

# **Managing a Safe and Healthy Small Forest Harvest**



**OCTOBER 2016**



**These guidelines provide owners of small forests with practical advice on managing a harvest safely and healthily.**

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**ACKNOWLEDGEMENTS**

WorkSafe New Zealand would like to acknowledge and thank the stakeholders who have contributed to the development of this guidance.

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# **MANAGING A SAFE AND HEALTHY SMALL FOREST HARVEST KEY POINTS:**

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**Plan your harvest well before you start it.**

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**Engage competent professionals.**

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**Work with other PCBUs to manage the risks.**

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**Monitor health and safety arrangements and improve them where possible.**

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## INTRODUCTION

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### IN THIS SECTION:

- 1.1 Purpose of this guide
- 1.2 Who is this guide for?
- 1.3 Why is the forest owner important?
- 1.4 HSWA key concepts
- 1.5 Duty holder roles

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**This guideline will help owners of small forests to understand their health and safety duties when planning and undertaking harvesting.**

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### **1.1 PURPOSE OF THIS GUIDE**

This document will help owners of small forest plan a safe and healthy forest harvest. It provides practical information on managing risks common to forest harvesting activities. It explains how to work with other duty holders to ensure everyone meets their health and safety duties under the Health and Safety at Work Act 2015 (HSWA).

### **1.2 WHO IS THIS GUIDE FOR?**

**Owners of small forests and farmers with woodlots/shelterbelts** are the primary audience for this document.

Other people who will find this document useful are:

- > landowners
- > tree owners or absent owners
- > woodlot managers
- > forest contractors and workers
- > log buyers
- > portable millers
- > haulage contractors.

### **1.3 WHY IS THE FOREST OWNER IMPORTANT?**

Workers in forest operations are in a high hazard environment that if not managed correctly can result in deaths, serious injury, or ill health. Improving health and safety performance in forestry requires all those involved to do their bit.

Forest owners can influence the health and safety performance of other businesses working on the harvest. They do this by:

- > consulting, cooperating and coordinating with other businesses to manage risks
- > only engaging contractors with an effective health and safety system
- > considering safety and health as well as cost when selecting a contractor
- > working with contractors to allow enough time to complete the work without fatiguing their workers.

**1.4 HSWA KEY CONCEPTS**

| TERM/CONCEPT   | EXPLANATION   |
|--|---|
| <p><b>PCBU – Person Conducting a business or undertaking</b><br/><i>Section 17</i></p> | <p>A PCBU is a ‘person conducting a business or undertaking’. A PCBU may be an individual person or an organisation (for example a corporate entity such as a company).</p> <p>Small forest owners and those who operate farms are usually PCBUs with duties under HSWA.</p> <p>The definition of PCBU does not include a person employed or engaged solely as a worker, officers of the PCBU, volunteer associations (with no employees), or home occupiers that employ or engage a person to do residential work.</p>   |
| <p><b>Due Diligence</b><br/><i>Section 44</i></p>                                      | <p>The due diligence duty requires directors and other officers of a PCBU that has a duty or obligation under HSWA to exercise due diligence to ensure that the PCBU complies with that duty or obligation. Due diligence includes taking reasonable steps to:</p> <ul style="list-style-type: none"> <li>&gt; know about work health and safety matters and keep that knowledge up-to-date</li> <li>&gt; gain an understanding of the work of the PCBU and the hazards and risks generally associated with that work</li> <li>&gt; ensure the PCBU has resources and processes to eliminate or minimise those risks and uses them</li> <li>&gt; ensure the PCBU has processes for receiving information about incidents, hazards and risks, and for responding to that information in a timely way</li> <li>&gt; ensure the PCBU has processes for complying with any duty, and that these are implemented</li> <li>&gt; verify that these resources and processes are in place and being used.</li> </ul> <p>Officers must exercise the care, diligence and skill a reasonable officer would exercise in the same circumstances, taking into account matters including the nature of the business or undertaking, and officer’s position and nature of their responsibilities.</p> <p>For more information on the due diligence duty and good governance see:</p> <ul style="list-style-type: none"> <li>&gt; <a href="#">Health and Safety Guide: Good governance for directors</a></li> <li>&gt; <a href="#">Health and Safety Leadership: A guide for small to medium business owners and company directors</a></li> </ul> |
| <p><b>Primary duty of care</b><br/><i>Section 36</i></p>                               | <p>A PCBU must ensure, so far as is reasonably practicable, the health and safety of workers while at work (this includes workers who work for the PCBU and other workers who are influenced or directed by the PCBU), and that other persons are not put at risk by its work. This is called the ‘primary duty of care’.</p>   |
| <p><b>Officer</b><br/><i>Section 18</i></p>  | <p>An officer is a person who has the ability to significantly influence the management of a PCBU. This includes, for example, chief executives, company directors (if the PCBU is a company) and partners/general partners (if the PCBU is a partnership/limited partnership).</p> <p>Officers of a PCBU must exercise due diligence to ensure the PCBU meets its health and safety obligations.</p>   |
| <p><b>Worker</b><br/><i>Section 19</i></p>   | <p>A worker is an individual who carries out work in any capacity for a PCBU. This includes an employee, a contractor or sub-contractor, an apprentice or trainee, a person on work experience or a work trial, a volunteer worker, and other types of workers listed in section 19 of HSWA.</p>  |

| TERM/CONCEPT                          | EXPLANATION   |
|---------------------------------------|---|
| <b>Workplace</b><br><i>Section 20</i> | <p>A workplace is a place where work is being carried out or is customarily carried out for a business or undertaking. It includes any place where a worker goes or is likely to be while at work. This means that certain locations will only be classed as workplaces while work is being carried out at those locations.</p> <p>Most duties under HSWA relate to the conduct of work, rather than a workplace. However, some duties are linked to workplaces.</p>  |
| <b>Reasonably practicable</b>         | <p>Certain health and safety duties require PCBUs to ensure health and safety 'so far as is reasonably practicable'.</p> <p>When used in relation to these duties, something is reasonably practicable if it is reasonably able to be done to ensure health and safety, having weighed up and considered all relevant matters, including:</p> <ul style="list-style-type: none"> <li>&gt; how likely the hazards and risks are to occur</li> <li>&gt; how severe the harm that might result from the hazard or risk could be</li> <li>&gt; what a person knows or ought to reasonably know about the hazard or risk, and the ways of eliminating or minimising it</li> <li>&gt; what measures exist to eliminate or minimise the risk (control measures)</li> <li>&gt; how available and suitable the control measure(s) are.</li> </ul> <p>Cost can only be a factor for not implementing a control when it is grossly disproportionate.</p> |

**Table 1:** HSWA key concepts

For more information on HSWA and the duties that affect your business see the special guide [\*Introduction to the Health and Safety at Work Act\*](#)

