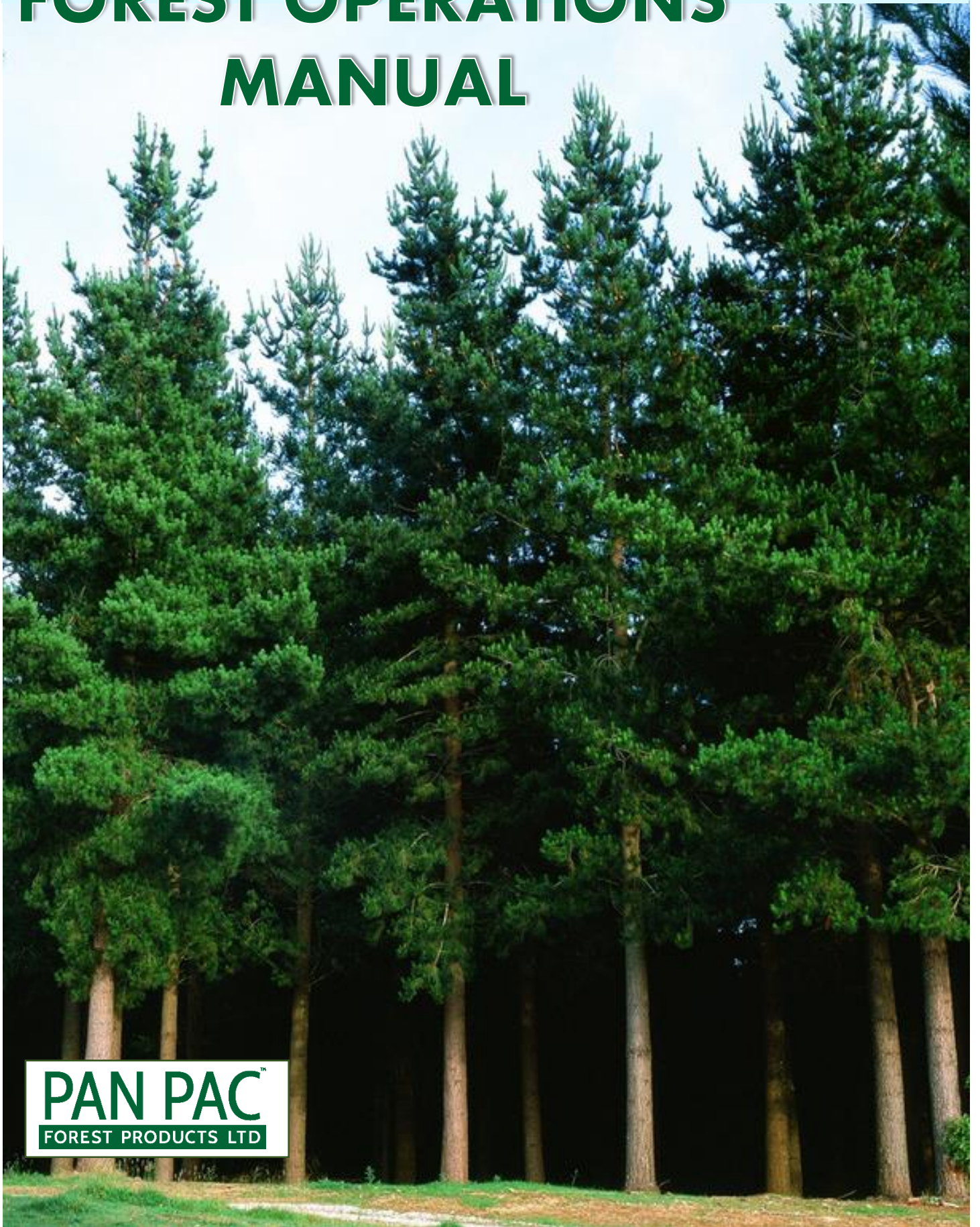


# FOREST OPERATIONS MANUAL



**PAN PAC**<sup>™</sup>  
FOREST PRODUCTS LTD

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# 1. Introduction

## 1.1. Purpose

This manual outlines Pan Pac Forest Products Ltd – Forests health and safety policies, procedures, and legal requirements as they apply to contractors’ (as PCBUs) operations and is intended for use by all Pan Pac Forests’ contractors and their workers, contractors’ service agents and visitors, and Pan Pac Forests’ staff and visitors.

Approved Codes of Practice and Best Practice Guidelines are the minimum standard for all operations. Pan Pac will set additional minimum standards as detailed in this Manual.

It is important that you read, understand, and comply with the requirements of this manual. If in doubt, seek clarification.

## 1.2 Associated Documents

Associated documents to this manual are as follows:

- Health and Safety at Work Act 2015 and all associated Regulations.
- Health and Safety in Employment Regulations 1995
- Approved Code of Practice for Safety and Health in Forest Operations 2012
- Forestry Mobile Plant Assessment Tool 2018
- Pan Pac Forest Ltd Forests various health and safety policies and procedures
- Approved Code of Practice for Safety and Health in Tree Work 1996 – Part 2
- Best Practice Guidelines – Safe Manual Tree Felling 2014
- Other safety codes for forest operations published by WorkSafe and its predecessor.

## 1.3 Pan Pac Forests’ Requirements

At Pan Pac protecting our people, our environment, and the community we operate in from harm is the number one priority.

To do this we must all work together to ensure our health, safety and environmental requirements are communicated, clearly understood, and acted upon by everyone at Pan Pac.

All tasks must be carried out in a healthy, safe, and environmentally sensitive manner.

It is critical you are both trained and competent or under training and supervision for the work you are doing. You must also have been informed of the risks associated with the work and the controls that have been agreed to reduce the risk to an acceptable level.

Health, safety and environmental rules and requirements must never be compromised. Never undertake a task that you cannot complete safely or may be detrimental to your health or the environment.

If work conditions have changed or you do not have the correct plant or equipment, or you are unsure how to proceed, **STOP THE WORK** and discuss with your workmate, foreman, employer or a Pan Pac staff member and agree on a safe and acceptable plan of action.

You are important to us, your family, and Pan Pac Forests. Ensuring you go home each day in a safe and healthy state while ensuring the environment is protected requires a significant team effort from us all. It involves trust, communication, leadership, and a desire for constant improvement.



## 1.4 Managing Health and Safety Risks

Each contractor shall have a working health and safety management system (HSMS) for their business. As a **minimum** it shall cover the five required points of the HSWA:

- Active management commitment – cooperation, communication collaboration with other PCBUs
- Active engagement with workers and enable them to actively participate in health and safety
- Focuses on managing work risk, and requires those who create the risk to manage the risk
- Training, certification, and supervision
- Event reporting, investigation, and recording.

## 2. Health and Safety Policy

### Reason

Pan Pac Forest Products Ltd (Pan Pac) is committed to protecting the health and safety of our workers, visitors, and the community.

**Our Vision: "No one will be harmed as a result of our operations."**

To achieve this, we will:

- Work together to prevent the conditions and behaviours that could lead to "injury or illness";
- Instil a culture where no business objective will take priority over health and safety;
- Comply with relevant health & safety legislation, safe work instruments (SWI), codes of practice (CoP), standards and safe operating procedures (SOPs);
- Have controls in place to manage our major hazards and prevent major incidents;
- Proactively identify and control risks;
- Consult with workers on matters of health and safety that affect them;
- Providing appropriate health and safety resources (including personal protective equipment) and ongoing training;
- Set annual objectives, improvement plans and performance standards for eliminating workplace injury and illness;
- Maintain and continually improve our health and safety management systems;
- Regularly monitor the performance of the health and safety management systems, audit their implementation, review their effectiveness, and be represented within overarching business performance metrics; and
- Consult, cooperate and coordinate with our contractors in regard to our overlapping duties, and arrangements to control risks.

### Our Six Health and Safety Principles

The following principles will guide our daily safety behaviours

- It is a condition for everyone working at Pan Pac to take personal responsibility to work safely, including care for physical safety as well as mental wellbeing.
- Managers and supervisors shall be committed to and will lead workplace health and safety; and are accountable for the safety of people at work.
- All health and safety risks shall be controlled; all events (accidents, incidents and near misses) and hazards shall be accurately reported and promptly acted upon.
- We must all observe and give feedback to our people on safe and unsafe behaviours and stop any job we believe is unsafe.
- We will engage our workers in the development, implementation and review of health and safety management system and ensure our people have the training, skills, knowledge, and resources to maintain a healthy and safe workplace.
- We will promote off-the-job health and safety.



Tony Clifford  
Managing Director  
(1 April 2024)

### 3. Critical Rules

# CRITICAL RULES

**Never operate in breach of any Approved Code of Practice, Best Practice Guideline, Pan Pac's Forest Operations Manual or Environmental Standards, or in a manner that may endanger you or anyone else.**

<b>DRIVING</b>	<ul style="list-style-type: none"><li>You must keep left, and drive defensively at all times.</li><li>You must be able to stop within half the visible distance ahead.</li><li>Seatbelts shall be worn in all mobile machines and vehicles if fitted.</li><li>Vehicle drivers shall not use a hand held cell phone or device (excludes radio telephones) for any purpose while driving.</li></ul>
<b>DRUG &amp; ALCOHOL</b>	<ul style="list-style-type: none"><li>The use, possession or being under the influence of drugs or alcohol is prohibited while at work.</li><li>Positive testing of controlled substances listed under Forests' D&amp;A procedure for contractors shall result in a 2-year ban (minimum) from Pan Pac operations.</li></ul>
<b>PPE</b>	<ul style="list-style-type: none"><li>All persons shall wear and use the appropriate PPE.</li></ul>
<b>MANUAL TREE FELLING</b>	<ul style="list-style-type: none"><li>All Fallers must be certified to fall in Pan Pac's forests.</li><li>No Tree Faller will be instructed to fall in an area that contains risk greater than their competency.</li><li>A daily felling plan must be documented and signed daily.</li><li>There will be a competent / skilled tree faller observing and taking an active part in the operation when trees are being directionally felled into other standing trees. The only exception to this is during thinning operations.</li></ul>
<b>BREAKING OUT</b>	<ul style="list-style-type: none"><li>No person shall stand in the bite of any operating rope.</li><li>Apply the breaking out Minimum Safe Distance (MSD) rule to all cable operations.</li></ul>
<b>LOG CARTAGE</b>	<ul style="list-style-type: none"><li>No person shall enter the loading zone while loading or unloading is in progress.</li></ul>
<b>TRAINING &amp; SUPERVISION</b>	<ul style="list-style-type: none"><li>All workers shall be assessed as competent for the task or be in training and under the direct supervision of a competent person.</li></ul>
<b>HAZARD/RISK ASSESSMENT</b>	<ul style="list-style-type: none"><li>A pre-start Hazard/Tailgate/Risk Assessment shall be carried out involving the entire crew and be reassessed as conditions change.</li></ul>
<b>ENVIRONMENT</b>	<ul style="list-style-type: none"><li>Fuel/oil, hazardous chemical storage systems shall be labelled correctly.</li><li>No rubbish shall be left in any operational forest areas.</li><li>Fuel or oil spillage shall be cleaned up and removed from the forest.</li></ul>

**We've called these Critical Rules because breaking any one of them has been a contributing factor in serious or fatal events.**

**The message is "Never break any of the rules above and Pan Pac will be a much healthier, safer and environmentally better place to work in".**

# CONSEQUENCES FOR HSE BREACHES

If acts are observed in breach of any ACOP, BPG or Pan Pac's Operations Manual or Critical Rules, the following consequences (AS A MINIMUM) will apply. In cases of unsafe acts these must be stopped, the reason for the stoppage made clear, and an explanation sought.

## 1<sup>st</sup> Infringement

1. Individual(s) receive a verbal warning (lower end).
2. Individual(s) issued with a Written Advice Notice and stood down for the rest of the day and the next full rostered work day from all Pan Pac work sites (higher end).

**When the crew and/or Crew Supervisor are aware of the breach and have not intervened:**

1. Crew Foreman – verbal warning and next offence will involve a stand down.
2. Individual(s) will be warned or issued with a Written Advice Notice.
3. Contractor will be notified.

## 2<sup>nd</sup> Infringement (for same or related breach within 12 months of last breach)

1. Individual(s) and Contractor will be issued with a Written Advice Notice (lower end).
2. Individual(s) stood down for the rest of the day and the next 2 full rostered work days from all Pan Pac work sites (higher end).

**When the crew and/or Crew Supervisor are aware of the breach and have not intervened:**

1. Contractor will be issued with a Written Advice Notice.
2. Crew stood down for the rest of the day and the next 2 full rostered work days from all Pan Pac work sites.
3. Work will not recommence until the Contractor has provided, and Pan Pac has agreed on, a written plan of corrective action.

