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| Title | Plan for, manage, and perform quality control on a ground-based motor manual clear fell harvesting operation | | |
| Level | 5 | Credits | 15 |

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| Purpose | People credited with this unit standard are able to: interpret the job prescription or harvest plan and determine the production target and resource requirements of the operation; develop a felling plan, an extraction plan, a processing plan, and develop and establish a temporary traffic control plan for a ground-based motor manual clear fell harvesting operation; manage a ground-based motor manual clear fell harvesting operation; and perform quality control on a ground-based motor manual clear fell harvesting operation. |
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| Classification | Forestry > Forest Operations Management |
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| Available grade | Achieved |
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Guidance Information

- 1 This unit standard is intended for crew foremen or operational managers with contracting companies managing the felling, extraction and processing in ground-based motor manual clear fell operations. They are responsible for all personnel involved in the operation. Personnel involved in the operation may include tree fallers, extraction machine operators, log makers, chainsaw operators and loader operators. Ground-based operations use mobile extraction machines to extract stems and motor manual operations use manually operated chainsaws for felling and log processing.
- 2 Recommended skills and knowledge
Unit 1256, *Demonstrate knowledge of ground-based log extraction*, or demonstrate equivalent knowledge and skills.
- 3 Legislation relevant to this unit standard includes the: Health and Safety at Work (HSW) Act 2015, Resource Management Act 1991; Resource Management (National Environmental Standards for Plantation Forestry) Amendment Regulations 2018; Heritage New Zealand Pouhere Taonga Act 2014, and any subsequent amendments.
- 4 References
Approved Code of Practice (ACOP) for Safety and Health in Forestry Operations, December 2012, available from <http://www.worksafe.govt.nz>
New Zealand Forest Owners Association, *Forest Practice Guides (2019)*, and any subsequent amendments, available from <http://www.nzfoa.org.nz>

NZ Transport Agency (Wellington, November 2012), *Transit Code of Practice* refers to the *Code of Practice for Temporary Traffic Management*, and any subsequent amendments. Available from NZ Transport Agency at <http://www.nzta.govt.nz/resources/>, or NZ Transport Agency, PO Box 5084, Wellington 6145

Safetree, *Best Practice Guides* refer to the *Best Practice Guidelines for Tree Felling*, *Best Practice Guidelines for Ground-based Logging*, *Best Practice Guidelines for Manual Log-making* and *Best Practice Guidelines for Loading* and any subsequent amendments. Available from <https://safetree.nz/resources/best-practice-guidelines/> Safetree, *Temporary Traffic Control (2015)*, and any subsequent amendments, available from https://safe_tree.nz/wp-content/uploads/2015/02/safetree_safetycard_temp_traffic_control.pdf.

5 Definitions

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

Harvest plan is a document usually supplied by the forest manager. The harvest plan will include detailed information on how the stand is intended to be harvested. It will include information on any environmental requirements for the stand.

Job prescription is a document usually supplied by the forest manager detailing the requirements for the job. It will include stand details, operational requirements, quality standards, health and safety and environmental requirements for the stand.

Operational plan is the plan developed by the contractor. It details the way the contractor will work the stand to meet their production and quality targets while complying with the requirements of the forest manager.

Stand is a commonly used term in forestry. It describes an area containing trees that are the same species and were planted at the same time for the purpose of harvesting.

Stand map is a map of a block of trees that are similar or the same in age and species.

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.

6 Assessment information

This unit standard must be assessed on-job.

All activities and performance criteria must meet the requirements of worksite procedures and accepted industry practice.

Outcomes and performance criteria

Outcome 1

Interpret the job prescription or harvest plan and determine the production target and resource requirements of the operation.

Performance criteria

- 1.1 Boundaries of the area to be felled are located in accordance with the job prescription or harvest plan.
- 1.2 The method and direction of extraction and the location of the landings are identified from the job prescription or harvest plan.
- 1.3 Natural features of the area are identified. Any relevant natural features missing from the stand map are marked.
- 1.4 Physical structures and cultural features of the area are identified. Any relevant physical structures and cultural features missing from the stand map are marked.
- 1.5 Operational constraints are identified from the job prescription or harvest plan.
- Range machine, environmental, manpower.
- 1.6 Hazardous areas are identified and recorded on the stand map.
- 1.7 Production target of the motor manual ground-based clear fell harvesting operation is determined.
- Range production target to be expressed as tonnes per day.
- 1.8 Resources required to meet average daily production are determined.
- Range machinery, equipment, manpower.