## 1.5 DUTY HOLDER ROLES

| ROLE  | TASKS  | DUTIES UNDER HSWA   |
|---|--|---|
| <b>Owner of small forest/woodlot</b>  | <ul style="list-style-type: none"> <li>&gt; Decide how to manage the harvest.</li> <li>&gt; Select a competent forest manager (or perform the duties of the forest manager if managing the harvest themselves).</li> <li>&gt; Provide relevant information to the forest manager.</li> <li>&gt; Seek assurance from forest manager that health and safety standards are being maintained.</li> </ul> | <p>The forest owner is a PCBU, and has duties including:</p> <ul style="list-style-type: none"> <li>&gt; primary duty of care</li> <li>&gt; duty to manage risk</li> <li>&gt; duty to consult, cooperate and coordinate with other PCBUs</li> <li>&gt; duty of a PCBU who manages or controls a workplace (where applicable)</li> <li>&gt; worker engagement, participation and representation duties.</li> </ul> |
| <b>Forest Manager</b><br>(can be an agent or a forestry contractor with forest management capabilities) | <ul style="list-style-type: none"> <li>&gt; Plan the forest harvest.</li> <li>&gt; Select competent contractors.</li> <li>&gt; Monitor the health and safety performance of contractors.</li> <li>&gt; Act as main contact for PCBUs to consult, cooperate and coordinate.</li> <li>&gt; Communicate risks and controls to all PCBUs.</li> </ul>   | <p>The forest manager's duties as a PCBU include:</p> <ul style="list-style-type: none"> <li>&gt; primary duty of care</li> <li>&gt; duty to manage risk</li> <li>&gt; duty to consult, cooperate and coordinate with other PCBUs.</li> </ul>   |

| ROLE                          | TASKS   | DUTIES UNDER HSWA  |
|-------------------------------|---|--|
| <b>Forestry contractor</b>    | <ul style="list-style-type: none"> <li>&gt; Work with forestry manager to finalise the harvest plan.</li> <li>&gt; Carry out the harvesting work.</li> <li>&gt; Select competent subcontractors.</li> <li>&gt; Manage forestry workers and subcontractors and ensure they work safely.</li> <li>&gt; Follow the harvest plan and comply with the health and safety management system.</li> <li>&gt; Communicate risks and controls to forest manager.</li> <li>&gt; Comply with agreed reporting requirements.</li> </ul> | <p>The forest contractor's duties as a PCBU include:</p> <ul style="list-style-type: none"> <li>&gt; primary duty of care</li> <li>&gt; duty to manage risk</li> <li>&gt; duty to consult, cooperate and coordinate with other PCBUs</li> <li>&gt; duty of a PCBU who manages or controls a workplace (where applicable)</li> <li>&gt; worker engagement, participation and representation duties.</li> </ul>                                |
| <b>Forestry/farm workers</b>  | <ul style="list-style-type: none"> <li>&gt; Carry out the forestry/farm work.</li> <li>&gt; Follow the PCBU's safe work procedures and reasonable instructions.</li> <li>&gt; Raise health and safety concerns with the PCBU.</li> </ul>  | <p>Workers have duties under HSWA. They must:</p> <ul style="list-style-type: none"> <li>&gt; take reasonable care of their own health and safety</li> <li>&gt; take care not to adversely affect the health and safety of others</li> <li>&gt; cooperate with reasonable work health and safety policies and procedures</li> <li>&gt; comply with reasonable instructions from the PCBU, so the PCBU can meet their HSWA duties.</li> </ul> |
| <b>Visitors and customers</b> |   | <p>Visitors have duties under HSWA. They must:</p> <ul style="list-style-type: none"> <li>&gt; take reasonable care for their own health and safety</li> <li>&gt; take care not to adversely affect the health and safety of others</li> <li>&gt; follow any reasonable instruction from the PCBU.</li> </ul>  |

Table 2: Duty holder roles

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## **STEPS TO PLANNING A HARVEST**

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### **IN THIS SECTION:**

- 2.1 Decide how to manage the harvest**
- 2.2 Conduct a pre-harvest inventory**
- 2.3 Identify physical constraints and hazards in the forest**
- 2.4 Identify seasonal constraints and hazards**
- 2.5 Apply for resource consents**
- 2.6 Liaise with neighbours**
- 2.7 Check roads and bridges**
- 2.8 Gather information for harvest plan**

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Depending on the size and location of the forest, organising a forest harvest can take several months or years. It is a good idea to start planning well before you want to harvest. This section lists the steps involved in planning a harvest.

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### **2.1** DECIDE HOW TO MANAGE THE HARVEST

You need to decide who will manage the pre-harvest and harvesting work. You can manage the work yourself, engage an agent (forest manager) or sell the standing timber to a log buyer.

#### **ENGAGE A FOREST MANAGER**

Agents you could engage include:

- > forest managers
- > forestry consultants
- > forest contractors (with small forest management capabilities).

**Note:** for simplicity this guide will use the term ‘forest manager’ to refer to the above agents.

A ‘forest manager’ plans and coordinates the harvesting activities. You retain some influence and control in decision making and as a PCBU will have responsibilities under HSWA. If you choose to engage a forestry manager it is important to engage a reputable company with robust health and safety systems.

See *Part Three – Engaging Safe Professionals* for more advice on engaging forest managers, log buyers and forestry contractors.

#### **MANAGE THE HARVEST YOURSELF**

If you chose to manage the harvest yourself, you should make sure you have a good understanding of health and safety management processes.

You will be responsible for engaging competent contractors, liaising with all of the contractors to make sure risks are managed appropriately, monitoring contractor performance, applying for relevant consents and planning the harvest.

#### **SELL STANDING TIMBER TO A LOG BUYER**

If you sell the standing crop to a log buyer they will plan and coordinate the harvesting activities. As a landowner, you are still a PCBU and will have health and safety duties.

### **2.2** CONDUCT A PRE-HARVEST INVENTORY

The pre-harvest inventory assesses your forestry assets. The inventory contains the following information:

- > an estimate of the total wood volume
- > tree size
- > possible log types
- > areas of windblown or diseased trees.

This information is used to develop a harvest plan and for marketing.

### **2.3** IDENTIFY PHYSICAL CONSTRAINTS AND HAZARDS IN THE FOREST

You can use topographic maps and aerial photographs to identify the constraints and hazards associated with your forest. You should include this information in the harvest plan.

Examples of constraints and hazards:

- > access points, tracks, roads and bridges
- > overhead power lines
- > underground utilities
- > areas of steep terrain, cliffs or quarries
- > floodplains
- > boundaries onto neighbouring properties
- > structures such as fences and buildings
- > rivers and creeks (consider downstream uses such as water supply)
- > areas with poor ground conditions (erosion-prone, unstable or wet soil)
- > areas for public access such as roads or walking and mountain biking tracks.

You or your forest manager will work with any contractors engaged to manage these constraints to ensure the work is done safely. You each have a duty to manage any health and safety risks 'so far as is reasonably practicable' to the extent you reasonably have the ability to influence and control them.