## 3<sup>rd</sup> Infringement (for same or related breach within 12 months of 2<sup>nd</sup> breach)

1. Individual(s) trespassed from all Pan Pac property and work sites for 2 years and the Contractor will be issued with a Written Advice Notice.

**When the crew and/or Crew Supervisor are aware of the breach and have not intervened:**

1. Crew stood down from all Pan Pac work sites for 5 full rostered work days, and may lead to termination of contract.
2. Work will not recommence until the Contractor has provided, and Pan Pac has agreed on, a written plan of corrective action.

## 4. Audit & Monitoring

Pan Pac will undertake regular audit and monitoring of contractors and their in-field operations to ensure that the business unit and their contractors operate in a consistently safe, healthy and environmentally friendly manner.

Types of monitoring will include;

- Prequalification (online & in person options)
- Site visits
- Site Assessments/audits, including equipment surveys
- Contractor HSMS Audits
- Contractor EMS Audits
- Safety or Environment conversations

For all site assessments or contractor HSMS/EMS audits the contractor and/or representative will receive a copy of the completed documentation for their records.

### Non Conformances

To ensure that non-conformances are identified and handled in a consistent manner the following severity scale and expectations apply;

Severity Rating	Meaning		Type Action
	Health and Safety	Environmental	
Extreme	A breach of HSMS controlled documents, legislation, ACOP or safety alerts which could lead to a single or multiple fatalities or serious injury/illness causing permanent disability or irreversible health effects	A breach of EMS controlled documents or regulations (NES-CF) or consent etc that could lead to immediate sustained and significant damage to the environment to social impacts	<b>Immediate action to address the situation and notification</b> to General Manager Forest, applicable Operations Manager and applicable Advisor (H & S or Environmental)  Corrective action report <b>within 5 working days</b>
High	A breach of HSMS controlled documents, legislation, ACOP or safety alerts which could lead to serious injuries or illnesses but will recover over time	A breach of EMS controlled documents or regulations (NES-CF) or consent etc that could lead to significant medium-term damage to the environment to social impacts	<b>Immediate action to address the situation and notification</b> to General Manager Forest, applicable Operations Manager and applicable Advisor (H & S or Environmental)  Corrective action report <b>within 10 working days</b>
Medium	A breach of HSMS controlled documents, legislation, ACOP or safety alerts which could require medical or professional treatment	A breach of EMS controlled documents or regulations (NES-CF) or consent etc that could lead to short-term damage to the environment to social impacts	Corrective action report <b>within 20 working days</b>
Low	Minor or no injuries/illness but a breach of HSMS controlled documents, legislation, ACOP	Minor or no environmental incident but a breach of EMS controlled documents or regulations (NES-CF) etc	Corrective action report <b>within 30 working days</b>

### Cease Operation or Approval

An order to cease operation may be given by any Pan Pac staff member (including during survey, monitoring or auditing) on site when the issue of concern involves a critical risk control or is of such severity that a person is in danger of;

- Imminent harm (personal or environmental)
- High potential to cause injury, illness, environmental harm

An order to remove an approval to work may be given by the Assessor during monitoring when it is identified that the persons competency or ability to perform work against the required standards is deficient.

Where there is a cease operation or approval the decision must be communicated as follows;

- Assessor – to the Pan Pac co-ordinator and Health & Safety Advisor
- Crew Foreman – to the organisations Operations Manager, Health & Safety Advisor or other

# 5. Risk Assessment and Hazard Management

## 5.1 Risk Assessment

Before operations start in a new area, the coordinator and contractor shall identify site specific hazards associated with the proposed work; assess and evaluate the risk associated with the hazards; and agree on the hazard/risk control methods.

The Workplace Health and Safety Risk Matrix and Hazard ID and Risk Assessment forms shown in Fig 1 and Fig 2 are to be used.

Fig 1 – Workplace Health and Safety Risk Matrix

WORKPLACE HEALTH & SAFETY RISK MATRIX			RISK PROBABILITY (LIKELIHOOD)				
			Highly Unlikely <small>May happen only in exceptional circumstances.</small>	Unlikely <small>Could happen at some time.</small>	Possible <small>Has occurred occasionally.</small>	Likely <small>Will probably occur in most circumstances.</small>	Almost Certain <small>Expected to occur in most circumstances.</small>
			E	D	C	B	A
RISK SEVERITY (CONSEQUENCES)	<b>Critical:</b> Death or permanent disability. Notifiable event.	5	MEDIUM	MEDIUM	HIGH	EXTREME	EXTREME
	<b>Major:</b> Serious injury or health effects resulting in long term absence or irreversible disability. Notifiable event.	4	LOW	MEDIUM	HIGH	HIGH	EXTREME
	<b>Serious:</b> Serious but reversible injury/health effect requiring time off work.	3	LOW	MEDIUM	HIGH	HIGH	HIGH
	<b>Moderate:</b> Medical treatment and may result in temporary restricted duties or hours.	2	LOW	LOW	MEDIUM	MEDIUM	HIGH
	<b>Minor:</b> Injury/illness requiring first aid treatment or hazard contact but not resulting in injury.	1	LOW	LOW	LOW	MEDIUM	MEDIUM
RISK RATING (Post Controls)			RISK TREATMENT ACTIONS REQUIRED				
EXTREME			Unacceptable level of risk - DO NOT ATTEMPT THE TASK!				
HIGH			Stop! Do not proceed; contact your Manager to confirm an alternative safe work method to do the job. This must also be approved by Pan Pac Forests. Record the approved safe work method on the Risk Assessment.				
MEDIUM			List any additional controls on the Risk Assessment, continue. Seek advice or assistance from your Manager if required to ensure that the risk has been managed as low as reasonably practicable.				
LOW			Risk is acceptable, continue.				

Type of Controls Key:  
 • Eliminate = EL  
 • Type of Minimisation Controls: S = Substitution, E = Engineering, I = Isolation, A = Administration, PPE = Personal Protective Equipment  
**TIPS:**  
 • Remember to involve applicable persons in the completion of this hazard identification and risk assessment.  
 • If a work procedure or hazard control cannot be implemented, you must stop and contact your Manager.  
 • Remember to focus on the CRITICAL RISKS!

Fig 2 – Hazard Identification and Risk Assessment

HAZARD IDENTIFICATION AND RISK ASSESSMENT										Pre Operational / Onsite Operational (circle type)				
Forest:		Stand/Project/Location:				Forest Road Name:								
Date:		Contractor:			Contractor Foreman:		Average Mean Top Height:							
Emergency Site:		Site Simplex RT Channel:			Work Description:									
Area/Task where hazard exists	Hazard: What can cause harm?  Focus on the critical ones, the ones that could cause serious injury!	Consequences	Likelihood	Risk Rating Before Controls	Required Control Measures: <small>List the control measures required to eliminate or minimise the risk of illness or injury for each hazard identified.</small>	Frequency of Monitoring or Action Date	Personnel Responsible: <small>The person required to action the control measure</small>	Type of Controls <small>(EL, S, E, I, A, PPE)</small>	Consequences	Likelihood	Risk Rating After Controls			
Any other known hazards or risks?														
RISK ASSESSMENT REVIEW (eg. when new hazards or risks are identified or the environment changes)														
Review Date:				Review Date:			Review Date:							
Review Time:				Review Time:			Review Time:							
ACKNOWLEDGEMENTS					WORK CREW/VISITORS									
Position	Date	Initials	Name	Date	Initials	Name	Date	Initials	Name	Initials				
Contractor Foreman														
Pan Pac Representatives														



## 5.2 Pre-operation Induction and Risk Assessments for Operational Contractors

The purpose of the pre-operational risk assessment is to identify any hazards that either:

- Pose a greater than normal health and safety risk at the particular work site, or
- Could cause a health and safety risk to either this operation or other operations in the area.

### Policy

No contractor shall start any work on site until:

- The Pan Pac Coordinator has carried out the correct pre-operational risk assessment and the required controls have been documented and communicated to the workers.
- The contractor has carried out a pre-operational risk assessment together with their workers and they have identified any significant hazards and controls, plus put in place plans to manage areas of high risk. This must be documented and communicated to all workers.

### Procedure

Contractors are required to:

- Identify all hazards associated with the type of operation they are carrying out.
- Risk rate each one before and after control measures have been implemented.
- Document on the Risk Assessment sheet.

For each identified hazard the Pan Pac Coordinator must:

- Discuss the hazard with the Contractor's representative.
- Agree on appropriate controls and risk rating.
- Rate the risk prior to the controls being put in place and follow the control to understand the residual risk.
- For significant hazards, ensure the risk assessment and controls are clearly documented, including the person responsible for implementing the control and monitoring the control effectiveness.

It is not the role of the Pan Pac Forests Coordinator to identify everyday generic hazards normally faced in the operation being carried out.

Any significant hazards identified must be specifically documented and clearly identified at the work site.

The Pre-Operation Induction and Risk Assessment Process (Fig 3) is to be followed for the different types of operations routinely carried out in Pan Pac managed forests.

Work must not commence on the worksite until the required Risk Assessment and Risk Rating process has been completed, clearly documented and the controls communicated to all affected workers.

All hazards with a residual risk after controls of HIGH shall be notified immediately to a Pan Pac staff person. The risk assessment and work plan must be signed off by the General Manager Forests before work commences. This may particularly impact jobs where windthrow and slips are present.

Full details are in the Pan Pac Forests Division Hazard Identification and Risk Management Procedure ([FOR-PRO-HS11](#)).

## 6. HSE Event Investigation Reporting

### 6.1 Event Response and Reporting

All events (incidents, injuries, illnesses and near misses) shall be notified and reported to the appropriate Pan Pac staff person within the time frames shown in the Event Investigation Timeframe Table.

For all events the Pan Pac "All Event Reporting Form" (Appendix 3) should be used with the exception being for near miss events, whereby the Pan Pac "Near Miss" form can be used as an alternative method.

All event reports should include:

- Date, time, and location of the event including the type of operation involved.
- Information on the workers involved.
- The type of the event i.e. near miss, injury, illness, incident.
- Details of person(s) injured (if applicable), and
- A description of the event.



The front pages of the “Near Miss Reports and Event Reporting Forms’ should be completed by the person directly involved in the event in consultation with the persons immediate supervisor or manager.

## 6.2 Preserving an Incident Scene

An event scene provides a large amount of information about how and why an event occurred. If we are to effectively use this information the site should be left as undisturbed as possible.

## 6.3 Notifiable Events

In the case of a Notifiable Event, the site shall be immediately frozen (remain undisturbed) until a clearance to resume work is received from both WorkSafe NZ and a Pan Pac management representative. Refer to the Worksafe website for the definition of a [Notifiable Event](#).

The contractor shall immediately notify the applicable Pan Pac management representative and confirm that WorkSafe NZ has been notified and the status of this notification.

In the case of a fatality the victim shall not be removed from the site until the Police have given their clearance and the site shall remain undisturbed until clearance is given by the Police, Worksafe NZ and a Pan Pac management representative.

No persons shall speak to the media. Any media requests shall be forwarded to the Pan Pac Managing Director.

## 6.4 Red Flag Events



A Red Flag event is a near miss or near hit that had the potential to be at a minimum a serious event. Should a red flag event occur, all operations shall stop and remain stopped until the site has been cleared by the relevant Pan Pac operational manager.

## 6.5 Event Investigation & Corrective Actions

The main purpose of an event investigation is to determine what went wrong, why it went wrong and how to prevent a recurrence of similar event by identifying the contributing factors and causes and recommending remedial actions.



All events shall be investigated and given to the appropriate Pan Pac staff person within the time frames shown in the Event Investigation Timeframe Table 5.8.

The second pages (investigation sections) of the “Near Miss Reports and Event Reporting Forms’ should be completed by the persons immediate supervisor or manager in consultation with the person involved.

For all Notifiable Events, or events that could have resulted in fatalities or serious injuries a formal investigation report shall be completed within the time frames shown in the Event Investigation Ranking Table 5.8.

Event investigation reports should include:

Information collected as part of the event investigation such as:

- The level of experience, supervision, competency, and training of all persons involved.
- Any environmental factors such as weather or terrain that contributed to the event occurring.
- Whether any plant or equipment that was involved in the event was compliant and fit for purpose.
- Whether a documented procedure exists relating to the event and if so whether it was followed.
- Any organisational factors that may have contributed to the event occurring.
- How adequate the risk assessments completed were at identifying the hazards or risks involved including the required control measures and whether new or existing hazards or risks have been identified.
- Details of any site examinations including photos, sequence of events leading up to the event occurring, and interviews or statements from persons directly involved or who witnessed the event from occurring.
- An analysis on the immediate and root causes and contributing factors.
- Actions taken or required to be taken to prevent a reoccurrence of the event.

