



# Australian Pulp and Paper Manufacturing Industry Sector

## Annual Update 2021

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### IRC Skills Forecast and Proposed Schedule of Work

Prepared on behalf of the Pulp and Paper Manufacturing Industry Reference Committee (IRC) for the Australian Industry Skills Committee (AISC).



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# Purpose of the Annual Update

This 2021 Annual Update to the Skills Forecast and Proposed Schedule of Work 2019 – 2022 (Skills Forecast) presents additional industry intelligence from 2021 to build on previously reported information. This Annual Update from the Pulp and Paper Manufacturing Industry Reference Committee (IRC) includes intelligence based on national and industry data sources and input from key stakeholders. It proposes vocational education and training (VET) training package review and development work that the IRC deems necessary to meet the needs of industry. The Australian Industry and Skills Committee (AISC) considers this information and includes commissioned work in the National Schedule<sup>1</sup>.

In 2019, the AISC changed the requirements for the annual Skills Forecast. IRCs are now required to submit comprehensive Skills Forecasts once every three years, with abridged annual updates in the intervening two years. As IRCs submitted comprehensive Skills Forecasts in 2019, the next are due in 2022. This Annual Update should be read in conjunction with the Skills Forecast and previous Annual Updates.

This document is not intended to be representative of every issue encountered across all industry sectors; it identifies and addresses the challenges and opportunities that industry has determined as 'priority' for this stage of the schedule, and is a resource for industry and associated skills, learning and accreditation bodies seeking to act upon them.

Detailed information concerning industry skills needs across all sectors covered by the Pulp and Paper Manufacturing IRC, including information from previous Skills Forecasts and Annual Updates, can be found on the Skills Impact website: <https://www.skillsimpact.com.au/pulp-and-paper/skills-forecast/>

## Method & Structure

This is an annual update to the comprehensive Skills Forecast submitted in 2019. IRCs are required to answer the questions in **Section A** to provide updates on issues such as industry skills and workforce development, and qualification utilisation. Answers provided build on and are not repetitive of information reported in previous Annual Updates.

IRCs are also permitted to propose additional training package development work projects to be included in the Proposed Schedule of Work. These will now be submitted separately to the Annual Updates.

**Section B** details the extensive, robust and ongoing industry consultation undertaken by IRC members and Skills Impact, including with rural, regional and remote stakeholders. In line with Skills Impact's values<sup>2</sup>, this helps to ensure transparency and accountability in the process of industry research and Training Package development work.

This Skills Forecast and Proposed Schedule of Work is developed in line with:

- Standards for Training Packages 2012<sup>3</sup>;
- Training Package Products Policy<sup>4</sup>;
- Training Package Development and Endorsement Process Policy<sup>5</sup>.

<sup>1</sup> Australian Industry and Skills Committee (2021); *Australian Industry and Skills Committee*; <https://www.aisc.net.au/content/national-schedule>; viewed 13/04/2021.

<sup>2</sup> Skills Impact (2021); *About us*; <https://www.skillsimpact.com.au/about/>; viewed 13/04/2021.

<sup>3</sup> Department of Education, Skills and Employment (2017); *Standards for Training Packages 2012*; <https://docs.education.gov.au/documents/standards-training-packages-2012>; viewed 13/04/2021.

<sup>4</sup> Department of Education, Skills and Employment (2020); *Training Package Products Policy*; <https://docs.employment.gov.au/documents/training-package-products-policy>; viewed 13/04/2021.

<sup>5</sup> Australian Industry and Skills Committee (2020); *Training Package Development and Endorsement Process Policy*; <https://docs.employment.gov.au/documents/training-package-development-and-endorsement-process-policy-0>; viewed 13/04/2021.

# Industry Reference Committee

The Pulp and Paper Manufacturing IRC is responsible for national training package qualifications relevant to pulp and paper manufacturing.

Qualifications overseen by the IRC are in *the Pulp and Paper Manufacturing Training Package*.

The Pulp and Paper Manufacturing IRC is supported by the Skills Service Organisation, Skills Impact.

<b>Name</b>	<b>Organisation or Area of Expertise</b>
Adele Elice-Invaso	APPITA Australian Pulp & Paper Industry Technical Association (APPITA)
Denise Campbell-Burns (Chair)	Construction, Forestry, Maritime, Mining and Energy Union (CFMMEU) Manufacturing Division
James Swan	Orora Group
Kaye Tyter	Australian Paper
Kevin Peachey	Australian Forest Products Association (AFPA)
Nathan Bright	Norske Skog
Terry McDonald (Deputy Chair)	Visy

# Executive Summary

The pulp and paper manufacturing (PPM) sector has responded reasonably well to the high demand, driven by the COVID-19 pandemic, for paper products during 2020. The huge demand experienced by businesses for paper products, particularly toilet paper, was fuelled by changing consumer behaviour. However, sales of copy paper plummeted due to decreased business-to-business sales because of business inactivity and a shift to working from home arrangements. Sales of copy paper were also impacted by government procurement policies that do not specify the use of Australian products.

The production of lightweight coated paper for catalogues, advertising and promotion was also impacted as businesses curbed advertising production and distribution due to lockdowns.

Demand for paper-based medical equipment, including face masks, gowns and hygiene products, increased throughout 2020 as a result of COVID-19.

The industry has also had to deal with the impact of issues affecting the upstream supply chain, including bushfires and market supply issues.