## 2.4 IDENTIFY SEASONAL CONSTRAINTS AND HAZARDS

Commercial and financial considerations will likely influence the timing of your harvest, but you should also consider safety when choosing a time to harvest. Seasonal constraints and hazards can impact safety.

### BAD WEATHER WHICH CAN CAUSE DELAYS

- > It's not safe to do forestry work in high winds.
- > Heavy rainfall can make conditions underfoot slippery and unsafe.
- > Heavy rain can also cause washouts and slips on tracks and roads making them impassable. Repair and maintenance following water damage can be costly.
- > Other bad weather conditions to consider are snow and black ice in the winter and lightning and drought conditions (fire risk) in the summer.

## FARMING ACTIVITIES SUCH AS LAMBING, HARVESTING AND BALING

- > Overseeing a harvest at busy times in the farming calendar may not be practical.
- > Farm workers should not work near the forest while harvesting is underway.

## VISITORS AND RECREATIONAL ACTIVITIES

- > Some forest owners allow visitors to use their land for recreational activities such as tramping, mountain biking and hunting. You may choose to plan the harvest outside peak use times.

## 2.5 APPLY FOR RESOURCE CONSENTS

Many forestry activities require resource consent from local and regional councils.

For more information see the publication: [An everyday guide to the RMA: Applying for a resource consent](#) or your local council for more information.

## 2.6 LIAISE WITH NEIGHBOURS

It is important to let neighbouring landowners know that you are planning to harvest your forest. If the work on your land creates health and safety risks for your neighbours and their workers you must work with them to manage the risks.

It is advisable to contact neighbours near the road to advise them that logging trucks and equipment will be using the road.

## 2.7 CHECK ROADS AND BRIDGES

Roads and bridges need to support fully loaded log trucks and trucks transporting mobile plant. Construction of harvest access roads and bridges must meet the applicable engineering standards. A professional roading engineer will be able to advise you on the suitability of roads and tracks.

For more information see: *Approved Code of Practice for Safety and Health in Forestry Operations (ACOP) – Part 8*

## **2.8** GATHER INFORMATION FOR HARVEST PLAN

The harvest plan provides contractors with the information they need to assess the size of the job and negotiate a contract price. You can engage a forest management company, a contractor or other experts to help you with this step.

Include information from the pre-harvest inventory and constraints assessments in the harvest plan. The harvest plan should include recent maps of the site showing:

- > location of the site-specific constraints and hazards
- > access points and routes
- > proposed road system
- > location of skid site
- > wood flows to landing
- > maximum and average haul distances (for log extraction)
- > overhead power lines
- > underground services
- > areas of steep terrain, cliffs or quarries
- > areas with windthrow
- > boundaries onto neighbouring properties
- > rivers and creeks – water management needs
- > wāhi tapu and other areas of historical or cultural significance
- > areas with poor ground conditions (erosion-prone, unstable or wet soil)
- > tracks used by farm traffic
- > areas of public access such as roads or walking and mountain biking tracks.

The harvest plan should also provide guidance on:

- > the equipment contractors need to complete the work
- > the tree extraction method:
  - Ground based extraction uses bulldozers, wheeled skidders, tracked skidders, excavators, skidders and forwarders to gather the drag or load.
  - Cable hauler extraction is used on steep slopes. The hauler remains in a fixed position and uses a raised steel rope to transport logs or stems.
- > quality control expectations
- > reporting expectations
- > electrical hazard management.

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## ENGAGING SAFE PROFESSIONALS

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### IN THIS SECTION:

- 3.1 Why it is important to engage competent professionals
- 3.2 Engaging a forest manager
- 3.3 Selling standing timber
- 3.4 Engaging other contractors
- 3.5 Contracts

Forest managers and other contractors are PCBUs that you are likely to share health and safety duties with. This section explains what to consider when engaging other PCBUs to help you with the harvest.

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### **3.1** WHY IT IS IMPORTANT TO ENGAGE COMPETENT PROFESSIONALS

It is important to engage competent PCBUs because you will likely have overlapping HSWA duties. HSWA does not allow PCBUs to contract out of their duties or transfer them to another PCBU. This means that you are responsible for managing any risks within your influence and control even if another PCBU has a duty in relation to the same matter.

When you engage another PCBU you need to be sure they have good health and safety systems in place so you can work together to manage shared risks. If you engage a PCBU who has poor health and safety performance or refuses to work together to manage risks it will be harder for you to meet your health and safety duties.

### **3.2** ENGAGING A FOREST MANAGER

A good forest manager can provide expert advice on many aspects of health, safety and quality management, including:

- > pre-harvest assessment
- > road and track access needs
- > hiring a logging contractor (crew) with the right equipment

- > transport and logging trucks
- > assessment of logs and matching logs to suitable markets
- > safety considerations and complying with your HSWA duties
- > resource consents.

Engaging a forest manager is likely to be the best option for absentee forest owners and others who don't have experience of forest operations.

Engaging a forest manager can also be worthwhile for farmers. A good forest manager will help you engage the right people, with the right skills, equipment and safety experience for the job. Since forestry managers are familiar with forestry operations they can undertake a more thorough assessment of a contractor's health, safety, environment and quality systems.

A forest manager will act as a key contact for all the PCBUs and workers involved in the work. They can help ensure that all PCBUs are consulting, coordinating and cooperating to assist you and them in meeting your health and safety duties.

**Questions to ask your forest manager**

- > Are you experienced at managing this type of project? What are some examples of similar projects you have managed?
- > What are the main risks to both health and safety risks associated with forestry operations? How do you assess and manage these?
- > How do you ensure the contractors you engage are competent and safe?
- > How will you monitor health and safety, environmental and quality performance of contractors? How will you report on this?
- > How will you communicate risks and work with all the relevant people to effectively manage them?
- > How do you consult, coordinate and cooperate with other PCBUs?
- > Will you ensure that contractors have enough time and resource to complete the work safely and without their workers becoming fatigued?
- > Who will take responsibility in the event of an accident? Who will ensure the scene is preserved? Who will notify WorkSafe?