Formal investigation reports should be completed by persons with experience and preferably formal event investigation training such as ICAM lead investigation training.

Event reviews shall be completed by the Pan Pac General Manager Forests, the relevant operational manager, and H&S Advisor. For all MTI's/illnesses, LTI's/illnesses, notifiable events or where deemed required by Pan Pac Forests. The contractor rep maybe included in the reviews.

Contractors and Pan Pac Forests are responsible for ensuring corrective and preventative actions associated with events relating to their staff are relevant, tracked and completed as per agreed target dates.

## 6.6 Guidance for Witness Statements

Evidence from witnesses or persons involved in events should be collected as soon as possible and while their recollection of the event is fresh in their minds and uninfluenced by conversations with others.

Statements should be clear, concise, and contained to facts.

All written statement should be dated and signed by the witness or person involved in the event.

## 6.7 Event Investigation – Communication of Outcomes

Contractors and Pan Pac management are responsible for communicating the outcomes from event investigations directly associated with their staff.



A summary of event investigation findings will be provided to staff and contractors via the Pan Pac Forests monthly health, safety, and environment report (HSE).

Safety alerts or flyers will be issued by Pan Pac Forests on the key learnings from event investigation, where required. In some cases, contractors will issue their own.

## 6.8 Event Reporting and Investigation Timeframe Table

How to use this table, for example a medical treatment (moderate) injury requires immediate notification to the applicable Pan Pac Forests representative, an investigation within 7 working days either using a Formal Investigation Report OR Event Reporting Form as agreed between Pan Pac Forests and the Contractor.

Event Reporting & Investigation Timetable								
Event type & Actual Consequences				Timeframe Requirements			Investigation Team	
Health & Safety	Property/Fire	Environmental	Complaint	Verbal Notification to Pan Pac Rep	Incident Report	Investigation & Report	Event Involving Contractor Workers	Event Involving Pan Pac Staff
<b>Red Flag Events:</b> Near miss or near hit that had the potential to be at a minimum a serious event.				Immediate. Operations Cease.	5 working days	Event Reporting Form.	Pan Pac Dept. Manager to appoint investigation team in consultation with contractor as required.	Pan Pac Dept. Manager to appoint investigation team as required.
<b>Notifiable Event:</b>	N/A	N/A	N/A	Immediate.	7 working days	Formal Investigation Report.	Contractor to appoint investigation team.	Pan Pac Dept. Manager or Co-ordinator to appoint investigation team.
<b>Critical:</b> Death or permanent disability, illness or disease. Notifiable injury.	Catastrophic >\$500,000	Significant Effect: public impact & concern, significant fines & prosecution.	Significant: negative media >= 2 days.	Immediate.	5 working days	As agreed by investigation team & Pan Pac General Manager Forests. Formal investigation	Pan Pac General Manager Forests to appoint investigation team in consultation with contractor as required (may involve external 3rd party).	
<b>Major:</b> Serious injury or health effects resulting in long term absence or moderate irreversible disability.	Major <\$500,000	Major Effect: Community impact, breach of consents, fines.	Major: negative media for 1 day.	Immediate.	5 working days	10 Working days, Formal investigation report.	Pan Pac Dept. Manager to appoint investigation team in consultation with contractor as required.	
<b>Serious:</b> Serious but reversible injury/health effect requiring time off work.	Moderate <\$50,000	Moderate Effect: Community impact, breach of consents, possible fines.	Serious: Heightened concern, adverse attention.	Immediate.	5 working days	10 Working days, Formal investigation report or Event Reporting Form.	Pan Pac Dept. Manager to appoint investigation team in consultation with contractor as required.	
<b>Moderate:</b> Medical treatment & may result in temporary restricted duties or hours.	Slight <\$5,000	Minimal Effect: Local complaints.	Minor: Local concern.	Immediate.	5 working days	10 Working days, Formal investigation report or Event Reporting Form.	Contractor to appoint investigation team.	Pan Pac Dept. Manager or Co-ordinator to appoint investigation team.
<b>Minor:</b> Injury/illness requiring first aid treatment.	Non-compliance. Unsafe practice or condition	Non-compliance. Unsafe practice or condition	N/A	Not required.	5 working days	Event Reporting Form.	Contractor to appoint investigation team.	Pan Pac Dept. Manager or Co-ordinator to appoint investigation team.
<b>Near Miss/Hit:</b>	N/A	Near Miss	N/A	Not required.	5 working days	Near Miss/Hit Form or Event Reporting Form	Contractor to appoint investigation team.	Pan Pac Dept. Manager or Co-ordinator to appoint investigation team.

## 6.9 Work Hours and Work Related Events

Hours shall be recorded from the time the worker gets picked up in the employer provided vehicle or when the driver of the employer provided vehicle leaves home. Hours shall finish being recorded when the worker gets dropped off after work or when the driver completes the driving duties.

If the worker takes a private vehicle to work the hours shall start to be recorded when they drive through the forest gate or arrives at the workplace. Work hours shall finish being recorded when the worker goes past the forest gate or leaves the workplace.

If an event occurs within the times detailed in the previous 2 paragraphs and it results in the injured person being unable to be at work for the next scheduled work period, then the event shall be recorded and reported as a lost time event.

Any driving event that results in lost time where it is not the workers profession shall be recorded under the company safety statistics and will be investigated.

Contractors shall be responsible for submitting their crew's work hours and travel hours (separated) by the 3<sup>rd</sup> working day of the next month and forwarding to the Pan Pac Forests office.

## 7. Emergencies

<b>PAN PAC EMERGENCY PROCEDURE</b>
<b>Accident – Call Dispatch</b>
Switch to: <b>Ops Mill Pan Pac Dispatch Channel</b> or the appropriate: <b>Pan Pac Channel</b> , call:
<b>EMERGENCY EMERGENCY EMERGENCY</b> (or Phone 111) <b>Identify Yourself and Your Crew</b> <b>Give Your Location</b> (Forest, Road, Stand or Landing No.) <b>Number of People Injured</b> (Do not mention names) <b>Types of Injuries</b> <b>Emergency Service Required</b>
<b>Fire – Call 111</b>
(if no cell phone coverage, contact Pan Pac Dispatch as above) <b>Identify Yourself</b> <b>Give Your Location</b> (Forest, Road, Stand or Landing No.) <b>Size of Fire, what is burning</b> <b>Weather Conditions</b> <b>Personnel Available</b>
Stay by the Radio & Wait for Further Instructions "Stay Calm"

The emergency label shall be available to workers at all times.

All crews and crew members shall be involved in a realistic drill of their emergency procedures at least once per year.

All contractors should have on site or available a current list of all workers and their home contact details should family members be required to be contacted during an emergency.

When starting a new working area, all crew members shall be briefed on the appropriate emergency procedures for that site, e.g.:

- Location (forest, road, compartment, landing site)
- Communications (appropriate R/T channel(s), R/T, and cell phone coverage)
- "Emergency Site" Location(s)
- Other Helicopter landing sites

Emergency Sites are strategically located for:

- Rendezvous with rescue helicopter or road ambulance (there may be a need to "escort" the ambulance within forest areas).
  - Provision of 'safe' after hours helicopter sites.
- (Note: in most situations injured persons should not be moved)

Refer to the Road and Emergency Site Location Maps booklet.

Before attending to any injured person, the area shall be checked for hazards to ensure no additional harm is sustained by anyone. Any significant hazards found shall be controlled.

In the event of a major natural disaster e.g. earthquake:

- Account for all personnel
- Close down machinery and isolate fuel
- Move to a safe area e.g. flat open ground
- Listen for Civil Defence broadcasts on an AM/FM radio
- Contact Pan Pac Forests base or dispatch, or security or a staff member to advise of situation and/or receive instructions.

Pan Pac Security

Emergencies: 555, 897, 899

Ext's: 7191, 7234

Mobile: 7555 or (027) 530 4611

Phone: (06) 831 0155

CIVIL DEFENCE – Phone:

Napier City 06 835 7579

Hastings District 06 871 5000

Wairoa District 06 838 7309

CHB District 06 857 8060

POWER LINES –Unison (Faults):

Phone 0800 286 476

For further information refer to the back page of the Yellow Pages.

In the event of a fire refer to the Fire section 9.



## 8. General Health and Safety

### 8.1. Adverse Weather

#### Guidelines for ceasing work amongst tall trees in high winds

	Category	Unit in km/hr	Unit in Knots	Description on Land
	Calm	0	0	Smoke rises vertically
	Light Winds	19km/hr or less	10 knots or less	Wind felt on face, leaves rustle, ordinary vanes moved by wind
	Moderate Winds	20-29km/hr	11-16 knots	Raises dust and loose paper, small branches are moved
	Fresh Winds	30-39km/hr	17-21 knots	Small trees in leaf begin to sway, <u>crested waves</u> on inland water
	Strong Winds	40-50km/hr	22-27 knots	Larges branches in motion, whistling heard in wires, road signs erected with difficulty
Cease Work - Other Task	Near gale	51-62km/hr	28-33 knots	Whole trees in motion, inconvenience felt when walking against wind
	Gale	63-75km/hr	34-40 knots	Twigs break off trees, progress generally impeded
		76-87km/hr	41-47 knots	Larger branches break off. Slight structural damage
No Forest Work	Storm	88-102km/hr	48-55 knots	Trees uprooted. Considerable structural damage
		103km/hr or more	56 knots or more	Very rarely experienced, wide spread damage

*Source – Based on Beaufort Wind Scale*

It is unsafe to work near tall trees when winds exceed 50km/hr. To eliminate the hazards associated with high winds move to an alternative task or site that does not require working beneath or near tall trees.

The weather forecast is to be monitored by the Forestry Manager for any potential adverse weather conditions. Any significantly adverse conditions identified are to be recorded weekly and a notification sent to Staff and Contractors.

When weather conditions deteriorate during operations or are found to be too hazardous for safe work operations to continue, the situation needs to be reviewed in the field to ensure the ongoing health and safety of forest workers.

The worker, contractor or staff member identifying the hazard is to contact the appropriate Forestry or Operations Coordinator. The Forestry or Operations Coordinator is to contact the Forestry **and** Operations Manager with advice and/or recommendations on forest or part forest closure. The Managers will decide on whether to close the forest / part forest.

The Forestry or Operations Coordinator needs to document the situation and outcome on Adverse Weather Notifications. A form has been generated under Appendix 2.

The Forestry and Operations Manager must ensure all affected contractors and staff in the affected forest / part forest are made aware of the decision.

If the forest / part forest is closed for work due to adverse weather, then recreational permittees need to be contacted and advised of the closure.



Before operations re-start, the situation must be discussed and confirmed with the Forestry and Operations Manager. Once re-start has been approved, all affected Contractors and Staff are to be informed of the decision. Assessment of forest areas for accessibility and safety issues must be conducted by Contractors and Staff as they re-enter the forest.

Supporting Information: If the only road to the worksite is closed (i.e. the Napier/Taupo Road or a main in forest road) and there is no all-weather road access for emergency services, then all operations **must** cease until either the road is reopened and work may continue, or the road is reopened but the forest/part forest is closed by Pan Pac Forests and workers go home. If mitigating factors can be put in place to ensure the road stays open, then the major factor in the decision whether to close the forest / part forest is the health and wellbeing of the workers on the ground.

Examples for when Adverse Weather Conditions require assessing on whether to stop work include:

**Rain** - Flooding; Land Slips; Road closures to/from work site

**Wind** - Risk to continue working becomes extreme; windthrow is occurring or branches/trees breaking

**Snow** - Access to/from worksite is restricted; Risk to continue working becomes extreme

**Fog** - Severe impaired visibility such that safe distances cannot be observed

**Fire** - As per the Forestry Operations Fire Danger Code

## 8.2. Hazardous Substances

Hazardous Substances are present in our Forests through the use of;

- Aerosol sprays
- Flammables
- Fuels – diesel, petrol
- Lubricants
- Weed sprays
- Pest control – bait stations, 1080 drops

Use of Hazardous Substances is required to comply with the Health & Safety at Work (Hazardous Substances) Regulations 2017, Environmental Standards and follow the 5 steps to safety;

- **Prepare** an Inventory.
- **Assess** - the risk. Identify and understand those that have human health impacts. Eliminate or minimize risks.
- **Use and store** your substances safely – including transportation.
- **Get ready** for an emergency.
- **Key Controls.**

As general guidance when assessing the risk and any controls for storage, handling and transport;

- Flammables may not be stored in crew safe zones such as cabins
- Secure transport methods should be used (including strapping, signage if transporting maximum amounts)
- Training – all personnel required to handle hazardous substances must receive at a minimum a general chemical awareness training
- Spill containment measures must be put in place to protect our environment and fire risk
- Not located near waterways or run off leading to waterways
- Fire Season – minimum amounts of flammables to be held in the forest to reduce ignition sources or fire loading

1080 - All personnel should be aware of and introduced to bait stations and 1080 castings.

