

FIELD MANUFACTURING**Reclassification and review of *Solid Wood Processing* and *Wood Processing Technology* unit standards**

Existing classification name		
Subfield	Domain	Id
Solid Wood Processing	Saw Doctoring	652-656, 660-662, 664, 665, 667, 669-674, 5844, 5845, 8337, 8338, 15758-15763, 16241, 17962, 17967-17969
	Sawmilling	130-135, 164-166, 739, 740, 8005-8007, 15764-15769, 17961
	Timber Grading	139-141, 5846, 5848, 5852, 8003, 8004, 15770, 15771
	Timber Machining	161, 675, 676, 678-682, 684-690, 5850, 8009, 8010, 15772, 15773, 15775, 16242, 17959, 17960, 19719, 19720
	Wood Drying	142, 143, 145, 146, 738, 5849, 15776, 16243
	Wood Preservation	148-152, 154, 737, 8339, 16240
Wood Processing Technology	Wood Product Manufacturing	4544-4552, 15055-15062, 17042-17053, 17201-17203, 17963-17966
	Wood Technology	155-157, 159, 160, 162, 668, 736, 5847, 8002, 8008, 9774, 15774, 15777, 15778, 16244, 17450-17452, 17970, 17971

New classification name		
Subfield	Domain	Id
Solid Wood Manufacturing	Finger Jointing	4544, 4546, 4547, 15055, 15058, 15060
	Saw Doctoring	652-656, 660-662, 664, 665, 667, 669, 670-674, 5844, 5845, 8337, 8338, 15758-15763, 16241, 17962, 17967-17969
	Sawmilling	8006, 8007, 15764-15766, 15767
	Timber Drying and Treatment	145, 146, 152, 154, 738, 8339, 16240
	Timber Grading	139, 141, 5846, 5848, 5852, 8003, 8004, 15770, 15771
	Timber Machining	675, 676, 678, 681, 682, 684, 685, 688-690, 8009, 8010, 15061, 15772, 15775, 17959, 17960, 19719
	Wood Product Manufacturing Skills	4548, 4551, 15056, 15059, 17042, 17044, 17046-17053, 17201-17203, 17963, 17964
Wood Handling and Distribution	Timber Yarding	143, 164, 165, 8005, 17961
	Wood Preparation	130, 134, 166, 739, 740
Wood Manufacturing - Generic Skills	Wood Manufacturing Coordination	19720
	Wood Manufacturing Foundation Skills	155-157, 159, 160, 162, 668, 736, 5847, 8002, 8008, 9774, 15774, 16244, 17970, 17971

Forest Industries Training and Educational Council (FITEC) has completed the review of the unit standards listed above.

Date new versions published

December 2006

Planned review date

December 2011

Summary of review and consultation process

Many unit standards in the Solid Wood Processing and Wood Processing Technology subfields were due for review over 2003 and 2004. FITEC saw advantages in completing these reviews concurrently and developed a plan for the review of the majority of the unit standards in these subfields.

As part of the review a restructuring of the subfields and domains has been completed, with unit standards being placed in domains that will be used by other FITEC manufacturing sectors. This has resulted in the creation of Finger Jointing, Wood Preparation, and Timber Yarding domains and the merging of the Wood Drying and Wood Preservation domains into one Timber Drying and Treatment domain. The Wood Manufacturing Foundation Skills domain has replaced the Wood Technology domain. This last change will allow some unit standards from Pulp and Paper Technology and the present Wood Technology unit standards to be combined into a common domain. Subfields have also be changed to reflect an integration of the wood manufacturing industries into two major groups, one working with solid wood, and the other with by-products as a raw material. This has seen Solid Wood Processing merged with the Wood Panel Manufacturing to create the Solid Wood Manufacturing subfield. A second new subfield Wood Fibre Manufacturing encompasses the Pulp and Paper Manufacturing subfield and the domain relating to composite panel manufacturing, previously in Wood Panels Manufacturing.

Wood Manufacturing – Generic Skills, has replaced the Wood Process Technology subfield and this contains domains that hold unit standards relevant across all the wood manufacturing industries. Finally, a new subfield has been created for the Wood Handling and Distribution domains, which were previously scattered through the old subfields.

