Title	**Position, secure and raise an integral tower on a cable yarder**		
Level	**4**	**Credits**	**10**

Purpose	This unit standard is intended for people employed in cable harvesting roles in a commercial forestry operation and required to set up a cable yarder to meet a forest harvesting plan. People credited with this unit standard are able to: plan and explain the set-up of a cable yarder to meet worksite requirements; prepare site for cable yarder set-up; prepare and attach guylines to anchor a cable yarder; and raise an integral tower on a cable yarder.

Classification	Forestry > Forest Harvesting Operations

Available grade	Achieved

Guidance Information

1 Legislation relevant to this unit standard includes the Health and Safety at Work (HSW) Act 2015; the 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/.
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.
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.
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.

Outcomes and performance criteria

Outcome 1

Plan and explain the set-up of a cable yarder to meet requirements of a worksite.

Performance criteria

1.1 The factors to be considered when setting up a cable yarder are explained in accordance with accepted industry practice.

1.2 The personnel and equipment needed for the set-up are explained in accordance with worksite procedures and accepted industry practice.

1.3 The position of the cable yarder is planned and explained in accordance with worksite procedures and accepted industry practice.

Range landing layout, first drag, stem landing chute, anchors.

1.4 Characteristics of suitable guylines are described in accordance with accepted industry practice.

Range includes but is not limited to – length, guyline extensions, diameter, strength, method of connection, other equipment required.

1.5 Features of suitable guyline anchors are described in accordance with accepted industry practice.

Range availability, location, ground conditions, earth-deadman, tie backs, twisters, multiple stump anchors, stump notching, stump age, size and condition.

1.6 Guyline configuration and positioning of anchors are planned in accordance with worksite procedures.

Range includes but is not limited to – vertical angles, number per quadrant, yarding radius, anchor availability.

1.7 The method for stabilising the cable yarder and raising the tower is explained in accordance with worksite procedures and accepted industry practice.

1.8 The procedure for repositioning the cable yarder on the same landing is explained in accordance with the worksite procedures and accepted industry practice.

Range includes but is not limited to – risk management.

Outcome 2

Prepare site for cable yarder set-up.

Performance criteria

2.1 Initial site is selected on a prepared landing and the cable yarder positioned in accordance with the set-up plan and accepted industry practice.

Range includes but is not limited to – yarding direction, landing layout, suitable stem landing area, clearance over edge of landing, effect on processing, machine stability.

2.2 The risks specific to setting up and securing the tower are assessed and controlled in accordance with accepted industry practice.

2.3 Factors affecting guyline placement are explained for the cable yarder being used, in terms of, in accordance with accepted industry practice.

Range anchor location, uniformity, number per quadrant, and vertical angle.

2.4 Anchor points for guylines are planned, selected, and marked in accordance with accepted industry practice and worksite procedures.

Range stumps, provision for alternative anchors, allowing for subsequent swing yarder shifts.

Outcome 3

Prepare and attach guylines to anchor a cable yarder.

Performance criteria

3.1 Anchors are prepared in accordance with worksite procedures and accepted industry practice.

3.2 Stumps are notched in accordance with the worksite procedures and accepted industry practice.

3.3 Guylines are secured to anchors and/or extensions in accordance with accepted industry practice.

3.4 Guylines and ropes are positioned and tensioned in accordance with the manufacturer's recommendations and worksite procedures.

Range sequence, spooled, balanced.

3.5 Tower set-up is checked and adjusted prior to machine operation in accordance with worksite procedures.

Range may include but is not limited to – locking pawls, machine security, anchor security, guyline tension, fleet angle.

3.6 The tailrope is directed through the backline blocks in accordance with accepted industry practice.

3.7 Anchors and guylines are checked for stability and safety in terms of the initial drags and under full production loads.

3.8 Anchors and guyline checks are carried out and documented in accordance with worksite procedures and accepted industry practice.

Outcome 4

Raise an integral tower on a cable yarder.

Performance criteria

4.1 Tower components are inspected and maintained prior to raising in accordance with accepted industry practice.

Range components include – strawline in sheaves, guyline blocks, sheaves, bearings, shackles, safety strops, hydraulic equipment, locking devices, tower raising line.

4.2 The communication process is established and roles clarified with workers involved in raising the tower in accordance with worksite procedures.

4.3 Machine is levelled and stabilised prior to raising the tower in accordance with worksite procedures.

Range may include but is not limited to – use of stabilising rams, checking ground conditions, use of displacement pads, use of chocks.

4.4 Tower is raised by directing crew members using hand or radio communication in accordance with worksite procedures.

4.5 Tower raising operation is completed while maintaining the safety of all crew members and machinery in accordance with worksite procedures.

Planned review date	31 December 2028

Status information and last date for assessment for superseded versions

Process	Version	Date	Last Date for Assessment
Registration	1	28 January 1995	31 December 2012
Review	2	8 November 1996	31 December 2012
Revision	3	19 June 1998	31 December 2012
Review	4	5 December 2000	31 December 2012
Review	5	22 May 2008	31 December 2012
Revision	6	16 July 2010	31 December 2012
Review	7	8 December 2011	31 December 2017
Review	8	10 December 2015	N/A
Review	9	23 January 2020	N/A
Rollover	10	26 April 2024	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 if you wish to suggest changes to the content of this unit standard.