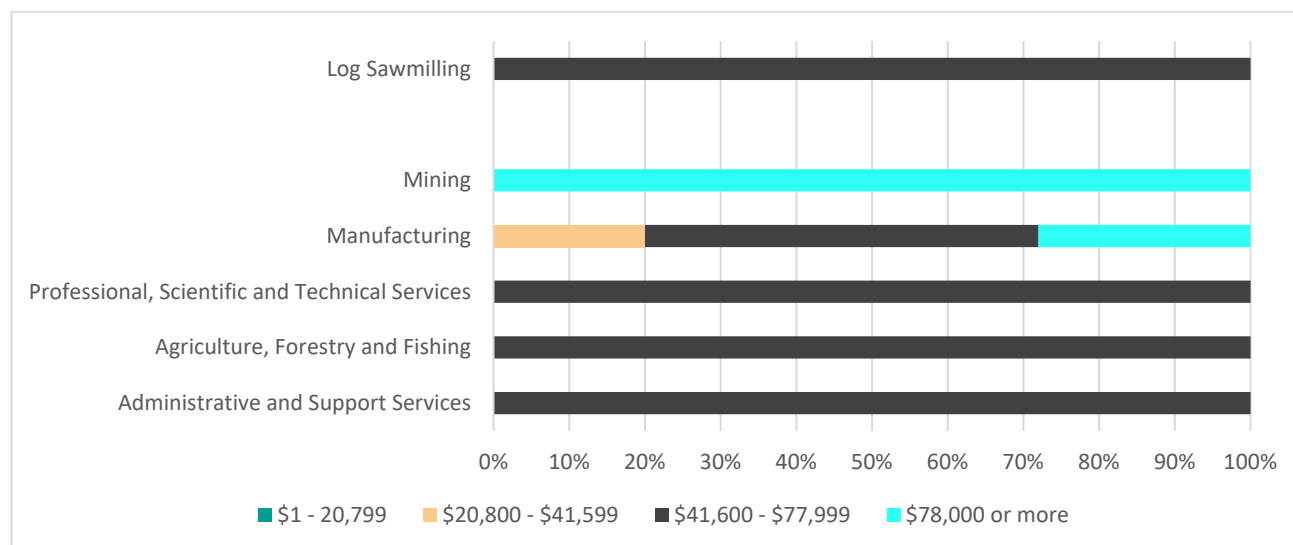
The Labourers in the forest and wood products industry in the region are represented in the occupations of:

- Timber and Wood Process Workers;
- Forestry and Logging Workers;
- Product Quality Controllers; and
- Other Farm, Forestry and Garden Workers.

ABS employment statistics indicate that there are 41 people working full-time as Product Quality Controllers, of which either 3 or 8 are employed in the forest and wood products industry. The disparity is due to data being collected from analysis of either income or industry of employment, and low reliability being placed on small cells.

The income distribution of Product Quality Controllers is presented in Figure 42 below. It indicates that Product Quality Controllers can earn more in Mining or Manufacturing, but a comparable income in other industries.

Figure 42 Income, Product Quality Controllers



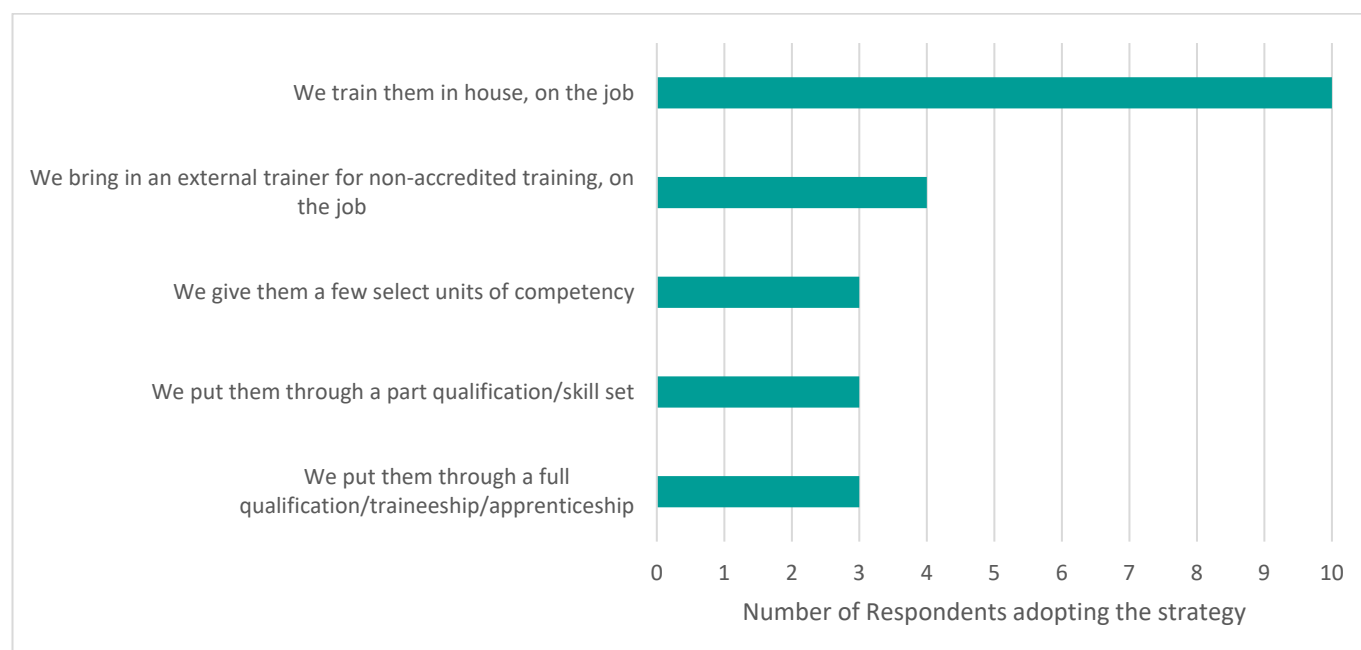
Source: Census of Population and Housing, 2016, TableBuilder

In summary, perceptions of the forest and wood products industry are generally positive. Wages within the industry are evidently higher compared to other industries in the region. The labour and skills shortage within the Central West forestry industry is shared by all industries in the region. The industry is well positioned to attract skilled workers if there is ever a successful program to promote regional migration.

7.2 Training provided to new entrants

All employers train their new recruits. Employers were asked which strategies they adopted for this training. Respondents were provided a shortlist of strategies that they could potentially adopt and given the opportunity to provide additional comment. The results are presented below in Figure 41. Two employers mentioned company induction training, followed by any training required for compliance reasons and then to address high-risk activities such as front-line firefighting, four-wheel driving and first aid.

Figure 43 What training do you provide to new workers?



Source: Hub interview data 2021

Some of the observations from the responses provided are:

- Most of the training provided to new recruits was on the job training by an internal trainer.
- Only 4 out of 10 businesses provided non-accredited training to new workers using an external trainer.
- There was an equal (low) emphasis placed on a few select units of competency, part qualifications or skill sets, and full qualifications.
- Only three businesses indicated they provided a full qualification or apprenticeship or traineeship: two from Sawmilling and Processing company and one from Harvesting and Haulage.

The net effect of the collective approach is that formal, transferable skills are not being fostered in the region. This is a direct contribution to the issue identified in Section 7.1, Figure 35. The availability of relevant training and a discussion of the barriers to training will be provided in the following chapter.

7.3 Other Perspectives on Recruitment Challenges

The Industry in Australia has been grappling with the same recruitment challenges as around the world. Attachment One details the approach and strategy in several other jurisdictions. In summary:

The forest industry plans of Scotland¹⁶, England and Wales¹⁷, New Zealand¹⁸ Maine, USA¹⁹ and South Australia²⁰ were reviewed. Several common barriers to recruitment were identified, in particular:

- The lack of knowledge of the sector leads to potential new recruits choosing other career paths. Forest industries in Tasmania, New Zealand and Scotland observed that they are facing the same attraction problems as other primary industries which are often competing for the same people who tend to move across sectors. A shared approach to attraction would be more efficient across either this sector or the primary industries in general.
 - Several jurisdictions are seeking to counter this by taking actions to establish forestry education programming in primary and secondary schools (Maine, England and Wales, Scotland)
- The perception of forest industries as being hard physical and potentially dangerous work as well as not technologically advanced or innovative, with little scope for promotion and reward. This negative perception was found to be having an impact on sector's ability to recruit young staff, supervisory and management roles. It also affects recruitment from sections of the community who were not currently well represented in the forestry workforce (England and Wales, Tasmania). Scotland is working to raise the perception of the sector among young people and their key influencers, celebrating and raising awareness of our sectors positive impact on climate change.
- The capacity for small business owners to supervise apprentices. Owner/operators do not have a great deal of time available to focus on the needs of apprentices or trainees and to undertake the requirements of the accredited training system. Furthermore, there is limited scope to take on full time permanent positions (England and Wales; Tasmania).
- The cost and availability of housing in the South East of England was cited as a barrier to businesses and organisations being able to employ forestry staff, given the relatively low level of wages in the sector (England and Wales). This may have parallels with the study region, given the change in the demographics due to 'Covid migration' in the past year and the rapid escalation of rental payments and low availability of rental properties.
- In Tasmania, low retention rates of high school students to Year 12 constrain the capacity to train, and therefore recruit, local staff for positions that require higher levels of literacy and numeracy.
- Tasmania also reported the following recruitment barriers:
 - the reluctance of workers to work in remote regional areas;
 - mobilising entry level labour in laborious roles for low wages;
 - the lack of social licence for forest industries; and
 - the lack of certainty about the future of the native-forest dependent industry.

¹⁶ *Skills Action Plan 2020*, Scottish Forest & Timber Technologies,

¹⁷ *Forestry Skills Plan 2019-2024* (2019), Forestry Skills Forum: A plan for England and Wales,

¹⁸ *Forestry and Wood Processing Workforce Action Plan 2020 – 2024*, Forestry New Zealand (The Forestry and Wood Processing Workforce Action Plan Working Group) 2020.

¹⁹ *Forest Opportunity Roadmap / Maine*, 2018, For/Maine.

²⁰ *Blueprint for the future South Australian forest and wood products industry (2014-2040)* 2014, South Australian Forest Industry Advisory Board.

8 The Approach to Training in the Central West Region

8.1 Barriers to Training

The employers were asked to identify which barriers to building skills via training applied to their businesses. The results across all occupation groupings are presented in Figure 44.

Figure 44 What barriers are there to training?



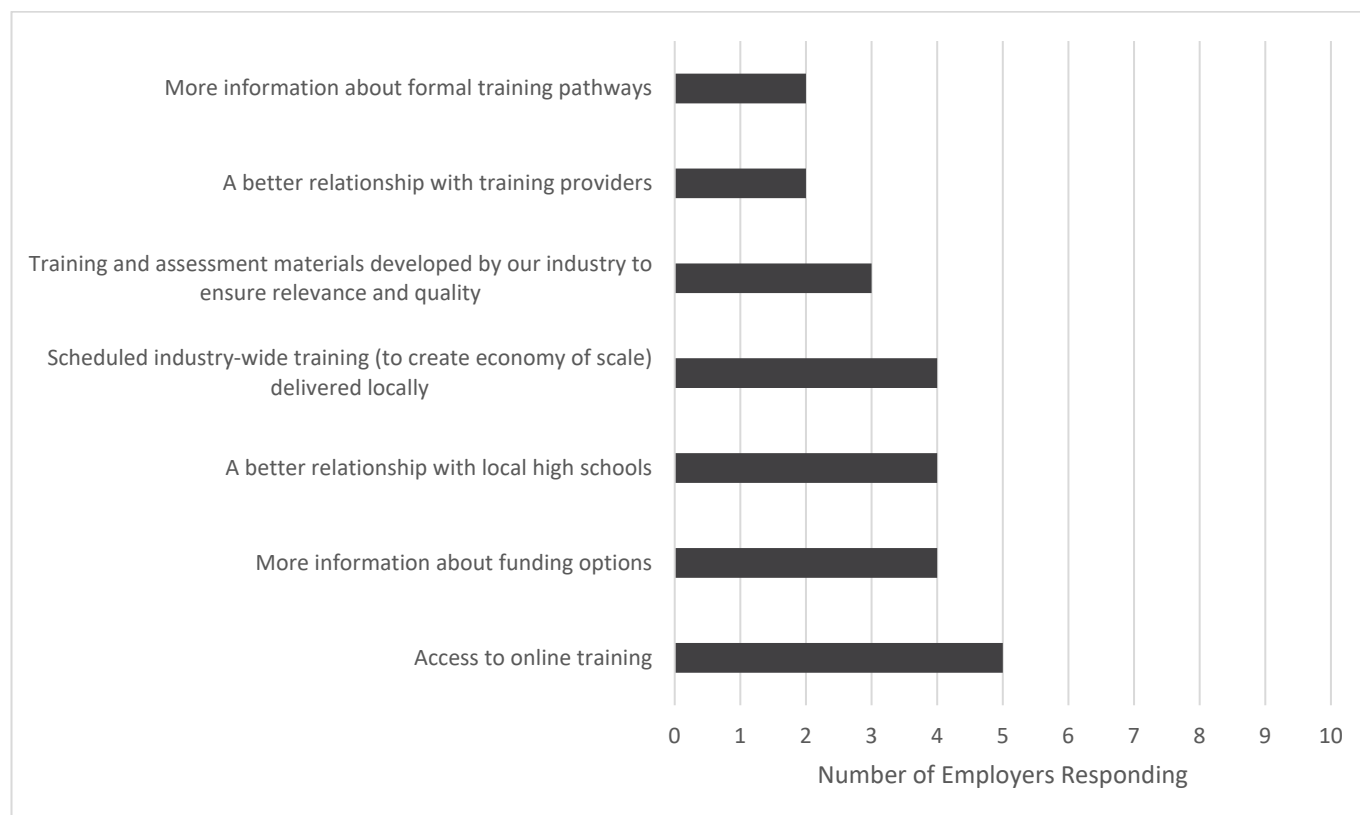
Source: Hub interview data 2021

A number of these barriers are related to each other. The financial cost of training is related to the time commitment of training, the shortage of suitable trainers and the subsequent need to send learners to another town where the training centre is located. Travel increases the cost of downtime to attend training and compounds the cost to the employer particularly if the learner is part of team that cannot meet production targets because a critical member is absent. However, employers also reported that the training that is available does not meet their needs.