Working teams comprising key representatives of the solid wood processing and wood product manufacturing industries were formed to undertake the review process. Consultation meetings were held with stakeholders (expert panels) representing both the solid wood processing and wood product manufacturing industries. Representatives were selected by geographical location to ensure the involvement of the whole industry. A wider consultation by post or email followed these meetings. Feedback gathered from these meetings and written submissions identified the need for additional unit standards, changes to existing unit standards, and deletion (designation as expiring) of unit standards that no longer met the needs of industry.

Drafts of new and reviewed unit standards were circulated to the expert panels for feedback and consultation with their networks. The wider industry and training providers were also sent drafts and invited to provide input. Successive drafts were developed in order to accommodate the needs of as many of the stakeholders as possible.

A final draft was developed and endorsed by the solid wood processing sector and wood product manufacturing sector advisory groups.

Main changes resulting from the review

The review process has resulted in the following changes.

- Credits amended for some unit standards to more accurately reflect the time taken for delivery, learning, and assessment.
- Levels amended for some unit standards to more accurately reflect the knowledge and skill level of the outcomes.
- Unit standards updated to incorporate industry changes and technological advances.
- Unit standards updated to meet current NZQA registration criteria.
- Evidence requirements including quantitative statements added to range statements where required to clarify evidence required for assessment.
- Special notes improved and updated.
- New unit standards developed to fill gaps in industry specific areas.
- 27 unit standards were considered no longer fit for purpose. They will expire and not be replaced.
- Some unit standards in the Sawmilling domain moved to the new Timber Yarding and Wood Preparation domains.
- Some unit standards in the Wood Product Manufacturing domain moved to the new Finger Jointing domain.

Unit standards categorised as category C or D expire at the end of December 2010

Impact on existing provider accreditations

FITEC have undertaken a reorganisation of their classifications and have determined that it is not appropriate for subfield to subfield extensions to occur in the cases below, due to the expanded coverage of the new subfields. In all cases the domains listed are aligned with the previous subfield coverage.

As many of the new domain names are the same as the previous classifications the table shows the Subfield > Domain format to distinguish between them.

Current Accreditation for			Accreditation extended to		
Nature of accreditation	Classification or Id	Level	Nature of accreditation	Classification or Id	Level
Subfield	Solid Wood Processing	Any	Domain	Solid Wood Manufacturing > Saw Doctoring	Same
			Domain	Solid Wood Manufacturing > Sawmilling	Same
			Domain	Solid Wood Manufacturing > Timber Drying and Treatment	Same
			Domain	Solid Wood Manufacturing > Timber Grading	Same
			Domain	Solid Wood Manufacturing > Timber Machining	Same

Current Accreditation for			Accreditation extended to		
Nature of accreditation	Classification or Id	Level	Nature of accreditation	Classification or Id	Level
			Domain	Wood Handling and Distribution > Timber Yarding	Same
			Domain	Wood Handling and Distribution > Wood Preparation	Same
Subfield	Solid Wood Processing	1	Standard	165	2
Subfield	Solid Wood Processing	2	Standards	166, 662, 681, 8005	3
Subfield	Wood Processing Technology	Any	Subfield	Wood Manufacturing – Generic Skills	Same
			Domain	Solid Wood Manufacturing > Finger Jointing	Same
			Domain	Solid Wood Manufacturing > Wood Product Manufacturing Skills	Same
Subfield	Wood Processing Technology	1	Standards	156, 159, 736	2
Subfield	Wood Processing Technology	3	Standards	15058, 15059, 21763	4
Domain	Solid Wood Processing > Sawmilling	Any	Domain	Solid Wood Manufacturing > Sawmilling	Same
			Domain	Solid Wood Manufacturing > Timber Yarding	Same
			Domain	Wood Handling and Distribution > Wood Preparation	Same
Domain	Solid Wood Processing > Sawmilling	2	Standards	166, 8005	3
Domain	Solid Wood Processing > Timber Grading	Any	Domain	Solid Wood Manufacturing > Timber Grading	Same
Domain	Solid Wood Processing > Wood Drying	Any	Domain	Solid Wood Manufacturing > Timber Drying and Treatment	Same
			Standard	143	2
Domain	Wood Processing Technology > Wood Technology	2	Standards	155-157, 159, 160, 162, 668, 736, 5847, 8002, 8008, 9774, 15774, 16244, 17971	2
Standard	135	3	Standard	20764	3
Standard	142	3	Standard	21758	3

Impact on Accreditation and Moderation Action Plan (AMAP)

All standards previously registered on AMAP 0021 have been transferred to AMAP 0173. AMAP 0021 has been designated as expiring and has been removed from the NQF.