The PPM industry places significant value on the competency and skills of its workforce in supporting its high regard for safety, its efficient operations, and its development of new and emerging technology.

Industry values and utilises the *PPM Training Package* – albeit informally, mainly due to a lack of service provision from training providers. The Industry Reference Committee (IRC) is committed to finding a pathway to formal use of the nationally accredited training system.

The IRC is currently undertaking a complete review of the *PPM Training Package* through the [Pulp and Paper Manufacturing Review Project](#) and is grateful for Australian Industry and Skills Committee (AISC) support of the project. This will allow all skills standards to be updated to reflect current processes and job functions. The project will also incorporate new and emerging technology into the training package to support bioprocessing, de-inking and recovered paper processes. These new technologies are important to the industry's development. Ensuring there is a skills development strategy and training products to support them is critical.

This Annual Update to the Industry Skills Forecast explores the barriers that make traditional training package use highly impracticable and outlines a strategy, endorsed by industry and being vigorously pursued by the IRC, to overcome these barriers.

# Section A: Overview

## Industry Developments

### Impacts of COVID-19

At the beginning of the COVID-19 pandemic, the potential impact on industry enterprises was a significant threat. Many pulp and paper manufacturers, both regional and metropolitan, are the sole Australian producers of a range of products, including feminine hygiene products, newsprint, medicinal packaging, and food packaging, and some industry sites are classified as Major Hazard Facilities<sup>6</sup>. The potential impact of a sustained COVID-19 breakout on the workforce, considering the skills needed to continue operations, was carefully monitored and responded to by the Industry Reference Committee.

The pulp and paper manufacturing (PPM) industry was granted permitted industry status and, despite wider societal restrictions, continued to operate to meet higher demand for essential products, such as toilet paper, and increased use of packaging materials owing to the surge in online purchasing and delivery/takeaway services.<sup>7</sup> This saw the demand for tissue products surge by a remarkable 17.5% in 2019-20, and a new record of 369.6kt in stock consumption for the year.<sup>8</sup>

The PPM industry has implemented advanced workplace safety protocols in light of what IBISWorld rates as its high total exposure to the impacts of COVID-19, especially from very high labour intensities and few options for employees to work from home (see Table 1).<sup>9</sup>

Employment levels in the industry have been maintained throughout the pandemic, although some companies reported requiring employees to use annual leave during periods of decreased demand.

The pandemic has driven an increase in home deliveries, which has resulted in a surge in delivery boxes and other packaging fibre in the kerbside recycling stream. The fibre this provides is a valuable commodity which can be measured by “the sustained growth in export pricing for the ‘Unsorted’ export volume for recovered paper. Most kerbside recovered fibre ends up in that stream”.<sup>10</sup> Expectations are that, by mid-2021, online shopping deliveries to households will stabilise.

In November 2020, the average export price of unsorted recovered paper exports was AUDFob221/t. This showed an increase of approximately 37% in 12 months, which was almost 50% in US dollars.<sup>11</sup>

The export price of unsorted recovered paper (in AUD) has risen approximately 37% in a year.  
Pulp & Paper Edge, 2021

Due to the highly exposed supply chain and very high trade exposure, the pandemic is expected to negatively impact on exports, potentially accelerating the anticipated decline in international demand for pulp and paper products over the next five years<sup>12</sup>.

<sup>6</sup> Safe work Australia (2021); *Major hazard facilities*; [https://www.safeworkaustralia.gov.au/industry\\_business/major-hazard-facilities](https://www.safeworkaustralia.gov.au/industry_business/major-hazard-facilities); viewed 21/06/2021

<sup>7</sup> IBISWorld (2020); *Paper Bag and Other Paper Product Manufacturing in Australia C1528*

<sup>8</sup> Pulp & Paper Edge (2020); *Tissue consumption explodes: 2020 a year of records*; <https://industryedge.com.au/tissue-consumption-explodes-2020-a-year-of-records/>

<sup>9</sup> IBISWorld (2020); *COVID-19 Impact Tool*

<sup>10</sup> Pulp & Paper Edge (2021); *RCPs: How kerbside collections are delivering fibre gold*; <https://industryedge.com.au/rcps-how-kerbside-collections-are-delivering-fibre-gold/>

<sup>11</sup> Pulp & Paper Edge (2021); *RCPs: How kerbside collections are delivering fibre gold*; <https://industryedge.com.au/rcps-how-kerbside-collections-are-delivering-fibre-gold/>

<sup>12</sup> IBISWorld (2020); *Pulp, Paper and Paperboard Manufacturing in Australia C1510*

**Table 1: COVID-19 Impact on Pulp, Paper and Paperboard Manufacturing in Australia**

Essential Business	Total Exposure	WFH Capability	Social Distancing	Trade Exposure	Labour Intensity	Supply Chain Exposure
Yes	High	Low	Medium	Very High	Very High	High

Source: IBISWorld COVID-19 Impact Tool

### Changes to industry structure

Norske Skog, who closed their mill in Albury in late 2019, is continuing to see falling sales as a result of reduced demand for newsprint and magazine paper in Australasia. “Combined Australasian newsprint consumption in 2019-20 was only 221,400 tonnes. The apparent rate of decline puts that below 200,000 tonnes coming into early 2021.”<sup>13</sup> The company has decided that, while their Tasman mill in New Zealand will cease newsprint operations, newsprint will continue to be manufactured at their Boyer mill in Tasmania. This is now the only site in Australia that manufactures newsprint. This issue was raised by the IRC in relation to the potential impact of COVID-19 in Australia. The Boyer Paper mill has seen a major drop in sales because of a decline in advertising revenue during the pandemic, which bounced back as restrictions eased. The mill sees diversification of product as a priority to lessen the impact of the decline.

