



Forestry and Timber



Australia relies on a skilled forest management and harvesting workforce to produce the wood, timber and fibre products used everyday to construct buildings and produce essential sanitary items like toilet paper.

The industry is made up of many sectors, each responsible for a crucial step in the supply chain, planting, managing, and harvesting forests, as well as processing and distributing timber and wood.

Employs over 62,000
people

Contributes \$6.2 billion to
Gross Domestic Product

Revenue of \$22.6 billion

Export revenue of over
\$2 billion

Source: IBISWorld Industry Wizard, 2021

In the face of bushfires, climate change and COVID-19, the importance of maintaining these skills at a local level has been reinforced. Building on current skills and attracting new entrants are an important focus for industry, so that it can have access to the skilled workforce it needs. Safe and sustainable work practices are also a key focus, so industry can continue to grow and manage Australian forests, recognising them as a valuable renewable resource.

The national skills standards and qualifications for Australia's forestry and timber industry are overseen by the Forest Management and Harvesting Industry Reference Committee (IRC), Timber and Wood Processing IRC and Timber Building Solutions IRC.



Skills Forecast

Over the past year, industry has been continuing to produce forest and wood products in one of the most complex and challenging environments experienced in memory. The COVID-19 pandemic came on the heels of a devastating bushfire season, with export and policy conditions also proving difficult.

Industry has demonstrated a commitment to vocational education and training (VET) during this time, contributing to a substantial review of the FWP Forest and Wood Products Training Package overseen by the IRCs for Forest Management and Harvesting, Timber Building Solutions and Timber and Wood Products. Employers have continued to encourage participation in the projects by workers, who have volunteered their time as subject matter experts, reviewers and validators.

As part of the 2020–2021 projects, consideration has been given to some qualifications and units with low enrolments, in the interest of streamlining training packages, as requested by the Skills Ministers and the AISC. The IRCs are continuing their work to streamline the FWP Training Package as part of the 2021–2022 project to review and consolidate the sawmilling and timber processing qualifications and units.

The governments of Victoria and New South Wales have both implemented initiatives to support industry as it recovers from the 2019–2020 bushfire season, with funding for research, planting, nurseries, salvaged timber, replacing and upgrading infrastructure, and new innovations. The IRCs are overseeing a project in 2021–2022 to improve available training for assisting during future bushfires and similar emergencies.

Even with the challenges of the past few years, industry continues to look towards opportunities to expand and improve its operations. Innovations in the way timber is produced and new timber products have attracted investments in new and upgraded facilities, machinery and equipment across the timber and wood products manufacturing sector. Work to identify the growth potential for the forestry industry in northern Australia is also underway, with opportunities for skill development and sustainable local employment identified.

Projects for 2021-22

The following projects have been approved by the Australian Industry and Skills Committee (AISC) for 2021-22.

Sawmilling and Timber Processing

The sawmilling, timber processing and timber products sectors are undergoing rapid digital transformation and technological advancement, and as a result the skills required of operators is changing. They need the skills to work with new technologies and produce innovative products such as cross laminated timber (CLT) and glue laminated timber (GLT). The 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. This project proposes a review of current qualifications and skills standards to incorporate current skills requirements and to consolidate the number of qualifications and units, to reduce complexity in the training system.

Responding and Assisting in Bushfires

Forestry operators hold a key role in assisting with fire mitigation, firefighting, clean up, and clearing operations. They have expertise in the heavy machinery used in both harvesting operations and firefighting and support the prevention of bushfire through mechanical thinning. With the frequency and intensity of bushfires in Australia expected to increase, forestry operators and emergency services supervisors need to be effectively trained and ready to respond and assist. Seventeen current units of competency within the FWP Forest and Wood Products Training Package are proposed for review, to incorporate the skills required for bushfire prevention, assistance and recovery. Two units may also need to be developed to fill a skills gap in fire incident control and leadership. The revised and new units could be exported into other training packages to support job roles outside the forestry industry, which have also expanded to undertake activities assisting with bushfires.

Project Work Between 2020-21

Outlined over the following pages is a summary of projects managed by Skills Impact, with support from ForestWorks, between July 2020 and June 2021.

The Forest Management and Harvesting IRC oversaw the project development, as part of their responsibility to support engagement with their industry and to ensure the projects meet stakeholder needs.