Impact on existing qualifications

Qualifications that contain the reviewed standards or classifications are tabled below.

Affected	The qualification lists a reviewed classification (domain or subfield) in an elective set The qualification lists a standard that has changes to level or credits The qualification lists a C or D category standard
Not materially affected	The qualification lists a standard that has a new title The qualification lists a standard that has a new classification

In the following tables the items that generated the *Affected* status are in **bold**.

The following FITEC qualifications are affected by the outcome of this review and will be revised/reviewed in 2006.

Qualification title	Classification or standard in the qualification
National Certificate in Forest Produce Inspection [Ref: 0908]	156, 160, 162, 165, 166, 736, 9774, 16244
National Certificate in Forestry (Log Scaling) (Level 4) [Ref: 1211]	156, 166
National Certificate in Pulp and Paper Manufacturing (Level 2) [Ref: 0237]	Solid Wood Processing, Wood Technology
National Certificate in Pulp and Paper Manufacturing (Level 3) [Ref: 0238]	Solid Wood Processing, Wood Technology
National Certificate in Pulp and Paper Manufacturing (Level 4) [Ref: 0239]	Solid Wood Processing, Wood Technology
National Certificate in Saw Doctoring (Saw and Tool Maintenance) (Level 3) [Ref: 0810]	Saw Doctoring, Sawmilling, Wood Technology, 161, 656, 660, 661, 662, 664, 665, 667, 668, 669, 684, 15758, 15759, 15760, 15762, 15763, 16241, 17962, 17967, 17969
National Certificate in Saw Doctoring (Level 4) [Ref: 0811]	Saw Doctoring, 159, 160, 652, 653, 654, 655, 736, 5844, 15758, 15759, 15762, 15763, 17968
National Certificate in Solid Wood Processing (Level 2) [Ref: 0807]	Wood Technology, 143, 159, 164, 165, 166, 736, 8005, 9774, 15055, 15056, 15776, 16243, 17961, 17971
National Certificate in Solid Wood Processing (Level 3) [Ref: 0808]	Sawmilling, Timber Grading, Wood Drying, Wood Preservation, Wood Technology, 159, 164, 678, 736, 4546, 4550, 4551, 4552, 9774, 15055, 15056, 15062, 17971
National Certificate in Solid Wood Processing (Level 4) with strands in Sawmilling, Timber Grading, Timber Yarding, Wood Drying, and Wood Preservation [Ref: 0809]	Sawmilling, Timber Grading, Wood Drying, Wood Preservation, Wood Technology, 131, 140, 141, 155, 157, 159, 164, 5846, 8003, 15770, 15771, 17970
National Certificate in Solid Wood Processing (Timber Yarding) (Level 3) [Ref: 1045]	135, 678, 4550, 4552, 5847, 8339, 15769, 17021
National Certificate in Timber Machining (Size and Gauge) (Level 3) [Ref: 0812]	Timber Grading, Timber Machining, Wood Product Manufacturing, 135, 146, 161, 162, 662, 669, 675, 678, 681, 684, 685, 689, 736, 5847, 9774, 17960, 17971
National Certificate in Timber Machining (Level 4) [Ref: 0813]	139, 141, 662, 668, 676, 679, 680, 682, 686, 687, 688, 690, 5852, 8002, 8004, 8009, 8010, 15060, 15061, 15775, 16242, 17042, 17048, 17959, 19719
National Certificate in Wood Panels Manufacturing (Level 2) [Ref: 0433]	134, 135, 155, 159, 166, 662, 675, 678, 679, 680, 685, 689, 740, 8010, 15769, 17963
National Certificate in Wood Panels Manufacturing (Level 4) [Ref: 0254]	Timber Machining, 134, 135, 159, 166, 662, 675, 678, 679, 680, 685, 689, 740, 8010, 15769, 17963