Opal was launched on 1 May 2020 after Nippon Paper Industries confirmed it had successfully completed its \$1.72 billion acquisition of the Orora Fibre Businesses, including the Botany recycling facility in Sydney. Opal Australian Paper’s Maryvale mill, one of the largest employers in the Latrobe Valley, is part of the Opal Group.<sup>14</sup>

### Recycling and waste

After falling almost continuously since late 2018, Australia’s exports of recovered paper to mainland China surged in the second half of 2020. After totalling just 7.9kt in May, shipments lifted to a 19-month high of 44.5kt in September 2020, ahead of the outright ban that commenced January 2021.<sup>15</sup>

In March 2020, COAG released a response strategy for phasing out exports of waste plastic, paper, glass, and tyres with a view to building Australia’s capacity to generate high value recycled commodities. With regard to recovered paper, the report identifies the following opportunities to:

- improve the quality of recovered paper by taking action to separate common contaminants from the co-mingled system, including broken glass, food waste, and batteries;
- fund research into innovative solutions for regional and remote areas to manage mixed paper. For example, micro paper mills; composting facilities; creation of building insulation; creation of soil conditioners for agriculture, forestry, and landscaping; and opportunities to drive economies of scale in Northern Australia;
- increase consumption of domestic recycled paper and cardboard through procurement of recycled photocopy, printing, tissue, and packaging paper; and
- further investigate new processing methods and infrastructure needs for paper to create value added products.<sup>16</sup>

<sup>13</sup> Pulp & Paper Edge (2020); *Tasman Mill Future: Update from Oslo*; <https://industryedge.com.au/tasman-mill-future-update-from-oslo/>

<sup>14</sup> Timberbiz (2020); *Opal, the new name for Australian Paper*; <https://www.timberbiz.com.au/opal-the-new-name-for-australian-paper/>

<sup>15</sup> IndustryEdge (2020); *End of the party: recovered paper shipments to China lift ahead of ban*; <https://industryedge.com.au/end-of-the-party-recovered-paper-shipments-to-china-lift-ahead-of-ban-2-2/>

<sup>16</sup> Council of Australian Governments (2020); *Phasing out exports of waste plastic, paper, glass and tyres: Response strategy to implement the August 2019 agreement of the Council of Australian Governments*

In July 2020, industry welcomed the announcement by the Federal Government that it will invest in Australia's waste and recycling capacity, enabling more wastepaper and cardboard to be recycled domestically<sup>17</sup>. The government will commit \$190 million to a new Recycling Modernisation Fund (RMF) that will generate \$600 million of recycling investment and support new innovative infrastructure to sort, process and remanufacture waste materials, including paper and cardboard.<sup>18</sup>

The Federal Government has committed \$190 million to a new Recycling Modernisation Fund to support domestic recycling.

[Australian Government Department of Agriculture, Water and the Environment, July 2020]

There remains a need for a wider implementation strategy around how waste is collected and sorted, and the impacts of co-mingled recycling from food contamination in collected paper and cardboard and other waste contamination.

This highlights the need for skills in recovered paper in pulp and paper mills, involving sorting, grading, and processing wastepaper and cardboard that has been recovered through kerbside and other recycling programs.

The skills identified in this area include:

- knowledge of the various stages of recovered paper operations; and
- understanding the terminology and systems involved in grading recovered paper.

These skills are being incorporated in the *PPM Training Package* through the review currently underway.

## Bioprocessing

Funded under the State Government Workforce Training Innovation Fund, BioPathways is a strategic partnership between Opal Australian Paper, Federation Training and Federation University to support Gippsland's future bioprocessing training needs. New curricula have been developed for a Certificate IV and a Diploma in BioManufacturing Operations. Endorsement by the State Government and accreditation by VRQA is expected in early 2021. The new curricula will complement the current pilot of the Certificate III in BioManufacturing Operations.

As part of the *PPM Training Package* review, which is due to be completed in September 2021, knowledge criteria pertaining to the structure, products and key future trends of the PPM industry, including bioprocessing operations, will be incorporated in two new units and a skill set designed for new entrants and those working in the industry. A diploma-level unit identifying skills in evaluating emerging technologies and production processes, including their scope, feasibility and application in the industry, is also under development as part of the *PPM Training Package* review.

In recognition of bio-processing operations that are already established within the pulp and paper industry, units of competency relating to industry-specific functional operations will be revised to include updated terminology and knowledge criteria for practices that cover the transformation of biomass by mechanical, thermo-chemical and biological processes.