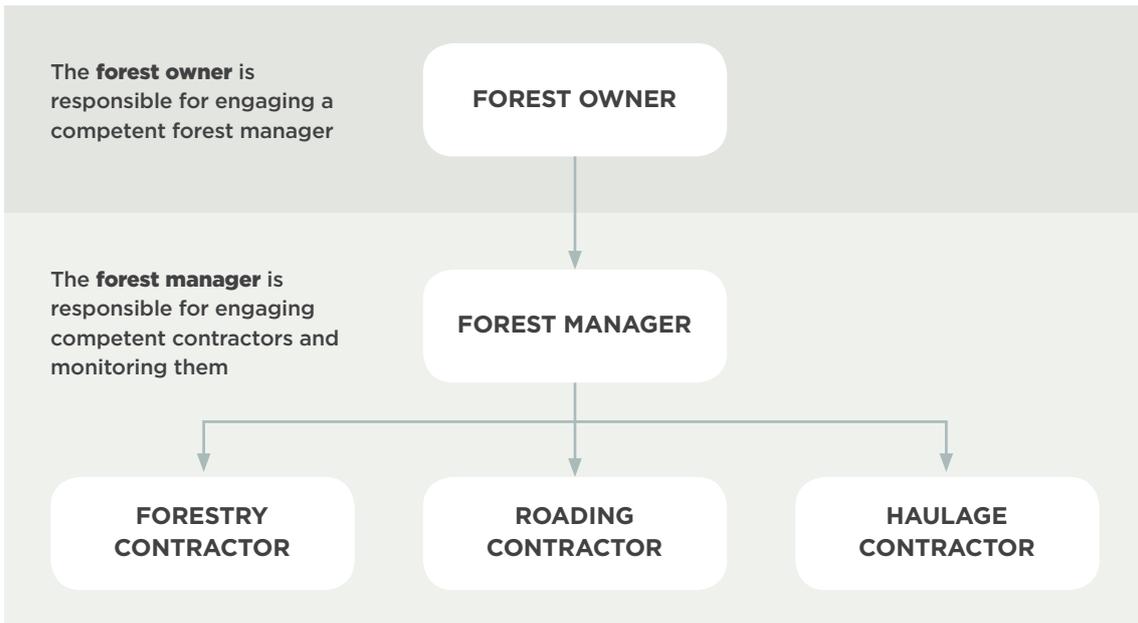


Figure 1: Contracting chain with a forest manager

### 3.3 SELLING STANDING TIMBER

If you decide to sell your standing timber the log buyer will arrange the forest harvesting activities agreed in the contract of sale. The cost of harvesting is factored into the sale price. If you sell your standing timber you will still have duties under HSWA. You cannot contract out of your duties.

Before you finalise the sale you should make sure you discuss health and safety expectations with the log buyer. You are likely to have overlapping duties with the contractors that they engage to do the work and will need to consult, cooperate and coordinate with them.

#### Questions to ask a log buyer

- > What health and safety provisions will be included in the contract?
- > How do you ensure the contractors you engage are competent and safe?
- > How will you monitor the health and safety performance of contractors? Will you or the contractor keep me informed of any non-conformances?
- > How will you or your contractor communicate risks and work with all the relevant people to effectively manage them?
- > How do you consult, coordinate and cooperate with other PCBUs? How will you ensure that contractors have enough time and resource to complete the work safely and without workers becoming fatigued?

### 3.4 ENGAGING OTHER CONTRACTORS

If you decide to manage the harvest yourself you will probably need to engage several different contractors (felling, haulage, road maintenance). When you engage any contractor you will have overlapping health and safety duties, so it's important to find competent contractors.

As a PCBU you also owe health and safety duties to workers who are contractors and subcontractors.

There are several ways of finding a contractor:

- > Put the contract out for tender by advertising online or forestry publications.
- > Use a contractor selected by your forest manager.
- > Use a local contractor recommended by contacts or friends.
- > Contact the Forestry Industry Contractors Association (FICA).

Whichever method you use you should check each contractor is competent and has systems in place to complete the work they are engaged to do safely and healthily. This doesn't mean that you have to become an expert in forestry health and safety. It does mean that you should discuss health and safety with each contractor before you hire them. You should check that they have an effective health and safety management system.

#### Talking to your contractor about health and safety

- > Are you aware of the Approved Code of Practice for Safety and Health in Forest Operations? Do your work practices meet the standard in this code?
- > Do you have a health and safety management system? Have you had it audited?
- > What equipment will you need to do the harvest? How do you ensure it is health and safe?
- > What mobile plant will you use? How do you ensure it's safe? What might be the impacts on my land from using the mobile plant?
- > How do you make sure your workers are competent? What sort of training and qualifications do they have?

- > Will you use subcontractors? How do you ensure they are competent?
- > What type of personal protective equipment do you supply your workers with?
- > Can you provide details of similar work you've done in the past?
- > Do you notify WorkSafe before you start harvesting?
- > How do you engage with your workers on health and safety matters?
- > Do you have public liability insurance? Does it cover the risks associated with this type of work? Can you provide evidence?
- > Have you been prosecuted or investigated by WorkSafe? How have you improved health and safety following this?
- > How do you prevent worker fatigue?
- > What activities do you undertake to protect your workers' health?
- > Do you have an alcohol and drug policy? How do you manage and enforce this?
- > How will you meet your duty to consult, coordinate and cooperate with other PCBUs?
- > How do you ensure your workers are working safely and meeting competency requirements?
- > Are you a member of any industry associations? Which ones?

If you have concerns about health and safety discuss these with the relevant contractor and ask for more information if you're not sure about something.

### HEALTH AND SAFETY PLAN

You should ask potential contractors to outline how they will identify, assess, and manage the risks and hazards identified in the harvest plan.

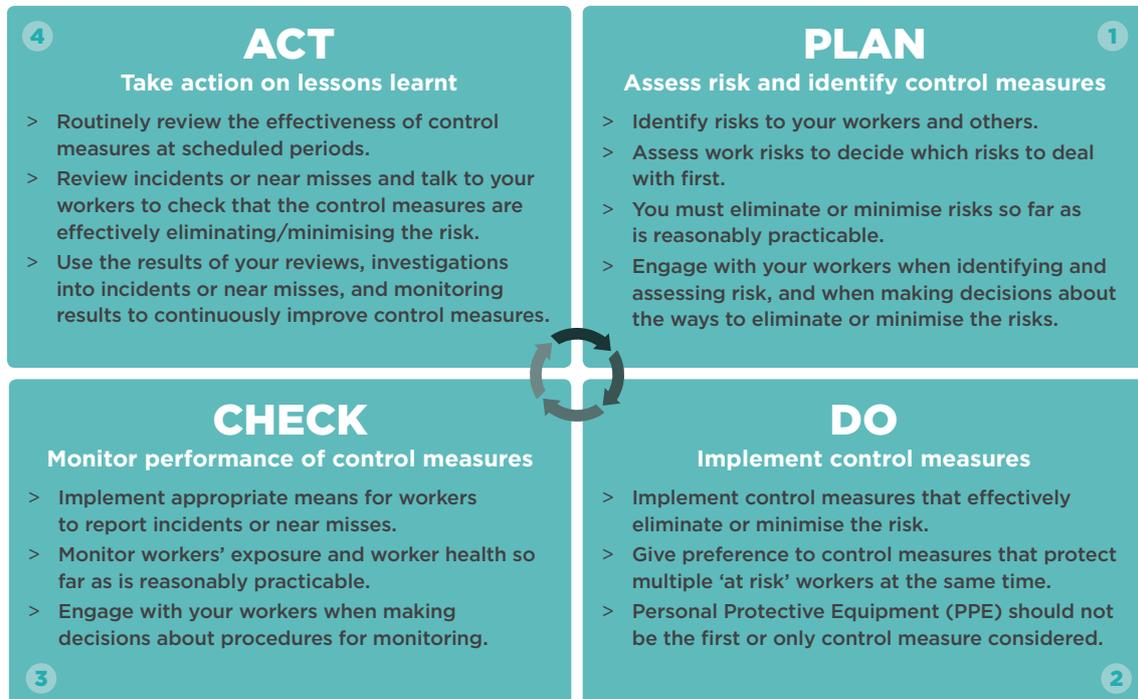


Figure 2: The PLAN-DO-CHECK-ACT approach

## REFERENCES

Ask for references from past customers to ensure any contractor has good hiring and work practices.