Qualification title	Classification or standard in the qualification
National Certificate in Wood Product Manufacturing (Level 2) [Ref: 0814]	Wood Product Manufacturing, 135, 155, 156, 159, 160, 161, 162, 164, 165, 669, 675, 678, 690, 736, 5847, 9774, 15774, 17964, 17971
National Certificate in Wood Product Manufacturing (Level 3) [Ref: 0815]	Timber Machining, Wood Product Manufacturing, Wood Technology, 159, 164, 17964
National Certificate in Wood Product Manufacturing (Level 4) [Ref: 0816]	Timber Machining, Wood Product Manufacturing, Wood Technology, 159, 164, 17964, 17965

The following qualifications are also affected by the outcome of this review. The standard setting bodies (SSBs) have been advised that they require revision.

Qualification title	Classification or standard in the qualification	SSB Name
National Certificate in Boatbuilding with strands in Marine Cabinetmaking, Composite Sparmaking, Alloy Boatbuilding, Marine Rigging, Marine Painting, Composite Boatbuilding, Steel Boatbuilding, Wooden Boatbuilding, Marine Systems Engineering, and Metal Sparmaking [Ref: 0877]	143	Boating Industry Training Organisation
National Certificate in Occupational Health and Safety (Workplace Safety) (Level 3) [Ref: 0801]	Solid Wood Processing	New Zealand Industry Training Organisation

Summary of main changes

All changes are in **bold**.

Key to review category

- A** Dates changed, but no other changes are made - the new version of the standard carries the same Id and a new version number
- B** Changes made, but the overall outcome remains the same - the new version of the standard carries the same Id and a new version number
- C** Major changes that necessitate the registration of a replacement standard with a new Id
- D** Standard will expire and not be replaced

Classification Wood Processing Technology > Wood Product Manufacturing
Solid Wood Manufacturing > Finger Jointing

Id	Title	Level	Credit	Review Category
4544	Clean finger-jointer in preparation for re-setting Clean engineered wood product equipment	2	1 3	B
4545 21763	Set up finger-jointer for wood product manufacturing Set up edge-to-edge finger jointer for solid wood manufacturing	3 4	8 15	C
4546	Feed and tail out finger-jointer for wood product manufacturing Feed and tail out finger jointer	3	3 5	B
4547	Operate finger-jointer for wood product manufacturing Coordinate finger jointer operations in solid wood manufacturing	4	28 20	B
15055	Demonstrate knowledge of the principles of finger-jointing in wood product manufacturing Demonstrate knowledge of the principles of finger jointing in solid wood manufacturing	2	5	B

Id	Title	Level	Credit	Review Category
15058	Test finger-jointed product in wood product manufacturing Test finger jointed product in solid wood manufacturing	3 4	1 10	B
15060	Maintain finger-jointer cutterhead in wood product manufacturing Maintain finger jointer cutterhead in solid wood manufacturing	3	4 5	B
20772	Set up face-to-face finger jointer for solid wood manufacturing	4	15	New

Classification Solid Wood Processing > Saw Doctoring
Solid Wood Manufacturing > Saw Doctoring

Id	Title	Level	Credit	Review Category
652	Weld wide bandsaws	3	15	B
653	Bench bandsaws and frame saws	4	30	B
654	Bench circular saws	4	30	B
655	Swage and shape saws Swage and shape a saw	3	12 10	B
656	Set circular saws	2	5 3	B
660	Maintain handsaws	3	9 10	B
661	Maintain narrow bandsaws	3	3	B
662	Maintain knives and anvils for chipping machines Grind and hone straight knives and anvils	2 3	3 5	B
664	Maintain chainsaw chain and bar Maintain a chainsaw chain and bar	2	2 3	B
665	Maintain metal cutting saws Maintain metal cutting saw	3	9 10	B
667	Maintain household and handyperson cutting tools	3	10	B
669	Demonstrate knowledge of grinding wheels, stones, and fluids for saw doctoring and timber machining Demonstrate knowledge of grinding for saw doctoring, timber machining and finger jointing	2	5	B
670	Maintain a wood chipping machine	4	10	B
671	Maintain and align frame saw centre	4	20	B
672	Maintain and align band saw centre Maintain and align bandsaw centre	4	38 35	B
673	Maintain and align circular saw centre	4	30	B
674	Grind bandwheels	4	4 15	B
5844	Braze and sharpen tipped circular saws Tip circular saw teeth and profile circular saw tips	4	25	B
5845	Control technical aspects of saw doctoring operations	5	45 25	B