The following units from the *PPM Training Package* are currently listed in the Certificate III in Biomufacturing Operations (Vic22546):

- PPMNUM320 Measure and calculate routine workplace data
- PPMCPP440 Troubleshoot and rectify coated paper processes
- PPMDEO440 Troubleshoot and rectify dry end systems
- PPMEPG440 Troubleshoot and rectify power generation system
- PPMFCO340 Troubleshoot and rectify finishing and converting systems
- PPMFUL440 Troubleshoot and rectify pulping processes

<sup>17</sup> Financial Review (2020); *Industry welcomes new waste strategy*; <https://www.afr.com/politics/federal/industry-welcomes-new-waste-strategy-20200319-p54bpb>

<sup>18</sup> Australian Government Department of Agriculture, Water and the Environment (2020); *Investing in Australia's waste and recycling infrastructure*; <https://www.environment.gov.au/protection/waste/how-we-manage-waste/recycling-modernisation-fund>



- PPMREC440 Troubleshoot and rectify chemical recovery operations
- PPMRES340 Troubleshoot and rectify primary resource operations
- PPMSPR440 Troubleshoot and rectify stock preparation systems
- PPMSTM440 Troubleshoot and rectify boiler plant systems
- PPMWAS340 Troubleshoot and rectify water systems
- PPMWEO440 Troubleshoot and rectify wet end systems
- PPMWPO440 Troubleshoot and rectify wastepaper operations

At this stage, the bioprocessing qualifications have been developed at a Victorian state level and are currently not incorporated into a national training package. Industry believes that the qualifications should be incorporated into the *PPM Training Package*.

Industry partnerships in waste recovery and bioprocessing are beginning to be enacted. Citywide, a major waste management company, has recently signed an MOU to participate in a state-of-the-art Energy from Waste (EfW) facility in Maryvale Victoria, which is being developed by a consortium that includes Opal Australian Paper.<sup>19</sup>

### **Packaging product development and usage**

Dineamic, an Australian provider of ready-to-eat meals that are sold at Coles and IGA, is moving from plastic to eco-cardboard packaging for its tray meals. This Halopack packaging system was developed and is produced by Dutch company Packable. It consists of a cardboard tray and is sealed with a plastic film lid.

While Dineamic presently sea-freights the packs from Europe for filling in its Melbourne facility, there are plans to bring pack production to Australia.<sup>20</sup>

Woolworths will be stocking PEFC-certified, Australian-made paper bags in South Australia and the Northern Territory ahead of a progressive roll-out over the next 12 months. Responsible Wood-certified Detpak will manufacture the bags, which are made from 70% locally sourced recycled content.<sup>21</sup>

In Europe, Stora Enso and Tetra Pak are collaborating on a used beverage container recycling solution. Australia's current consumes 50,000 tonnes of beverage containers per annum. Local producers are working on recycling solutions; however, the low volume of operations will limit the solutions available.<sup>22</sup>

McDonalds, along with other major food corporations, has made a commitment to transition to 100% fibre-based packaging by 2025<sup>23</sup>, which brings opportunities for the pulp and paper sector. From November 2019 to November 2020, a 12.9% growth in imports of plastic-coated paper, including paper suitable for food, signals an increasing use of fibre-based packaging.<sup>24</sup>

### **The National Skills Commission and attracting new industry workers**

The National Skills Commission (NSC) was created in 2019 when much of the national debate focused on skills gaps; but, with the onset of COVID-19, the focus is now firmly on managing skills surpluses and identifying training options for unemployed workers, especially young people, women and city-dwellers, who have been disproportionately affected.<sup>25</sup> The PPM industry may be able to capitalise on the availability of people who have

<sup>19</sup> Citywide (2020); *Citywide enters MoU for Energy from Waste project to fuel growing circular economy and reshape waste disposal landscape*; <https://opalanz.com/app/uploads/2020/12/2020-12-10-Citywide-MOU-Suez-EfW-Maryvale-Media-Release-FINAL.pdf>

<sup>20</sup> Packing News (2020); *Eco packaging for ready meals comes to Coles*; <https://www.packagingnews.com.au/latest/eco-packaging-for-ready-meals-comes-to-coles>

<sup>21</sup> Timber & Forestry enews (2021); *Woolies has safe environment in the bag*; <https://www.timberandforestryenews.com/wp-content/uploads/2021/01/Issue-640-1.pdf>

<sup>22</sup> Pulp & Paper Edge (2020); *Beverage container recycling solutions: good for entire supply chain*; <https://industryedge.com.au/beverage-container-recycling-solutions-good-for-entire-supply-chain/>

<sup>23</sup> Fisher International (2020); *Is Fiber-Based Food Packaging a New Golden Opportunity for Specialty Papers?*; <https://www.fisheri.com/blog/is-fiber-based-food-packaging-a-new-golden-opportunity-for-specialty-papers>

<sup>24</sup> Pulp & Paper Edge (2021); *Fibre packaging for food lifts 'specialty' grades*; <https://industryedge.com.au/fibre-packaging-for-food-lifts-specialties-to-a-new-level-2/>

<sup>25</sup> National Skills Commission (2020); *A snapshot in time: The Australian labour market and COVID-19*

been displaced from their usual work and are seeking new opportunities.

As well as highlighting reskilling and upskilling options for improving the prospects of people already performing an industry role, the NSC is promoting 'skills transferability' to facilitate clearer pathways between roles in diverse industries that require similar capabilities. The IRC notes that skills transferability is an important objective that must be considered as complementary to the primary role of vocational education and training in enabling potential workers to reach competency and be job-ready. This contention recognises that specific skills are required for jobs in order to complete tasks safely and effectively.