### 8.3. Chainsaws



All chainsaw operators shall comply with all the relevant sections of the Approved Code of Practice for Safety and Health in Forest Operations and shall maintain the chainsaw in good working order.

All chainsaws shall be fitted with an effective safety mitt, which extends to the wrist **and** a chain brake in working order. All chainsaws shall have an efficient spark arrestor fitted.

Pruning chainsaws shall have an approved bar guard fitted. (A safety mitt is not compulsory).

All chainsaw operators shall conform to the training clauses listed in the Tree Felling section.

No person shall work within 2 metres of anyone using a chainsaw.

All chainsaw operators (harvesting, forestry) should gain the relevant unit standards for their operational roles, which are listed under section 11.2 – Minimum Qualifications for Pan Pac Forests Operations.

### 8.4. Alcohol and Other Drugs

Pan Pac Forest Products Ltd – **Forests Division** (Pan Pac Forests) is committed to a workplace free from the effects of alcohol or other drug(s) thereby ensuring a safe and healthy environment for all people<sup>1</sup> working in Pan Pac Forests' operational sites.

Pan Pac Forests is committed to:

- ensuring the health and safety of every Contractor<sup>2</sup> or visitor to Pan Pac Forests' workplace;
- ensuring healthy and safe working conditions, including the safe operation of all equipment in the workplace;
- creating and maintaining an alcohol and drug free work environment through 'zero tolerance';
- dealing with substance abuse in the workplace; and
- complying with legal obligations under the Health and Safety at Work Act 2015 and Privacy Act 1993.

Pan Pac Forests has adopted an alcohol and other drug(s) policy and procedure, which prohibits all Contractor, contractor workers, service agents, subcontractors or visitor, at all levels, from working or conducting Pan Pac Forests business under the influence of alcohol or other drug(s). This policy procedure is available from the Forests H&S Advisor ([hseforests@panpac.co.nz](mailto:hseforests@panpac.co.nz)).

The policy procedure covers, but not limited to, the following:

- Alcohol and other drug(s) testing for random, post-event and reasonable cause
- Pre-employment testing
- Cheating on a drug and/or alcohol test
- Dilution of a drug test
- Refusal to take an alcohol and/or other drug(s) test

Consequences of positive drug tests for controlled substances under the *Misuse of Drugs Act 1975*, or listed substances in our policy procedure, range from time off work and rehabilitation to the imposing of a minimum 2-year ban from all Pan Pac Forests' operational sites.

<sup>1</sup> This policy procedure excludes Forests Division staff, as they come under the Pan Pac Forest Products Ltd's drug and alcohol policy procedure.

<sup>2</sup> Subcontractors include service agents of contractors working in the Division's operational areas.



## 8.5. Cell Phone



Vehicle drivers shall not use a handheld cell phone or device (excludes radio telephones) for any purpose while driving.

Hands free cell phones are permitted to be used for receiving and making voice activated calls. Where an extended conversation (more than a minute) is required, as a result of the call, drivers should safely pull off the road and stop to continue using the phone.

This applies to all company vehicles use and all vehicle drivers operating a vehicle/machine in the course of carrying out normal paid work duties (including travel to, from and in/on the forest or work site) on Pan Pac business.

*Note: Pan Pac Forests is genuinely concerned for the safety and wellbeing of staff and workers at all times and strongly encourages they extend these same rules into their private vehicle use*

Refer to critical rule consequences (refer to Section 3).

## 8.6. Radio Communications

All forest operations shall have a digital radio on site at all times. It shall have the capacity to hold, as a minimum, the required channels as follows:

Channel/Name:	Tune to:
17	Forestry
6	Simplex
12	Simplex
7	Simplex – Mill Site Dispatch
Ops Mill Pan Pac Dispatch	Pan Pac Dispatch & Emergencies
PPF Log Yard	Simplex – Pan Pac Log Yard
3PY	Simplex 3PY Operations
SIMP KWKA	Simplex Kaweka Forest
SIMP ESK	Simplex <u>Esk</u> Forest
SIMP MHKA	Simplex <u>Mohaka</u>
SIMP GWAVS	Simplex <u>Gwavas</u>
SIMP TNGO	Simplex <u>Tangoio</u>
PPFP 01	Simplex Harvest Lot 01
PPFP 02	Simplex Harvest Lot 02
PPFP 03	Simplex Harvest Lot 03
PPFP 04	Simplex Harvest Lot 04
PPFP 05	Simplex Harvest Lot 05

**NOTE:** See Radio Telephone System Operation (7.6), which shall be followed when using the system.

All logging trucks and at least one log loader per crew working in Pan Pac forests shall have **two** radio telephones fitted.

All logging trucks shall as a minimum call up on a Pan Pac Logistics channel when loaded and leaving a Pan Pac Forests crew, stating the crew they are leaving and the road they are on e.g. “loaded truck leaving 62 on Harris Road”.

Fuel tankers, over-dimension vehicles and transporters, when entering a forest and leaving a forest and/or operational site, shall call up on the appropriate Pan Pac channel, stating their intended route.

All Pan Pac Forests staff and contractor worker vehicles that enter a forest shall call up their movements on the appropriate channel when entering the forest, and at road intersections, kilometre markers or at appropriate landmarks within all forest operational areas.

All vehicles that occasionally visit a forest are required to have a VHF radio, and shall call up their movements on the appropriate channel when entering the forest, and at road intersections, kilometre markers or at appropriate land marks within all forest operational areas.

Vehicles fitted with a VHF radio shall monitor the appropriate Pan Pac Forests channels while travelling on any forest road which connects to roads being used by harvesting traffic.

**Radio telephone usage** can aid safe vehicle travel but **will not at any time overrule public road or forest road rules.**

In certain operational areas signage may dictate the use of specific channels (e.g. simplex) for reasons of safety.

In emergencies the Ops Mill Pan Pac Dispatch channel or the appropriate Pan Pac channel is to be used. The person in charge may dictate on alternative specific channel to be used if required. All radios used on the network must be authorised by Pan Pac Forests and then registered with INet.

## 8.7. Radio Telephone (RT) System Operation

The essence of a satisfactory radio telephone service is good operating practice. If the following simple rules are observed, the efficiency of the service is assured:

Pan Pac's system operates five linked repeaters for the co-ordination of forest, harvesting and transport. This gives communication throughout the entire coverage area when one repeater is activated. Due to this linking system there is a small delay when a repeater is activated while all repeaters start transmitting. To ensure the party you are contacting receives your entire transmission, pause for a moment after pushing your transmit button before speaking.

Speak naturally, clearly and be brief and to the point.

Be courteous. Offensive language is likely to endanger your goodwill.

Do not 'hog' the channel. If your message is a long one, pause now and again to see if someone else wants to communicate urgently.

When calling another station use your number or call sign first, followed by the number or call sign of the party you are trying to contact.

If a conversation is interrupted while information is being obtained do not hold the channel by keeping the press-to-talk switch depressed.

If called upon by an operator over the air to cease transmitting, do so immediately without argument. It may be a matter of safety or life.

When you have finished transmitting **always** place the hand piece back in the holder. This eliminates the chance of accidentally jamming the system. A jammed microphone renders the system inoperable for other users.

A simplex channel may be authorised to be used in specific operational areas for reasons of safety and occasionally for brief communication as vehicles pass during travel.

Vehicles are to be on the operations channel at all other times and are not to leave sets locked on a simplex channel while travelling. The only exception will be where the vehicle has two R/T sets.

Failure to operate a radio telephone as per this operating practice may result in disciplinary action and/or the removal of the operating frequencies from the radio.

## 8.8. Prohibited Items

To ensure that all personnel are aware of those items that are not permitted or require prior approval before being brought on to company property or other Pan Pac work location.



**Drugs, Alcohol, and Illegal Substances** - Subject to the Drugs and Alcohol Section; drugs, alcohol and illegal substances are strictly prohibited on company property or any other Pan Pac work location and will be dealt with as serious misconduct.

**Dogs** – Shall not be brought on to company property or any other Pan Pac work location. The only exceptions to this rule are:

- Dogs included on valid hunting permits.
- Working dogs accompanying persons carrying out grazing stock work or approved animal control work.
- Dogs that are in the company of and controlled by the owner, at **ALL** times (dogs held at operational sites or in machine cabs **do not** qualify).
- All dogs shall have current kiwi aversion training.

**Firearms** - Will not be permitted on company property or any other Pan Pac work location during work hours unless permission has been given by the Forestry Manager. Outside of work hours all persons must have a valid hunting permit issued by a Forestry Coordinator.

Unauthorised possession of firearms will be considered serious misconduct and will be treated as such in terms of the disciplinary section



## 8.9. Fatigue Process

Fatigue is a hazard caused by a combination of work-related and non-work-related factors. To address fatigue, all the contributing factors need to be managed so far as is reasonably practicable. Pan Pac as a company is currently reviewing their fatigue management process with the view of having a comprehensive procedure published within the next 12 months – 2 years. As an interim measure, the Forest Division will apply it's guideline for [fatigue and stress management](#) [FOR-GUI-HS01].

## 8.10. Safety Certification/Auditing Process

Safety certification will be monitored periodically (a minimum of quarterly) to ensure compliance to the Pan Pac Forest Operations Manual and other procedures.

## 8.11. Machinery



All vehicles and machinery used in forest operations and log cartage shall meet the relevant standards of mechanical and structural fitness required by the manufacturer, Approved Code of Practice for Safety and Health in Forest Operations and Ministry of Transport.

Haulers (or yarders) shall meet the standards in the paragraph above and be rigged to manufacturers' specifications as a minimum. Certification tags shall be attached to all machines.

Any machine known to have mechanical or structural defects that could pose a significant hazard to the operator, other workers, or bystanders, shall be shut down immediately and shall not resume work until the hazard is removed or controlled.

Any machinery being brought into the forests shall be inspected by the Contractor or other qualified person to ensure that it is in good mechanical and structural condition before starting operation. A written record of the inspection shall be kept by the Contractor.

Contractors shall discuss with the relevant Coordinator the need to thoroughly wash down all machinery before moving between forests or working areas. This is to minimise the movement of undesirable plant species and diseases.

## 8.12. Vehicles

**Purpose** - Pan Pac Forests has a clear responsibility to ensure safe road user behaviour. All those who drive vehicles on forest and public roads (including to and from work) must do so in a manner that ensures their own and all other road users' safety at all times.

All vehicles must be driven with headlights *on* within Pan Pac Forests managed forests (driving lights acceptable).

All occupants shall wear seatbelts (if fitted) while travelling in Pan Pac forests.

Vehicles must not be driven at a speed greater than that which allows it to be stopped within half the visible road distance ahead.

The maximum vehicle speed for forest roads is 50 km / hour.

All vehicles shall be driven in accordance with the NZ road traffic legislation.

All vehicles shall have a current New Zealand Motor Vehicle Registration.

All vehicles (including trailers) shall have either a current Warrant of Fitness or a current relevant Certificate of Inspection.

All drivers shall have a current *Full* New Zealand Drivers licence appropriate for the vehicle they are driving.

### **Crew Vehicles Shall:**

- Have forward facing seating with seat belting for all occupants, which must be worn.
- Have adequate ventilation and heating for all occupants.
- Have no loose objects in the passenger compartment(s).

All vehicles on a work site must be facing the exit and the exit is not to be blocked (as per unit standard 17769).

All crew vans when carrying passengers shall have a designated co-driver/observer positioned in the front left seat to monitor driver well-being. This co-driver/observer shall relieve the driver if required.

Use of radios (RT) to determine on-coming traffic is a useful warning device but must not be used as a substitute for safe driving practices.

All vehicles shall be fitted with an approved first aid kit.

All vehicles shall be fitted with a minimum 0.9kg and preferably a 1.5kg dry powder fire extinguisher maintained in good working order.

Vehicles should be parked facing out of the forest and without obstructing other traffic.

All motorised equipment and vehicles including motorcycles shall have efficient spark arrestors and/or exhaust systems that prevent spark emission.

Operators of ATVs shall have completed an approved training course or be under training. When operating an ATV within Pan Pac Forests managed estate the operator shall wear an industry approved helmet.

Apply courtesy to laden trucks and uphill traffic.

All drivers are to comply with Pan Pac Forests company imposed 50km/hr speed restriction through the first 700metres of Raupunga residential housing area (Putere Road).

“Pan Pac Forests encourages that all work-related vehicles driving on public roads be driven with lights on.”

All Pan Pac Forests logging trucks must use the Waitara Road/Pohokura Rd route when travelling to and from Pohokura Forest. No logging trucks shall travel on the section of Pohokura Road towards Tutira from Jeph Everett Road.