8.2 Industry-Identified Barriers to Training

Survey participants were provided with a list of potential methods to overcome the barriers to training for each occupation group.

Figure 45 What would remove or reduce these barriers to training, skills or education?



Source: Hub interview data 2021

Employers can obtain further information about formal training pathways, funding options and training providers through the network of NSW Industry Training Advisory Bodies (ITABs). Other barriers will be discussed in later sections of this report.

Respondents reported the significance of the “training available does not meet my needs”. This could be resolved by awareness raising of training options; communicating training needs to training providers; and developing training materials to address the need. However, these options were the least commonly reported options (see Figure 46).

8.3 Accessing Accredited Training in NSW

An employer considering skills development of their employees has several options available to them:

- **Enrolling learners into a Part Qualification**

This option provides accredited, nationally recognised training in subjects of immediate interest and value to both the learner and the employer, without the need to enter a full qualification or a full training contract. Some part qualifications can be subsidised under Smart and Skilled at the discretion of the Training Services NSW regional office.

An employer that is considering a part qualification should first contact either their local office of Training Services NSW or a registered training organisation with the authority to deliver the accredited training. They will be able to determine the appropriate training for the job roles and advise on funding arrangements from state and federal governments.

- **Full Qualification training**

This option applies to learners enrolled in a full qualification in a nationally recognised training package. It is conducted without being formally linked to employment. If it is linked to employment, then it can be delivered as an apprenticeship or traineeship.

- **Enrolling employees into accredited apprenticeships or traineeships.**

This provides the highest standard of training quality. The employer, the learner, the training provider and the NSW Government (through Training Services NSW) will enter into a training contract; the learner will be enrolled into a full qualification; training fees will be subsidised under the Smart and Skilled program and training quality will be monitored by the NSW Government.

An employer that is considering taking on an apprentice or trainee should first contact a local Group Training Organisation (GTO) who can advise them on employment conditions, the most suitable qualification and training provider, and the most recent advice on state and federal funding arrangements and programs.

- **Fee for Service Training**

This mode of training is a private arrangement between the training provider and the employer and learner. It offers the maximum flexibility in the design and delivery of training. The stakeholders can design the training plan to incorporate accredited or non-accredited topics; and the training provider can be a Registered Training Provider or not. All training fees are paid by the employer or learner without NSW Government involvement.

An employer that is considering this mode of training can contact the training provider directly to negotiate a training plan, lessons, and training fees.

8.3.1 Part Qualifications

An alternative to training as apprenticeships and traineeships, and even to full qualifications, is training as Part-Qualifications or Skill Sets. These are programmes of training to a set of nationally accredited Units that are much smaller and flexible compared to full qualifications. Funding for part qualifications may be available under Smart and Skilled: further advice on this can be provided by a regional office of Training Services NSW. Part qualifications and skill sets are suited to:

- Targeted, specific training for existing employees to acquire skills for their job role;
- To meet minimum competency requirements for a job role. For example, the *Skill set for a plantation forest operator*, made up of just 4 units of competency;
- Pre-apprenticeships, to gain basic skills for a worker prior to commencing a full apprenticeship.

8.3.2 Full Qualifications

There are 19 nationally recognised qualifications specifically developed for the Industry in the Forest and Wood Products training package. According to training.gov.au, there are about 21 Registered Training Providers (RTOs) that carry at least one FWP qualification on their scope of registration. Not all these RTOs are active in NSW, even though NSW has the largest forestry industries and therefore has the largest training market.

The VET qualifications that are specialised for the Forest and Wood Products industry are delivered by a relatively small number of training providers (refer to Attachment Three for a list of qualifications and providers broken down by industry sector).

The scheme to provide subsidies for vocational education and training as apprenticeships and traineeships in NSW is known as Smart and Skilled. Only 5 RTOs have been endorsed by the NSW Government to deliver

apprenticeships and traineeships under Smart and Skilled in respect of the FWP Training Package. This is noted in Attachment Three.

8.3.3 Apprenticeships and Traineeships

Apprenticeships and traineeships involve a combination of on-the-job training and formal education. Apprenticeships are generally available in traditional skilled trades whereas traineeships are offered across many vocations.

The two apprenticeships in the FWP training package are Saw Technicians and Wood Machinists. Both these qualifications require the learner to complete nationally accredited Certificate III training. All qualifications in the FWP Training Package are available as traineeships, however thin markets, regional locations, and difficulty in attracting young people to the Industry are all factors inhibiting the uptake of these traineeships.²¹

Over 108,000 people are currently undertaking an apprenticeship or traineeship in NSW (as of 1 November 2021²²). Of these, the Hub region of Western NSW accounts for about 6,000 places.

There are just 79 apprentices and trainees associated with specialised Forest and Wood Products qualifications in NSW. This is a tiny fraction (0.07 per cent) of all apprenticeships and traineeships in the state. These placements are in both the hardwood and softwood industries and include all industry sectors including the timber truss and frame sector. The number in the Forest and Wood products Industry from Western NSW, which encompasses the Hub region and further west to the South Australian border, is 9.

Table 11 Numbers of Registered apprentices and trainees in all industries in NSW

Industry	Apprenticeship	Existing Worker Traineeship	New Entrant Traineeship	Grand Total
Building and Construction	22,208	169	991	23,368
Utilities and Electrotechnology	14,397	1	187	14,585
Community Services and Health		1,228	10,106	11,334
Automotive	9,918	17	306	10,241
Finance, Insurance and Business Services		2,380	7,754	10,134
Retail and Wholesale	2,928	448	3,476	6,852
Manufacturing Engineering	6,242	128	259	6,629
Tourism	2,162	378	2,758	5,298
Property Services		559	3,731	4,290

²¹ Skills Impact, FWP, *Annual Update to Industry Skills Forecast and Proposed Schedule of Work 2021*, p.24 available at

²² Training Services NSW Apprenticeship and Traineeship data, accessed 2 November 2021

<https://public.tableau.com/profile/business.reporting#!/vizhome/ATTrainingContractsIntraininganalysis/InTrainingbyGender>

Industry	Apprenticeship	Existing Worker Traineeship	New Entrant Traineeship	Grand Total
Transport and Distribution		412	3,717	4,129
Primary Industry	2,492	167	1,194	3,853
Furnishing, Light Manufacturing, Textile	2,311		121	2,432
Food Industry	1,219	537	482	2,238
Information Technology	826	71	391	1,288
Mining		22	569	591
Process Manufacturing	18	83	423	524
Sport and Recreation		9	264	273
Racing	35	6	220	261
Public Sector Industry		8	231	239
Communications	119		9	128
Forest Industry	18	10	51	79
Arts and Entertainment		1	50	51
Corrective Services			16	16
Grand Total	64,893	6,634	37,306	108,833

Source: Training Services NSW Apprenticeship and Traineeship Statistics, November 2021

Training Services NSW has reported the numbers and age distribution of all registered apprenticeships and traineeships, in full-time, part-time and school-based training, in Western NSW. The results are presented in Table 12 below. The region makes up about 6 per cent of NSW apprentices and trainees. Around 14 per cent of the learners in the region are Aboriginal and Torres Strait Islander.

Apprentices may have to attend the RTO campus for training. Due to the small number of RTOs delivering Saw Technology and Woodmachining, this could mean leaving their home to stay in Creswick, Victoria or Tumut, NSW for about a week at a time. This can be challenging for young people with little life experience or transport options or workers with family commitments.

The age class distribution of all apprentices and trainees is quite broad. Understandably, the majority (68 per cent) are aged 25 or below. However, almost one third are aged over 26 (see Table 12).

Table 12 Age class distribution of registered apprentices and trainees in the Western NSW region²³.

Training Type	19 and under	20 - 25	26 - 45	46 - 60	Over 60	Grand Total
Apprenticeship	1,322	1,454	801	110	7	3,694
Existing Worker Traineeship	16	60	168	48	3	295
New Entrant Traineeship	617	536	612	148	16	1,929
Grand Total	1,955	2,050	1,581	306	26	5,918

Source: Training Services NSW Apprenticeship and Traineeship Statistics, 2021 (Accessed 2 November 2021)

8.3.4 Group Training Organisations (GTOs)

A GTO is the direct employer of apprentices and trainees, who then places the learner with a host employer. The learner attends the workplace of the host employer whilst receiving on-the-job training for their apprenticeship or traineeship from their workplace mentor as well as being enrolled in a VET qualification. GTOs may be registered or un-registered, operate for profit or not-for-profit. They may also be labour hire companies. Some GTOs are also RTOs or they may only be the direct employer of the learner and then work with a separate RTO for the VET component of the apprenticeship/traineeship.

GTOs support the apprenticeship and traineeship system in Australia by providing opportunities for employers who can't support an apprentice or trainee for the full term of an apprenticeship or traineeship, or think it is too administratively cumbersome, to still take on an apprentice or trainee. They can also provide employment opportunities for apprenticeships and traineeships that otherwise might not have existed.

8.3.5 School Based Apprenticeships and Traineeships

There are several accredited VET qualifications that are available to students as they complete the final years of their schooling and are considering their career options. Naturally, a school-leaver with a formal Certificate has an

²³ NSW Department of Education Training Services NSW, *NSW Apprenticeships and Traineeships in Training*, accessed 2 November 2021.

interest in building on their qualification in the years following their schooling. They may choose to continue with a full-time apprenticeship or traineeship that builds on the training that they have just completed.

School-based apprenticeships and traineeships (SBATs) allow school students to commence an apprenticeship or complete a traineeship while still at school²⁴. They are a combination of paid employment, schoolwork and vocational education and training that leads towards an industry recognised national qualification. SBATs are available to all Year 10, 11 and 12 high school students in NSW. SBATs are regulated, overseen and supported by Training Services NSW.

The VET component of the SBAT is generally delivered by a registered training organisation such as TAFE NSW. This component of the education generally contributes 4 units towards the Higher School Certificate (HSC).

The benefits of SBATs are that they provide a pathway from school into paid employment; learners obtain workplace skills that are required by employers; contribute towards a nationally recognised qualification; and expose the students to the range of career opportunities within the Industry.

The following forest and wood products qualifications are currently listed as being suitable for school-based delivery:

- FWP20116 Certificate II in Forest Growing and Management
- FWP20216 Certificate II in Harvesting and Haulage
- FWP20316 Certificate II in Sawmilling and Processing
- FWP20516 Certificate II in Timber Manufactured Products

In NSW, since January 2020, there have been around 2,500 students register for a school-based apprenticeship or traineeship. The breakdown by region and industry is presented below in Table 14.

The trends in this table indicate some positive points:

1. There is a significant number of students that have an interest in taking up a trade while still at school.
2. The update of VET and trades is supported by the NSW Government.
3. Although the industries that take on most VET students do not have many transferable skills with the forest and wood products sector, there are still significant numbers of students in Building and Construction; Transport and Distribution; Primary Industries; Utilities and Electrotechnology; Automotive; Manufacturing Engineering; Furnishing, and Light Manufacturing and Textiles; than could potentially enter the forest and wood products industry.
4. Western NSW has about 7 per cent of NSW school-based apprentices and trainees (outside of the Sydney metropolitan regions).

Table 14 shows that, since January 2021, there has been 1 school-based apprenticeship in Forest and Wood Products qualifications in NSW²⁵. There has been no delivery of school-based training in Forest and Wood

²⁴ NSW Department of Education Training Services NSW, https://www.training.nsw.gov.au/apprenticeships_traineeships/policy/policy_procedures/school_based_app_tr.html, accessed 26 November 2021.

²⁵ NSW Department of Education Training Services NSW, *NSW Apprenticeship and Traineeship Approvals – School Based*, accessed 2 November 2021.

Products in the Hub region to date. Although there is an administrative, regulatory and funding framework in place to deliver school-based traineeships in NSW, it is effectively dormant.

Table 13 Commencements in school-based apprenticeships and traineeships in NSW, by region and industry (NSW Department of Education).