## VET Qualifications & Employment Outcomes

As described in previous skills forecasts, there have been no Registered Training Organisations (RTOs) with the *Pulp and Paper Manufacturing (PPM) Training Package* on scope in recent years.

Consequently, there are no enrolments in PPM qualifications. However, as also previously advised in skills forecasts and annual updates, industry continues to use the *PPM Training Package* extensively but informally, without the recognition process through an RTO.

Also, and most importantly, the industry remains committed to the training and skills development of its workforce. It further remains committed to finding a way to formally utilise Australia's VET system, for the benefits it provides to individuals, enterprises, communities and to the overall industry. It sees the VET system as offering industry consistency, quality and accreditation of its skills standards and training products and service providers.

The Industry Reference Committee (IRC) has developed an action strategy focussed on updating the training package, to ensure it is fit for purpose, and creating a delivery model that suits the needs of industry, while also being attractive and viable to an RTO.

The IRC are currently undertaking a full review of the *PPM Training Package* following project approval by the Australian Industry Skills Committee (AISC) in 2020. The project is focussing on potential improvements to the usability and accessibility of the training package.

Through the review, industry and the IRC have determined that the newly revised *PPM Training Package* should be supported by a collective delivery model to identify and engage a suitable RTO to service the entire sector.

### Previous Industry Training Methods and Use of VET

In recent years, training in pulp and paper manufacturing in Australia has been conducted on the job by in-house subject matter experts, often utilising the *PPM Training Package* informally to design activities. A survey of two of the largest pulp and paper manufacturing facilities identified that the skills described in training package components are used to map against job roles to improve training and assessment internally.

Prior to this informal use of the training package, throughout the 2000s in-house training was supported by an arrangement with one RTO, resulting in healthy enrolments (with respect to industry size) in PPM units of competency.

### Creating a Delivery Model that works for industry

In order to secure enrolments in nationally accredited training, the IRC and industry stakeholders recognise that it will be necessary to identify and agree on a model that will meet the industry's training and workplace needs, as well as the needs of an RTO, particularly in relation to compliance and cost-effectiveness.

Based on feedback in IRC meetings, industry workshops and training package project workshops over the last

three years, the industry's preferred model would include the following elements:

Activity	Responsible
In-house training and assessment for all PPM units of competency	Workplace
Suitably qualified trainers and assessors in-house (current TAE assessor or trainer qualifications)	Workplace
One industry-preferred RTO to partner with workplaces	Industry
RTO to put in place partnership arrangements to recognise in-house training and assessment	RTO
Online self-paced or online instructor-led training may be considered in relation to some content in some units of competency.	Industry – determining suitability; RTO – facilitating delivery

The IRC recognise the benefits and efficiencies of adopting a collective delivery model. These include economic viability, a solution to thin market issues, sharing the load of development and maintenance of training and assessment materials, shared validation and moderation processes, and increased opportunities for professional development of trainers and assessors.

The IRC and industry believe that reducing the complexity of the training package, as is being progressed through its current review project, will make it easier and more attractive for an RTO to deliver.

Proposed changes being considered as part of the *PPM Training Package* review project include:

- Consolidation of qualifications from seven to four – better recognising skills common to pulping, papermaking and converting
- Consolidation of units with duplicated functions
- Development of proposed induction skill set
- Incorporation of new technology areas – de-inking, recovered paper and bioprocessing
- Maintained focus on workplace health and safety through retention of five existing units
- Merging of some units for generic skills into existing functional units
- Replacement of some units with cross-sector units

The IRC are progressing this overall strategy with the support of ForestWorks and Skills Impact.

In addition to 1) an updated training package and 2) a viable delivery model, the IRC have also identified that there is a third requirement for progressing the strategy: the development and availability of a set of industry owned learning and assessment materials corresponding with PPM units of competency. These would be based on the units revised in the updated *PPM Training Package* following AISC endorsement of the current project. Further information about a potential proposal for support is included in Section C.

**Table 2: Pulp and Paper Enrolments over the period 2003-2019**

<b>Government-Funded Qualification</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>	<b>Total</b>
FPP10101 - Certificate I in Pulp and Paper Manufacturing	51	35	32	49	59	63	61	80	16	16	0	0	0	0	0	0	0	<b>462</b>
FPP20101 - Certificate II in Pulp and Paper Manufacturing	54	142	80	90	67	86	125	160	35	39	0	0	0	0	0	0	0	<b>878</b>
FPP20110 - Certificate II in Pulping Operations	0	0	0	0	0	0	0	0	0	3	4	0	0	0	0	0	0	<b>7</b>
FPP20201 - Certificate II in Pulp and Paper Services	17	2	7	7	5	0	3	1	0	0	0	0	0	0	0	0	0	<b>42</b>
FPP20210 - Certificate II in Papermaking Operations	0	0	0	0	0	0	0	0	0	9	43	0	0	0	0	0	0	<b>52</b>
FPP20298 - Certificate II in Pulp and Paper Manufacturing (Pulping Operations)	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	<b>6</b>
FPP20301 - Certificate II in Pulp and Paper (General)	0	17	17	14	0	0	0	0	0	0	0	0	0	0	0	0	0	<b>48</b>
FPP21098 - Certificate II in Pulp and Paper Manufacturing (Finishing and Conversion)	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	<b>4</b>
FPP30101 - Certificate III in Pulp and Paper Manufacturing	48	99	96	196	134	119	129	119	25	23	0	0	0	0	0	0	0	<b>988</b>
FPP30110 - Certificate III in Pulping Operations	0	0	0	0	0	0	0	0	0	0	6	30	19	0	1	0	0	<b>56</b>
FPP30201 - Certificate III in Pulp and Paper Services	13	24	1	9	6	0	0	2	4	0	0	0	0	0	0	0	0	<b>59</b>