## 8.13. Visitors to the Forest

Contractors must have in place a process for managing visitors to their worksite. This must include a designated person in the crew at the main work site responsible for meeting and inducting visitors.

All visitors shall wear the appropriate protective clothing and be kept in controlled areas or under constant supervision unless they have been inducted.



Children under the age of 15 shall not be present at operational worksites unless under constant supervision, in controlled conditions and with the prior permission of the person supervising the operation.

Pan Pac Forestry Coordinators should be contacted by the contractor if the contractor or anyone invited by the contractor is to visit the worksite during the weekends.

Pan Pac Forestry Coordinators shall inform the Harvesting Coordinators, contractors, and any other forest users of any weekend activities within the forest that may cause a hazard.

### 8.14. Working Alone/Remote



To ensure the safety of all Pan Pac Forests workers and contractors working alone in Pan Pac managed operational areas. When working alone in a Pan Pac operational area, workers and contractors are to: Notify their immediate supervisor or a nominated person of:

- The forest/location they will be working in.
- Their planned route for the day.
- The expected time they will be leaving the forest/location and agree on a last report back time.

And shall have...

- One effective means of communication on them at all times and access to one back up system. These may include...
  - A handheld VHF radio
  - A personal locator beacon
  - A cell phone

There shall be an agreed system to record the working alone information between the person working alone and the supervisor or nominated person. Information to be recorded shall include:

- Name of the person working alone
- Working Location(s)
- The agreed return time

If the worker or contractor is to be away for longer than the agreed time or there is a change in their itinerary (e.g. unannounced visits; time delays) they should contact the supervisor or nominated person and advise on the amended details.

If the agreed last report back time is missed, the supervisor/nominated person shall attempt to:

- Directly contact the worker or contractor to verify their safety.
- Indirectly contact the worker or contractor by seeking information from a third party e.g. another contractor in the vicinity.

If no contact can be made, a search should be instigated.

Safe Plan for Working Alone:

Name:	
Mobile Phone:	
Home Phone:	
Personal Locator Beacon:	
Home Address:	
<b>LOG OF ACTION</b>	
Date:	
Work Location:	
Task:	
Depart From:	
Finish Time:	

### 8.15. Road Signage and Temporary Management Control (TMC)

All temporary traffic control should comply with the [August 2007 Best Practice Guidelines for Temporary Traffic Control \(TTC\)](#).

- All TTC sites shall have operational hazard management documentation in place.
- All TTC sites shall be managed by a qualified Traffic Coordinator (TC). All TTC on public roads must be managed by qualified STMS.

Signs – All advanced warnings sign shall:

- Be clear, clean, and firmly held in position
- Display standard symbols and text

- Conform to established standards for size and colour
- On left hand side of the road (off running surface)

Temporary Road Closure

- Forest and Private Roads
- Where roads cannot be closed for long periods (e.g. high volume of logging trucks) temporary traffic control shall be put in place to manage hazards that may affect road users. This may involve temporary unmanned or temporary manned road closure.

Unmanned Recommended Layout

For both sides of the operation.

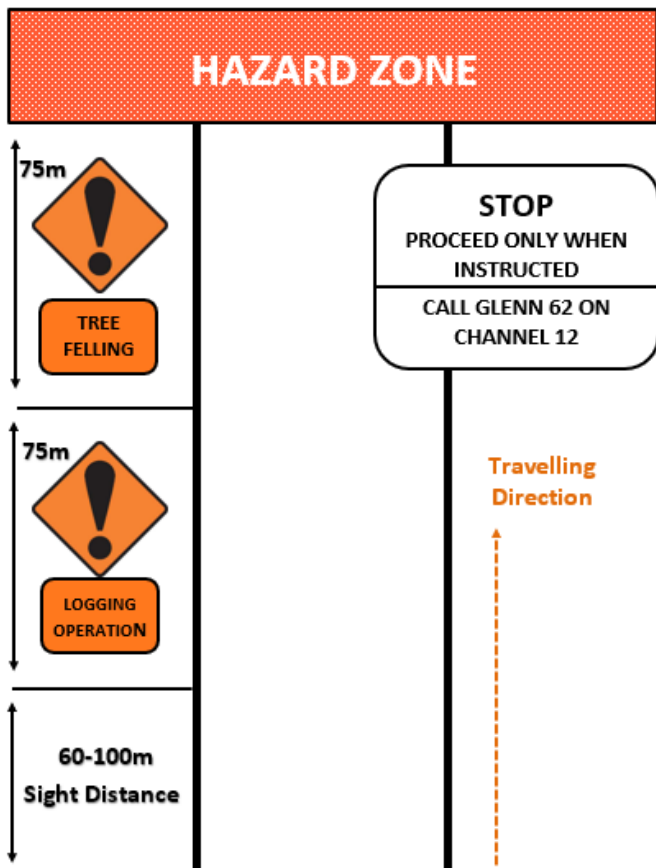


Fig 4

Flagman Controlled – Recommended Layout For both sides of the operation

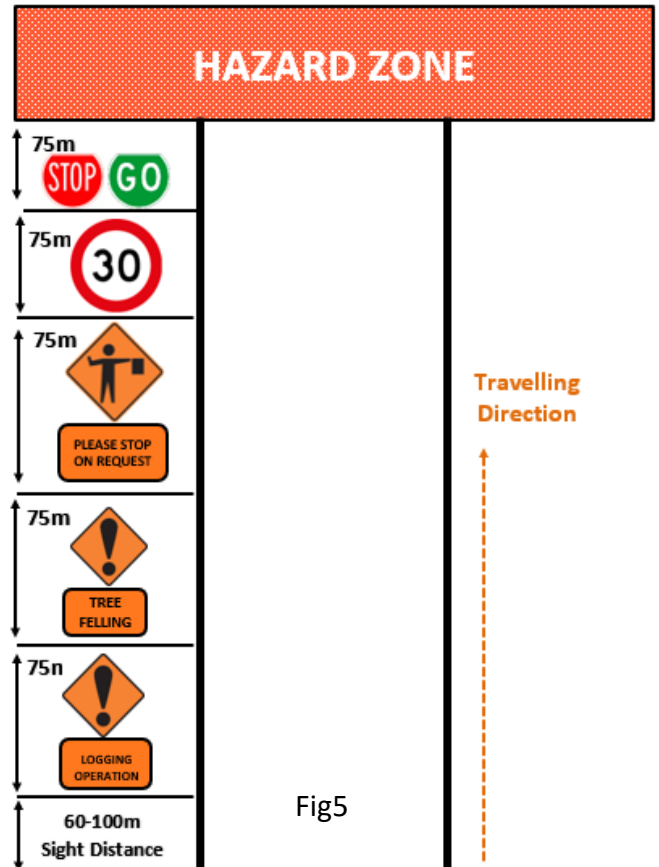


Fig5

In this circumstance, flag people or manual traffic controllers (MTC's) shall be used to stop and start traffic as required.

Minimum requirements for a flagman-controlled operation are:

- One or more appropriately trained MTC's with stop/go paddles
- Effective communication (R/T radios) between the hazard area and the MTC's
- MTC's shall wear appropriate PPE (hi viz clothing, steel cap safety boots, helmet, earmuffs, safety glasses)
- Traffic delays shall be kept to a minimum (5minutes)
- Documented communications section

Public Roads

- Temporary traffic control on public roads requires a Temporary Traffic Management Plan to be completed by a Temporary Traffic Management Planner (TTMP) and managed by a Site Traffic Management Supervisor (STMS). The plan must be approved by the relevant Local Authority (e.g. NZTA/ District Council etc.).

### Closing of Forest or Private Roads

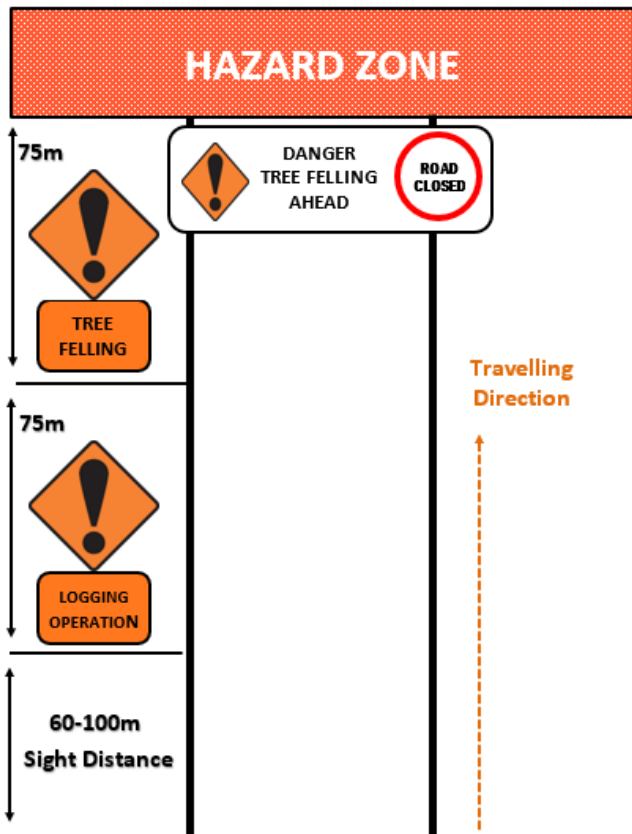


Fig 6

### Chain Shot

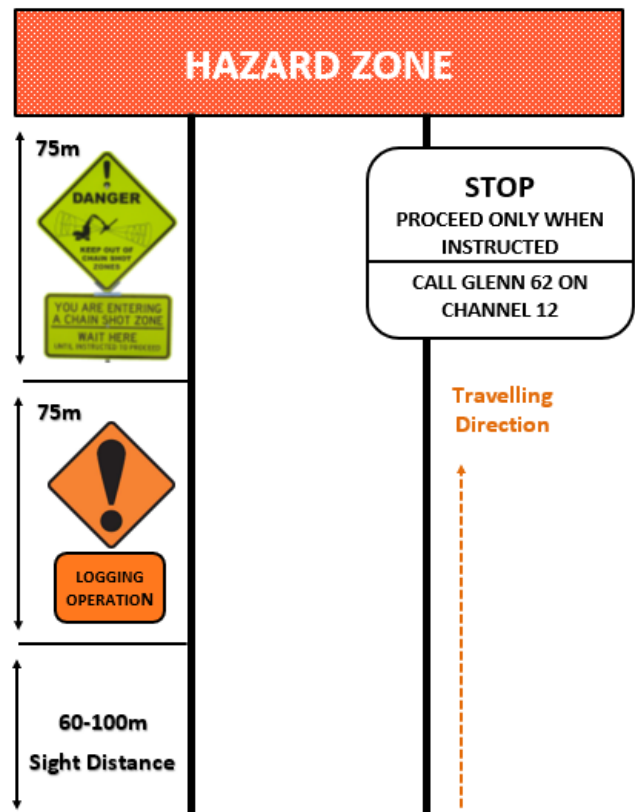


Fig 7

- All roadside felling should comply with the Approved Code of Practice for Safety and Health in Forest Operations.
- A “Road Closed” sign indicates the road **is closed** beyond this point to all traffic **with no intention of allowing temporary access**.
- If traffic must be allowed through the hazard zone, then TCC shall be put in place (Fig 4 Temporary Road Closure).
- The minimum requirements to close a forest or private road are:
  - Road closed sign in centre of road with Danger tape fixed from the sides of the road to the top section of the sign (Fig 6).
  - PVC Road Closed and Tree Felling (‘Falla’ style) banner fixed across the width of the road, **with no access to drive around the sign**.
  - The only persons that may remove a Road Closed sign are:
    - The Contractor
    - The person designated in charge of that operation
    - A person authorised by the person designated in charge of that operation

All operations with a mechanised processor shall have chain shot signs 80m from the operation.

Logging Operations – Every logging operation shall, as a minimum, have advanced warning signage and appropriate supplementary signage (e.g. Fig 7).

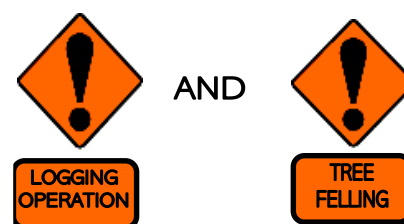


Fig 8

If tree felling both signs should be up 75m apart.

Where practicable these signs shall be placed on all access routes a minimum of 75m from any accessible side of any logging activity being carried out in the operation (Fig 8).