The skills standards and qualifications updated as part of the following projects are expected to be endorsed by the AISC and State and Territory Ministers later in 2021.

Entry Level Forestry Skills Project

Skilled workers are highly sought after in the forestry industry. With continued strong demand for a range of products, from new wood-fibre based plastic alternatives to the softwood used to build new homes, industry and governments are looking for ways to produce these materials in a sustainable way. The Federal Government has committed to planting a billion trees over the next decade, in addition to the 70 million trees already planted each year. Australian plantation forests, which provide the majority of Australia's timber, are located in regional and sometimes remote locations. New entrants are needed in these regions to deliver on planting commitments and address the future skills needs of industry.

Industry representatives have volunteered their time throughout this project to update the national entry level qualifications to better meet current skills needs and attract new young entrants. These updates have focused on improving the deliverability of the qualifications, so that they better support the career journey of learners and reflect the hands-on skills required. The updated qualifications, skill sets and units are designed to support entry-level and

existing operators to meet current job requirements, as well as providing school students in regional forestry areas with access to school-based VET training that provides a career path into a variety of forestry roles.

“These updated qualifications, skill sets and units of competency allow myself and my colleagues to be aware of any updated skills needs that apply to our industry, and then allows us to pass on this information to learners, so they have knowledge of any new requirements they may need to meet future industry demands.”

Keith Eastley, TasTAFE

Key Outcomes

- Four qualifications at the AQF level two and three were consolidated into one qualification at each level, resulting in a Certificate II in Forest Operations and a Certificate III in Forest Operations, with specialisations in forest nursery production, silviculture and timber harvesting and haulage.
- The Certificate I in Forest and Forest Products is proposed for deletion as it is no longer needed by industry.
- Five skill sets were developed, including four to support targeted skills in plantation establishment, silviculture, and excavator and skid steer loader operations, as well as one for learners who are new to forestry operations.
- Fifteen existing skill sets were

revised to incorporate updated units of competency.

- New units of competency were developed to address gaps in entry level qualifications and meet skills requirements, including two for learners who are new to forestry operations, such as those in school-based VET traineeships and other VET in-school programs and nine to support workers and operators in forest nursery production operations.
- Units of competency from the Foundation Skills Training Package have been imported to allow for soft skills development, so that young learners are prepared to navigate workplaces and to build on the VET foundation skills programs widely delivered in schools across regions.
- Existing units were reviewed to reflect job roles and works tasks and to improve learning outcomes.
- Five units are proposed for deletion as feedback indicated they are no applicable or relevant to forestry operations.

High-Level Forestry Skills Project

Growing and maintaining sustainable forests for timber, wood and fibre requires high level skills in planning, supervision and management. With new digital and spatial technologies being adopted by industry, these skills have been changing, meaning updated skills are needed. Expertise is required to develop digital forest maps and harvest instructions files and for the management and analysis of harvesting optimisation data. Skills are also needed for the collection of forestry data using unmanned aerial vehicles (UAV) and interpretation and use of image data in forestry planning

and management. These skills help support a safer and more sustainable forestry industry.

While high-level forestry skills are in high demand in Australia, there is a shortage of people qualified and available to perform the work. Thanks to the contributions of everyone involved in this project, the qualifications and skills standards that support these skills have been updated to better support career pathways and reflect the current skills required to grow and harvest forests safely and sustainably. The updated qualification structure is more flexible, enabling participants to select subjects which best suit their needs.

“Both qualifications are now reflective of industry developments and relevant to our industry as a stepping stone to a fulfilling forestry career.”

Linda Cotterill, Forestry Corporation of NSW

Key Outcomes

- Two qualifications, the Diploma of Forest and Forest Products and Certificate IV in Forest Operations, were revised to support the current skills requirements of the forest industry and provide a flexible structure for learners.
- The Advanced Diploma of Forest Industry Sustainability is proposed for deletion as feedback indicated it is no longer needed by industry.
- Ten skill sets are proposed for deletion as they are no longer needed by industry.
- Forty-six units of competency underwent minor adjustments and updates. These units focus on people practices management, safety and environment, and forest operations.

