Title	**Optimise timber for fibre and grade recovery when cutting timber**		
Level	**4**	**Credits**	**15**

Purpose	People credited with this unit standard are able to: demonstrate knowledge of fibre and grade recovery for timber; make optimising decisions for cutting timber; implement optimisation decisions for fibre and grade recovery when cutting timber at production speed; and monitor output timber when cutting timber for optimum fibre and grade recovery.

Classification	Solid Wood Manufacturing > Sawmilling

Available grade	Achieved

Guidance Information

1 Legislation
Health and Safety at Work Act 2015.
Resource Management Act 1991.

2 Definitions
Accepted industry practice – approved codes of practice and standardised procedures accepted by the wider sawmilling industry as examples of best practice.
Corrective action may include actions such as communication to management, communication to on-site technical support person, communication to off-site technical support person, cleaning, communication with maintenance staff, recalibration, or changes made to the operating system in accordance with worksite documentation.
Input material refers to timber, shook, or boards that are presented to the docking or trim centre for further processing.
Optimise refers to the most efficient use of product and plant, taking into account raw material input, customer demands, and machine capability.
Workplace procedures refer to documented policies and procedures set by the organisation carrying out the work, and to documented or other directions provided to staff, and applicable to the tasks being carried out. They may include but are not limited to – standard operating procedures, site specific procedures, site safety procedures, equipment operating procedures, quality assurance procedures, product quality specifications, references, approved codes of practice, housekeeping standards, environmental considerations, on-site briefings, supervisor's instructions, and procedures to comply with legislative and local body requirements relevant to the industry sector.

3 Assessment information
a All activities and evidence must meet workplace procedures and accepted industry practice.

b This unit standard applies to the cutting of timber for fibre and grade recovery using an adjustable sawing system.

4 Recommended unit standard for entry:
Unit 20751, *Operate a cross cut saw centre*.

Outcomes and performance criteria

Outcome 1

Demonstrate knowledge of fibre and grade recovery for timber.

Performance criteria

1.1 Cutting plans and product output mix are described in relation to input materials and product demand.

1.2 Processing constraints are identified and potential solutions to maintain productivity and quality requirements are described.

Range constraints may include but are not limited to – markets, timber supply, preferred products, downstream processing options, operator skill level.

1.3 Impacts of decision making on fibre and grade recovery are described and related to potential effects on customer demand and saw centre efficiency.

Range customer demand and saw centre efficiency may include but is not limited to – shipping on time, customer preferences, saw centre productivity, volume of input material required, unrequired product generation.

Outcome 2

Make optimising decisions for cutting timber.

Performance criteria

2.1 Feedstock timber are checked to ensure they meet specifications and production run expectations.

2.2 Individual pieces of feedstock timber are inspected for defects and the impact of these defects on the cutting decisions is described.

2.3 Hazards associated with optimising timber for fibre and grade recovery are identified and actions to manage the hazards are described.

Range hazards may include but are not limited to – moving equipment, moving and misaligned pieces, kick back, sawdust, mobile plant, noise.

2.4 Decisions for optimising sawing for size and/or grade recovery are made based on the results of the inspection.

2.5 Trial pieces are cut and checked to ensure that the results predicted for size and/or grade recovery are achieved.

Outcome 3

Implement optimisation decisions for fibre and grade recovery when cutting timber at production speed.

Performance criteria

3.1 Safe work practices associated with optimising timber for fibre and grade recovery are identified and applied.

Range practices may include but are not limited to – isolation procedures, lock-outs, emergency stops, machine guarding, wearing appropriate safety equipment.

3.2 Cutting plans are implemented to optimise fibre and grade recovery.

3.3 Production is managed to meet the production rate and product quality specifications.

3.4 Product flow is managed to optimise downstream processes.

Outcome 4

Monitor output when cutting timber for optimum fibre and grade recovery.

Performance criteria

4.1 Cut timber are monitored for grade and size, and corrective action is taken to optimise fibre and grade recovery.

4.2 Equipment faults and malfunctions are identified, and corrective actions taken.

Range equipment faults may be mechanical, electrical, or hydraulic.

Planned review date	31 December 2024

Status information and last date for assessment for superseded versions

Process	Version	Date	Last Date for Assessment
Registration	1	18 December 2006	31 December 2012
Rollover and Revision	2	15 April 2011	31 December 2014
Review	3	18 April 2013	N/A
Review	4	23 April 2020	N/A

Consent and Moderation Requirements (CMR) reference	0013

This CMR can be accessed at http://www.nzqa.govt.nz/framework/search/index.do.

Comments on this unit standard

Please contact Competenz qualifications@competenz.org.nz if you wish to suggest changes to the content of this unit standard.