Outcome 2

Develop a felling plan for a ground-based motor manual clear fell harvesting operation.

Performance criteria

- 2.1 The felling plan is developed to meet the operational requirements in accordance with the Best Practice Guides and the Forest Practice Guides.
- Range may include but is not limited to – production target, boundaries, hazard management, felling pattern and/or direction, settings, timing of felling, communication, environmental management.

Outcome 3

Develop an extraction plan for a ground-based motor manual clear fell harvesting operation.

Performance criteria

3.1 Requirements for the log extraction operation are determined.

Range may include but is not limited to – drag size, haul distance, machine type, terrain conditions, weather conditions, forest owner requirements, environmental constraints.

3.2 An extraction plan is developed to meet operational requirements in accordance with the Best Practice Guides and the Forest Practice Guides.

Range may include but is not limited to – short and long haul regulation, method for monitoring ground conditions, hazard management, environmental management, optimal machine utilisation, interface with felling, interface with processing, machine maintenance schedule, communication.

Outcome 4

Develop a processing plan for a ground-based motor manual clear fell harvesting operation.

Performance criteria

4.1 A processing plan is developed to meet operational requirements in accordance with the Best Practice Guides.

Range may include but is not limited to – manpower, machinery, location of processing area, location of surge stacks, location of log stockpiles, loadout requirements.

Outcome 5

Develop and establish a temporary traffic control plan for a ground-based motor manual clear fell harvesting operation.

Performance criteria

5.1 The temporary traffic control plan required for the operation is developed in accordance with the Temporary Traffic Control guidelines and/or the Transit Code of Practice.

5.2 The temporary traffic control plan is established in accordance with the Temporary Traffic Control guidelines and/or the Transit Code of Practice.

Outcome 6

Manage a ground-based motor manual clear fell harvesting operation.

Performance criteria

- 6.1 The operational plan including safety, environmental production and quality requirements is communicated to crew in a pre-start meeting.
- 6.2 The work of the tree fallers and extraction machine operators is managed to meet the operational plan in accordance with the Best Practice Guides and the Forest Practice Guides.
- Range may include but is not limited to – daily production target, quality, machine utilisation, environmental constraints, communication.
- 6.3 Trees which pose a specific hazard to people using roads, skids or tracks are felled before extraction operations begin.
- Range may include but is not limited to – damaged trees, dead trees, trees leaning toward skid or extraction tracks, trees blocking extraction tracks, trees on the prevailing wind side, trees disturbed in skid or track formation.

Outcome 7

Perform quality control on a ground-based motor manual clear fell harvesting operation.

Performance criteria

- 7.1 Felling quality is assessed against job prescription requirements and the operational plan.
- Range may include – damage to standing crop, breakage of felled trees, stump height, butt log damage.
- 7.2 Extraction quality and efficiency is monitored against job prescription requirements and operational plan.
- Range may include – stems per drag, drags per hour, condition of extraction trails, salvage requirements, landing congestion.
- 7.3 Processing quality control is monitored against the cutting instruction and operational plan.
- Range may include – log making quality, landing efficiency.
- 7.4 Quality control results are recorded and communicated to the crew and other interested parties.
- Range other interested parties may include but are not limited to – supervisor, contractor, forest owner.

7.5 Health and safety and quality issues identified during quality control checks are remedied in accordance with the job prescription and the company health and safety plan.

Range may include but is not limited to – training, auditing, incentives, penalties;
evidence of at least two issues remedied.

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| 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 2011 |
| Review | 2 | 18 February 2011 | 31 December 2017 |
| Review | 3 | 10 December 2015 | N/A |
| Review | 4 | 23 July 2020 | N/A |
| Rollover | 5 | 26 April 2024 | N/A |

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| Accreditation and Moderation Action Plan (AMAP) 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.