FPP30210 - Certificate III in Papermaking Operations	0	0	0	0	0	0	0	0	0	0	40	98	21	22	14	1	0	0	<b>196</b>
FPP31098 - Certificate III in Pulp and Paper Manufacturing (Finishing and Conversion)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	<b>0</b>
FPP40101 - Certificate IV in Pulp and Paper Manufacturing	45	58	76	60	75	87	81	64	29	16	0	0	0	0	0	0	0	0	<b>591</b>
FPP40110 - Certificate IV in Pulping Operations	0	0	0	0	0	0	0	0	0	6	1	0	0	0	0	0	0	0	<b>7</b>
FPP40201 - Certificate IV in Pulp and Paper Services	2	5	7	9	3	0	0	1	6	2	0	0	0	0	0	0	0	0	<b>35</b>
FPP40210 - Certificate IV in Papermaking Operations	0	0	0	0	0	0	0	0	0	3	11	0	0	0	0	0	0	0	<b>14</b>
FPP50101 - Diploma of Pulp and Paper Industry Operations	5	0	0	0	0	6	0	0	0	0	0	0	0	0	0	0	0	0	<b>11</b>
<b>Total</b>	<b>245</b>	<b>382</b>	<b>316</b>	<b>434</b>	<b>349</b>	<b>361</b>	<b>399</b>	<b>427</b>	<b>115</b>	<b>157</b>	<b>163</b>	<b>51</b>	<b>41</b>	<b>14</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>3,456</b>

Source: NCVET VOCSTATS, Government-funded students and courses 2003-2019

## Other Training Used by Employers

Industry businesses continue to use the *PPM Training Package* informally as there are no RTOs delivering accredited training. In 2020, an RTO was granted approval to place one PPM qualification on its scope of registration, but this RTO is not currently servicing the industry.

Some formal training is undertaken by industry which utilises training packages other than PPM, including for micro-credentials in high-risk activities that are linked to regulated/licensed operations, such as:

- Forklift
- Overhead cranes
- Boiler operations
- Chemical use and handling

Units from other training packages associated with the above operations can be imported into PPM qualifications as electives; however, there are no PPM qualifications being delivered by RTOs.

Some industry businesses report that non-accredited training is undertaken in lean manufacturing, leadership, and technical specialist areas.

## Enrolment Levels

There were zero enrolments in PPM qualifications in 2018 and 2019 because no RTO is currently providing service to the industry.

Industry continues to struggle with attracting RTOs as partners in delivering nationally recognised training because of:

- unmet demand for 'flexible' training and assessment; and
- RTO viability challenges, especially relating to:
  - compliance;
  - perceived risk of using workplace trainers and assessors and the increased requirements for workplace trainers and assessors;
  - lack of developed training and assessment materials;
  - access to specialised equipment;
  - thin markets in regional areas; and
  - government funding models.

The PPM IRC maintains that changes to VET policy and structures over the past five years have stymied industry's preferred model of using workplace trainers and assessors in partnership with an RTO to issue statements of attainment (which has previously proved effective).

A research project currently being undertaken by Skills Impact and ForestWorks (outside of the annual update process) is examining barriers to training delivery in greater detail, with a view to developing and testing solutions for overcoming them. Data collection for this project included detailed interviews with PPM companies to explore the challenges of engaging with the formal VET system. PPM companies reported that they have been unable to engage an RTO who can work with the delivery and assessment model that meets the needs of industry.

Another consideration of this project is whether the *PPM Training Package* meets the needs of industry and reflects current functions and processes. Consistent industry feedback is that qualifications are too long and

that shorter skill sets are far more attractive. This raises the issue of how government funding and support is allocated for training. Policy changes to make funding available for skills sets is expected to facilitate greater opportunities for industry to access training by RTOs.

Some companies reported that the *PPM Training Package* does align with the job functions and roles in PPM plants, and that those companies then develop training activities and learning and assessment materials based on PPM units. However, one company reported that when an RTO was engaged, the learning and assessment materials developed and used by the RTO did not adequately or accurately reflect the content of the unit.

The project also confirmed that a significant amount of internal training at PPM sites is based on national units of competency but is not formalised through an RTO.

### **Using workplace trainers and assessors**

Industry companies report that they have much more in-house technical knowledge available to them than an external RTO could offer. Companies naturally then begin to question the value of engaging a training provider.

Companies prefer to develop experienced operators into workplace trainers and assessors, and partner with an RTO simply to formalise training and assessment delivery and administration. RTOs have become increasingly uncomfortable with this style of arrangement, potentially because of stringent ASQA compliance requirements.

The requirement for in-house trainers to possess Training and Assessor (TAE) qualifications has been flagged as a potential barrier to engaging with the VET sector through an RTO. One pulp and paper manufacturer reported that it was not easy to attract internal operators to undertake the new TAE qualification due to its complex Language, Literacy and Numeracy (LLN) requirements. For that business, existing trainers are stretched to capacity due to others not becoming available. Having existing trainers and assessors upgrade their TAE and enticing more operators to undertake the TAE would require support.