Industry	Hunter & Central Coast	Western Sydney & Blue Mountains	Southern & South Western Sydney	Illawarra & South East NSW	North Coast & Mid North Coast	Central & Northern Sydney	New England	Western NSW	Riverina	Total
Retail and Wholesale	114	215	124	82	36	73	22	19	11	696
Community Services and Health	160	30	7	47	56	6	44	48	35	433
Building and Construction	23	47	57	28	30	63	14	15	9	286
Finance, Insurance and Business Services	39	26	23	20	23	11	18	22	14	196
Primary Industry	8	5	3	27	21	3	25	18	18	128
Automotive	10	21	30	8	12	6	22	10	5	124
Utilities and Electrotechnology	13	19	20	9	2	18	6	6	2	95
Tourism	11	5	13	8	21	4	7	9	4	82
Transport and Distribution	12	15	14	9	10	7	3	4	3	77
Sport and Recreation	10	5	32	5	4	4	1	3	1	65
Manufacturing Engineering	5	3	5	3	5		2	2	4	29
Property Services	3	4	4	1	6	1	1	2		22
Furnishing, Light Manufacturing, Textile	1	3	7	3	1	1			2	18
Food Industry	2		1	3	3	1	3	1	1	15
Information Technology	5			3	2		1	2		13
Process Manufacturing				8						8
Racing				2	3				1	6
Arts and Entertainment	1	2	1							4
Forest Industry				1						1
Grand Total	417	400	341	267	235	198	169	161	110	2,298

Source: Training Services NSW Apprenticeship and Traineeship Statistics, 2021

8.3.6 School – Forest Learning and Secondary Education

The Australian Forest Education Alliance (AFEA) is a network of forest educators and forestry communication specialists from organisations such as

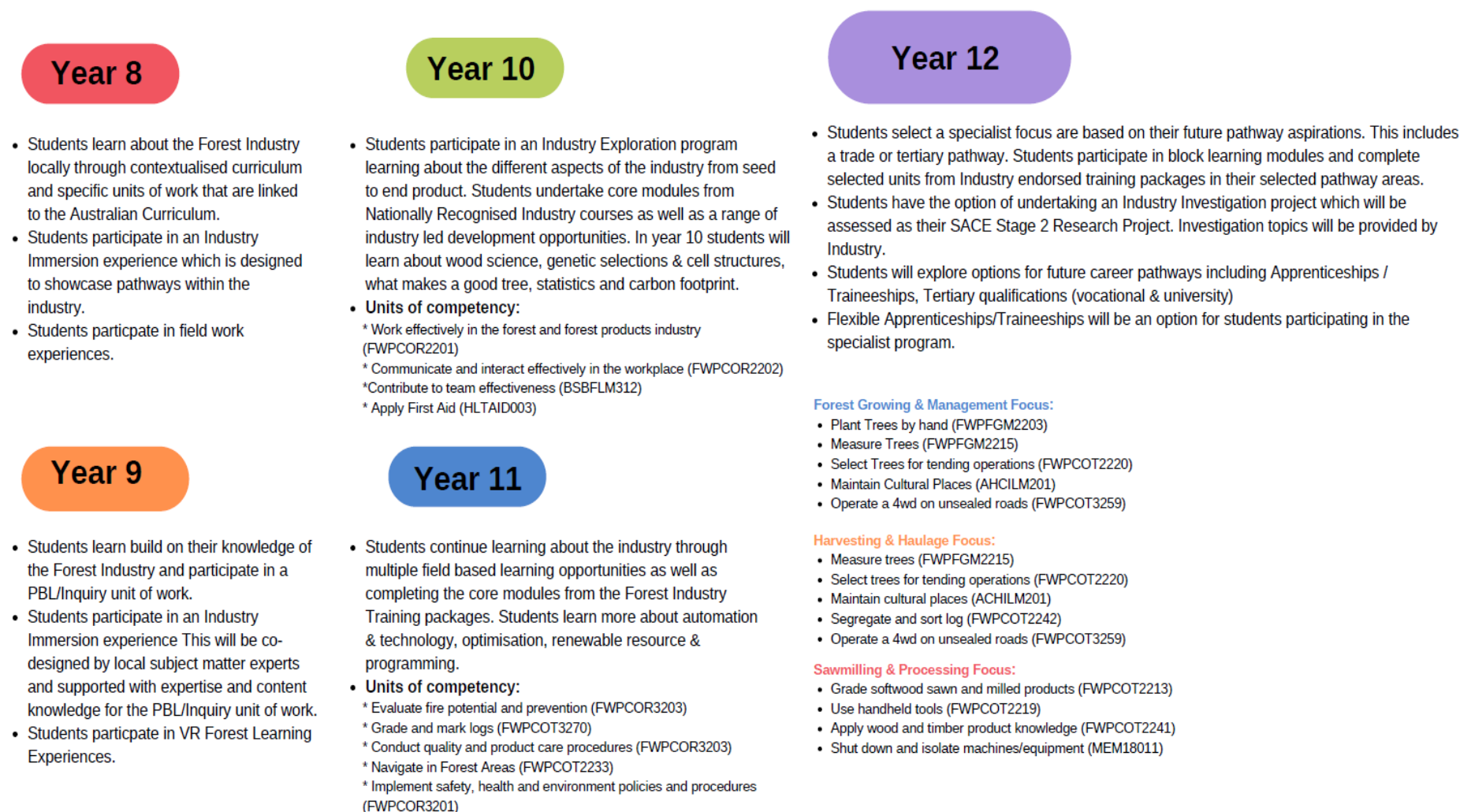
- Australian Forest Products Association
- Forestry Corporation of New South Wales
- Forest Education Foundation, Tasmania
- Forest Products Commission, Western Australia
- Forest and Wood Products Australia Limited
- Primary Industries and Regions, South Australia
- Sustainable Forestry Program, Southern Cross University, NSW
- VicForests, Victoria

AFEA maintains the Forest Learning website (forestlearning.edu.au) to provide schoolteachers, school students and the public with educational resources on Australian forests and forest-based products and services. It also provides access to forestry teaching resources.

AFEA collaborates with the Australian Curriculum, Assessment and Reporting Authority (ACARA) to support the delivery of their forestry educational resources in against the state school syllabi. These resources are provided free of charge.

Forest Learning has collaborated with the forest industry in the Green Triangle to build a learning pathway for school students entering their Industry. Students are introduced to forest science, wood science, forest management practices and technological advances. A summary of the program is supplied in Figure 44 below.

Figure 46 Pathway to a career in the forest and timber industry



Source: Forest Learning, The Ultimate Renewable Pathway Program

Last updated: 8/02/2022

8.4 Government Support for Training

The three tiers of government in Australia offer support for training and skills development.

The Australian Government, through the Department of Education, Skills and Employment (DESE), operates the Local Jobs Program that “... brings together expertise, resources and access to funding at the local level to support job seekers and their communities in each region. The program has a particular focus on reskilling, upskilling and employment pathways and is part of supporting Australia’s economic recovery from the COVID-19 pandemic”²⁶.

The Central West Local Jobs Program is the relevant program for the study region provides an Employment Facilitator, Local Jobs and Skills Taskforce, and Local Jobs plan for the region²⁷.

The NSW State Government operates Training Services NSW (TSNSW) as a division of the NSW Department of Education. The functions of TSNSW include:

- leading strategic policy, planning, funding, regulation and advice on VET;
- the implementation of funded programs, including Smart and Skilled, apprenticeships and traineeships and adult and community education. This includes
 - the Regional Industry Education Partnerships (RIEP) program which strengthens connections between local industry and secondary schools to support students in planning their career pathways;
 - Skills Brokers that assist employers to local new staff that are ready to fill roles, find ways to upskill existing staff that have been stood down or are at risk of being stood down or facing retrenchment.
- undertaking contract management of approved Smart and Skilled training providers and implementing quality assurance and performance monitoring to achieve the best possible outcomes for students;
- managing several initiatives to support the training and employment of Aboriginal and Torres Strait Islander people.

The NSW State Government has also assisted local councils to develop Regional Economic Development Strategies (REDS) to guide government investment in development initiatives in regional NSW. All these REDS recognised forestry as a significant industry within the region, and almost all of them include strategic priorities to grow the forestry and timber industries as they are “Engines of Growth”²⁸.

8.4.1 Smart and Skilled

Smart and Skilled provides eligible students with:

- an entitlement to government-subsidised training up to and including Certificate III
- government funding for higher-level courses (Certificate IV and above) in targeted priority areas.

²⁶ Department of Education, Skills and Employment, Australian Government, <https://www.dese.gov.au/local-jobs-program>, accessed 22 July 2021.

²⁷ Department of Education, Skills and Employment, Australian Government, <https://www.dese.gov.au/local-jobs-program/resources/central-west-local-jobs-plan>, accessed 4 February 2022.

²⁸ NSW Government, Regional Economic Development Strategies <https://www.nsw.gov.au/regional-nsw/regional-economic-development-strategies>, accessed 22 July 2021.

The NSW Skills List covers the subsidised qualifications, from Certificate II to Advanced Diploma, selected Foundation Skills courses, all apprenticeships and traineeship and all the qualifications where their units can be selected for part qualifications. Qualifications on the Skills List are those that will lead to jobs and further career options. There are about 700 qualifications on the NSW Skills List.

To be eligible for Smart and Skilled training you must:

- Be an Australian citizen, permanent resident, humanitarian visa holder or New Zealand citizen
- Be aged 15 years or older
- Live or work in NSW, and
- No longer be at school.

8.4.2 Training Services NSW Aboriginal Initiatives

The NSW Department of Education is committed to improving the vocational outcomes and wellbeing of Aboriginal and Torres Strait Islander people so that they excel and achieve in every aspect of their education and training.

In line with this policy, Training Services NSW has created the Aboriginal Initiatives unit to manage several programs. These programs focus on providing workplace mentoring, improving access to employment and training and creating business opportunities for Aboriginal and Torres Strait Islander people.

- **Barrangirra: Skilling for Employment Initiative.** This initiative consolidates the long-standing “The Way Ahead for Aboriginal People” and “New Careers for Aboriginal People” programs to strengthen the end to end support for Aboriginal and Torres Strait Islander learners. This includes culturally appropriate mentoring, improved post-training outcomes and building stronger links for Aboriginal people with current opportunities for employment and training flowing from broader Department and Government priorities for Aboriginal participation in the NSW workforce and in major projects.
- **Aboriginal Business Advisory Initiative.** This initiative support for existing Aboriginal owned and operated businesses to grow and diversify their business.

- **Bert Evans Apprentice Scholarships**

https://www.training.nsw.gov.au/apprenticeships_traineeships/students/bert_evans_scholarships.html

The Bert Evans Apprentice Scholarships were first launched in 2014 to assist apprentices who have experienced hardship in their life to successfully complete their apprenticeship. The Bert Evans Apprentice Scholarships assist apprentices in NSW who have demonstrated:

- hardship in their personal circumstances;
- aptitude for vocational education and training to lead to successful completion of their trade training; and
- a positive attitude and application in the workplace and in off-the-job training.

The Scholarships are worth \$5,000 each year for up to three years.

Applicants must be active in an approved apprenticeship at the time of being awarded the Scholarship.

Continued funding is subject to the Scholarship holder maintaining their eligibility during the life of the Scholarship as outlined in the Bert Evans Apprentice Scholarships Guidelines.

9 Regional Workforce Development Planning

There are three models for workforce development planning that may be appropriate for the Industry in the Central West NSW region. The models can be thought of as short-term, medium term and long-term solutions for skills development:

- The first is skills development of the existing workforce;
- The second is the recruitment of new entrants to the Industry as apprentices and trainees;
- The third is building the skills of school students so that they are ready to enter the workforce at the completion of their school studies.

Employers may need assistance in developing training plans that are appropriate for their business operations, their employees and their job roles. ForestWorks or an RTO may be able to offer this assistance.

Ideally, several employers in a small geographical region would coordinate the training of their workforces in the same qualifications at the same time to enhance the financial viability of the program for the RTO.

9.1 Skills development of the existing workforce

This can be done using the existing networks of stakeholders and their current projects that support skills development:

- The lead agencies in this would be the DESE Local Jobs Program and the TSNSW Skills Brokers. The involvement of the Local Jobs Program will provide the links to the local government REDS and linkages to a range of Australian Government employment programs.
- Funding for training would primarily come from NSW Government Smart and Skilled for full qualifications listed in

9.2 Recruitment of Apprentices and Trainees

Employers can use the supporting services of TSNSW and their Skills Brokers and RIEP program to take advantage of local knowledge and networks to boost student engagement with local industry. The RIEP program is designed to:

- build partnerships between employers and local schools
- support employers to engage with schools and share their expectations for their future workforce
- help students develop the skills they need to get a job; and
- strengthen links between what is learned at school and what is needed in the workplace.

Again, funding for training is provided through Smart and Skilled that will subsidise the cost of the training fees for apprenticeships and traineeships in qualifications listed in Attachment Three.

Engagement with local schools will assist in identifying suitable candidates for apprenticeships and traineeships. Once they are ready to transition to full-time employment, they can then be employed by a GTO. It is possible for the GTO to place the learner with several employers during their apprenticeship.

9.3 Forest Education in Schools

Under this system, the local forest and wood products industry would need to support the delivery of resources developed by Forest Learning into local schools so that lessons align with the state school curriculum.

Alternatively, it could mean school-based traineeships of VET qualifications with appropriate work placement. For example, one model may be the Certificate II in Forest growing and management, Certificate II in Harvesting and haulage or Certificate II in Sawmilling and processing delivered to Years 10-11-12.

Units could include the Skill Set for native forest operator; Maintain & Operate chainsaws; Log Grading; Sawn Timber grading; stacking timber. This meets bare minimum employment Units and introduces concepts of WHS, environmental compliance in a commercial environment. Alternatively, it could include skill sets in:

- AHCSS00117 - Introduction to Conservation and Ecosystem Management Skill Set
- PUASS00086 - Simple Prescribed Burn Officer

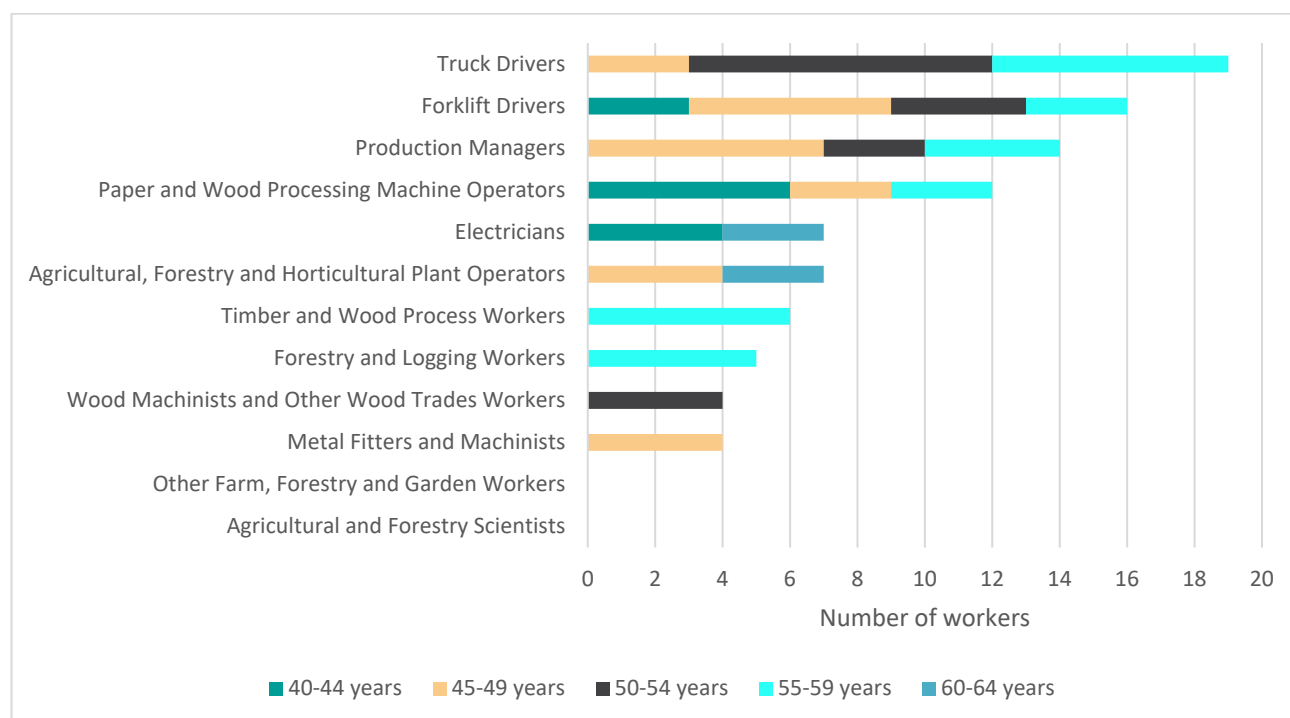
The training may have greater uptake by students if the skills developed can provide pathways into other allied local industries so that participants can see that they have options available to them. For example, parks management, fire control, agriculture, manufacturing. The training should be promoted as building transferable skills. Graduates of this training would have a good foundation in forestry and timber knowledge and skills; exposure to a workplace; and provided with options for further study or career aspirations.