Id	Title	Level	Credit	Review Category
8337	Weld stellite or high speed steel tips to saws Tip saw teeth with stellite or high speed steel	4	10	B
8338	Retooth inserted teeth saws	3	3	B
15758	Sharpen bandsaws	3	8 10	B
15759	Sharpen circular saws	3	9 10	B
15760	Tooth circular saws	3	5	B
15761	Tooth bandsaws	3	4 5	B
15762	Demonstrate knowledge of the alignment of bandsaw and circular rip saw centres	3	8 5	B
15763	Demonstrate knowledge of the grinding of bandwheels	3	4 5	B
16241	Maintain router bits and drill bits	3	10	B
17962	Demonstrate knowledge of saw tooth profiles in saw doctoring	3	5	B
17967	Demonstrate knowledge of saw grinder application and operation	3	5	B
17968	Apply advanced calculations for saw doctoring	4	10	B
17969	Perform basic saw doctoring calculations	2	5	B

Classification Solid Wood Processing > Sawmilling
Solid Wood Manufacturing > Sawmilling

Id	Title	Level	Credit	Review Category
135 20751	Operate a cross-cut saw Operate cross cut saw centre	3 3	3 5	C
8006	Maximise timber recovery	5	20 25	B
8007	Implement a sawmill quality control programme Implement a saw centre size control programme	4	4 5	B
15764	Explain principles of sawmill operations Demonstrate knowledge of sawmill operations	4 3	14 15	B
15765	Break down logs at primary breakdown using log carriage Break down logs using manual or semi-automated systems and a log carriage	4	28 30	B
15766	Break down logs using automatic systems with manual over-ride and centre line log feed system	4	15	B
15767	Break down logs using fully automatic systems and centre line log feed system	4	8 15	B
15768 20752	Resaw timber for grade and size recovery Operate ripping saw centre	4 3	18 5	C
20753	Optimise resawing timber for fibre and grade recovery	4	20	New

Classification Solid Wood Processing > Wood Drying
 Solid Wood Processing > Wood Preservation*

Solid Wood Manufacturing > Timber Drying and Treatment

Id	Title	Level	Credit	Review Category
142	Demonstrate knowledge of wood drying operations and establish correction factors for a moisture meter	3	8	C
21758	Explain wood drying, determine wood moisture content and establish equipment correction factor	3	10	
145	Operate dehumidifier and/or heat pump Dry wood products using a dehumidifier or heat pump process	3	6 5	B
146	Determine wood moisture content by oven drying and moisture meter Determine wood moisture content using a moisture meter	3	3	B
148	Pressure treat wood	4	30	C
21759	Pressure treat wood using waterborne preservatives	4	35	
149	Treat wood by the diffusion process	3	6	C
21760	Treat wood by the diffusion process	4	5	
150	Treat wood with antisapstain chemicals	3	4	C
21761	Treat wood with antisapstain chemicals	3	5	
151	Pre-steam wood under pressure for wood preservation treatment	3	4	C
21762	Pre-steam wood under pressure for wood preservation treatment	3	5	
152*	Treat wood with light organic solvent preservative	4	20	B
154*	Fix copper chrome arsenic preservatives in wood using heat assistance	3	2 5	B
738	Kiln dry timber	4	25	B
8339*	Demonstrate knowledge of the principles of wood preservation and antisapstain treatment	3	8 10	B
16240*	Interpret legislative and regulatory requirements relating to wood preservation operations Interpret legislative requirements and workplace compliance relating to wood preservation operations	3	10	B
20759	Air dry timber or round wood	3	3	New

Classification Solid Wood Processing > Timber Grading

Solid Wood Manufacturing > Timber Grading

Id	Title	Level	Credit	Review Category
139	Grade timber to NZS 3631:1988 Group III rules under supervision Grade timber to NZS 3631:1988 Group III rules at 80% accuracy	3	15 20	B