For more information see [\*ACOP - Rule 2.4\*](#)

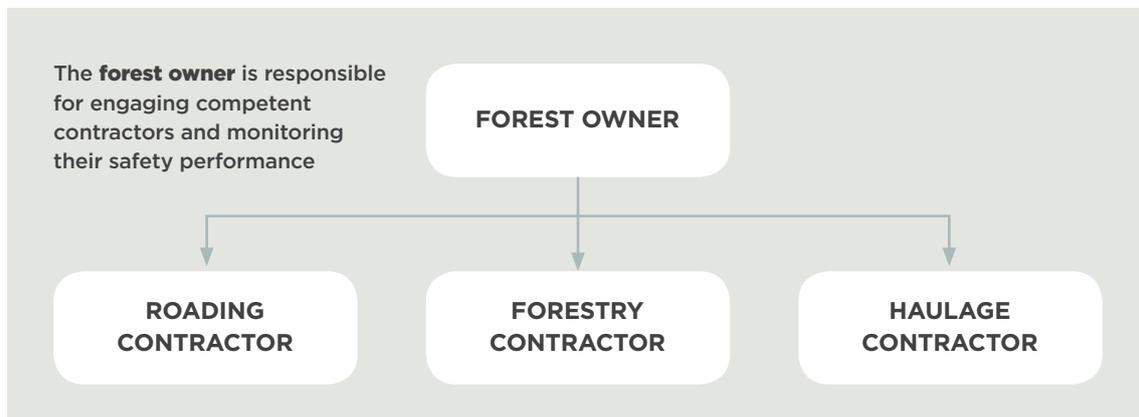


Figure 3: Contracting chain when forest owner manages the harvest

## 3.5 CONTRACTS

It's a good idea to have written contracts with your forest managers and other contractors. A well written contract provides clarity and protects the interests of both parties. Including health and safety expectations in the contract means it's clear from the outset how health and safety will be managed. It's advisable to include the harvest plan in the contract with the felling contractor.

Remember you cannot contract out of your health and safety duties.

# 04/

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## MANAGING RISKS

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### IN THIS SECTION:

- 4.1 What risks do I need to manage?
- 4.2 Work with other PCBUs to manage shared risks

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When PCBUs are working together on the same project or at the same location, each PCBU must do what they can, within their influence and control, to keep workers healthy and safe. This section explains how to consult, coordinate and cooperate with other PCBUs.

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#### 4.1 WHAT RISKS DO I NEED TO MANAGE?

As a PCBU you must ensure, so far as is reasonably practicable, the health and safety of workers who work for the PCBU (eg your employees, contractors, including their sub-contractors or workers) while they are at work in the business or undertaking. You must also ensure, so far as is reasonably practicable, that other people (eg visitors and members of the public) are not put at risk by the work. This is called the primary duty of care.

This is a broad duty; it includes but is not limited to, so far as is reasonably practicable:

- > providing and maintaining a work environment that is without risks to health and safety
- > providing and maintaining safe plant and structures
- > providing and maintaining safe systems of work
- > ensuring the safe use, handling and storage of plant, structures and substances
- > providing adequate facilities for the welfare at work of workers in carrying out work for the business or undertaking, including ensuring access to those facilities
- > providing any information, training, instruction, or supervision that is necessary to protect all persons from risks to their health and safety arising from work carried out as part of the conduct of the business or undertaking

- > monitoring the health of workers and the conditions at the workplace for the purpose of preventing injury or illness of workers arising from the conduct of the business or undertaking.

You must, so far as is reasonably practicable, maintain **worker accommodation** that you own or manage and provide because other accommodation is not reasonably available, so that workers are not exposed to health and safety risks arising from the accommodation.

**Managing risks means that you have to:**

- > eliminate the risk to health and safety so far as is reasonably practicable
- > if this is not possible, minimise the risk so far as is reasonably practicable
- > do what is within your influence and control to keep workers safe.

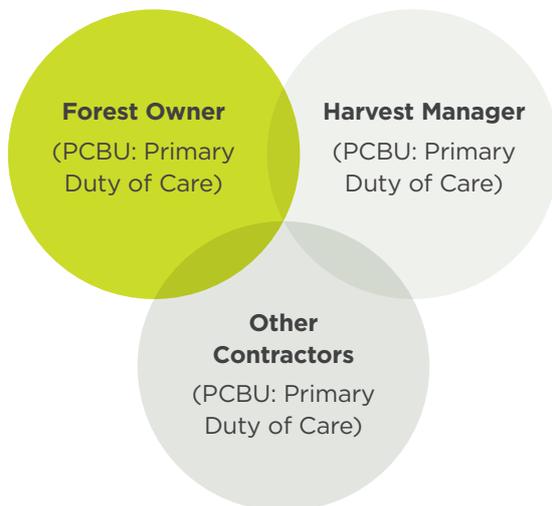
#### 4.2 WORK WITH OTHER PCBUs TO MANAGE SHARED RISKS

HSWA aims to improve health and safety at work by placing a clear duty on PCBUs to work together to manage shared risks and overlapping duties. This means you must work with other PCBUs involved in or affected by the harvest to manage risks collectively. You must do this by consulting, cooperating and coordinating activities with the other PCBUs.

Some PCBUs who you may need to work with to manage risks are:

- > forestry contractor

- > forestry manager
- > haulage contractor
- > portable millers
- > road maintenance, construction contractors, engineers
- > farm manager (if they are a contractor, not an employee)
- > other farm contractors such as fencing and shearing contractors
- > Transpower or relevant distribution lines company.



**Figure 4:** PCBUs have overlapping duties and must work together to fulfil them

**WHAT IS MEANT BY CONSULTATION, COOPERATION AND COORDINATION?**

Consultation requires exchanging information with other PCBUs so everyone understands what the risks are and then collectively comes up with a plan to manage them.

Information to share and discuss includes:

- > the harvest plan
- > the activities of each PCBU
- > the plant and equipment each will use
- > the risks the work will create

- > who has influence and control over the work and workplace
- > which workers are involved in certain activities
- > how will each PCBU consult with their workers
- > which PCBU or PCBUs will be responsible for managing each risk.