9.4 Schedule of Skills Needs

The main occupations in the Central West Industry seen in Figure 14. The age distribution for these occupations has been derived from ABS statistics as at the most recent census in 2016 to identify the cohorts likely to retire in the next decade. The results have been presented in Figure 47 below.

Although the occupations of **Other Farm, Forestry and Garden Workers** and **Agricultural and Forestry Scientists** were identified as being significant occupations in the regional Industry, the numbers in the age brackets were negligible. Due to the nature of small cell statistics, the small numbers were unreliable. These occupations were retained in Figure 47 to indicate that they have been considered, however we don't have sufficient census data to make reliable conclusions.

Figure 47 Significant occupations in the Central West Industry, by age group.



Source: Census of Population and Housing, 2016, TableBuilder

Table 15 and Table 16 are a schedule of skills needs and corresponding qualifications that could address the skills lost due to retirements.

Skills have been selected based on:

- their prevalence in each sector (see Section 3.1);
- whether the skills are presently in shortage (see Section 5); and
- estimates of numbers exiting the industry in the short-medium term.

Tables 18 to Table 25 provide advice about available training providers and availability of funding.

The report only includes skills needs with related vocational solutions.

The skills needed are described by occupation and job role.

These table also outline:

- The availability of the qualification to be delivered as an apprenticeship or traineeship;
- The option of the qualification to be delivered as school-based training;
- Whether the qualification is eligible for government funding under the NSW Government Smart and Skilled program;
- The list of registered training organisations (RTOs) that are registered to deliver the qualification. Please note that although these RTOs can deliver these qualifications, they may not always be eligible for Smart and Skilled funding for a range of reasons. For example, they may have not applied to the NSW Government for recognition as Smart and Skilled providers.

Table 14 Certificate II and III Qualifications (ANZSCO Skill Level 4 or 3)

	Certificate II (Skill Level 4)	Certificate III (Skill Level 4 or 3)
AHC		Arboriculture (AHC30820) 362212 Arborist - Arborist - Consulting Arborist Rural and Environmental Pest Management (AHC30318) 841912 Pest or Weed Controller - Pest Control Project Officer
AUR		Automotive Diesel Engine Technology 321212 Diesel Motor Mechanic 321214 Small Engine Mechanic - Diesel Engine Technician Automotive Diesel Fuel Technology (AUR31420) 321212 Diesel Motor Mechanic - Automotive Heavy Vehicle Diesel Fuel Technician - Diesel Fuel Specialist Automotive Engine Reconditioning (AUR31316) 321214 Small Engine Mechanic - Engine Reconditioner
FWP	Forest Growing and Management (FWP20116) 841311 Forestry Worker - Forest Nursery Production Worker (Assistant) - Silviculture Worker - Tree Planter - Tree Pruner - Pest and Weed Controller - Chainsaw Operator – Basic - Forestry Worker - Farm Forestry Worker	Forest Growing and Management (FWP30116) 841311 Forestry Worker - Forest Nursery Production Operator - Silviculture Operator - Chainsaw Operator (Tree Feller) – Intermediate to Advanced - Forest Firefighter
	Harvesting and Haulage (FWP20216) 841312 Logging Assistant 841313 Tree Faller - Harvesting Worker (Assistant) - Chainsaw Operator (Tree Feller and Cross Cutter) – Basic	Harvesting and Haulage (FWP30216) 721112 Logging Plant Operator - Mechanical Site Preparation Operator - Earthmoving Plant Operator - Bulldozer Operator - Excavator Operator - Mechanised Harvesting Machine Operator - Feller Buncher Operator - Single Grip Harvester Operator - Log Extraction Machine Operator - Forwarder Operator - Loader Operator - Skidder Operator - Cable Logging Operator - Chainsaw Operator (Tree Feller) – Intermediate to Advanced - Mechanised In-field Wood Chipper Operator - Log truck driver - Forest Firefighter

	Certificate II (Skill Level 4)	Certificate III (Skill Level 4 or 3)
	Sawmilling and Processing (FWP20316) 711312 Wood Processing Machine Operator 839412 Sawmill or Timber Yard Worker • Kiln Worker • Timber Grader • Treatment Plant Worker • Production Worker • Sawmill Worker	Sawmilling and Processing (FWP30316) 711312 Wood Processing Machine Operator 839412 Sawmill or Timber Yard Worker • Benchman • Chipper Operator • Head Rig Operator • Kiln Operator • Machine Operator (e.g. Finger Jointing, Moulding, Planning) • Production Technician • Timber Grader • Timber Products Technician • Treatment Plant Operator • Saw Technician • Optimisation Technician • Wood Machinist • Technician • Sawyer
	Timber Manufactured Products (FWP20516) 839412 Sawmill or Timber Yard Worker 839413 Wood and Wood Products Factory Worker • Grader • Manufacturing Assistant (Timber Products) • Saw Operator • Timber Manufacturing Worker • Engineered Wood Product Manufacturing Worker • Timber Products Worker • Timber Puller	Timber Manufactured Products (FWP30516) 839412 Sawmill or Timber Yard Worker • Press Operator • Jig Setter • Machine Operator (e.g. Finger Jointing, Moulding, Planning) • Saw Operator • Kiln Operator • Timber Manufactured Products Technician • Engineered Wood Products Technician
		Saw Technology (FWP31019) 323315 Saw Maker and Repairer • Saw Technician
		Wood Machining (FWP31119) 394213 Wood Machinist • Wood Machinist
MEM		Engineering – Fixed and Mobile Plant Mechanic (MEM31419) 321211 Motor Mechanic (General) 321212 Diesel Motor Mechanic 321214 Small Engine Mechanic 323211 Fitter (General) • Plant Mechanic
		Engineering – Mechanical Trade (MEM30219) 321211 Motor Mechanic (General) 323212 Fitter and Turner 323214 Metal Machinist (First Class) • Fitter Machinists • Fluid Power Mechanics • Maintenance Fitter • Maintenance Mechanic • Mechanical Engineering Tradesperson • Mechanical Fitters • Metal Machinists
		Engineering – Fabrication Trade (MEM30319) 323213 Fitter-Welder Welder

Table 15 Certificate IV, Diploma and Advanced Diploma (Skill Level 3 or 2)

	Certificate IV (Skill Level 3)	Diploma (Skill Level 2)	Adv. Diploma (Skill Level 2)
AHC		Agriculture (AHC50116) 121299 Crop Farmers (Tree Farmer) • Farm Manager • Farmer • Production Horticulture Manager	Arboriculture (AHC60520) 362212 Arborist • Senior Consulting Arborist
FWP	Timber Processing (FWP40216) • Customer Service Manager • Production Supervisor (Timber) • Timber Manufacturing Supervisor	Forest and Forest Products 133511 Production Manager (Forestry) • Forestry Manager 133512 Production Manager (Manufacturing) • Production Manager (Timber) • Timber Manufacturing Manager	

9.5 List of Training Providers by Industry Sector and Qualification

Refer to Section 8.3.5 for further information on school-based delivery.

The following tables are provided to assist employers find potential training providers for qualifications that may be useful to the industry based on the information in Table 15 and Table 16 above. The tables:

- Indicate the total number of training providers that have delivered the traineeship or apprenticeship in NSW;
- A maximum of five training providers per qualification are suggested, prioritized on whether they have been approved for subsidized training under Smart and Skilled and by the proximity of the training centre to NE NSW.
- If no provider has been approved for the Smart and Skilled subsidy then the provider will be indicated as Fee for Service.

Note that an RTO must be approved for Smart and Skilled subsidies qualification by qualification. For example, Gimbal have been approved for the Smart and Skilled subsidy for two out of three of the metals and engineering qualifications. This may be because they have not applied for the subsidy against this qualification.

The following tables indicate the RTOs that are available to deliver apprenticeships and traineeships in the relevant qualifications.

Funding options are also indicated:

- SSA indicates that the RTO has been approved for delivery under Smart and Skilled.
- FFS indicates that the RTO can deliver the qualification on a fee for service basis.

Table 16 Delivery of Qualifications in Forest Growing and Management (FGM)

	Cert II in FGM (FWP20116)	Cert III in FGM (FWP30116)	Cert IV in Forest Operations (FWP40116)	Diploma of Forest and Forest Products (FWP50116)	Advanced Diploma of Forest Industry Sustainability (FWP60116)
Apprenticeship / Traineeship	Traineeship	Traineeship	Traineeship	Traineeship	No
Option for school-based delivery	Yes	No	No	No	No
Funded on the NSW Skills List²⁹	Yes	Yes	Yes	Yes	No
Training Provider					
FITEC Australia (TABMA Training)	FFS	FFS	FFS	FFS	FFS
Timber Training Creswick (Vic)	FFS	FFS	FFS	FFS	FFS
South Regional TAFE (WA)	FFS	FFS	FFS	FFS	FFS
MTO Group (HS Business School)	-	FFS	-	FFS	FFS
TasTAFE	-	FFS	FFS	-	-
Down Under Training (Qld)	FFS	FFS	-	-	-
TAFE Gippsland	FFS	FFS	-	-	-
Intrain National Training Academy	FFS	FFS	-	-	-
TAFE NSW	-	-	SSA	-	-
Southern Training Organisation	-	FFS	-	-	-
FITS Training Centre (WA)	-	FFS	-	-	-
Total College	FFS	-	-	-	-
Walan Miya	SSA	-	-	-	-
THS Training	FFS	-	-	-	-
Western Australian College of Agriculture	FFS	-	-	-	-

Source: Training.gov.au and NSW Skills List (NSW Department of Education)

²⁹ Smart and Skilled NSW Skills List – v12.1, for training commencing from 1 July 2021, NSW Government.

Table 17 Delivery of Qualifications in Harvesting and Haulage

	Certificate II in Harvesting and Haulage (FWP20216)	Certificate III in Harvesting and Haulage (FWP30216)	Certificate IV in Forest Operations (FWP40116)	Diploma of Forest and Forest Products (FWP50116)
Apprenticeship / Traineeship	Traineeship	Traineeship	Traineeship	Traineeship
Option for school-based delivery	Yes	No	No	No
Funded on the NSW Skills List	Yes	Yes	Yes	Yes

Training Provider

Timber Training Creswick (Vic)	FFS	FFS	-	FFS
TasTAFE	FFS	FFS	FFS	-
MTO Group (HS Business School)	-	FFS	-	FFS
South Regional TAFE (WA)	-	FFS	-	FFS
TAFE NSW	-	SSA	SSA	-
ABC Training & Consulting	FFS	SSA	-	-
Forest Industries Skills Training (Tas)	FFS	FFS	-	-
TAFE Gippsland	FFS	FFS	-	-
National Workplace Services Group	FFS	FFS	-	-
Southern Training Organisation	FFS	FFS	-	-
Intrain National Training Academy	-	FFS	-	-
LITA Training	-	FFS	-	-
FITS Training Service (WA)	-	FFS	-	-
THS Training	FFS	-	-	-

Source: Training.gov.au and NSW Skills List (NSW Department of Education)

Table 18 Delivery of Qualifications in Sawmilling and Processing (S&P)

	Cert II in S&P (FWP20316)	Cert III in S&P (FWP30316)	Cert III in Saw Technology (FWP31019)	Cert III in Wood Machining (FWP31119)	Cert IV in Timber Processing (FWP40216)	Diploma of Forest and Forest Products (FWP50116)
Apprenticeship / Traineeship	Traineeship	Traineeship	Apprenticeship	Apprenticeship	Traineeship	Traineeship
Option for school-based delivery	Yes	No	No	No	No	No
Funded on the NSW Skills List	Yes	Yes	Yes	Yes	No	Yes

Training Provider

Timber Training Creswick (Vic)	FFS	SSA	SSA	SSA	FFS	FFS
FITEC Australia (TABMA Training)	-	SSA	-	-	FFS	FFS
South Regional TAFE (WA)	-	-	-	-	FFS	FFS
TAFE Gippsland	FFS	FFS	-	-	-	-
MTO Group (HS Business School)	-	-	-	-	-	FFS
Southern Training Organisation	-	FFS	-	-	-	-
TAFE NSW	SSA	-	-	-	-	-

Source: Training.gov.au and NSW Skills List (NSW Department of Education)