## Roading and Roadside Operations

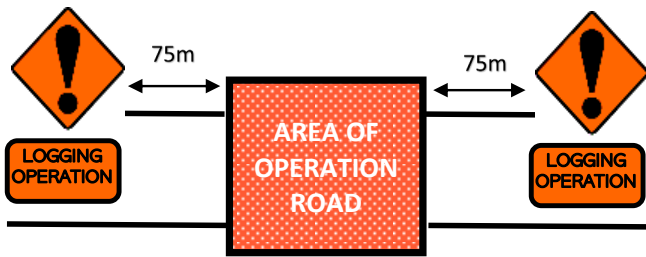


Fig 9

When an operation is being carried out on or adjacent to a road the following signs shall be used:

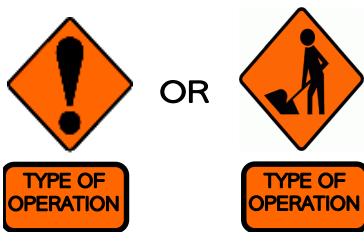


Fig 10

The supplementary sign shall state the type of operation being carried out and in the case of spraying operations, the type of spray being used (e.g. herbicide).

### Aerial Spraying

For aerial spraying operations the following signs shall be used and must state the type of spray being used e.g. herbicide (Fig 11)



Fig 11

## 9. Personal Protective Equipment

### 9.1. Safety Boots

All footwear worn in forest operational areas shall meet the specification in the Approved Code of Practice for Safety and Health in Forest Operations.



All fallers and chainsaw operators in harvesting operations that are under training – shall wear boots of the cut resistant type:

- Where **no** trimming, delimiting or cutting off of heads is carried out by the faller (i.e., felling only), cut resistant safety boots are not compulsory.

The wearing of cut resistant safety boots are preferred but not compulsory if:

- The person is qualified and has held the appropriate chainsaw unit standards for more than six months.
- The person is a casual user of chainsaw (i.e. loader operator, log maker or breaker-out) and holds the appropriate chainsaw unit standards.

Any other approved safety boot or foot safety management procedure will only be accepted if it can be demonstrated the workers feet are protected to a level at least equal to that provided by cut resistant safety boots.

When working on steep slopes and/or slippery surfaces, workers should fit spikes or other gripping attachments (e.g. “gripper”) to their safety boots.

### 9.2. Safety Helmets



Safety helmets shall be worn by all people (including visitors) in and around all operations, except for:

- Planting
- Releasing
- Nursery work
- Plotting in the above operations
- Operating a machine within a protective cab
- Harvest planning, forestry inspections or visits where no active operations are in progress
- Lopper pruning lifts, where the pruners feet are up to 4.5m off the ground

All safety helmets worn by tree fallers (including fallers engaged in TTW operations) shall be of a polycarbonate make with a 6-point harness and comply with current AS/NZ standards. The only addition to this rule is the Protos Integral Forest Helmet System and will include hearing and vision protection.



For all safety helmets fluorescent yellow or orange is the preferred colour. No other colour is acceptable.

Helmets shall be replaced:

- Immediately if damaged;
- 3 years after the issued date (if recorded);
- Where issue date is not recorded helmet shall be replaced 3 years after manufacture date.

**Hoodies and peak caps shall not be worn under helmets.**



### 9.3. Eye Protection

Approved eye protection shall be worn by any person:

- Operating a chainsaw
  - Mixing concentrated agrichemicals
  - Cutting or splicing wire rope
- unless hazards are created through the wearing of eye protection (e.g. reduced vision).

In all other situations approved eye protection should be worn where hazards to the eyes are present e.g., dust, wind, and glare.

Approved eye protection is defined as:

- Polycarbonate lenses, goggles or face shields approved to AS / NZS1337.1:2010
- A mesh visor or mesh goggles (not acceptable when mixing or applying agrichemicals)

People wearing prescription spectacles made of glass should take additional precautions where they are required to wear eye protection i.e., mesh visor or polycarbonate over specs.

### 9.4. Hearing Protection



Class 5 hearing protection shall be worn when working with or around chainsaws or forestry machinery.

Hearing protectors shall comply with either:

- AS/NZS 1270:2002 Hearing protectors
- Any other standard embodying the same or more stringent criteria.

Owners of machinery shall take all practical steps to minimise at source excessive noise levels which may impair the workers hearing.

Any clothing or item that interferes with the hearing protection shall not be worn or used while working.

*Exception: Prescription glasses.*

## 9.5. High Visibility



High visibility clothing shall comply with AS/NZS 4602.1.2011DN (Day/Night).

High visibility clothing must be worn on the outside of other clothing. If the clothing or reflector has faded the garment must be replaced.

High visibility can only be yellow or orange (not orange/red spectrum).

## 10. Harvesting Operations

### 10.1. Debris/Slash Piles

Landings

Pan Pac standard for slash piles is:

- Operational & engineering pre-harvest planning includes slash management
- Rootballs and merchantable wood are not to be included in slash piles. They must be stored away from anywhere that processing slash material will be deposited
- 3 meters of debris max (height or depth)
- Not contain any material which may act as a fire catalyst such as wire rope, oily rags, cans, plastic or other rubbish

- Care with inclusion fine debris, this should be scattered far and wide
- Water runoff controls are required to direct water away from or around the pile.

#### Cutover

Pan Pac standard for slash in the cutover is;

- Removal of debris as per the NES-CF requirements
- Identify and assess high risk slopes where movement, failure or erosion could occur
- Operational pre-harvest planning includes slope/slash management planning
- Crew selection as per the assessment to reduce damage to the soil structures

For more information the Forest Owners Association has excellent guidance for managing slash

[FOA - Managing processing slash on landings](#)

[FOA - Managing slash in the cutover](#)

## 10.2. Machine Operators

All machine operators working in Pan Pac forests shall hold the unit standard for the machine they are operating or under documented training. ACOP rules for mobile plant shall apply.

Slope assessments shall be completed for every setting where machines will be working on slopes over 18°.

## 10.3. Winch (Cable) Assisted Steep Slope Harvesting

All operators working in Pan Pac forests shall hold or be under training for the required units (refer to training section 11.2).

Persons moving the winch machine shall have their competency assessed against unit standard. No body shall be in the winch machine or closer than 15 metres of the winch machine when the felling machine is moving felling trees. The felling machine must remain stationary on stable ground until the winch machine is dug in correctly and the operator is clear. Refer to [Approved Code of Practice for Safety and Health in Forestry Operations](#).

## 10.4. Machine Certification

The steep slope felling machine and attachment points must be certified and fit for purpose before any felling takes place. This certification must be current and remain onsite for auditing by Pan Pac Forests. Winch machine ropes and shackles must have a breaking strain greater than the weight of the felling machine they are assisting.

## 10.5. Machine Requirements

Shall have an inclinometer fitted that measures track angles at all times.

Shall have a minimum of two emergency exits, three is preferred.

## 10.6. Daily Maintenance

Before any felling takes place, a daily checklist provided by the manufacturer must be filled out and signed by the operator. A copy of the manufacturer's Operators manual and Safe Work Practices must be kept on site.

## 10.7. Daily Felling Plan

Before any felling can take place, a daily felling plan must be documented and signed by all involved in the steep slope harvesting operation. This must include the area to be felled and how the hazards for the day are going to be managed. A risk assessment will be supplied by Pan Pac Forests outlining any hazards Pan Pac Forests is aware of in the area, however the Operator / Foreman will still need to walk the area to be felled to identify any new hazards and put a plan in place to manage them.

## 10.8. Operation of a Mechanised Felling Machine

No felling shall be done in a way that will cause damage to a stand which needs to be cut by manual fallers. These areas need to have a detailed documented plan to manage these zones and if practical manually felled before any steep slope felling takes place.

Manual felling rules shall still apply – no tree shall be left standing with felling cuts in it.

Any hung up trees must be brought down ASAP or managed until it can be brought down safely.

If the mechanised felling machine is not visible to other workers in the operation, the operator must check in every 40 minutes. These check in times must be recorded. Any time the operator needs to exit the cab while on the felling face, they shall make sure the machine lockouts are applied, the machine and attachments are stable and must notify the check in person of the plan.

Operators shall consider stump height and felling duration to maximise value retention of the tree they are falling.

### 10.9. Shovel Logging, Bunching, Heeling

No machine engaged in shovel logging, bunching and/or heeling shall operate outside the manufacturer's recommendations.

Machine doors shall be securely closed during operations.

No tree shall be pulled by the head unless the tree stays below cab height throughout the full manoeuvre.

The operator shall ensure only trees that are within the capabilities of the machine are handled.

Heeling of trees shall not occur:

- if the tree is a double leader or
- is visibly rotten, split or cracked or
- is being handled from the small end

### 10.10. Log Processing on Landing

Prior to any processing operations commencing at a new landing this must be signed off by the harvesting and roading contractor, a detailed operational plan including a layout diagram shall be put in place by the contractor.

This operational plan shall include the following:

- Identify extraction direction for trees onto the landing.
- Identify a safe area for skid workers to carry out chainsaw maintenance and fuelling activities.

- Identify safe areas for trimming, log making, processing, quality control, reprocessing and log marking so that isolation from any machinery occurs while these processes are taking place.
- At least one skid worker shall have radio contact with the loader operators at all times in a log making operation.
- When processing logs, skid workers should face operational machinery where practicable at all times.
- Trees laid out for trimming and/or log making shall have a safe working distance between them and be placed in a stable position (the use of bearers is optional).

- No person shall work or walk on log stacks.
- Trimming, log making, and quality control work shall be done without walking on stems.
- No trees, logs or debris shall be swung over, or in the direction of workers on the landing.
- Landings should be cleaned regularly to provide a reasonable safe working surface.

### 10.11. 5 Step Felling Procedure – Butting Off Windthrown Trees

There shall be two level 4 Fallers and one with unit standard 1270 windthrow.

#### **Site Assessment:**

- Identify and manage all significant hazards within your work area.
- Check the condition of the surrounding stand. Assess wind strength, remember little or no wind can topple over wind and wrenched trees.
- Work from behind the blow down, ensure no unstable trees are behind your work area.

#### **Individual Tree Assessment:**

- Identify the compression and tension side on the tree.
- Determine if any movement is likely and in what direction.
- Identify any natural safety barriers e.g. standing trees/spars, root plates etc. Or consider other options e.g. machinery, use of ropes etc. to minimise the risk.

- Select a safe cutting zone and safe retreat position.

*Question – Can I fall the tree safely, or do I need assistance?*

**Prepare Work Area and Escape Route:**

- Clear sufficient work area around the selected “cutting zone”.
- Prepare escape route on “safe side”, away from any anticipated movement, if possible.

**Use Correct Techniques for Each Situation:**

Cut compression side first:

- Monitor cut for movement or binding on the guide bar, the depth of this cut can identify the amount of tension in the stem.

Make tension release cut:

- Make this cut on the side of the lesser movement e.g. stem or stump side of compression cut.
- Adjust “step” based on the amount of anticipated tension.
- Use natural barriers as “safety zones”
- Just overlap cuts, no more!

*If an “angled” release cut is used, make sure it is clear of “compression cut”.*

**Observe from a Safe Position:**

- Be prepared for delayed stump and/or stem movement.
- Treat all severed root plates “unstable”.
- Assess each situation thoroughly before gathering up wedges, etc.



**10.12. Log Making and Value Recovery**

Where practicable pruned stems in a ground-based operation shall be marked at the first branch whorl with paint prior to delimiting.

Where operational constraints prevent this from occurring, such as a steep hauler face, all pruned stems shall be marked with paint at the hauler site after extraction.

Any person engaged in the marking of tree stems into log products shall hold the minimum unit standards (refer section 11.2).

A person may mark logs without meeting these requirements only when they are under direct and constant supervision by someone who does meet the criteria above. Documented training records shall be kept for a minimum of 80 full days before the person can mark logs unsupervised.



Any person engaged in the marking of 18m stems shall meet the relevant requirements under section 11.2.

No stem shall be marked, or any logs cut without a current cutting instruction on site.

No logs shall be marked by the Log Maker prior to the stem being flush trimmed.

Slovens shall only be cut off after it has been marked by the Log Maker.

All product grades identified on the cutting instruction shall be sought by the Log Maker.

Log Makers shall always maximise the value of the stem by working down from the highest priority grade on the cutting instruction.

Under no circumstances shall logs be downgraded for the purposes of order filling.

Changes to a cutting instruction shall only be made with written consent from the Woodflow Coordinator.

### 10.13. Breaking Out



The person in charge of a cable harvesting breaking out operation shall hold unit standards.

Any person in a cable harvesting operation shall have or be under training for the relevant unit standards.

Any person breaking out for a ground base machine shall have or be under direct supervision the relevant unit standards.

The person in charge of the breaking out operation shall be competent in the specific system being used i.e.; Grapple, MSP carriage extraction, highlead, shotgun / scab / north bend.

Establishing the minimum safe distance – safe distances for line changes and line retrieval are to be the greater of: Twice the length of the longest strop or 15m (ACOP 12.2.11 During outhaul all breaker outs shall be a minimum of 15m away from any moving rope). This distance includes the area around and between the backline blocks.