Coordination is about putting the arrangements and agreements into place to manage health and safety, so that risks are managed by the PCBUs who are best placed to do so. Each PCBU should make sure that they manage risks that they have the ability to influence and control and don't do anything that compromises health and safety.

The PCBUs should:

- > agree when and how risks controls are implemented
- > ensure the risk controls work together and don't introduce new risks
- > be open to communication with other PCBUs throughout the project.

Cooperation means discussing health and safety matters and complying with reasonable requests from other PCBUs so they can meet their duties.

**THE BENEFITS OF CONSULTING, COOPERATING AND COORDINATING**

Working with other PCBUs to meet overlapping duties has many benefits:

- > Each PCBU understands how the risks are being managed; this avoids a situation where a risk is not managed because one PCBU assumes it is being managed by another.
- > The PCBUs can decide who best placed to manage the risk.
- > Duplication of effort is avoided.

**WHAT IF ONE OF THE DUTY HOLDERS REFUSES TO CONSULT, COOPERATE OR COORDINATE?**

To avoid disagreements, make health and safety expectations clear when engaging contractors. If there is a disagreement between you and another duty holder about the extent of consultation, co-operation and co-ordination needed, you don't need to accept poor health and safety performance. Make sure that they are aware of the duty and outline what your expectations are. Written agreements can be helpful to ensure everyone knows what is required. Including health and safety arrangements in contracts may give you a contractual right to enforce them.

# 05/

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## **COMPLETING THE HARVEST PLAN AND RISK MANAGEMENT**

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### **IN THIS SECTION:**

- 5.1 Health risks**
- 5.2 Working around live power lines**
- 5.3 Emergency management**
- 5.4 Management of site access**
- 5.5 Risks to farm workers**
- 5.6 Traffic management and site access**
- 5.7 Visitors/members of the public**
- 5.8 Bad weather**
- 5.9 Notifying WorkSafe**
- 5.10 Documents to have on-site**
- 5.11 Reports and updates**

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This section discusses some of the risks that will need to be managed and that you should address when you consult, cooperate and coordinate with other PCBUs about the harvest.

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### 5.1 HEALTH RISKS

PCBUs have a duty to ensure, so far as is reasonably practicable, the health of their workers and other workers whose activities they influence or direct.

PCBUs must eliminate risks so far as is reasonably practicable, and where this is not possible they must minimise them.

Forest owners and managers need to be aware of health risks that could be present during a forest harvest, and ensure that any downstream PCBUs identify and manage those health risks as part of their risk assessment process.

#### IDENTIFYING HEALTH RISKS

Work-related health risks in forest harvesting include:

- > hearing damage from noise
- > vibration damage from operating chainsaws and other machinery
- > heat stroke, sun stroke, sun burn or dehydration
- > exposure to chemicals
- > fatigue.

#### MANAGING HEALTH RISKS

Upstream PCBUs like forest owners or managers should ensure that any contractors they engage include health risks in their health and safety management systems.

Downstream PCBUs should have strong processes to identify, assess, and manage existing and new health risks. They should try

to eliminate a risk before considering controls like PPE to minimise it.

#### MONITORING HEALTH RISKS

PCBUs have a duty to monitor the health of workers and the conditions at the workplace to ensure that workers are not made ill by their work. Health and exposure monitoring can measure if workers are potentially being exposed to health hazards, and whether they are being made ill as a result. Talk to an occupational health practitioner when determining what type of monitoring is required.

Results from health and exposure monitoring should be used to improve controls.

For information on forestry health risks and their management, see the ACOP see Safetree's [HSWA and work-related health](#). More work-related health guidance can be found here: [www.worksafe.govt.nz](http://www.worksafe.govt.nz)

### 5.2 WORKING AROUND LIVE POWER LINES

If there are trees within two tree lengths of power lines you (or your forest manager), the lines owner and the contractor must consult and agree on the felling plan. Notify the lines owner with plenty of time to allow the necessary safety measures to be taken. For instance, specialist equipment may be required to direct trees away from a line and/or an outage of the line may also be required. This requires coordination with other parties and may not be able to be done at short notice.

Felling trees close to power lines is dangerous work and only competent people who have received specialised training should undertake this work.

**Note:** It is best practice to plant away from power lines so that a tree being felled, or one that falls during an adverse weather event, won't strike a power line.

For more information see: [\*ACOP - Rule 2.14\*](#)

### 5.3 EMERGENCY MANAGEMENT

All workers need to know what to do in an emergency. Your contractors should have their own emergency plans and suitable first aid kits. You should coordinate your emergency plans with any contractors and ensure that they have the right information.

#### IMPORTANT INFORMATION TO DISCUSS

##### The location of the forest:

It's important that all workers can provide the emergency services with clear details about the location of the forest/woodlot/shelter belt. Ensure that workers know the:

- > global positioning system (GPS) coordinates of the forest
- > GPS coordinates of the nearest helicopter landing site
- > location of access points from the main road
- > details that could help the emergency services find the forest such as the names of roads, significant landmarks and buildings.

##### Communication plan for an emergency:

It's important for everyone to know how to contact the emergency services. If there is no cellular phone coverage all workers should know who has access to a satellite phone or other emergency communications equipment.

### 5.4 MANAGEMENT OF SITE ACCESS

Felling, hauling and loading logs is dangerous work, therefore it's important to carefully manage site access during the harvest. You and any contractors need to ensure so far as is reasonably practicable that unauthorised people do not enter the forest as they could be hurt. Where possible limit access to the forest to the forestry crew and haulage truck drivers.

### 5.5 RISKS TO FARM WORKERS

If your forest is a woodlot on a working farm you need to ensure, so far as is reasonably practicable, that your farm workers are not put at risk by the harvesting activities. You also have a duty, so far as is reasonably practicable, to ensure that forestry workers are not put at risk by farming operations.

You need to communicate the risks associated with the harvest to your workers and put controls in place to manage the risks.

Examples of controls include:

- > arranging work so workers don't need to go near the area
- > moving stock from paddocks near the forest/woodlot or planning your work so stock movements don't coincide with logging truck movements
- > using radios (if you have them) to communicate with other traffic
- > putting procedures in place to manage how farm vehicles and forestry vehicles/haulage will share farm roads and tracks.

### 5.6 TRAFFIC MANAGEMENT AND SITE ACCESS

You will have identified roads as a constraint on the harvest plan. During harvesting operations there may be increased traffic such as haulage trucks, workers vehicles/transport and other

contractors using roads and tracks on your property. There also may be felling taking place next to roads and tracks. You and any contractors need to put a plan in place to ensure the safety of road users is not put at risk.

### PRIVATE ROADS

The felling contractor may organise traffic management for you. Discuss and agree traffic management with the forest manager or contractor to ensure you understand the processes that are in place. Communicate this to workers and visitors.