Table 19 Delivery of Qualifications in Timber Manufactured Products

	Certificate II in Timber Manufactured Products (FWP20516)	Certificate III in Timber Manufactured Products (FWP30516)	Certificate IV in Timber Processing (FWP40216)	Diploma of Forest and Forest Products (FWP50116)
Apprenticeship / Traineeship	Traineeship			Traineeship
Option for school-based delivery	Yes	No	No	No
Funded on the NSW Skills List	Yes	Yes	No	Yes

Training Provider

FITEC Australia (TABMA Training)	SSA	SSA	FFS	FFS
Timber Training Creswick (Vic)	FFS	FFS	FFS	FFS
South Regional TAFE (WA)	-	-	FFS	FFS
MTO Group (HS Business School)	-	-	-	FFS
Activ Pathways (WA)	FFS	-	-	-

Source: Training.gov.au and NSW Skills List (NSW Department of Education)

Table 20 Delivery of Qualifications in Engineering Training Package

	Cert III Mechanical Trade (MEM30219)	Cert III Fabrication Trade (MEM30319)	Cert III Fixed and Mobile Plant Mechanic (MEM31419)
Apprenticeship/Traineeship	Apprenticeship	Apprenticeship	Apprenticeship
Option for school-based delivery	Yes	Yes	Yes
Funded on the NSW Skills List	Yes	Yes	Yes

Training Provider

	37 in NSW	46 in NSW	9 in NSW
TAFE NSW	SSA	SSA	
Gimbal Engineering	SSA	SSA	
Educational Living Pty Ltd	SSA	SSA	
Central Coast Community College	SSA	SSA	
Komatsu Australia			FFS

Source: Training.gov.au and NSW Skills List (NSW Department of Education)

Table 21 Delivery of Qualifications in Automotive Training Package

	Cert III Diesel Engine Technology (AUR31520)	Cert III Diesel Fuel Technology (AUR31420)	Cert III Engine Reconditioning (AUR31316)
Apprenticeship/Traineeship	Apprenticeship	Apprenticeship	Apprenticeship
Option for school-based delivery	No	No	No
Funded on the NSW Skills List	Yes	Yes	Yes
Training Provider	7 in NSW	4 in NSW	2 in NSW
Ashton College	FFS		
Crown Education	FFS		
Global Training Innovations	FFS	FFS	
Intech Institute of Technology	FFS		
Kingsford Institute of Technology	FFS		
TAFE Queensland		FFS	FFS
The MTA Group Training Scheme		FFS	
Axial Training		FFS	
Bendigo Kangan Institute			FFS

Source: [Training.gov.au](https://training.gov.au) and NSW Skills List (NSW Department of Education)

Table 22 Delivery of Qualifications in Agriculture, Horticulture and Conservation and Land Management Training Package

	Cert III in Rural and Environmental Pest Management (AHC30318)	Cert III in Arboriculture (AHC30820)	Diploma of Agriculture (AHC50116)	Diploma of Arboriculture (AHC50520)	Adv Dip of Arboriculture (AHC60520)
Apprenticeship/Traineeship	None	Traineeship	None	None	None
Option for school-based delivery	No	No	No	No	No
Funded on the NSW Skills List	Yes	Yes	Yes	Yes	No
Training Provider	2 in NSW	12 in NSW	13 in NSW	5 in NSW	1 in NSW
Ballistic Training Solutions	FFS				
PEST Australia	FFS				
TAFE NSW		SSA	SSA	SSA	
Power Safety Training		SSA			
Tocal College			SSA		
Kreate Pty Ltd			SSA		
MTO Group					FFS

Source: Training.gov.au and NSW Skills List (NSW Department of Education)

10 Methodology

10.1 Companies identified in the Hub Region

Name	LGA	ABS Industry	Sector	Consultation Method
Bathurst Silviculture	Bathurst	Forestry	Forestry support services	Survey Monkey
Forestry Corporation of NSW	Bathurst	Forestry	Forest growing and management	Videoconference
Southern Cross Forests	Bathurst	Forestry	Forest growing and management	Videoconference
Mangan Logging	Oberon	Logging	Harvesting and haulage	Videoconference
Pine Harvesters Pty Ltd	Bathurst	Logging	Harvesting and haulage	Survey Monkey
Plantation Pine Products Australia Pty Ltd	Oberon	Logging	Harvesting and haulage	Face to Face
Australian United Timbers	Oberon	Log Sawmilling	Sawmilling and processing	Survey Monkey
Australian Softwood Pty Ltd	Bathurst	Log Sawmilling	Sawmilling and processing	Survey Monkey
Highland Pine Products	Oberon	Log Sawmilling	Sawmilling and processing	Face to Face
Borg Manufacturing Pty Ltd	Oberon	Reconstituted Wood Product Manufacturing	Timber manufactured products	Face to Face

10.2 Survey

ForestWorks conducted face-to-face meetings with 3 employers; videoconferences with 3 employers; and 4 employers provided data online through Survey Monkey. Data was collected in October and November 2021. All employers answered the same questions and the answers were compiled in Survey Monkey.

The Survey Monkey questions are provided in Attachment One.

Respondents made up the entirety of the forest and wood products industry in the region.

The survey of all employers in the region revealed trends that were common across and within the sectors of the Forest and Wood products in the region, although individual employers may deviate from these trends due to other factors.

10.3 ABS and other Data Sources

Desktop research was conducted to establish the current situation and establish trends with the available data. Sources are listed in the references and throughout. The latest information was used, however in some instances the data is a few years out of date. Particularly, Australian Bureau of Statistics (ABS) census data, as the census is due this year (2021) meaning the latest available census data is 5 years old (2016). ABS Data is provided for the Hub region as defined by the Local Government Areas of:

- Bathurst
- Lithgow
- Upper Lachlan Shire
- Blayney
- Oberon
- Goulburn Mulwaree
- Orange

For the purposes of this report, data from the ABS defines the Forest Industry using the following ANZSIC Divisions and Subdivision Codes and Titles:

A Agriculture, Forestry and Fishing

03 Forestry and Logging

030 Forestry and Logging

0301 Forestry

This class consists of units mainly engaged in growing standing timber in native or plantation forests, or timber tracts, for commercial benefit. This class also includes the gathering of forest products such as mushrooms, kauri gum or resin from forest environments.

0302 Logging

This class consists of units mainly engaged in logging native or plantation forests, including felling, cutting and/or roughly hewing logs into products such as railway sleepers or posts. This class also includes units mainly engaged in cutting trees and scrubs for firewood.

05 Agriculture, Forestry and Fishing Support Services

051 Forestry Support Services

0510 Forestry Support Services

This class consists of units mainly engaged in providing support services to forestry. Services include silvicultural services, such as planting, pruning and thinning trees, forest reforestation, forest plantation conservation or maintenance. This class also includes units mainly engaged in operating forestry planting stock nurseries.

C Manufacturing

14 Wood Product Manufacturing

141 Sawmilling and Processing

1411 Log Sawmilling

This class consists of units mainly engaged in manufacturing rough sawn timber, and boards.

1412 Wood Chipping

This class consists of units mainly engaged in manufacturing softwood or hardwood wood chips.

1413 Timber Resawing and Dressing

This class consists of units mainly engaged in resawing or dressing timber, timber boards and mouldings. Dressing timber includes seasoning (kiln or air drying) or chemical preservation.

149 Other Wood Product Manufacturing

1493 Veneer and Plywood Manufacturing

This class consists of units mainly engaged in manufacturing veneers and plywood

1494 Reconstituted Wood Product Manufacturing

This class consists of units mainly engaged in manufacturing wood boards and sheets from reconstituted wood fibres such as wood chips, sawdust, wood shavings, slab wood or off-cuts. Also included are units that manufacture laminations of timber and non-timber materials (including decorative plastic laminates on boards or other substrates).

LGA boundaries are considered in the design of SA2s and a reasonable degree of concordance could be expected between the Hub Region LGAs and SA2s.

For the purposes of this report, data from the ABS defines occupations in the Forestry Industry using the following ANZSCO. This list of occupations is based on cross-referencing the Unit Group with the ANZSIC codes identified above. Some decisions have been taken to eliminate occupations within a unit group which are unlikely to be applicable to the Industry:

Minor Group	Unit Group	Occupations	Specialisations
1 Managers			
121 Farmers and Farm Managers plan, organise, control, coordinate and perform farming operations in agricultural establishments to grow crops, and breed and raise livestock, and fish and other aquatic life.	1212 Crop Farmers plan, organise, control, coordinate and perform farming operations to grow crops.	121299 Crop Farmers nec This occupation group covers Crop Farmers not elsewhere classified. <i>Skill Level 1</i>	Tree Farmer
132 Business Administration Managers plan, organise, direct, control and coordinate the corporate, financial, human resource, policy, planning, research and development activities and guidelines within organisations.	1322 Finance Managers plan, organise, direct, control and coordinate the financial and accounting activities within organisations.	132211 Finance Manager Chief Financial Officer Finance Director Financial Controller Plans, organises, directs, controls and coordinates the financial and accounting activities within an organisation. <i>Skill Level 1</i>	
133 Construction, Distribution and Production Managers plan, organise, direct, control and coordinate building and construction, engineering, importing, exporting and wholesaling, manufacturing,	1334 Manufacturers plan, organise, direct, control and coordinate the operations of small manufacturing establishments.	133411 Manufacturer Plans, organises, directs, controls and coordinates the operations of a small manufacturing establishment. <i>Skill Level 1</i>	

Minor Group	Unit Group	Occupations	Specialisations
production, supply and distribution activities within organisations.		133511 Production Manager (Forestry)	
		Plans, organises, directs, controls and coordinates the production activities of a forestry operation including physical and human resources.	Harvest Manager (Forestry) Operations Manager (Forestry)
		Skill Level 1	
	1335 Production Managers plan, organise, direct, control and coordinate the production activities of forestry, manufacturing and mining organisations including physical and human resources.	133512 Production Manager (Manufacturing)	
		Plans, organises, directs, controls and coordinates the manufacturing activities of an organisation including physical and human resources.	Operations Manager (Production) Plant Manager (Manufacturing) Works Manager (Manufacturing)
		Skill Level 1	
	1336 Supply and Distribution Managers	133611 Supply and Distribution Manager	
	plan, organise, direct, control and coordinate the supply, storage and distribution of goods produced by organisations.	Plans, organises, directs, controls and coordinates the supply, storage and distribution of goods produced by an organisation.	Logistics Manager Supply Chain Manager
		Skill Level 1	
139 Miscellaneous Specialist Managers	1399 Other Specialist Managers	139912 Environmental Manager	
This minor group covers Specialist Managers not elsewhere classified.	This unit group covers Specialist Managers not elsewhere classified. It includes Arts Administrators or Managers, Environmental Managers,	Plans, organises, directs, controls and coordinates the development and implementation of an environmental management system within an	

Minor Group	Unit Group	Occupations	Specialisations
	Laboratory Managers, Quality Assurance Managers and Sports Administrators.	organisation by identifying, solving and alleviating environmental issues, such as pollution and waste treatment, in compliance with environmental legislation and to ensure corporate sustainable development. Skill Level 1 139913 Laboratory Manager Plans, organises, directs, controls and coordinates the operations of a research or production laboratory Skill Level 1 139914 Quality Assurance Manager Quality Facilitator Plans, organises, directs, controls and coordinates the deployment of quality systems and certification processes within an organisation. Skill Level 1 139999 Specialist Managers nec This occupation group covers Specialist Managers not elsewhere classified. Skill Level 1	

Minor Group	Unit Group	Occupations	Specialisations
149 Miscellaneous Hospitality, Retail and Service Managers This minor group covers Hospitality, Retail and Service Managers not elsewhere classified.	1494 Transport Services Managers organise and control the buying and selling of vehicles for rental agencies and coordinates the leasing of vehicles, the operations of railway stations, and the operations of enterprises that operate fleets of vehicles to transport goods and passengers.	149413 Transport Company Manager Organises and controls the operations of an enterprise that operates a fleet of vehicles to transport goods and passengers. Registration or licensing may be required. Skill Level: 2	
2 Professionals 224 Information and Organisation Professionals support organisations, government, individuals and the community by analysing, organising and managing information and data, and by providing advice on policy, business and organisational methods, and the value of property and other items.	2247 Management and Organisation Analysts assist organisations to achieve greater efficiency and solve organisational problems, and study organisational structures, methods, systems and procedures.	224711 Management Consultant Business Consultant Assists organisations to achieve greater efficiency and solve organisational problems. Skill Level 1 224712 Organisation and Methods Analyst Procedures Analyst Studies organisational structures, methods, systems and procedures. Skill Level 1 225111 Advertising Specialist	Business Analyst Change Management Facilitator Industry Analyst Quality Auditor Skills Auditor

Minor Group	Unit Group	Occupations	Specialisations
225 Sales, Marketing and Public Relations Professionals plan, develop, coordinate and implement programs of information dissemination to promote organisations, goods and services, and represent companies in selling a range of technical, industrial, medical, pharmaceutical and ICT goods and services.	2251 Advertising and Marketing Professionals develop and coordinate advertising strategies and campaigns, determine the market for new goods and services, and identify and develop market opportunities for new and existing goods and services.	Advertising Account Executive	
		Advertising Account Manager	
		Creative Director (Advertising)	
		Devises and coordinates advertising campaigns which encourage consumers to purchase goods or services.	
		Skill Level 1	
		225112 Market Research Analyst	
		Determines the market for new goods and services, develops advertising strategies, and evaluates the best business sites for commercial organisations.	
		Skill Level 1	
		225113 Marketing Specialist	
		Marketing Consultant	
		Marketing Coordinator	
		Marketing Officer Identifies market opportunities and advises on the development, coordination and implementation of plans for pricing and promoting an organisation's goods and services.	Brand Manager Product Manager Sales Promotion Officer