Written records of training and work experience in breaking out shall be maintained for each extraction system. This is to be regularly signed off by a competent person (e.g. nominated trainer or supervisor).

A breaker out in logging operations shall conform to the training clauses listed in the Pan Pac Forests “Felling Section”.

**Note:** In these clauses “faller” and “tree felling” shall be substituted with “breaker out” and “breaking out”.

In cable operations, workers at the break-out face shall move to a safe position when rigging is being returned. This shall be a distance of at least twice the length of the longest strop or 15m.

In cable operations when notifying the hauler operator of a long stropped log or tree (more than 3 metre from the butt or 5 metres from the head end), the breaker out in radio contact shall also state the distance from butt to point of choke of that log or tree.

Breaker-outs shall be aware of the machines’ capabilities (i.e. in relation to safe working load and drag size) and load or organise loading within that capability.

All haulers with skyline capability should be fitted with tension monitoring devices on the skyline which provide an accurate and live display of tensions. Hauler operators should be able to analyse readings and manage line tension / payloads.

*Note: These rules are in addition or further support the Approved Code of Practice for Safety and Health in Forest Operations.*

### 10.14. Tree Felling

*All felling operations with a residual risk of High must have the work plan and risk assessment approved by the GM Forests before commencing work.*

## Felling

Felling operations include: clearfall, production thinning, waste thinning, roadline salvage, windthrow salvage and eucalypt felling operations.

- All Fallers must be certified to fall in Pan Pac's forests.
- No Tree Faller will be instructed to fall in an area that contains risk greater than their competency.
- All completed tree falling audits will be discussed and signed off by the Faller, the Foreman and Auditor before the Auditor leaves the worksite.
- Any sub-standard tree falling techniques observed during normal operations or auditing will require the tree faller to be deemed "under supervision" and will remain so until a satisfactory audit is completed.
- All Fallers that haven't had a Pan Pac Forests certification audit done within 6 months will be moved into an inactive status and will not be able to fall until an audit has been completed.
- A daily felling plan must be documented and signed daily.
- Fallers must check in every 40 minutes. The Faller shall notify the check in person when falling has ceased.
- Every block must be walked to identify and document any high-risk areas and how to manage them.
- There will be a competent / skilled tree faller observing and taking an active part in the operation when trees are being directionally felled into other standing trees. The only exception to this is during thinning operations.

All fallers working in Pan Pac Forests tree felling operations are required to hold the relevant unit standards.

Fallers who are not holders of the required Tree Felling unit standards for the operation being worked, shall be "under training".

A faller under training will be classified into one of the following categories:

### *Requires Constant Supervision:*

- Constant supervision is the one-to-one training of the faller in the relevant operation, by the nominated trainer until the unit standard training record has been verified as able to do task under training.

### *Requires Periodic Supervision:*

- Fallers who have been assessed as able to do the task under training can work on their own in the relevant operation but require periodic supervision.

Those responsible for the supervision of fallers under training shall:

- Inspect the work area of fallers under training at the start of each day.
- Check for hazards with the trainee faller.
- Provide instruction on felling plan and ensure compliance.
- Make a minimum of 2 periodic checks during the day, not including start of day inspection, (for those requiring "periodic supervision").
- Ensure detailed training and supervision records of training are kept.
- From the date all performance criteria are verified as able to do the task under training, the faller shall complete a minimum period of 80 days tree falling under periodic supervision before being able to work on their own, unsupervised.

*Note: The relevant unit standards can be awarded within this period, but periodic supervision is to continue for the specified 80 days.*

Any faller who holds the required unit standards but who has not worked as a faller for 6 months or more shall be classified as a faller "under training" requiring periodic supervision, until their competency has been validated against the training standard by a nominated trainer or person supervising felling.

The minimum qualification for a nominated trainer or person supervising a trainee faller shall be a registered trainer or a senior faller.

### **Falling Within Two Tree Lengths**

When it is necessary to fall with other people present, the following shall be strictly adhered to:

- Any person within two tree lengths of a tree being felled shall be under the direct control of the faller unless that person is training the faller.
- Only the nominated faller is allowed to make the felling cuts.
- Mobile plant with appropriate protective structures may work closer than two tree lengths but not closer than one tree length of felling operations unless they are directly assisting in the tree felling operation.
- Under no circumstances are chainsaws other than the one being used by the nominated faller to be operating during falling. Buddy cutting is not permitted.
- The observer(s) shall be behind the tree being felled and up the escape route as the felling cuts are being made. This does not exclude recognised trainers or other authorised people from inspecting scarf cuts before the start of the backcut.
- The observer shall have direct line of sight with the faller and an unobstructed view of the top of the tree being felled.
- As a final check the faller shall ensure that any other people present are in a safe position and are complying with the above rules before the backcut is executed.

### **Bringing Down Hang-ups**

- A hang-up is any tree or substantial part of a tree caught in or against another, thus preventing it from falling to the ground.
- Where practicable all hang-ups shall be brought to the ground using machine assistance.
- When using a machine to bring down a hang-up, no person shall be within a two-tree-length radius of the hang-up until it is brought to the ground unless they are in a protective cab.
- If a hang-up situation involves more than one tree and machinery is being used, then each tree shall be brought to the ground individually. No other tree may be attached to the main rope or strops while the hang-up is being brought down.

- Where it is not practicable to use a machine to bring down a hang-up, then driving out a hang-up with one other tree is allowed. Where more than one tree is required to bring the hang-up to the ground, a qualified level 4 faller or other suitably experienced worker shall be brought on to the site to help plan and observe the drive.

### **Roadside Felling (includes railway lines)**

#### **Forest and Private Roads**

When falling within two tree lengths of a road or in a situation that would allow trees or debris to land on a road then the following shall apply:

- Close the road as per Road Signage (Fig 6) Closing of Forest or Private Roads. If this is not appropriate, then:
- Set up temporary traffic control, as per Road Signage (Fig 4 or 5) Temporary Road Closure – Forest and Private Roads.

#### **Public Roads**

- These are controlled by Transit NZ or Local Territorial Authorities. Temporary traffic control for roadside felling shall be in accordance with the appropriate code or guidelines.
- Ask your Coordinator before starting any operation where this may apply.

### **Windthrow Salvage**



- Any faller that is required to work in a windthrow salvage operation must hold the qualifications as detailed above, as well as the following:
  - Unit 28561 – Fell trees in a commercial forest harvesting operation.
  - Unit 1270 - Windthrow Salvage

Windthrow salvage fallers require a second person who holds unit 28561 to be with them at all times when salvaging windthrow trees. A competency validation by a nominated trainer or person supervising felling if they have not worked within windthrow operations within the last 6 months. Fallers who do not hold the above units shall work within the “under training requirements”.

28561 – “Plan and Fell Trees Using Advanced Techniques Under a Commercial Forest Harvesting Operation”.

A thorough risk assessment shall be completed, and appropriate control measures implemented by the Pan Pac Forests Coordinator, where the windthrow occurs and any subsequent windthrow could impact on a third party, such as near:

- The forest boundary
- A public road
- Waterways
- Near powerlines or other structures

### 10.15. Merchantable Wood

Merchantable wood in the cutover can be described as a sound stem (not branch) with a minimum diameter of 10cm at the small end and a minimum length of 2.4m.

Merchantable wood on the landing can be described as a sound stem (not branch) with a minimum diameter of 10cm at the small end and a minimum length of 0.8 metres.

Wagner waste assessments shall be completed by Harvesting Coordinators throughout the time the harvest crew is working in a setting. The minimum volume of merchantable wood remaining on the cutover shall be no more than 3% of the Total Recoverable Volume (e.g. TRV 750m<sup>3</sup>/ha = 22.5m<sup>3</sup>/ha).

### 10.16. Wire Rope and Equipment Storage

Discarded wire rope and equipment that is not required in future operations must be removed from the landing or work site within 5 working days of operations being completed.

Wire rope and operational equipment that is required in future operations must be stored in a designated site.

Designated sites require approval by the appropriate Coordinator.

## 11. Log Truck Loading

Refer to section 13.1 for information on log truck loading.

moving with battery operated drills and any spare batteries or drills required.

## 12. Forestry

This work has a large impact on the Health, Safety and Environment and value of the crop at maturity.



As a highly manual workforce considerations for protection of workers throughout the workday is important. Workers must have additional PPE to protect from sun, wind, heat and rain. Workwear must also consider the workers need to carry water and food with them throughout the day.

Tailgates: Low risk Silviculture work must at a minimum hold a full team tailgate at the beginning of each block as circumstances change or new hazards are identified and where the crews are working alongside other contractors.

### 12.1. Establishment

Includes land preparation, planting and releasing. The Forestry cycle is a long term commitment and it is better to design out any issues before planting begins.

When considering the on-going land use feedback from the following parties should be considered;

- Iwi/Owner
- Harvest team
- Environmental
- Health & Safety

Specific requirements that apply are;

- Wetlands & water sources - 5 meter setback
- Waterways <3 meters – 5 meter set back
- Waterways >3 meters – 10 meter set back
- Public Roads – 2 tree length set back
- Powerlines minimum – 4 meter set back, above and beside (measured by mature tree height)

A good resource for identifying some Wetlands is:



Pan Pac Standards:

For Wetlands and water sources is to apply a 10 m setback which will be registered in the GIS mapping system

## 12.2. Aerial Spraying

Aerial Spraying or aerial drops have the potential to impact our neighbours, employees and contractors if not strictly controlled.

Not all spraying or drops are controlled by Pan Pac, they may include nearby Forest Management companies, DOC or other land management organisations. Where this is the case PFP co-ordinators will ensure that notification is forwarded to all impacted crews or stakeholders (such as Mountain Biking, Hunting Clubs)

Key concerns are;

- Spray or drop drift (persons/crop)
  - Weather
  - Servicing the helicopter
  - Elevated items in the helicopter path
- No drift of the drop or spray should occur over populated areas, houses, crew or other. Prior to beginning operations;
- Visit or letter drop all houses.
  - Visit any crews (ask them to withdraw from the area or remain under cover).
  - Fly the area (look for unknowns, entrants etc.).
  - Check the programmed pattern.
  - Ensure the pattern includes at a minimum 100-300m of buffer zone.
  - Spray during weekends where able.

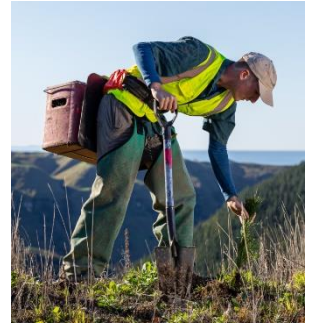
Always hold the SDSs with you and advise any crews etc.. the mix that is being used.

Where impacted crews are pruners, planters then consideration should be given to moving them to another block as persons on foot should not return to the spray area until such time as the spray has dried and skin contact should be avoided.

## 12.3. Planting

Tree planters are vulnerable to ground conditions and use of equipment.

Avoid working directly below or above another worker on slopes.



When working near other operations the daily planting plan / tailgate shall include segregation and minimum distances from others.

Where nearby operations are harvesting a minimum 2 tree lengths must be imposed.

## 12.4. Releasing and E-thinning

All contractors and personnel who take part in spot spraying and/or releasing must be trained in the task SOP and have a general chemical



awareness training for (at a minimum) the hazardous substances they are handling.

For transport or decanting the person in charge must hold a Growsafe Certification as per HBRC requirements.

### When transporting Hazardous Substances;

- Check the maximum transport volumes and transport under the maximum amount.
  - Ensure substances are separated from passenger compartments and locked (they must be secured from unauthorised access).
- PPE suitable for the hazardous substance must be supplied and used during spraying or releasing. When E-Thinning PPE should include the use of a suitable pouch for moving with battery operated drills and any spare batteries or drills required.

Residual spray must not be transported in back packs. At the end of the day all left over spray should be tipped into a labelled residual spray container for safe transport or disposal.

## 12.5. Pruning

Contractors will not undertake ultra-high pruning.

The most common causes of operator harm are cuts from trees/undergrowth, falling.

The largest number of falls are as a result of debris underfoot however falls from height can occur when pruning. The most common causes of this include;

- Equipment breakage causing the operator to overbalance.
- Ladder slipping from the tree.
- Steps, grips and platforms detaching from the tree.
- Operator slipping off the ladder or step.
- Poor technique resulting in overbalancing.

### Ladders – lean to

The ladder shall be specifically designed for commercial forestry. Where a lean-to ladder is used it shall:

- Have a working platform of at least 400mm wide by 200mm deep with a non-slip surface and have a “V” shape on one side, which will fit snugly against the tree trunk.
- Have points at the base of the stiles to improve stability in the ground.
- Have a chain located between the first and third rung from the top of the ladder which can be secured around the tree where stabilising is a problem.
- Have the serial number stamped on the ladder for audit purposes.