There is a strong view that industry expertise resides not in the RTO but in the enterprise. However, the status quo is unlikely to change in the context of thin training markets in the pulp and paper sector, which are reflective of a number of factors, including its small industry size, dispersed geographic locations and high retention rates.

By way of example, companies identified that high staff retention rates mean that they cannot guarantee the minimum number of trainees each year that would incentivise an RTO to invest in and develop the sort of expertise required to facilitate high-quality training. This reporting of high retention is consistent with the IRC's observations in previous skills forecasts.

## Reasons for Non-Completion

The Pulp and Paper Manufacturing (PPM) industry and Industry Reference Committee (IRC) remain focussed on the challenge of creating a viable delivery mechanism that will allow for enrolments and commencements in PPM qualifications and skill sets. The critical factors that will enable this will likely also ameliorate traditional reasons for non-completion, including:

- the provision of on-site, flexible delivery that minimises time away from the workplace;
- training that is highly relevant and specific rather than generic and irrelevant; and
- training that is supported by employer partnerships with a training provider.

The model described above, which would utilise workplace trainers and assessors working in partnership with an RTO, offers a more robust, broader application of training, including training for current competence, upskilling and the induction of entry level employees.

## Cross-Sector Units

As part of the [Pulp and Paper Manufacturing Review Project](#), there is an opportunity to undertake an appraisal of the large number of imported units that currently support the highly specialised Pulp and Paper Manufacturing (PPM) units.

As this project is on-going, it is difficult to provide a final number of imported and cross-sector units; however, the industry and project team have identified the following cross-sector units to be included in PPM qualifications and replace existing PPM units relating to communication, teamwork, business relationships, innovation and sustainability.

Cross-sector units included in 2020-21 PPM Training Package review
BSBSUS211 Participate in sustainable work practices
BSBTWK201 Work effectively with others
BSBCMM211 Apply communication skills
BSBXTW301 Work in a team
BSBLDR301 Support effective workplace relationships
BSBTWK401 Build and maintain business relationships
BSBSTR401 Promote innovation in team environments
MSS404054 Apply statistics to operational processes
BSBSUS511 Develop workplace policies and procedures for sustainability

## Changes to Skill Requirements

Industry engagement activities undertaken as part of the [Pulp and Paper Manufacturing Review Project](#) have identified skill requirements for the workforce in emerging technologies, including applications in bioprocessing, the use of recovered paper and processes for de-inking. These skills and the associated underpinning knowledge have been incorporated at entry level, operational, team leader and management levels in the revision of current units of competency and in the proposed development of seven new units of competency.

### Industry Induction

Industry continues to be characterised by a very stable workforce with very low attrition rates. However, the workforce is ageing, and the PPM industry and IRC are examining potential strategies to attract new entrants to the industry over the next decade. An important aspect of this strategy will be to induct new entrants into the industry as the ageing workforce retires.

The Industry Reference Committee (IRC) has identified the need for units of competency and a skill set that will provide new entrants (and some existing employees) with an understanding of the industry structure, the principles of pulp and papermaking, and the processes used for papermaking and converting.

Understanding the entire process, from log receipt and storage right through to converting operations, is critical to developing and maintaining product quality.

### Bioprocessing

Bioprocessing is another new technology area for which skills standards are not yet reflected in the *PPM Training Package*.

As part of the *PPM Training Package* review, bioprocessing will be incorporated into existing functional units via revised knowledge evidence. This will incorporate elements relating to the transformation of biomass through various processes, namely:



- Mechanical: use of mechanical pre-transformation processes such as mixing, filtering, grinding, pressing and drying;
- Thermo-chemical: use of controlled heat and chemicals to transform biomass; and
- Biological: use of micro-organisms to break-down biomass.

### De-inking

De-inking is the process of removing printing ink from recycled paper to make de-inked pulp. De-inking provides the opportunity to use recovered paper and boards for not only brown-grade products but also white-grade products such as newsprint, tissue, and market pulp. Visy and Orora process high-, medium- and low-grade recovered paper into a wide range of recycled paper products. Australian Paper's de-inking and recycling plant in Latrobe Valley, Victoria, processes high-grade (office) recovered paper into recycled copy paper, envelope, and printing paper.

De-inking has been identified by industry as an important technology that needs to be reflected in skills standards and training products. De-inking skills will be incorporated into the *PPM Training Package* through the current review, with development of units at levels II, III and IV (still under development and consultation).

### Recovered Paper

The 2020 Annual Update reported that skills for recovered paper were to be addressed through two Victorian short courses because of the then-absence of a mechanism to incorporate them into the national training package. However, the approval of the *PPM Training Package* review project has allowed industry to include recovered paper skills in the national qualifications.

These skills relate to the handling, sorting, and grading of recovered paper. It is proposed that existing PPM wastepaper units be revised and broadened to include recovered paper. The stream will be referred to as recovered paper.

### Converting

Previous skills forecasts have identified priority industry and occupation skills relating to paper bag, paper stationery and sanitary paper product manufacturing. These too are being addressed as part of the *PPM Training Package* review project. Units are being revised to better reflect related downstream converting processes, which are also being emphasised as part of existing qualifications.