Id	Title	Level	Credit	Review Category
141	Stress grade timber mechanically Operate a mechanical stress grading machine to grade timber	4	9 20	B
5846	Grade timber to AS 2858-1986: structural rules Grade timber to AS 2858-2004: structural rules	4	12 15	B
5848	Manage technical aspects of timber grading Audit timber grading operations	5	10	B
5852	Grade timber to AS 2858-1986: structural rules under supervision Grade timber to AS 2858-2004: structural rules at 80% accuracy	3	7 10	B
8003	Grade lumber to United States of America grading rules	4	20	B
8004	Grade lumber to United States of America grading rules under supervision Grade lumber to United States of America grading rules at 80% accuracy	3	15	B
15770	Grade timber to NZS3631 Group III structural rules Grade timber to NZS 3631 Group III structural rules	4	7 10	B
15771	Grade timber to NZS3631 Group III appearance and cuttings rules Grade timber to NZS 3631 Group III appearance and cuttings rules	4	8 15	B
20754	Demonstrate knowledge of mechanical stress grading of timber	2	5	New
20755	Grade timber using customer specific grading rules at 80% accuracy	3	10	New
20756	Grade timber using customer specific grading rules	4	10	New

Classification Solid Wood Processing > Timber Machining
Solid Wood Manufacturing > Timber Machining

Id	Title	Level	Credit	Review Category
675	Set up a timber planer for dress four sides	3	7 20	B
676	Set up timber planer for profile	4	28 30	B
678	Feed and tail out planer	3	7 5	B
681	Joint straight cutters	2 3	3 5	B
682	Joint profile cutters	3	3 5	B
684	Grind and hone straight cutters	3	5	B
685	Grind and hone straight cutters in-head	3	3	B

Id	Title	Level	Credit	Review Category
687 and 16242 23105	Grind and hone profile cutters in-head Draw and develop profiles for timber machining Develop profile, and grind and hone profile cutters in-head	4 3 4	15 4 25	C C
688	Make profile cutter templates	3	3 15	B
689	Set cutters into cutterheads	3	7 10	B
690	Make straight cutters	2	3	B
8009	Describe timber machining operation cost structures Explain and calculate costing of timber machining operations	4	3 4	B
8010	Set machines using computer aided setting systems Set cutterhead spindle positions using data from a calibrated measuring device	4	4 5	B
15772	Manage tooling and profile systems	5	45 35	B
15775	Inspect and maintain timber planer/grinder components Inspect and maintain a wood forming machine and a grinding machine	3	14 15	B
17959	Apply calculations for operating and maintaining timber machining equipment	4	5 10	B
17960	Perform basic calculations for the operation of planers and grinders in a timber machining operation Perform basic calculations for the operation of wood forming machines and grinders	2	5	B
19719	Identify, diagnose and rectify machined product defects	4	24 25	B

Classification Wood Processing Technology > Wood Product Manufacturing
Solid Wood Manufacturing > Timber Machining

Id	Title	Level	Credit	Review Category
15061	Sharpen finger-jointer cutterhead in wood product manufacturing Grind and hone finger jointer cutterhead in wood product manufacturing	4	5	B

Classification Wood Processing Technology > Wood Product Manufacturing
Solid Wood Manufacturing > Wood Product Manufacturing Skills

Id	Title	Level	Credit	Review Category
4548	Laminate straight timber for wood product manufacturing	3	6 8	B