Minor Group	Unit Group	Occupations	Specialisations
232 Architects, Designers, Planners and Surveyors design building exteriors and interiors, and landscapes; conduct survey work to precisely position geographical features, and design, prepare and revise maps; design information for visual communication, publication and display, and products for manufacture; and develop and implement plans and policies for controlling the use of land.	2322 Cartographers and Surveyors apply scientific and mathematical principles to design, prepare and revise maps and charts, plan, direct and conduct survey work to determine, delineate, plan and precisely position tracts of land, natural and constructed features, coastlines, marine floors and underground works, and manage related information systems.	Skill Level 1 232211 Cartographer Map Maker Applies scientific and mathematical principles to design, prepare and revise maps and charts. Registration or licensing may be required.	
		Skill Level 1 232212 Surveyor Geomatician Geomatic Engineer Plans, directs and conducts survey work to determine, delineate, plan and precisely position tracts of land, natural and constructed features, coastlines, marine floors and underground works, and manages related information systems. Registration or licensing may be required.	
		Skill Level 1 234113 Forester Studies, develops and manages forest areas to maintain commercial and	Forestry Adviser Forestry Consultant Silviculturist
234 Natural and Physical Science Professionals	2341 Agricultural and Forestry Scientists advise farmers, rural industries and government on aspects of farming, develop techniques for		

Minor Group	Unit Group	Occupations	Specialisations
perform analytical, conceptual and practical tasks in relation to environmental factors and agricultural production, the chemical and physical properties of the universe, the extraction and processing of mineral ores, life forms including the physiology and biochemistry of humans, plants and animals, and disease prevention.	increasing productivity, and study and develop plans and policies for the management of forest areas.	recreational uses, conserve flora and fauna, and protect against fire, pests and diseases. Skill Level 1 234311 Conservation Officer Environmental Officer Develops and implements programs and regulations for the protection of fish, wildlife and other natural resources.	Landcare Facilitator
	2343 Environmental Scientists study, develop, implement and advise on policies and plans for managing and protecting the environment, flora, fauna and other natural resources.	Skill Level 1 234312 Environmental Consultant Environmental Adviser Environmental Analyst Analyses and advises on policies guiding the design, implementation and modification of government or commercial environmental operations and programs. Skill Level 1 234313 Environmental Research Scientist Environmental Scientist Studies and develops policies and plans for the control of factors which may	Air Pollution Analyst Ecologist Water Quality Analyst

Minor Group	Unit Group	Occupations	Specialisations
		produce pollution, imbalance in or degradation of the environment.	
		Skill Level 1	
		234399 Environmental Scientists nec	
		This occupation group covers Environmental Scientists not elsewhere classified.	Environmental Auditor Soil Scientist
		Skill Level 1	
		261111 ICT Business Analyst	
		BA (ICT)	
261 Business and Systems Analysts, and Programmers	2611 ICT Business and Systems Analysts	Business Consultant (ICT) Identifies and communicates with users to formulate and produce a requirements specification to create system and software solutions.	Business Systems Analyst
work with users to formulate system requirements, develop system plans and documentation, review and evaluate existing systems, and design and modify systems to meet users' business needs, create audio-visual applications, and develop, test and maintain code for computer applications and web sites.	work with users to formulate system requirements, develop system plans and documentation, review and evaluate existing systems, and design and modify systems to meet users' business needs.	Skill Level 1	
		261112 Systems Analyst	
		Evaluates processes and methods used in existing ICT systems, proposes modifications, additional system components or new systems to meet user needs as expressed in specifications and other documentation.	
		Skill Level 1	

Minor Group	Unit Group	Occupations	Specialisations
3 Technicians and Trades Workers			
311 Agricultural, Medical and Science Technicians perform tests and experiments, and provide support to Professionals engaged in agriculture, medicine and science including inspecting animals, plants and agricultural produce.	3114 Science Technicians perform tests and experiments, and provide technical support functions to assist with research, design, production and teaching in chemistry, earth sciences, life sciences, and physical sciences.	311411 Chemistry Technician <i>Chemistry Technical Officer</i> Performs laboratory tests on organic and inorganic chemicals, analyses test data and carries out technical functions in support of Chemists or Chemical Engineers in a wide variety of areas such as fuels, agricultural products, food, pharmaceuticals, paints, metals, plastics, textiles, detergents, paper, fertilisers and cosmetics.	
		Skill level 2 311412 Earth Science Technician Earth Science Technical Officer Collects and tests earth and water samples, records observations and analyses data in support of Geologists or Geophysicists.	Meteorological Observer Soil Science Technical Officer
		Skill level 2 311413 Life Science Technician Identifies and collects living organisms and conducts field and laboratory studies	Biological Technical Officer Botanical Technical Officer Ecological Technical Officer Environmental Technical Officer Forestry Technical Officer

Minor Group	Unit Group	Occupations	Specialisations
		in support of Life Scientists or Environmental Scientists.	Wood Technologist
		Skill level 2	
		311499 Science Technicians nec	
		This occupation group covers Science Technicians not elsewhere classified.	
		Skill level 2	
		312114 Construction Estimator	
		Building Estimator	
		Prepares and delivers estimates and cost plans for construction projects up to the tender settlement stage.	
		Skill level 2	
		312116 Surveying and Cartographic Technician	
		Surveying Technologist	
		Collects, records and evaluates survey data and prepares maps, charts and plans in support of Surveyors or Cartographers. Registration or licensing may be required.	Aerial Survey Technician Photogrammetrist
		Skill level 2	
		312911 Maintenance Planner	
312 Building and Engineering Technicians	3121 Architectural, Building and Surveying Technicians		
perform tests and provide technical support to Construction Managers, Architects and Engineering Professionals in research, design, construction, operation and maintenance of equipment, distribution systems and installations, and resource estimation and site inspection.	perform technical functions to assist Construction Managers, Architects and Surveyors by supervising and inspecting construction sites, estimating time, costs and resources, inspecting plumbing work, and collecting and evaluating survey data and preparing maps and plans.		

Minor Group	Unit Group	Occupations	Specialisations
		Maintenance Scheduler	
		Shutdown Coordinator	
		Shutdown Planner	
	3129 Other Building and Engineering Technicians	Develops maintenance planning strategies, and schedules, coordinates and monitors the maintenance of all plant equipment.	
	This unit group covers Building and Engineering Technicians not elsewhere classified. It includes Maintenance Planners, Metallurgical or Materials Technicians, and Mine Deputies.	Skill level 2	
		312999 Building and Engineering Technicians nec	
		This occupation group covers Building and Engineering Technicians not elsewhere classified. Registration or licensing may be required.	
		Skill level 2	
321 Automotive Electricians and Mechanics		321211 Motor Mechanic (General)	
repair and maintain automotive electrical systems and motor vehicle and other internal combustion engines	3212 Motor Mechanics	Maintains, tests and repairs petrol engines and the mechanical parts of lightweight motor vehicles such as transmissions, suspension, steering and brakes. Registration or licensing may be required.	
	repair, maintain and test motor vehicle and other internal combustion engines and related mechanical components.	Skill Level 3	

Minor Group	Unit Group	Occupations	Specialisations
322 Fabrication Engineering Trades Workers	3223 Structural Steel and Welding Trades Workers	321212 Diesel Motor Mechanic Maintains, tests and repairs diesel motors and the mechanical parts of trucks, buses and other heavy vehicles such as transmissions, suspension, steering and brakes. Registration or licensing may be required. <i>Skill Level 3</i>	
		321214 Small Engine Mechanic Maintains, tests and repairs engines of chainsaws, lawn mowers, garden tractors and other equipment with small engines. Registration or licensing may be required. <i>Skill Level 3</i>	Chainsaw Mechanic
		322311 Metal Fabricator Marks off and fabricates structural steel and other metal stock to make or repair metal products and structures such as boilers and pressure vessels. <i>Skill Level 3</i>	
		322312 Pressure Welder Assembles, welds and repairs pressure vessels and pipes to relevant standards.	
		cut, shape, join and repair metal components of iron and steel structures, boilers, pressure vessels and pipes, ships and other vessels.	
		cast, shape, cut, join and finish metal.	

Minor Group	Unit Group	Occupations	Specialisations
323 Mechanical Engineering Trades Workers machine and prepare aircraft systems, metal parts, subassemblies and precision instruments.	3232 Metal Fitters and Machinists fit and assemble fabricated metal parts into products, set up machining tools, production machines and textile machines, and operate machining tools and machines to shape metal stock and castings.	Skill Level 3 322313 Welder (First Class) Fabricates and repairs metal products using various welding techniques.	
		Skill Level 3 323211 Fitter (General) Fits and assembles metal parts and subassemblies to fabricate production machines and other equipment.	Diesel Fitter- Mechanic Fitter-Machinist Fitter-Mechanic Maintenance Fitter Mechanic (Diesel and Heavy Earthmoving Equipment) Plant Mechanic
		Skill Level 3 323212 Fitter and Turner Fits, assembles, grinds and shapes metal parts and subassemblies to fabricate production machines and other equipment.	
		Skill Level 3 323213 Fitter-Welder Fits, assembles and welds metal parts and subassemblies to fabricate production machines and other equipment.	
		Skill Level 3	

Minor Group	Unit Group	Occupations	Specialisations
		323214 Metal Machinist (First Class) Sets up and operates machine tools to shape and form metal stock and castings to fine tolerances, using detailed drawings and specifications. Skill Level 3	Automotive Machinist Metal Machine Setter Metal Turner Milling Machinist Vertical Borer
		323299 Metal Fitters and Machinists nec This occupation group covers Metal Fitters and Machinists not elsewhere classified. Skill Level 3	Printing Engineer
	3233 Precision Metal Trades Workers fabricate, assemble, maintain and repair metal precision instruments	323315 Saw Maker and Repairer Makes, repairs, sets and sharpens blades for circular, band and other saws. Skill Level 3	Saw Sharpener
341 Electricians design, assemble, install, test, commission, diagnose, maintain and repair electrical networks, systems, circuits, equipment, components, appliances and facilities for industrial, commercial and domestic	3411 Electricians design, assemble, install, test, commission, diagnose, maintain and repair electrical networks, systems, circuits, equipment, components, appliances and facilities for industrial, commercial and domestic purposes,	341111 Electrician (General) Electrical Fitter Installs, tests, connects, commissions, maintains and modifies electrical equipment, wiring and control systems. Registration or licensing is required. Skill Level 3	Electrical Contractor

Minor Group	Unit Group	Occupations	Specialisations
purposes, and service and repair lifts, escalators and related equipment.	and service and repair lifts, escalators and related equipment	341112 Electrician (Special Class) Services and repairs intricate and complex electrical and electronic circuitry. Registration or licensing is required. <i>Skill Level 3</i>	
362 Horticultural Trades Workers prepare and sell floral arrangements and flowers, establish and maintain gardens, parks and surfaces used for sport, and plant, cultivate and maintain plants and trees.	3622 Gardeners plant, cultivate, maintain, plan and construct parks, gardens and landscapes, and inspect, diagnose and treat trees and shrubs.	362212 Arborist Maintains and cares for trees and shrubs by lopping limbs and shaping branches, treating trees with fertilisers and insecticides, removing dead or decaying trees, and advising on general tree care. <i>Skill Level 3</i>	Tree Surgeon
394 Wood Trades Workers fabricate, repair and finish wooden furniture and fit and assemble prepared wooden parts to make furniture, set up and operate woodworking machines and wood turning lathes to shape wood stock, and make picture frames and other wood products.	3942 Wood Machinists and Other Wood Trades Workers set up and operate woodworking machines and wood turning lathes to shape wood stock, finish and polish furniture, and make picture frames and frame paintings, photographs and other artwork.	394213 Wood Machinist Cuts, planes, turns, shapes and sands wood stock to specifications. <i>Skill Level 3</i>	Automatic Profile Sander Operator Copy Lathe Operator Edge Bander Operator Jigmaker (Wood) Panel Saw Operator Woodworking Machine Setter
		394299 Wood Machinists and Other Wood Trades Workers nec This occupation group covers Wood Machinists and Wood Trades Workers not elsewhere classified. <i>Skill Level 3</i>	Cooper

Minor Group	Unit Group	Occupations	Specialisations
4 COMMUNITY AND PERSONAL SERVICE WORKERS			
441 Defence Force Members, Fire Fighters and Police			
protect and preserve property, public order and safety through the provision of specialised military services to the defence forces, the enforcement of laws, attendance at emergencies, and control and extinguishment of fires.	4412 Fire and Emergency Workers attend emergencies to minimise risk to community safety and security and protect life and property.	441212 Fire Fighter Responds to fire alarms and emergency calls, controls and extinguishes fires, and protects life and property. Registration or licensing is required. <i>Skill Level 3</i>	Fire Prevention Officer
5 CLERICAL AND ADMINISTRATIVE WORKERS			
512 Office and Practice Managers			
organise and manage the functions and resources of offices and professional practices such as administrative systems and office personnel.	5121 Office Managers organise and control the functions and resources of offices such as administrative systems and office personnel.	512111 Office Manager Organises and controls the functions and resources of an office such as administrative systems and office personnel. <i>Skill Level 2</i>	
531 General Clerks			
perform a range of clerical and administrative tasks	5311 General Clerks perform a range of clerical and administrative tasks	531111 General Clerk Performs a range of clerical and administrative tasks. <i>Skill Level 4</i>	
532 Keyboard Operators			
	5321 Keyboard Operators	532111 Data Entry Operator	

Minor Group	Unit Group	Occupations	Specialisations
input and process text and data, and prepare, edit and generate documents for storage, processing, publication and transmission.	input and process text and data, and prepare, edit and generate documents for storage, processing, publication and transmission.	Data Processing Operator Operates a keyboard to input and transfer data into a computer for storage, processing and transmission. Skill Level 4 532113 Word Processing Operator Typist Operates a computer to type, edit and generate a variety of documents and reports. Skill Level 4 551111 Accounts Clerk Accounts Payable or Receivable Clerk Monitors creditor and debtor accounts, and undertakes related routine documentation. May work in a call centre. Skill Level 4 551112 Cost Clerk Calculates and investigates the cost of wages, materials, overheads and other operating expenses. Skill Level 4	
551 Accounting Clerks and Bookkeepers compile, record and process documents relating to creditors and debtors, operating costs, financial transactions and payrolls.	5511 Accounting Clerks monitor creditor and debtor accounts, undertake related routine documentation, and calculate and investigate the cost of wages, materials, overheads and other operating costs.		