## Apprenticeship & Traineeship Barriers

All Pulp and Paper Manufacturing (PPM) qualifications are available as traineeships and are anticipated to remain so after the training package review. There are no recognised PPM apprenticeships, and this will remain so after the review of the training package.

As reported previously, industry is unable to hire trainees with PPM qualifications as there is currently no RTO delivering industry qualifications. Employers continue to arrange for in-house subject matter experts to conduct training, utilising the *PPM Training Package* where possible.

The IRC's strategy and work towards identifying and engaging a suitable RTO that can meet industry needs will potentially overcome this barrier.

## Other Relevant Activities

In addition to the *PPM Training Package* review project and the challenge of finding a suitable Registered Training Organisation (RTO) delivery model, PPM IRC was kept busy during 2020, with additional

responsibilities, consultation and meetings for responding to the impacts of COVID-19.

The IRC has assisted the Australian Industry and Skills Committee (AISC) and the AISC Emergency Response Sub-Committee (ERSC) by seeking industry input and responding to a number of requests for information. These requests have taken place in several stages.

Immediate crisis response:

- Identification of immediate training issues relating to workplace and campus-based training (completed April 2020); and
- Identification of skills needs and delivery challenges for essential workforces (completed May 2020).

Supporting training for worker movement and potential surge workforces to meet current needs:

- Identification of existing training products and potential surge workforces (completed May 2020); and
- Analysis of available infection control training (completed June 2020).

Support for workforce recovery:

- Critical Response Projects to create pathways for displaced workers (July 2020); and
- Promotion of pathways for displaced workers (July 2020).

Mandatory work placements analysis and response:

- Initial analysis of units requiring mandatory work placements or assessment/training conditions that were likely to require the use of physical workspaces, most likely in workplaces (completed April 2020); and
- Analysis of units within qualifications with high levels of enrolments (completed October and November 2020).

The IRC has also responded to a Ministers' request to delete units and qualifications which had zero enrolments in the years 2017 to 2019. The IRC has offered advice on the units and qualifications identified by the Ministers, which, in most cases, were already under review in current projects.

The additional work detailed above has required that the IRC meet more regularly and that members conduct many more additional "out of session" discussions and consultations than in previous years. This has been achieved without additional IRC members or secretariat support. The Chair of the IRC would like to express their gratitude to all IRC members and stakeholders who have given up so much of their time and energy in 2020 to complete this important work.

## Section B: Ongoing Consultation

Detailed below is the industry consultation undertaken by IRC members and Skills Impact, including with rural, regional and remote stakeholders.

Engagement activities are described across four key areas:

- Ongoing engagement and validation with industry and stakeholders
- Collection of industry intelligence
- Promotion of the VET system
- Cultivating and maintaining networks and partnerships with industry including engagement in rural and regional areas.

Entity Name	Sector	State	Rural/ Regional / Remote	Ongoing engagement	Industry intelligence	Promotion of VET	Networks & Partnerships
Opal Australian Paper	PPM Manufacturing	Victoria	Yes	✓	✓	✓	✓
Visy	PPM Manufacturing	National	Yes	✓	✓	✓	✓
Norske Skog	PPM Manufacturing	National	Yes	✓	✓	✓	✓
Kimberly-Clark	PPM Manufacturing Enterprise	National	Yes	✓	✓	✓	✓
Australasian Pulp and Paper Technical Association (APPITA)	Technical Association	National	Yes	✓	✓	✓	✓
Asaleo Care	PPM Manufacturing Enterprise	National	No	✓	✓	✓	
Encore Tissue	PPM Manufacturing Enterprise	Victoria	No	✓	✓	✓	
Huhtamaki	PPM Manufacturing Enterprise	National	No	✓	✓	✓	
ABC Tissue	PPM Manufacturing Enterprise	Queensland, New South Wales	No	✓	✓	✓	
CFMEU Manufacturing Division	Employee Association	National	No	✓	✓	✓	

## Section C: Proposed New Work

The Industry Reference Committee (IRC) is currently overseeing a complete review of the Pulp and Paper Manufacturing (PPM) Training Package, as part of the [Pulp and Paper Manufacturing Review Project](#). The outcome will be a training package that reflects current industry skills and processes. It will be of a size and coverage that industry hope will be considered more viable for an Registered Training Organisation (RTO) to deliver, while still maintaining and providing specialised PPM skills standards. The revised training package will also contain fewer qualifications.

The IRC recognise that an updated training package alone will not equal enrolments in the training package.

The establishment of a delivery mechanism via an industry and RTO partnership is in some ways the greater work and challenge – yet the IRC remains positive and committed to achieving this.

An up to date and industry endorsed training package can be considered an important part of the solution and the IRC is pleased that this work has been approved and is currently being undertaken.

The next identified part of the solution is a set of learning and assessment materials that can be used by all parties in the industry/RTO partnership model. The IRC recognise that to leave the lion's share of the development of support materials to an RTO would be a disincentive to prospective RTOs.

The IRC will be building a project proposal for the development of learning and assessment materials to support the new training package. It is anticipated that this will be submitted as a Case for Change at the same time as the Case for Endorsement of the PPM Training Package 3.0.

## IRC Sign-Off

This IRC Skills Forecast and Proposed Schedule of Work Annual Update was agreed as the result of a properly constituted IRC decision.

Signed for and on behalf of the Industry Reference Committees by the Chairs:



Denise Campbell-Burns  
IRC Chair  
22 June 2021