Id	Title	Level	Credit	Review Category
4551	Set up and operate multi-rip saws in wood product manufacturing Set up and operate a multi-rip machine centre in wood product manufacturing	3	5	B
15056	Demonstrate knowledge of laminating in wood product manufacturing Demonstrate knowledge of the principles of laminating in wood product manufacturing	2	5	B
15057 21764	Mix and test glue for wood product manufacturing Carry out procedures for gluing in wood product manufacturing	3 3	2 8	C
15059	Test laminated product in wood product manufacturing	3 4	1 10	B
17042	Set up mortise and tenoners for wood product manufacturing Set up mortise and tenoner for wood product manufacturing	4	5	B
17044	Set up sanding machines for wood product manufacturing	4	3	B
17045 21765	Set up painting machines for wood product manufacturing Set up, shut down and maintain a painting machine and drying equipment for wood product manufacturing	4 4	3 10	C
17046	Set up lathes for wood product manufacturing Set up and prepare lathe for wood product manufacturing	4	6 5	B
17047	Set up drilling and boring machinery for wood product manufacturing Set up and prepare drilling and boring machinery for wood product manufacturing	4	3	B
17048	Set up thicknessers and overhand planers for wood product manufacturing Set up and prepare thicknessers and overhand planers for wood product manufacturing	4	5	B
17049	Produce components using drilling and boring machinery in wood product manufacturing	3	3	B
17050	Produce components using overhead routers in wood product manufacturing Produce components using an overhead router in wood product manufacturing	4	5	B
17051	Produce components using edge-banders in wood product manufacturing Produce components using an edge-bander in wood product manufacturing	4	3	B
17052	Produce components using mortise and tenoners in wood product manufacturing Produce components using mortise and tenoner in wood product manufacturing	3	3	B

Id	Title	Level	Credit	Review Category
17053	Produce components using spindle moulders in wood product manufacturing Produce components using a spindle moulder in wood product manufacturing	4	8 10	B
17201	Produce components using thicknessers and overhand planers in wood product manufacturing Produce components using a thicknesser and overhand planer in wood product manufacturing	3	5	B
17202	Assemble wood product components for wood product manufacturing	3	6 5	B
17203	Sand wood products for wood product manufacturing	3	3	B
17963	Use and maintain hand and portable power tools in a wood product manufacturing plant Use and maintain hand and portable power tools in a wood manufacturing plant	3	5	B
17964	Demonstrate knowledge of the wood product manufacturing industry	2	5	B
20768	Explain adhesive use in wood product manufacturing	3	10	New
20769	Control automatic glue mixing systems for wood product manufacturing	4	10	New
20770	Develop patterns and construct jigs for curved laminate products in wood product manufacturing	4	10	New
20771	Laminate curved products for wood product manufacturing	4	10	New

Classifications Solid Wood Processing > Wood Drying*

Solid Wood Processing > Sawmilling

Wood Handling and Distribution > Timber Yarding

Id	Title	Level	Credit	Review Category
143*	Fillet timber for air or kiln drying Fillet timber for further processing	2	2 3	B
164	Tally timber	2	2 3	B
165	Handle, sort and stack timber	1 2	2 3	B
8005	Operate a mechanical timber handling system Operate a mechanical timber stacking system	2 3	2 5	B
17961	Tally random width timber	2	2 3	B
20757	Operate a mechanical timber handling system	3	5	New
20758	Operate interlinked mechanical timber handling systems simultaneously	3	10	New

Classification Solid Wood Processing > Sawmilling

Wood Handling and Distribution > Wood Preparation

Id	Title	Level	Credit	Review Category
130	Control log yard operations	4	15	B
134	Operate a debarker	3	4 5	B
166	Confirm log grades Confirm log grades and scale logs	2 3	4 10	B
739	Operate a wood slabber	3	3	B
740	Operate a wood chipper	3	3	B
20760	Monitor and control contamination in wood chip and wood fibre materials	2	5	New
20761	Collect wood chip samples	3	3	New
20762	Collect wood fibre material samples, and assess and report wood fibre material quality	3	5	New
20763	Interpret wood chip and/ or wood fibre material test results and take corrective actions	3	5	New
20764	Operate log saw	3	5	New
20765	Test and report wood chip quality	3	5	New

Classification Solid Wood Processing > Timber Machining
**Wood Manufacturing – Generic Skills > Wood Manufacturing
Coordination**

Id	Title	Level	Credit	Review Category
19720	Manage maintenance of timber machining plant Manage maintenance of technical plant in wood manufacturing	5	15 25	B
20773	Plan wood manufacturing operations	5	20	New
20774	Coordinate wood manufacturing operations	5	25	New

Classification Wood Processing Technology > Wood Technology
**Wood Manufacturing – Generic Skills > Wood Manufacturing
Foundation Skills**