Minor Group	Unit Group	Occupations	Specialisations
591 Logistics Clerks coordinate the purchasing, receipt, recording, monitoring, and distribution of goods and services, and the clearance and collection of imported cargo and shipment of cargo for export.	5512 Bookkeepers	551211 Bookkeeper	Financial Administration Officer
	maintain and evaluate records of financial transactions in account books and computerised accounting systems	Maintains and evaluates records of financial transactions in account books and computerised accounting systems.	
		Skill Level 4	
	5513 Payroll Clerks	551311 Payroll Clerk	
	prepare payrolls and related records for employee salaries and statutory record-keeping purposes.	Pay Clerk Payroll Officer Prepares payroll and related records for employee salaries and statutory record-keeping purposes.	
		Skill Level 4	
	5911 Purchasing and Supply Logistics Clerks	591111 Order Clerk	Delivery Clerk Logistics Clerk
	prepare and process orders for goods and services, monitor stock levels and supply sources and maintain stock and inventory levels, record and coordinate the flow of materials between departments, prepare production schedules, and administer and coordinate storage and distribution operations within organisations.	Customer Orders Clerk Receives purchase requests for good and services, checks requests against inventory records and stock, and processes orders.	
		Skill Level 4	
		591112 Production Clerk	
		Production Recorder Schedule Clerk	

Minor Group	Unit Group	Occupations	Specialisations
		Records and coordinates the flow of work and materials between departments, examines orders for goods, and prepares production schedules.	
		Skill Level 4	
		591113 Purchasing Officer	
		Procurement Clerk	
		Prepares purchase orders, monitors supply sources and negotiates contracts with suppliers.	
		Skill Level 4	
		591114 Sales Clerk	
		Internal Salesperson	
		Receives and processes purchase orders for goods and services, and provides information and advice about goods and services.	Engineering Sales Clerk Lay-by Clerk
		Skill Level 4	
		591115 Stock Clerk	
		Stock Control Clerk	Inventory Clerk Supply Clerk
		Stores Clerk	

Minor Group	Unit Group	Occupations	Specialisations
		Monitors stock levels and maintains stock, order and inventory records. Skill Level 4 591116 Warehouse Administrator Administers and coordinates storage and distribution operations within an organisation. Skill Level 4	
6 SALES WORKERS			
611 Insurance Agents and Sales Representatives represent companies in selling their goods and services, and sell property on behalf of clients.	6113 Sales Representatives represent companies to sell their goods and business services to wholesale and retail establishments.	611311 Sales Representative (Building and Plumbing Supplies) Represents their company in selling builders' timber, and building and plumbing hardware and supplies to wholesale and retail establishments. Skill Level 4 611399 Sales Representatives nec This occupation group covers Sales Representatives not elsewhere classified. Skill Level 4	
7 MACHINERY OPERATORS AND DRIVERS			

Minor Group	Unit Group	Occupations	Specialisations
711 Machine Operators operate stationary machines to process, manufacture, treat and finish a range of products	7113 Paper and Wood Processing Machine Operators operate machines to manufacture paper packaging and other paper products, fibreboard stock, logs, plywood, particle board, solid laminate and similar timber products.	711312 Wood Processing Machine Operator Operates sawing, rolling, pressing and other machines to manufacture logs, timber poles and pieces, plywood, particle board, solid laminate and similar products. <i>Skill Level 4</i>	Band Saw Operator Beam Saw Operator Cant Gang Sawyer Debarker Operator Docking Saw Operator Log Preparer Plywood and Veneer Repairer Resawyer Ripsaw Operator Sawmill Moulder Operator Veneer Production Machine Operator
	7121 Crane, Hoist and Lift Operators operate stationary and mobile cranes, hoists, lifts and winches to lift, move and place materials, equipment and people in areas such as building sites, factories, mines, sawmills, wharves and shipyards.	712111 Crane, Hoist or Lift Operator Operates stationary and mobile cranes, hoists, lifts and winches to lift, move and place materials, equipment and people in areas such as building sites, factories, mines, sawmills, wharves and shipyards. Registration or licensing is required. <i>Skill Level 4</i>	Elevated Work Platform Operator Pile Driver Winch Operator Winding Engine Driver
712 Stationary Plant Operators operate stationary plant to perform a range of activities such as extracting minerals from the earth; refining and treating metals and mineral ore, and producing basic metal products; lifting, moving and placing materials and equipment; and loading and stacking bulk materials.	7123 Engineering Production Systems Worker perform a range of production process tasks to refine and treat metals and mineral ore, fire ceramics, and operate plant to produce and finish metal products such as rods, tubing and	712311 Engineering Production Systems Worker Performs a range of production process tasks to refine and treat metals and mineral ore, fire ceramics, and operate plant to produce and finish metal products such as rods, tubing and	Tool Setter

Minor Group	Unit Group	Occupations	Specialisations
	structural shapes, and moulds for casting	structural shapes, and moulds for casting. Registration or licensing is required. Skill Level 4 712911 Boiler or Engine Operator Operates and maintains stationary engines, boilers, refrigeration and air-conditioning systems, and associated mechanical plant. Registration or licensing is required. Skill Level 4 712912 Bulk Materials Handling Plant Operator Operates plant to load, unload, move, store and stack bulk materials such as grain, sugar and mineral ore Skill Level 4 712999 Stationary Plant Operators nec This occupation group covers Stationary Plant Operators not elsewhere classified. Skill Level 4	
	7129 Other Stationary Plant Operators This unit group covers Stationary Plant Operators not elsewhere classified. It includes Boiler or Engine Operators, Bulk Materials Handling Plant Operators, Cement Production Plant Operators, Concrete Batching Plant Operators, Concrete Pump Operators, Paper and Pulp Mill Operators, Railway Signal Operators, Train Controllers, Waste Water or Water Plant Operators and Weighbridge Operators.		
721 Mobile Plant Operators	7211 Agricultural, Forestry and Horticultural Plant Operators	721112 Logging Plant Operator	Timber Treatment Plant Operator Forwarder Operator Skidder Operator Tree Feller Operator

Minor Group	Unit Group	Occupations	Specialisations
operate mobile plant to clear and cultivate land, sow and harvest crops, fell trees, move and excavate rock and soil, move pallets and containers, and lay roads and railway tracks.	operate agricultural, forestry and horticultural plant to clear and cultivate land, sow and harvest crops, and fell trees and move logs.	Operates plant to fell trees and drag, transport and load logs onto trucks. Registration or licensing may be required.	
	7212 Earthmoving Plant Operators	Skill Level 4	
		721211 Earthmoving Plant Operators (General)	
		Construction Plant Operator (General)	
		Operates a range of earthmoving plant to assist with building roads, rail, water supply, dams, treatment plants and agricultural earthworks. Registration or licensing is required.	
		Skill Level 4	
		721212 Backhoe Operator	
		Operates a backhoe and attachments to excavate, break, drill, level and compact earth, rock and other material. Registration or licensing is required.	
		Skill Level 4	
		721213 Bulldozer Operator	
		Operates a bulldozer using blades and other attachments to gouge out, level and move materials in construction, forestry,	

Minor Group	Unit Group	Occupations	Specialisations
		mining and other projects. Registration or licensing is required.	
		Skill Level 4	
		721214 Excavator Operator	
		Operates heavy excavation plant to excavate, move and load earth, rock and rubble. Registration or licensing is required.	
		Skill Level 4	
		721215 Grader Operator	
		Operates a grader to spread and level materials in construction projects. Registration or licensing is required.	
		Skill Level 4	
		721216 Loader Operator	
		Operates a motorised loader to move and load soil, rock and other material. Registration or licensing is required.	
		Skill Level 4	
	7213 Forklift Drivers operate forklifts to move bulk materials, containers, crates, palletised goods, cartons and bales.	721311 Forklift Driver	
		Forklift Operator Fork Truck Operator	

Minor Group	Unit Group	Occupations	Specialisations
733 Truck Drivers drive heavy trucks, removal vans, tankers and tow trucks to transport bulky goods and liquids	7331 Truck Drivers drive heavy trucks, removal vans, tankers and tow trucks to transport bulky goods and liquids.	Operates a forklift to move bulk materials, containers, crates, palletised goods, cartons and bales. Registration or licensing may be required. Skill Level 4 733111 Truck Driver (General) Drives a heavy truck, requiring a specially endorsed class of licence, to transport bulky goods. Registration or licensing is required. Skill Level 4 741111 Storeperson Stores Assistant Warehouse Assistant Receives, handles and despatches goods in a store or warehouse. Skill Level 4	Logging Truck Driver Manufacturing Storeperson Stores Despatch Hand
741 Storepersons receive, handle and despatch goods in stores and warehouses.	7411 Storepersons receive, handle and despatch goods in stores and warehouses.		
8 LABOURERS 811 Cleaners and Laundry Workers clean vehicles, commercial, industrial and domestic premises, construction sites and industrial machines, and	8112 Commercial Cleaners clean offices, residential complexes, hospitals, schools, industrial work areas, industrial machines, construction	811211 Commercial Cleaner Cleans offices, residential complexes, hospitals, schools, industrial work areas, industrial machines, construction sites	

Minor Group	Unit Group	Occupations	Specialisations
clothing and other items in laundries and dry-cleaning establishments.	sites and other commercial premises using heavy duty cleaning equipment.	and other commercial premises using heavy duty cleaning equipment.	
		Skill Level 5	
		821112 Drainage, Sewerage and Stormwater Labourer	
		Performs routine tasks in maintaining drainage, sewerage and stormwater systems.	
		Skill Level 5	
		821113 Earthmoving Labourer	
		Performs routine tasks in excavating earth, clearing and levelling sites, and digging irrigation channels.	
		Skill Level 5	
		821511 Paving and Surfacing Labourer	
		Performs routine tasks associated in laying bituminous and other paving materials on roads, runways, parking areas and other surfaces to be paved.	
		Skill Level 5	
821 Construction and Mining Labourers	8211 Building and Plumbing Labourers		
perform a variety of routine tasks in house building, and road, rail and general construction, and in drilling, mining and mineral ore treatment, usually under close supervision.	perform a variety of routine tasks associated with erecting and repairing structures and facilities, maintaining stormwater, drainage and sewerage systems, excavating earth and clearing and levelling sites, and installing and maintaining piping systems, fixtures and water regulators.		
	8215 Paving and Surfacing Labourers		
	perform routine tasks associated in laying bituminous and other paving materials on roads, runways, parking areas and other surfaces to be paved.		
832 Packers and Product Assemblers	8321 Packers	832199 Packers nec	

Minor Group	Unit Group	Occupations	Specialisations
wrap and place items into containers and seal containers in preparation for despatch to customers, and assemble components and subassemblies of products.	weigh, wrap, seal and label chocolate, fruit, vegetables, meat, seafood and other products.	This occupation group covers Packers not elsewhere classified. Skill Level 5 839311 Product Examiner Quality Assurance Assessor Quality Control Assessor Examines products to ensure conformity to specifications and standards of presentation and quality. Skill Level 4 839312 Product Grader Grades primary produce by evaluating individual items or batches against established standards and records results. Skill Level 4 839313 Product Tester Collects product samples, conducts tests to determine quality of produce and maintains records of results. Skill Level 4 839411 Paper and Pulp Mill Worker	Timber Grader
839 Miscellaneous Factory Process Workers This minor group covers Factory Process Workers not elsewhere classified. It includes Metal Engineering Process Workers, Plastics and Rubber Factory Workers, Product Quality Controllers, and Timber and Wood Process Workers.	8393 Product Quality Controllers examine manufactured products and primary produce to ensure conformity to specifications and standards of presentation and quality.		

Minor Group	Unit Group	Occupations	Specialisations
		Pulp, Paper Making and Paper Products Labourer	
		Performs routine tasks in a paper and pulp mill such as placing logs onto conveyors for chipping, and loading woodchip and pulp for processing.	
		Skill Level 5	
	8394 Timber and Wood Process Workers	839412 Sawmill or Timber Yard Worker	
		Timber Mill Worker	
		Wood Processing Worker	
	perform routine tasks in paper and pulp mills, sawmills, timber yards, and wood processing and timber products factories.	Performs routine tasks in a sawmill or timber yard such as sorting and stacking timber, assisting timber machinists, assembling orders and racking offcuts.	Tailer-out
		Skill Level 5	
		839413 Wood and Wood Products Factory Worker	
		Wood and Wood Products Labourer	Hardboard Factory Worker
		Performs routine tasks in a wood processing and timber product factory such as placing logs on equipment and conveyors, assisting with measuring and	Joinery Factory Worker
			Particleboard Factory Worker
			Plywood Factory Worker

Minor Group	Unit Group	Occupations	Specialisations
		cutting of materials, and setting up and operating plant equipment.	
		Skill Level 5	
	8412 Crop Farm Workers	841299 Crop Farm Workers nec	
	perform routine tasks in producing crops such as fruit, nuts, grains and vegetables.	This occupation group covers Crop Farm Workers not elsewhere classified	
		Skill Level 5	
841 Farm, Forestry and Garden Workers		841311 Forestry Worker Assists with cultivating, maintaining and protecting forests. Registration or licensing may be required.	Fire Lookout Tree Planter
perform a variety of routine tasks in cultivating and harvesting crops, plants and forests, breeding and raising of livestock and aquatic stock, and the management of pests and weeds.	8413 Forestry and Logging Workers	841312 Logging Assistant	
	perform routine tasks associated in cultivating and maintaining natural and plantation forests, and logging, felling and sawing trees.	Assists with logging, felling and sawing of trees in forests.	
		Skill Level 4	
		841313 Tree Faller	
		Tree Feller	
		Fells trees in forests, and trims and saws them into logs. Registration or licensing may be required	Hardwood Faller Softwood Faller
		Skill Level 4	

Minor Group	Unit Group	Occupations	Specialisations
	8414 Garden and Nursery Labourers S perform a variety of routine tasks in propagating, cultivating and maintaining plants in gardens and horticultural nurseries.	841412 Horticultural Nursery Assistant Nursery Hand (Horticulture) Assists in propagating, cultivating and harvesting plants in a horticultural nursery. <i>Skill Level 5</i>	
	8419 Other Farm, Forestry and Garden Workers nec This unit group covers Farm, Forestry and Garden Workers not elsewhere classified.	841912 Pest or Weed Controller Applies pest or weed management techniques to kill and control pests or weeds in domestic, commercial and industrial areas, roadsides, and private and public lands. Registration or licensing may be required. <i>Skill Level 4</i>	Fumigator
		841999 Farm, Forestry and Garden Workers nec This occupation group covers Farm, Forestry and Garden Workers not elsewhere classified <i>Skill Level 5</i>	Coral Collector Indoor Plant Technician Irrigationist Kelp or Seagrass Gatherer Seed Collector
899 Miscellaneous Labourers This minor group includes Labourers not elsewhere classified. It includes	8993 Handypersons clean, paint, repair and maintain buildings, grounds and facilities.	899311 Handyperson Cleans, paints, repairs and maintains buildings, grounds and facilities.	

