

<b>Title</b>	<b>Demonstrate knowledge of cable harvesting operations</b>		
<b>Level</b>	<b>3</b>	<b>Credits</b>	<b>10</b>

<b>Purpose</b>	People credited with this unit standard are able to: explain roles of personnel in a cable harvesting operation; demonstrate knowledge of cable harvesting equipment and systems; demonstrate knowledge of rigging used in cable harvesting; and demonstrate knowledge of communication requirements for cable harvesting operations.
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<b>Classification</b>	Forestry > Forest Harvesting Operations
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<b>Available grade</b>	Achieved
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### Guidance Information

- 1 Legislations and regulations relevant to this unit standard include but are not limited to:

- Health and Safety at Work Act 2015;
- Resource Management (National Environmental Standards for Plantation Forestry) Amendment Regulations 2018;
- and any subsequent amendments.

- 2 References

*Approved Code of Practice (ACOP) for Safety and Health in Forestry Operations*, December 2012, available from <https://worksafe.govt.nz/>.

Forestry Industry Safety Council, *Best Practice Guides*, available from <https://safetree.nz/>.

New Zealand Forest Owners Association, *Forest Practice Guides* (2019), and any subsequent amendments, available from <https://www.nzfoa.org.nz>.

- 3 Definitions

*Accepted industry practice* – approved codes of practice and standardised procedures accepted by the wider forestry industry as examples of best practice.

*Line retrieval* is the activity of bringing ropes and rigging (for example tail blocks) back to the hauler at the end of the setting and in preparation for moving the hauler. May also be referred to as winding in the ropes.

*RT* refers to a radio telephone in which audible communications are established by use of a two-way radio transmitter and receiver.

*Strawline* refers to a light cable used to haul heavier cables during the setup of a cable harvesting operation, and may be wire, or synthetic, or an accepted alternative material.

*Talkie Tooter* refers to a remote control radio designed for use in harvesting.

*Worksite procedures* refers 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.

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## Outcomes and performance criteria

### Outcome 1

Explain roles of personnel in a cable harvesting operation.

#### Performance criteria

- 1.1 Explain the head breaker-out's role in accordance with accepted industry practice and worksite procedures.
- Range drag selection, hook-up, communication, hazard management, pre-planning, health and safety management, line shifts, line retrieval, safe retreat position.
- 1.2 Explain the poleman's role in accordance with worksite procedures.
- Range communication, un-hooking, hazard management, line shifts, line retrieval, wire rope and equipment maintenance.
- 1.3 Explain the cable yarder operator's role in accordance with worksite procedures.
- Range cable yarder set-up, stem extraction, hazard management.

### Outcome 2

Demonstrate knowledge of cable harvesting equipment and systems.

#### Performance criteria

- 2.1 Describe terms associated with cable harvesting in accordance with accepted industry practice.
- Range butt rigging, grapple yarding, carriage, tower, deflection, guylines, shock loading, payload, span, yarding corridor.
- 2.2 Explain the differences between a fixed tower yarder and a swing yarder in accordance with accepted industry practice.
- Range base machine, tower configuration, guyline configuration, yarding capabilities.

- 2.3 Describe common harvesting systems in accordance with accepted industry practice.
- Range highlead, standing skyline, running skyline.
- 2.4 Describe anchor types used in cable harvesting in accordance with accepted industry practice.
- Range stump, deadman, mobile anchor.
- 2.5 Describe factors influencing the use of cable harvesting anchors in accordance with accepted industry practice.
- Range stump, deadman, mobile anchor.
- 2.6 Explain the use of wire rope used on a yarder in accordance with accepted industry practice.
- Range skyline, mainline, tailrope, strawline, guyline.
- 2.7 Describe factors that influence drag cycle times in accordance with the job prescription.
- Range factors may include but are not limited to – haul distance, payload, number of strops, piece size, machine capability, breaker-out capability, terrain, environmental; evidence of six factors is required.

### Outcome 3

Demonstrate knowledge of rigging used in cable harvesting.

#### Performance criteria

- 3.1 Identify rigging items and explain their function in accordance with accepted industry practice.
- Range block, sheave, chain, strop, butt rigging, shackle, choker, ferrule, grommet, swivel, fallblock, marlin spike, hammerlocks, molly grommet.
- 3.2 Describe wire rope dimensions and construction in accordance with accepted industry practice.
- Range diameter, wire rope core, configuration, swaging.
- 3.3 Explain maintenance requirements for wire ropes and rigging in accordance with accepted industry practice.
- 3.4 Explain the Safe Working Loads (SWL) of wire ropes, shackles, and pins in accordance with accepted industry practice.

**Outcome 4**

Demonstrate knowledge of communication requirements for cable harvesting operations.

**Performance criteria**

- 4.1 Describe types of communication systems in terms of their use in cable harvesting operations.
- Range Talkie Tooters, RTs, hand signals.
- 4.2 Explain the requirements for hand and audio signals used in cable operations in accordance with accepted industry practice.
- 4.3 Explain the purpose of, and requirements for the use of a radio communication system during cable harvesting operations in accordance with accepted industry practice.
- 4.4 Demonstrate hand signals used in cable harvesting operations in accordance with accepted industry practice.
- Range emergency, stop, start mainline, start tailrope, slacken wire ropes, up and down skyline.
- 4.5 Describe audio signals for cable harvesting operations in accordance with accepted industry practice.
- Range start and slack mainline, start and slack tailrope, stop any rope, emergency, up and down skyline movements, strawline.

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<b>Planned review date</b>	31 December 2024
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**Status information and last date for assessment for superseded versions**

Process	Version	Date	Last Date for Assessment
Registration	1	8 November 1996	31 December 2012
Revision	2	19 June 1998	31 December 2012
Review	3	5 December 2000	31 December 2012
Review	4	22 May 2008	31 December 2012
Review	5	8 December 2011	31 December 2016
Review	6	19 March 2015	31 December 2017
Review	7	10 December 2015	31 December 2024
Review	8	23 January 2020	31 December 2024
Revision	9	27 October 2022	N/A

**Consent and Moderation Requirements (CMR) reference**

0173

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](mailto:qualifications@mukatangata.nz) if you wish to suggest changes to the content of this unit standard.