Id	Title	Level	Credit	Review Category
155	Demonstrate knowledge of the characteristics of wood	2	5 8	B
156	Demonstrate knowledge of phytosanitary standards in the solid wood processing industry Demonstrate knowledge of phytosanitary standards in the solid wood manufacturing industry	1 2	3 5	B
157	Demonstrate knowledge of the principles of New Zealand timber grading	2	10	B
159	Demonstrate knowledge of environmental issues for the solid wood processing industry Demonstrate knowledge of environmental issues in wood manufacturing industries	1 2	3 5	B
160	Demonstrate knowledge of the principles of sawmilling	2	6 5	B

Id	Title	Level	Credit	Review Category
162	Demonstrate knowledge of the principles of wood drying for the timber industry Describe the principles of wood drying	2	5	B
668	Demonstrate knowledge of the principles of saw doctoring	2	5	B
736	Demonstrate knowledge of tree growth and physical characteristics of wood	1 2	4 5	B
5847	Demonstrate knowledge of timber yard operations	2	5	B
8002	Demonstrate knowledge of the principles of grading lumber for the United States of America market	2	5	B
8008	Demonstrate knowledge of log yard operations	2	4 5	B
9774	Demonstrate knowledge of timber grading	2	5	B
15774	Demonstrate knowledge of timber machining	2	3 5	B
16244	Demonstrate knowledge of wood preservation	2	3 5	B
17970	Explain solid wood processing cost factors influencing profitability and sustainability Explain wood manufacturing cost factors influencing profitability and sustainability	4	10	B
17971	Demonstrate knowledge of the solid wood processing industry Demonstrate knowledge of the solid wood manufacturing industry	2	5	B
20766	Describe forest management and log use in solid wood manufacturing	2	5	New
20767	Demonstrate knowledge of saws and knives used in wood manufacturing	2	5	New

Category D standards

Subfield Solid Wood Processing
Domain Sawmilling

Id	Title	Level	Credit	Review Category
131	Coordinate the movement, storage, and despatch of in-process and finished timber products	4	30	D
132	Control sawmill operations	5	45	D
133	Control timber yard operations	5	40	D
15769	Resaw timber for width and/or thickness	3	4	D

Domain Timber Grading

Id	Title	Level	Credit	Review Category
140	Grade timber to NZS 3631:1988 Group III rules	4	20	D

Domain Timber Machining

Id	Title	Level	Credit	Review Category
161	Explain principles of timber machining	2	5	D
679	Profile-sand timber	3	10	D
680	Make pressure pads for timber planers or sanders	3	3	D
686	Grind and hone profile cutters	4	10	D
5850	Control planer mill operations	5	45	D
15773	Co-ordinate planer mill resources	5	40	D

Domain Wood Drying

Id	Title	Level	Credit	Review Category
5849	Control wood drying operations	5	30	D
15776	Block stack timber	1	2	D
16243	Explain principles of air drying timber and round wood	2	3	D

Domain Wood Preservation

Id	Title	Level	Credit	Review Category
737	Manage wood preservation operations	5	30	D

Subfield Wood Processing Technology

Domain Wood Product Manufacturing

Id	Title	Level	Credit	Review Category
4549	Mix glue for wood product manufacturing	2	1	D
4550	Cross cut timber for grade recovery and length in wood product manufacturing	3	8	D
4552	Resaw timber to smaller widths for grade recovery in wood product manufacturing	2	4	D
15062	Resaw for clears recovery in wood product manufacturing	2	2	D
17043	Set up face and edge laminating presses for wood product manufacturing	4	16	D
17965	Explain wood product manufacturing cost factors influencing profitability and sustainability	4	10	D
17966	Coordinate wood product manufacturing across multiple process stages	5	25	D

Domain Wood Technology

Id	Title	Level	Credit	Review Category
15777	Demonstrate knowledge of New Zealand forest products	3	12	D
15778	Demonstrate knowledge of the New Zealand forest industry	1	6	D
17450	Explain features of New Zealand wood-based industries which impact on wood processing	4	10	D

Id	Title	Level	Credit	Review Category
17451	Explain the impact of wood characteristics on processes and product quality in wood-based industries	5	30	D
17452	Demonstrate knowledge of legislative requirements relating to New Zealand wood-based industries	4	10	D