Some examples of how traffic can be managed include:

- > using signs to warn drivers that they are approaching logging operations
- > using signs to tell the driver to stop and contact a supervisor for authorisation to continue.

### UNMANNED ROAD CLOSURES

Banners can be used at unmanned road closures to prevent drivers from missing or driving around signs. Note: If a road is an emergency access route the banners must be easy to take down.

For more information see the [Best Practice Guidelines for Temporary Traffic Control](#)

### PUBLIC ROADS

Traffic management for public roads should also be discussed with your forest manager/contractor. If trees are being felled within two tree lengths of a public road traffic management including signs must be in place. These must comply with the [New Zealand Transport Code for Temporary Traffic Control](#) or the requirements of the appropriate road control authority (RCA). The contractor will need to apply for formal authorisation from the RCA before work starts.

## 5.7 VISITORS/MEMBERS OF THE PUBLIC

If you allow members of the public on to your land, for example to hunt, fish and mountain bike, or if there is a right of way across your land, you need to ensure the harvesting doesn't put people at risk. Some controls you could put in place include:

- > putting up signs to warn people that felling is underway and access is prohibited
- > notifying the local hunting, tramping and fishing clubs that felling is underway and the access is prohibited.

## 5.8 BAD WEATHER

Bad weather such as heavy rain and high winds make felling unsafe. In the case of bad weather you and any contractors may need to agree a new time frame for completion of the work. Requiring workers to work long shifts because of delays can cause them to become fatigued. Fatigue can be a contributing factor to health and safety incidents.

## 5.9 NOTIFYING WORKSAFE

### NOTIFIABLE WORK

Felling trees for commercial gain is notifiable work. You must agree who (you, forest manager, or contractor) will notify WorkSafe at least 24 hours before felling begins.

### NOTIFIABLE EVENTS

WorkSafe must also be notified as soon as possible after a notifiable injury, illness, incident or the death of a person. The PCBU that was conducting the work that resulted in the incident must notify WorkSafe. Where more than one business is involved they should agree who will notify WorkSafe.

The PCBU who manages or controls the workplace where the notifiable event occurred must preserve the site until advised otherwise by a WorkSafe inspector.

Notification allows WorkSafe to investigate or follow up on significant events immediately.

Notify WorkSafe:

- > by telephone 0800 030 040
- > email [heathsafety.notification@worksafe.govt.nz](mailto:heathsafety.notification@worksafe.govt.nz)

For more information on what is a notifiable event go to [www.worksafe.govt.nz](http://www.worksafe.govt.nz)

### **5.10** DOCUMENTS TO HAVE ON-SITE

It is the responsibility of the contractor to ensure they have certain documents on-site.

These include:

- > pre-harvest agreement
- > a map showing high-risk areas and known infrastructure hazards
- > information on mean tree height
- > maximum log storage
- > chain shot management (where applicable)
- > the traffic management plan
- > tree felling plan.

You may want to ask the contractor or forest manager for a copy of this documentation for your own risk management plans.

### **5.11** REPORTS AND UPDATES

Agree with your forest manager or contractor what updates and reports they will provide you with, and the frequency of reporting.

Ensure that you have arrangements to communicate and collaboratively manage new risks and hazards as they arise.

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## **MONITORING HEALTH AND SAFETY**

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### **IN THIS SECTION:**

- 6.1 Landowner without a forest manager**
- 6.2 Landowner with a forest manager**
- 6.3 Review and feedback**

Monitoring health and safety arrangements is an important step in risk management. You should check that your contractors and your own workers are following the agreed arrangements.

### 6.1 LANDOWNER WITHOUT A FOREST MANAGER

#### MONITORING CONTRACTOR PERFORMANCE

It is important to monitor each contractor's performance to ensure that they are completing the work as agreed in the harvest plan. Monitoring a contractor does not mean that you have to be at the forest every day checking on what the contractor is doing. What is reasonable will depend on the circumstances, such as the duration of the work and your access to the site. You may monitor performance by visiting the site, making a phone call to get an update, or receiving an email report.

#### Things to check and discuss with the contractor

- > Is there a health and safety management system in place? How are you ensuring everyone is following the requirements?
- > Are there any new risks we need to discuss?
- > Have visitors to the site been inducted?
- > How are high risk activities being managed?
- > How are you engaging with your workers on health and safety?
- > Have there been any health and safety incidents? What preventative measures have been put in place? Did you notify WorkSafe?
- > How will worker health be managed to prevent harm from work-related health hazards?

- > How will exposure to work-related health hazards be monitored
- > Is our agreed traffic management plan working? Do we need to make any changes?
- > Is our plan to control site access working? Do we need to make any changes?
- > How are you monitoring sub-contractors?
- > How are you preventing fatigue?

If a contractor is not following the agreed health and safety arrangements you should raise this with them straight away and come to an agreement about how to improve performance.

#### VISITING THE FOREST DURING THE HARVEST

Like any other visitor to the site you should advise any contractors involved when you are coming and follow the site visitor procedure.

When you arrive at the site the relevant contractor will induct you by advising you of the site hazards such as:

- > overhead risks
- > noise
- > slip, trips, falls
- > emergency procedures
- > machinery risks
- > other site-specific risks.

The contractor should make sure that someone accompanies you around the site and that you have the right personal protective equipment (PPE).

**PPE for a site visit includes:**

- > high visibility clothing
- > lace up safety boots
- > hard hat
- > hearing protection.

**6.2 LANDOWNER WITH A FOREST MANAGER**

If you have engaged a forest manager they will be responsible for monitoring how each contractor performs. However you should follow up with the manager to ensure all contractors are maintaining safe standards. You should ask for results from safety audits. If the audits show any contractor has not been conforming to the agreed health and safety plans you should ensure the forest manager takes steps to address these non-conformances.

For longer jobs the landowner may wish to engage an independent consultant to audit safety performance.

**6.3 REVIEW AND FEEDBACK**

It is a good idea to meet with your forest manager or contractors once the work is completed to discuss the quality of the work and the health and safety performance of the businesses involved. This gives you the opportunity to provide feedback on how they can improve their health and safety. You can also think about and take note of what you would do differently if you harvest another forest in the future.

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## **WORKING IN YOUR FOREST**

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### **IN THIS SECTION:**

- 7.1 Ensure you have the right skills and training**
- 7.2 Using chainsaws**

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Depending on the size of your forest you may decide to do some or all the forestry work yourself. It is important to remember that forestry work is dangerous and you need a high-level of skill and competence to produce quality logs safely. Only competent fallers and machine operators should attempt tree felling and log extraction.

