

Title	Demonstrate knowledge of landing operations, hazards, and log making, and process logs on a landing under supervision		
Level	2	Credits	10

Purpose	<p>This unit standard is intended for people employed in a landing operations role in a forestry operation or people seeking to enter the forest industry.</p> <p>People credited with this unit standard are able to: demonstrate knowledge of landing operations, log making, and hazards and hazard management for landing operations; and process logs on a landing under supervision.</p>
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Classification	Forestry > Forest Foundation Skills
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Available grade	Achieved
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Guidance Information

- 1 Legislation relevant to this unit standard includes the: Health and Safety at Work (HSW) Act 2015, Resource Management Act 1991; the Resource Management (National Environmental Standards for Plantation Forestry) Amendment Regulations 2018; and the Heritage New Zealand Pouhere Taonga Act 2014, and any subsequent amendments.
- 2 References
New Zealand Forest Owners Association, *Forest Practice Guides* (2019), and any subsequent amendments, available from <http://www.nzfoa.org.nz>.
Approved Code of Practice (ACOP) for Safety and Health in Forestry Operations, December 2012, available from <http://www.worksafe.govt.nz>.
- 3 Definitions
Accepted industry practice refers to approved codes of practice and standardised procedures accepted by the wider forestry industry as examples of best practice.
Worksite procedures refer to documented procedures used by the organisation carrying out the work and applicable to the tasks being carried out. They may include but are not limited to – standard operating procedures, site safety procedures, equipment operating procedures, quality assurance procedures, housekeeping standards, procedures to comply with legislative and local body requirements.
- 4 Assessment information
This unit standard must be assessed on-job.

Outcomes and performance criteria

Outcome 1

Demonstrate knowledge of landing operations.

Performance criteria

- 1.1 Forestry harvesting operations are described and those that are part of landing operations are identified.
- Range tree felling, delimbing, extraction, log making, fleeting, loading, transportation.
- 1.2 A typical layout of a landing is described in accordance with accepted industry practice.
- Range verbal or pictorial description must indicate locations of – no go zones, safe refuelling and maintenance areas, work break area, no smoking areas, smoking area, safe distances between workers with chainsaws, safe distances between workers and machines, sorting area, loading area, log stacks, processing areas, machine movement, parking area.
- 1.3 The role of a landing worker is described in accordance with accepted industry practice.
- 1.4 Machines active in a landing operation area are identified and their purpose described in accordance with accepted industry practice.
- Range machines may include but are not limited to – extraction machines, loading machines, mechanised processor, static delimber, fleeting machine, cable yarder, log truck, stem truck; evidence of at least three machines is required.

Outcome 2

Demonstrate knowledge of log making.

Performance criteria

- 2.1 Basic log making terminology is defined in accordance with accepted industry practice.
- Range log making, log specifications, cutting instructions, large end diameter (LED), small end diameter (SED), stem attribute identification (SAI), maximum and minimum diameters, length, sonic testing.
- 2.2 The purpose of log making is explained in terms of the effect on the final log.

- 2.3 The responsibilities of a log maker are described in accordance with accepted industry practice and worksite procedures.

Range landing activities, log value, safety.

- 2.4 Purpose of the cutting instructions is explained in accordance with accepted industry practice.

- 2.5 Log making equipment is identified and its function in a landing operation is described in accordance with accepted industry practice.

Range logger's tape, refills, log callipers, spray paint, stencil, SED tape, calibration tag.

- 2.6 Basic stem attributes are described in accordance with accepted industry practice.

Range sweep, knot size, fluting, diameter, nodal swelling, kink, wobble, out of round, draw wood, shatter, sapstain, off-centre pith, sloven, malform, crutch, spike, collar, machine or saw damage, pruned.

Outcome 3

Demonstrate knowledge of hazards and hazard management for landing operations.

Performance criteria

- 3.1 Personal protective equipment and equipment required for landing operations are identified in accordance with accepted industry practice.

Range personal protective equipment includes but is not limited to – high visibility gear, hard hat, chaps, earmuffs, safety visor or glasses, safety boots;
equipment may include but is not limited to – wedge and hammer, chainsaw, spare bar and chain, approved fuel containers, tools (file, spanner, file guide), logger's tape, log callipers, identification stencil, SED tape, calibration tag, sonic testing equipment;
evidence of six equipment is required.

- 3.2 Safety procedures for a safe refuelling and maintenance area are described in accordance with accepted industry practice and worksite procedures.

- 3.3 Requirements for safe fuel storage are described in accordance with accepted industry practice and worksite procedures.

- 3.4 Landing operation hazards are identified and a method of control for each hazard is stated in accordance with accepted industry practice.

Range rolling logs, slash, moving machinery and vehicles, chainsaw, log stacks, ground conditions, chainsaw operators, other operators.

3.5 The terms *tension* and *compression* are defined in accordance with accepted industry practice.

3.6 The hazards and potential harm associated with tension and compression are identified. Control methods for each hazard are explained in accordance with accepted industry practice.

Range hazards may include but are not limited to – log movement, log splitting, kickback, chain pinching.

Outcome 4

Process logs on a landing under supervision.

Performance criteria

4.1 Personal protective equipment is used in accordance with accepted industry practice.

4.2 Clear and agreed communication as specified by the supervisor is established with landing operators in accordance with worksite procedures.

Range hand signals, eye contact, verbal communication.

4.3 Logs and stems are processed in accordance with worksite procedures and the supervisor's instructions.

Range cut perpendicular to the log, combination cuts, correct body position, appropriate use of wedges, correct starting position.

4.4 Stems are trimmed in accordance with the supervisor's instructions.

Range space to work in, trimmed from the ground, ergonomically correct, trimmed below shoulder height, trimmed flush, safe chainsaw use.

4.5 Compression and tension are identified, the identification is confirmed with the supervisor, and is managed in accordance with accepted industry practice.

Range management techniques include but are not limited to – hammer and wedge, cutting techniques, request reposition of log by a machine.

4.6 Hazards are identified, reported to the supervisor, and controlled in accordance with worksite procedures.

Range may include but is not limited to – rubbish caught in tree limbs, kickback, rolling or falling logs, slash build up, pinching, unsafe footing, overlapping work areas, machine movement.

Planned review date	31 December 2028
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Status information and last date for assessment for superseded versions

Process	Version	Date	Last Date for Assessment
Registration	1	22 May 2008	31 December 2016
Review	2	19 March 2015	31 December 2017
Review	3	10 December 2015	N/A
Review	4	28 May 2020	N/A
Rollover	5	28 March 2024	N/A

Consent and Moderation Requirements (CMR) reference	0173
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This CMR can be accessed at <http://www.nzqa.govt.nz/framework/search/index.do>.

Comments on this unit standard

Please contact Muka Tangata - People, Food and Fibre Workforce Development Council qualifications@mukatangata.nz if you wish to suggest changes to the content of this unit standard.