Minor Group	Unit Group	Occupations	Specialisations
Caretakers, Deck and Fishing Hands, Handypersons, Motor Vehicle Parts and Accessories Fitters, Printing Assistants and Table Workers, Recycling and Rubbish Collectors, and Vending Machine Attendants.		Skill Level 5	
	8999 Other Miscellaneous Labourers	899914 Electrical or Telecommunications Trades Assistant	
	This unit group covers Labourers not elsewhere classified. It includes Bicycle Mechanics, Car Park Attendants, Crossing Supervisors, Electrical or Telecommunications Trades Assistants, Leaflet or Newspaper Deliverers, Mechanic's Assistants, Railways Assistants, Sign Erectors, Ticket Collectors or Ushers, and Trolley Collectors.	Assists Electrotechnology and Telecommunications Trades Workers to install and maintain electrical and telecommunications systems.	
		Skill Level 5	
		899916 Mechanic's Assistant	
		Assists Motor Mechanics to replace and repair worn and defective parts, re-assemble mechanical components, change oil and filters, and perform other routine mechanical tasks.	
		Skill Level 5	
		899999 Labourers nec	
		This occupation group covers Labourers not elsewhere classified	
		Skill Level 5	

11 References

Blueprint for the future South Australian forest and wood products industry (2014-2040) 2014, South Australian Forest Industry Advisory Board.

Department of Primary Industries NSW, *Private Native Forestry - Survey of private native forest landholders*, available at: <https://www.dpi.nsw.gov.au/forestry/private-native-forestry>, last accessed 15 June 2021

Forestry and Wood Processing Workforce Action Plan 2020 – 2024, Forestry New Zealand (The Forestry and Wood Processing Workforce Action Plan Working Group) 2020.

Forestry New Zealand (The Forestry and Wood Processing Workforce Action Plan Working Group) 2020, *Forestry and Wood Processing Workforce Action Plan 2020 – 2024*.

Forest Opportunity Roadmap / Maine, 2018, For/Maine.

Forestry Skills Forum: A Plan for England and Wales (2019).

Forestry Skills Plan 2019-2024 (2019), Forestry Skills Forum: A plan for England and Wales,

Jumbunna Institute for Indigenous Education and Research Gari Yala Speak the Truth Synopsis Report, 2021, available at: https://www.dca.org.au/sites/default/files/dca_synopsisreport_web_0.pdf last accessed 15 June 2021

National Skills Commission, *25 Emerging Occupations*, available at: <https://www.nationalskillscommission.gov.au/25-emerging-occupations> last accessed 28 July 2021

NSW Apprenticeship and Traineeship Approvals – School Based, Training Services NSW Tableau dataset, accessed 27 July 2021.

Skills Action Plan 2020, Scottish Forest & Timber Technologies

Skills Impact, *Forest and Wood Products Industry Sector IRC Skills Forecast and Proposed Schedule of Work 2019-2022*, available at:

[https://www.skillsimpact.com.au/site/skilliampactmedia/uploads/2019/05/ISF.FWP_IRCSkillsForecast.2019-2022.Final .pdf?x98929](https://www.skillsimpact.com.au/site/skilliampactmedia/uploads/2019/05/ISF.FWP_IRCSkillsForecast.2019-2022.Final.pdf?x98929) last accessed 28 July 2021

Skills Impact, *Forest and Wood Products Industry Sector Annual Update 2021 IRC Skills Forecast and Proposed Schedule of Work*, available at:

https://www.skillsimpact.com.au/site/skilliampactmedia/uploads/2021/07/ISF.FWP_IRCSkillsForecast.2021AnnualUpdate.pdf?x98929 last accessed 28 July 2021

Training Services NSW Apprenticeship and Traineeship Statistics, <https://public.tableau.com/app/profile/business.reporting>, accessed on 2 February 2021.

Error! Reference source not found.

Attachment One: Interview Questions

What is your Business Name?	
Who is filling in this form?	☐ Name ☐ Email ☐ Phone Number
What is your company size? ?	☐ 0-19 employees ☐ 20-99 ☐ 200+
How many of your workers are in the following occupation groups??	☐ Managers ☐ Professionals ☐ Technicians and trade workers ☐ Clerical and administrative workers ☐ Sales workers ☐ Machinery operators and drivers ☐ Labourers
How many of your workers are:	☐ Male ☐ Female
How many of your employees are in the following age groups?	☐ 19 and under ☐ 20 – 25 ☐ 26 – 45 ☐ 46 - 60 ☐ Over 60
How many of your employees are Aboriginal or Torres Strait Islander?	☐ Don't know ☐ None ☐ 1-3 ☐ 4-10
Do you have any employees that could work better with some literacy or numeracy training or support?	☐ Yes ☐ No
Do any employees have a disability, impairment or long-term condition?	☐ Yes ☐ No

How much effect do the following external factors affect your business?	☐ Competitors ☐ The economy (including housing starts, investment in infrastructure) ☐ Access to a skilled workforce ☐ Access to an unskilled workforce ☐ Availability of younger workers (aged under 35 years) ☐ Government policy, legislation or regulations ☐ Community attitudes to forestry ☐ Stewardship requirements (e.g. Responsible Wood, FSC) ☐ Climate change ☐ Other ☐ (please specify)
How much do the following factors inside your organisation affect your business?	☐ Changes in processes or innovative ways of working ☐ Changes in technology or equipment ☐ Knowledge sharing between peer-level workers ☐ Knowledge sharing between management and other workers ☐ Workforce skills ☐ Ability to attract new employees ☐ Ability to retain employees ☐ A workforce that is getting older ☐ Workplace flexibility ☐ Other
In the next 2 years: Are you planning to introduce any new or improved...	☐ Technology and processes (either for producing products or supplying services) ☒ Sales and marketing methods ☐ New work practices ☐ Products and services ☐ No changes planned
Which industry sector best describes the work that you do?	☐ Forest growing and management ☐ Harvesting and haulage ☐ Sawmilling and processing ☐ Timber manufactured products

Which Forest Growing and Management job roles are you likely to need to fill or create in the next 5 years?	☐ Forestry and Logging Worker ☐ Forestry Scientist (Forester) ☐ Environmental Scientist ☐ Production Manager ☐ Garden and Nursery Labourers ☐ Other (please specify)
Which job roles have been the most difficult to fill?	☐ Forestry and Logging Worker ☐ Forestry Scientist (Forester) ☐ Environmental Scientist ☐ Production Manager ☐ Garden and Nursery Labourers ☐ Other ☐ Other (please specify)
Which Harvest & Haulage job roles are you likely to need to fill or create in the next 5 years?	☐ Logging Plant operator (including harvester, forwarder, skidder etc.) ☐ Truck Driver (Log haulage) ☐ Metal Fitter / Machinist ☐ Clerks ☐ Mechanics ☐ Other (please specify)
Which job roles have been the most difficult to fill?	☐ Logging Plant operator (including harvester, forwarder, skidder etc.) ☐ Truck Driver (Log haulage) ☐ Metal Fitter / Machinist ☐ Clerks ☒ Mechanics ☐ Other ☐ Other (please specify)
Which Sawmilling and Processing job roles are you likely to need to fill or create in the next 5 years?	☐ Timber and Wood Process Worker ☐ Forklift Driver ☐ Production Manager ☐ Metal Fitter and Machinists (including Saw Technician) ☐ Wood Machinists ☐ Other (please specify)

Which job roles have been the most difficult to fill?	☐ Timber and Wood Process Worker ☐ Forklift Driver ☐ Production Manager ☐ Metal Fitter and Machinists (including Saw Technician) ☐ Wood Machinists ☐ Other ☐ Other (please specify)
Which Timber Manufactured Products job roles are you likely to need to fill or create in the next 5 years?	☐ Timber and Wood Process Workers ☐ Forklift Drivers ☐ Metal Fitters and Machinists (including saw technician) ☐ Electricians ☐ Production Managers ☐ Other (please specify)
Which job roles have been the most difficult to fill?	☐ Timber and Wood Process Workers ☐ Forklift Drivers ☐ Metal Fitters and Machinists (including saw technician) ☐ Electricians ☐ Production Managers ☐ Other ☐ Other (please specify)
How many of your workers have been with the company for the following periods of time:	☐ Less than 12 months ☐ 1-3 years ☐ 3-10 years ☒ 10-20 years ☐ 20+ years
What are the most common reasons that you employ a new worker?	☐ Replace a worker who has left voluntarily ☐ Replace a worker who has retired ☐ Replace a worker who has left involuntarily ☐ Company growth ☐ To bring new skills into the business ☐ Other (please specify)
How much difficulty do you have in recruiting staff?	☐ Open-Ended Response (0 to 100)

What challenges do you face when recruiting workers? Select as many as you want from the list below, or add other items that are not on the list.	☐ Shortage of skilled and experienced people in the industry ☐ Few applicants with the skills needed ☐ People think that our workplace is remote ☐ Applicants have a poor attitude to work or work ethic ☐ People don't want to work in our industry ☐ People think that our wages/salaries too low ☐ People don't like our working conditions (e.g. shift work, seasonal work, hours of work) ☐ Other (please specify)
What personal attributes are you looking for, when recruiting workers? Select as many as you want from the list below, or add other items that are not on the list.	☐ Ability to work in a team ☐ Ability to work without supervision ☐ 'Cultural fit' with the organisation ☐ Fresh thinking / ideas ☐ Literacy and numeracy skills ☐ Practical / manual skills ☐ Young people to teach ☐ Mature workers to bring their skills with them ☐ Other (please specify)

What level of education do you require when recruiting workers?	☐ Managers - Secondary School - Year 9 and below ☐ Managers - Secondary School - Year 10 and above ☐ Managers - A Certificate II, III or IV ☐ Managers - A university degree ☐ Professionals - Secondary School - Year 9 and below ☐ Professionals - Secondary School - Year 10 and above ☐ Professionals - A Certificate II, III or IV ☐ Professionals - A university degree ☐ Technicians and trade workers - Secondary School - Year 9 and below ☐ Technicians and trade workers - Secondary School - Year 10 and above ☐ Technicians and trade workers - A Certificate II, III or IV ☐ Technicians and trade workers - A university degree ☐ Clerical and administrative workers - Secondary School - Year 9 and below ☐ Clerical and administrative workers - Secondary School - Year 10 and above ☐ Clerical and administrative workers - A Certificate II, III or IV ☐ Clerical and administrative workers - A university degree ☐ Sales workers - Secondary School - Year 9 and below ☐ Sales workers - Secondary School - Year 10 and above ☐ Sales workers - A Certificate II, III or IV ☐ Sales workers - A university degree ☐ Machinery operators and drivers - Secondary School - Year 9 and below ☐ Machinery operators and drivers - Secondary School - Year 10 and above ☐ Machinery operators and drivers - A Certificate II, III or IV ☐ Machinery operators and drivers - A university degree ☐ Labourers - Secondary School - Year 9 and below ☐ Labourers - Secondary School - Year 10 and above ☐ Labourers - A Certificate II, III or IV ☐ Labourers - A university degree
Have you put on any apprentices or trainees in the last 2 years? If so, in what areas?	☐ Open-Ended Response
Do you intend to put on any apprentices or trainees in the next 2 years? If so, in what areas?	☐ Open-Ended Response
Do you think that your organisation has a skills shortage?	☐ Yes

	☐ No
In what areas do you have a skills shortage?	☐ Open-Ended Response
How do you normally fill skills gaps in your organisation?	☐ Recruit school-leavers ☐ Recruit experienced workers from another industry ☐ Build the skills of workers with accredited training ☐ Build the skills of workers with non-accredited training ☐ Use the skilled workforce of another business (outsourcing) ☐ Other (please specify)
Why do you train workers?	☐ To meet highly specific training needs ☐ Legislative, regulatory or licensing requirements ☐ Career development/to increase or update skills ☐ To improve the quality of our products/services ☐ To formalise skills into qualifications ☐ To maintain a flexible and responsive workforce ☐ To use new technology ☐ To remain competitive ☐ Other (please specify)
What training do you provide to new workers?	☐ We put them through a full qualification/traineeship/apprenticeship ☐ We put them through a part qualification/skill set ☐ We give them a few select units of competency ☐ We train them in house, on the job ☐ We bring in an external trainer for non-accredited training, on the job ☐ Other (please specify)
What barriers are there to training?	☐ Training fees are too high ☐ The time commitment to training ☐ The training centre is too far away ☐ There's a shortage of suitable trainers ☐ The training that is available doesn't meet my needs ☐ Not sure how to find or access training ☐ Other (please specify)

What would remove or reduce these barriers to training, skills or education?	☐ More information about formal training pathways ☐ More information about funding options ☐ A better relationship with training providers ☐ A better relationship with local high schools ☐ Scheduled industry-wide training (to create economy of scale) delivered locally ☐ Training and assessment materials developed by our industry to ensure relevance and quality ☐ Access to online training ☐ Other (please specify)
---	---