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### **7.1** ENSURE YOU HAVE THE RIGHT SKILLS AND TRAINING

Forest harvesting involves high risk work activities such as tree felling, breaking out, cutting trees into logs and operating mobile plant. Any person engaging in this work must be adequately trained and competent or under direct supervision. This means that if you and your workers are undertaking forestry work you should have formal training and be deemed competent by an independent third party. You should have knowledge of and comply with the requirements of the Approved Code of Practice for Safety and Health in Forest Operations (ACOP).

If you and your workers are doing harvesting work yourself you should have a comprehensive health and safety system in place including but not limited to:

- > a health and safety policy
- > a drug and alcohol policy, including appropriate testing
- > training and supervision
- > health and safety meetings
- > hazard management and risk assessment
- > auditing and inspection programmes
- > incident reporting and investigations
- > emergency procedures
- > HSNO management

- > monitoring worker health and environmental conditions.

For more information see: [ACOP - Rule 2.3 and Rule 2.5.2](#)

### **7.2** USING CHAINSAWS

Chainsaws are often used for forestry work such as land preparation, thinning, pruning and felling. If you plan on doing this type of work yourself, you should ensure you have adequate training and skills.

For more information see: [ACOP - Rule 4.2 and ACOP Part - 3](#)

Hazardous felling includes:

- > wind-thrown or wind-affected trees
- > large shelter belt trees
- > trees with a heavy lean or unbalanced branches
- > trees near buildings, roads or public access ways
- > trees on steep slopes or unstable ground
- > trees near power lines.

**08/**

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**WORKSAFE'S  
ROLE**

**WorkSafe is the government agency that is the workplace health and safety regulator. WorkSafe collaborates with PCBUs, workers and other duty holders and industry groups to embed and promote good workplace health and safety practices, and enforce health and safety law.**

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WorkSafe is the health and safety regulator in New Zealand and is committed to reducing ill health, serious harm, and deaths in the forestry industry.

Our main objective is to promote and contribute to a balanced framework for securing the health and safety of workers and workplaces. Our functions include:

- > providing guidance, advice and information on work health and safety to duty holders and the wider public
- > promoting and supporting research, education and training in work health and safety
- > monitoring and enforcing health and safety law.

Inspectors have an important role in engaging with PCBUs, officers, workers and others at workplaces. They can advise PCBUs and workers of their responsibilities and rights under HSWA and its regulations and provide relevant guidance material and information.

WorkSafe produces guidance materials to educate duty holders and explain preferred safe practice in forestry operations. We attend industry events to support the development of healthy and safe practices. See Part 9 for links to forestry related guidance.

WorkSafe inspectors carry out assessments at forestry sites; they focus on hazards that pose serious risks to workers and hazards that are common causes of injury and ill health.

WorkSafe may carry out an investigation into an incident; this usually occurs after WorkSafe is notified of a notifiable event but WorkSafe may investigate whether or not it receives a notification. Investigations look into whether there has been a breach of health and safety law. An investigation may also identify whether actions can be taken to prevent a similar reoccurrence.

If there has been a breach of the law WorkSafe may exercise a wide range of enforcement tools under HSWA.

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## **APPENDICES**

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### **IN THIS SECTION:**

**Appendix A: More information**

**Appendix B: Glossary**

## APPENDIX A: MORE INFORMATION

### WORKSAFE NEW ZEALAND

For information and guidance about health and safety visit WorkSafe's website:

[www.worksafe.govt.nz](http://www.worksafe.govt.nz) or call 0800 030 040.

For information and guidance specifically about forestry visit: <http://forestry.worksafe.govt.nz>

### NEW ZEALAND LEGISLATION

To access all legislation including Acts and regulations visit the New Zealand Legislation website:

[www.legislation.govt.nz](http://www.legislation.govt.nz)

### SAFETREE

For injury prevention for New Zealand's forestry sector visit: <http://safetree.nz>

### FORESTRY INDUSTRY SAFETY COUNCIL

For the Forestry Industry Safety Council, funded jointly by the forest industry and the

Government, visit: [www.fisc.org.nz](http://www.fisc.org.nz)

### NEW ZEALAND FARM FORESTRY ASSOCIATION

[www.nzffa.org.nz](http://www.nzffa.org.nz)

### FORESTRY INDUSTRY CONTRACTORS ASSOCIATION

<http://fica.org.nz>

### NEW ZEALAND INSTITUTE OF FORESTRY

[www.nzif.org.nz](http://www.nzif.org.nz)

### GUIDANCE

*[Approved Code of Practice for Safety and Health in Forest Operations](#)*

*[Approved Code of Practice for Safety and Health in Tree Work Part 2: Maintenance or removal of trees around powerlines 1996](#)*

*[A Guide to Safety with Chainsaws](#)*

*[Health and Safety Guide: Good governance for directors](#)*

*[Health and Safety Leadership: A guide for small to medium business owners and company directors](#)*

*[Safe Manual Tree Felling](#)*

*[Safe Retreat Positions in Breaking Out](#)*

*[How to manage health and safety under HSWA](#)*

*[Farm Foresters and Small-Scale Forest Owners Contractor Checklist](#)*

*[Best Practice Guidelines for Temporary Traffic Control](#)*

*[An Everyday Guide to the RMA: Applying for a resource consent](#)*

*[Guide to Electrical Safety for Forestry Woodlot Felling and Logging Operations](#)*

## APPENDIX B: GLOSSARY

This section explains some of the terminology used in this guide.

| TERM                          | EXPLANATION   |
|-------------------------------|---|
| <b>Chain shot</b>             | The high-speed ejection of a piece of chain when a chain used in mechanised harvesting breaks.  |
| <b>Cutover</b>                | Land where trees have been felled.  |
| <b>Landing</b>                | Cleared area of land where logs are placed after extraction.  |
| <b>Manual tree felling</b>    | A person felling a tree with a chainsaw.  |
| <b>Maximum log storage</b>    | The maximum number of logs that can be safely staked in the designated log staking area.  |
| <b>Road Control Authority</b> | A body or person having control of the road; and includes a person acting under and within the terms of a delegation or authorisation given by the controlling authority. |
| <b>Wāhi tapu</b>              | A place sacred to Maori in a traditional, spiritual, religious, ritual, or mythological sense.  |
| <b>Underground utilities</b>  | Telecommunication, electricity, natural gas, fibre optics lines. Storm drains, water mains, waste water pipes.  |
| <b>Windthrow</b>              | Trees that have been blown down (stems snapped or uprooted).  |



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## DISCLAIMER

WorkSafe New Zealand has made every effort to ensure the information contained in this publication is reliable, but makes no guarantee of its completeness. WorkSafe may change the contents of this guide at any time without notice.

This document is a guideline only. It should not be used as a substitute for legislation or legal advice. WorkSafe is not responsible for the results of any action taken on the basis of information in this document, or for any errors or omissions.

ISBN: 978-0-908336-69-2 (online)

Published: November 2016 Current until: 2018

PO Box 165, Wellington 6140, New Zealand

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ISBN: 978-0-908336-69-2 (online)