- Seventeen units have been consolidated and merged into eight units, as they had similar learning outcomes.
- Seven units are proposed for deletion as they are no longer needed by industry.
- Sixteen units were developed to address skills gaps related to management systems, forest resource management and forest operations management.

Remote Forestry Operations Project

Forestry work in remote locations requires specific safety skills to support the wellbeing of individuals and small teams. Forest workers must possess specialised skills to maintain safe work practices while operating heavy machinery for long periods of time, in conditions that can be unpredictable. Skills are also needed to respond to emergency situations if they occur. Mental health awareness and first aid is also a key skills requirement. At a leadership level, the team's abilities are reinforced by skills to actively shape and promote a safety mindset.

The forestry industry has driven this project to capture the skill required to foster a safety culture with safe practices and a safety mindset while working in team situations or alone, in isolation or out of line of sight. One unit applies to operational forestry roles and the other unit is designed for those leading small work teams in remote forestry operations.

Key Outcomes

- A unit has been developed to describe the skills and knowledge required for applying situational awareness and a safety mindset while performing operational forestry-related tasks in team situations or when working alone, in isolation or out of line of sight. This unit has been added to the redeveloped Certificate III in Forest Operations, which was reviewed as part of the Entry Level Forestry Skills Project.
- A unit for applying a safety mindset in forestry operations has been developed to capture the skills required for those leading small work teams to influence safety culture. This unit has been added to the Certificate IV in Forest Operations, which was reviewed as part of the High-Level Forestry Skills Project.

Completed Projects

The following projects were endorsed by the Australian Industry and Skills Committee (AISC). The revised qualifications, skill sets and units of competency, that were developed as part of these projects, are published on training.gov.au and available for delivery by registered training organisations (RTOs).

Visit www.skillsimpact.com.au/completed-projects for further details.

New Timber Harvesting Technologies Project

New technologies such as digital maps, forest operation plans, and new harvesting systems are providing the forestry industry with safer, more environmentally sustainable ways to work. For this reason, many job roles have adapted to incorporate the technical and digital skills required to use these and other new technologies. As a result of consultation throughout this project, the skills needed to perform harvesting activities using new technologies were captured in five new units of competency. Twenty-five units across the forest harvesting sector were also updated to reflect current work practices, safety standards, and equipment. One unit, FWPFGM2210 Implement animal pest control procedures, was deleted and replaced by AHCPMG309 Apply pest animal control techniques, a unit of similar content and outcomes from the AHC Agriculture, Horticulture and Conservation and Land Management Training Package that has allowed for the reduction of duplication across these two training packages.

Timber Merchandising Project

Timber merchandising workers make up an essential step in the timber and wood supply chain, helping construction businesses and individual consumers with advice and sales services to meet their specific needs. Consultation has taken place throughout this project to review and redevelop the Certificate III in Timber Merchandising (now the FWP30620 Certificate III in Timber Building Products Supply) with different learning pathways and relevant job outcomes for timber building supply job roles, including specialisations in timber warehousing, logistics, or customer advice and sales. A Certificate IV was considered for development, but industry feedback indicated that leadership and management skills for this sector can be met by existing leadership and management qualifications. The Certificate II in Timber Merchandising was deleted because of availability of alternative qualifications in timber or sale operations. Four units were revised to update workplace health and safety and foundation skills requirements, and to more clearly define the nature and scope of work tasks described in these units. One unit, FWPCOT3251 Promote the carbon benefits of wood products, was deleted as industry did not indicate a need for it.

Timber Truss & Frame Estimating & Design

Many homes and other buildings in Australia are built using timber trusses and frames. While there is rising demand for timber roof trusses and frames, there is a shortage of locally based timber systems designers in Australia to provide plans for how to construct timber truss structures. Industry has contributed throughout this project to review skills standards for timber truss and frame estimators (designers) and fabricators, so that they reflect the distinct skills requirements for each role. As a result, three qualifications and 25 units of competency were updated, and five skill sets and one unit of competency were developed. They have been updated to broaden entry requirements and improve consistency. Four qualifications have been deleted, the Certificate II in Timber Truss and Frame Design and Manufacture; Certificate IV in Timber Truss and Frame Manufacture; Diploma of Timber Truss and Frame Manufacture; and Diploma of Timber Truss and Frame Design. All qualifications have been deleted either due to the low demand for training or the availability of alternative qualifications.