Ladder and step failures are two major causes of accidents in both manual and chainsaw pruning, so ladders and steps must be regularly inspected and maintained.

## 12.6. Thinning-to-Waste

Refer to Harvesting section manual felling (10).

All manual fellers will be observed and certified by an independent assessor provided by PFPF each 6 months.



PCBUs are required to ensure;

- All new but experienced fellers are booked for assessment prior to completing the first week.
- All fellers in training are supervised and assessed
- All experienced fellers are booked for their assessments on time.



No felling is to be undertaken unless there are two fellers present with RT communication established.

## 12.7. Working with Power Lines or Road Side Felling

Refer to Harvesting sections (10).

## 12.8. Production Thinning

Refer to Harvesting sections (10).

## 13. Training & Induction

### 13.1. New Workers Induction

Refer to section 7.14 Tree Felling for specific harvesting tree felling training.

All Contractors shall ensure that new workers undertake induction training on their first day of employment and before any work is started. The following areas shall be covered as a minimum:

- Pan Pac Forest Operations Manual
- Contractor’s Health and Safety Management System
- Alcohol and other drugs procedure
- *Approved Code of Practice for S&H in Forest Operations and relevant Worksafe best practice guidelines*
- Emergency Procedures
- Information on the risk hazards and their controls in the workplace.
- Required safety equipment e.g. PPE
- National Environmental Standards (NES-CF)
- Specifications and Prescriptions
- Log truck loading (for log truck drivers).

Pan Pac’s inductions must be completed **before** entering a Pan Pac operation:

- Forest contractor induction
- Pan Pac site induction (if applicable)
- 3PY/Log Yard (if applicable)

It is the responsibility of the Contractor to ensure new workers understand safety protocols before starting work.

New workers shall notify their employer if they have any medical conditions which may affect the safety or health of themselves or others at work. Any such condition should be recorded along with how it should be dealt with if it arises e.g., hepatitis, HIV, epilepsy, diabetes, heart problems, allergies, or blood pressure problems. Any person who requires medication for conditions likely to affect their wellbeing or safety at work, shall notify their employer or supervisor.

Written records of induction shall be kept. They shall be signed and dated by each worker.

Any contractor or worker of a contractor who needs to carry out any work at the Pan Pac Mill at Whirinaki shall be inducted before going onto the site. Induction can be arranged by contacting the person in charge of the area where the work will take place.

### 13.2. Minimum Qualifications for Pan Pac Forests Operations

#### GENERAL TRAINING

Everyone working in Pan Pac Forests operations shall be qualified, or undergoing training, for the work they are doing.

Contractors shall maintain written records of all training and qualifications for themselves and their workers.

Everyone working in Pan Pac Forests operations shall achieve (or be ready for assessment in) the following unit standards within the timeframes shown below:

#### *Within three months of commencing work*

Unit Std	Description
6400**	Manage first aid in an emergency
6401**	Provide first aid
6042**	Provide resuscitation (level 2)
17769	Demonstrate knowledge of general health, safety, and environmental requirements in forestry
17772	Demonstrate knowledge of environmental requirements in forest operations
22994^	Demonstrate knowledge of factors that affect the performance of forestry workers (except cartage)
31664	Demonstrate knowledge of general health, safety, and basic operational requirements for log truck drivers

*Note: All operational activities are required to have at least one current certified first aider on site at all times (i.e., a logging crew at all times is to have at least one qualified and current first aid certificate holder on site).*

*17772 - "Demonstrate knowledge of environmental requirements in forest operations" (applies to all machine operators)*

*Note: Units 13108/13109 have been replaced by 22994^ in the NZQA framework but remain valid for this purpose.*

Any worker engaged in transporting other personnel to and from work shall achieve (or be ready for assessment in) the following unit standards within the timeframe below:

### Within three months of commencing that work

Unit Std	Description
17676	Carry out pre-drive vehicle check on a light motor vehicle, and start and shut down the vehicle
3466	Apply risk reduction techniques while driving
3469	Apply control in driving a light motor vehicle
17678	Drive a light motor vehicle on unsealed road surfaces

## ENVIRONMENTAL TRAINING

### Within six months of commencing work

All personnel that make environmental decisions must achieve the relevant unit standards as listed in the table below, as a minimum.

Minimum Qualifications	
Who	NZQA Unit Standard
Pan Pac Engineering Planning Staff	6963
Pan Pac Harvesting Coordinators	6964
Pan Pac Forestry Coordinators	6963
Pan Pac Roading Contractors	
Logging Contractors/ Foremen	6964
Forestry Contractors/ Foremen	6963
Machine Operators	
Wood Purchases & Distribution Coordinators	

**Note:**

6963 - "Plan forestry operations to meet environmental guidelines."

6964 - "Applying environmental management to harvesting trees"

### Within three months of commencing work

#### Chainsaw

All chainsaw operators shall hold the following or be under training for chainsaw maintenance and operating unit standards:

Unit Std	Description
6916	Demonstrate knowledge of the rules relating to chainsaw use
6917	Demonstrate basic chainsaw operation

Additional Harvesting chainsaw operator unit standards required are:

Unit Std	Description
6924	Process tree stems on a landing
23411	Operate a chainsaw and carry out basic chainsaw maintenance in a commercial forestry situation.

Additional Forestry chainsaw operator unit standards required are:

Unit Std	Description
1247	Thin plantation trees under 200mm stump diameter, to waste
6972	Prune plantation trees with a chainsaw from off the ground
6973	Prune plantation trees with a chainsaw from the ground
23411	Operate a chainsaw and carry out basic chainsaw maintenance in commercial forestry situation.

## HARVESTING

All machine operators working in Pan Pac forests shall hold the unit standard for the machine they are operating or be under documented training. [Approved Code of Practice for Safety and Health in Forest Operations – Mobile plant shall apply.](#)

All operators working in Pan Pac forests shall hold or be under training for:

Unit Std	Description
6934	Operate skidder in a forestry situation
6935	Operate an excavator-based track machine in a forest situation
6936	Operator tracked machine in a forestry situation

## Mechanised Harvesting

The mechanised harvesting operator shall hold the following units, or be under supervision by someone who holds the following units and has experience in the steep slope machine/system being used:

Unit Std	Description
6941	Demonstrate knowledge of forest mechanised harvesting and processing.
6945	Fell trees using a mechanised harvesting machine
24590	Operate a self-levelling machine in a forestry situation
30587	Shovel and bunch tree stems or logs.

## Mechanised Processing

All machine operators shall hold the unit standards or be under training for:

Unit Std	Description
6944	Make logs using a mechanised processing machine.
6941	Demonstrate knowledge of forest mechanised harvesting and processing.

## Winch Assisted Steep Slope

Persons moving the winch shall have their competency assessed against unit standards:

Unit Std	Description
30583	Establish an anchor for a cable assisted forestry machine

The winch assisted felling operator should be working towards the following units:

Unit Std	Description
30584	DKO cable assisted forestry machine operation
30585	Operate a cable assisted forestry machine
30586	Manage a cable assisted forestry machine

## Breaking Out

Head breaking out for cable harvesting must have:

Unit Std	Description
1258	Co-ordinate breaking out for cable harvesting

Trainee breaker outs for cable harvesting must be under training for:

Unit Std	Description
24567	Breaker out for cable harvesting operations

Any person carrying out line shifts shall hold or be under training for:

Unit Std	Description
1269	Plan, prepare for and carry out line shifts in a cable harvesting operation
17771	Carry out line shifts in a cable harvesting operation using mobile tail hold

Any person breaking out for ground-based machine shall hold or be under training for:

Unit Std	Description
1256	Demonstrate knowledge for ground-based log extraction
6939	Break out ground-based forest harvesting operations

## Manual Tree Felling – Harvesting

All fallers must be certified BEFORE manually felling trees and shall hold unit standards:

Unit Std	Description
17763	Demonstrate knowledge of tree felling
28560	Fell trees in a commercial forest harvesting operation
28561	Plan and fell trees using advanced techniques in a commercial forest harvesting operation

## Machine Assisted Tree Felling

Any fallers carrying out machine assisted tree felling shall hold unit standards:

Unit Std	Description
24569	Fell trees using machine pushing assistance
24570	Fell trees using machine pulling assistance

## Log Making

All persons engaged in log making shall hold or be under training for:

Unit Std	Description
1252	Demonstrate knowledge of log making
1254	Mark logs to optimise value

## Log Quality Control

All persons engaged in log quality control shall hold or be under training for:

Unit Std	Description
25787	Carry out quality control of logs on a landing

## FORESTRY

All silviculture contractors and staff shall hold unit standard:

Unit Std	Description
3285	Protection of personal safety at vegetation fires

## Establishment

All persons engaged in establishment operations shall currently hold or be under training for:

Unit Std	Description
1234	Plant plantation trees
1236	Demonstrate knowledge of releasing plantation trees and the use of agrichemicals
23000	Demonstrate forestry foundation skills under supervision for plantation forest establishment

*Note: Unit 1232 has been replaced by 23000*

## Pruning

All persons engaged in pruning shall currently hold or be under training for:

Unit Std	Description
1243	Prune plantation trees from ground
6951 *	Demonstrate knowledge of selecting plantation trees
6952 **	Selection plantation trees for a forest crop
22998	Demonstrate forestry foundation skills under supervision for pruning plantation trees

*Note: Unit 1243 is recommended but not a pre-requisite for 1245.*

*\* Unit 6951 will expire 31/12/2022.*

*\*\* Unit 6952 will expire 31/12/2024.*

All persons engaged in lopper pruning from off the ground shall currently hold or be under training for:



Unit Std	Description
1245	Prune plantation trees from off the ground

All persons engaged in chainsaw pruning from the ground (pre-requisites 6951, 6952, 22998, 1243) shall currently hold or be under training for:

Unit Std	Description
6973	Prune plantation trees with a chainsaw from the ground

All persons engaged in chainsaw pruning from off the ground (pre-requisites 22998, 1243, 1245, 6951, 6952, 6973) shall currently hold or be under training for:

Unit Std	Description
6972	Prune plantation trees with a chainsaw from off the ground

### Thin-to-waste

All persons engaged in TTW shall currently hold or be under training for:

Unit Std	Description
6950	Demonstrate knowledge of thinning plantation trees and equipment use
6951 *	Demonstrate knowledge of selecting plantation trees
17763	Demonstrate knowledge of tree felling
17766	Fell trees safely using a chainsaw
17767	Thin plantation trees, over 200mm stump diameter, to waste

### CARTAGE

All persons engaged in log cartage shall currently hold or be under training for:

Unit Std	Description
1737	Drive a heavy vehicle on unsealed road surfaces
1763	Transport logs by heavy motor vehicle
Alternative	National Certificate in Transportation of Logs by Road

These unit standards follow the Log Transport Safety Council (LSTC) Pathway to Success Silver Standard.

## 14. Fire



On 30 June 2017 the Forest and Rural Fires Act and associated regulations was repealed and replaced by the Fire and Emergency Act 2017. This new Act disestablished the Bay Forests Rural Fire Authority and District, placing the legislative responsibility relating to fire and emergencies on a new organisation Fire and Emergency NZ (FENZ).

Although the legislative responsibility disestablished all Rural Fire District boundaries the commercial risk of losing forest assets to fire remains with the forest owner. To assist forest owners, manage fire risk in the interim the old Bay Forests Rural Fire District has become the Bay Forests Rural Fire Zone (BFRFZ). Most of Pan Pac's Hawkes Bay's exotic forest estate is within this zone. Only the Wairoa View Block northwest of Wairoa is outside the zone.

Under the Forest and Rural Fires Act the cost of extinguishing a fire was the responsibility of the landowner. The Fire and Emergency Act 2017 removes this cost from the landowner with the cost being met by FENZ. This cost is funded by the fire levy portion of insurance.

Within its boundaries, the BFRFZ provides the format for the forest industry to work in conjunction with FENZ, in preventing and suppressing wildfire.

## 13.1 Fire Prevention

The risk of fire increases during periods of warm, dry weather and intermittent rain, due to;



- Moisture promotes microbial growth, enhancing the oxidation process which advances composting conditions (including heat) in the pile
- Rain can create 'tunnels' or debris movement which breaches of the dirt capping allowing air to enter the pile

Common causes of Forest Fires in slash piles are

- The size of material in the pile appears to have a role, with the presence of fine material being key to increasing the risk of spontaneous combustion.
- Sufficient green plant material in the pile to initiate the heat-generating decomposition process.
- If soil is mixed into the pile, which provides bacteria that can promote the decomposition process. Soil also promotes prolonged smouldering and restricts air movement in a similar manner to excess fines in the pile (inhibiting ventilation).
- Pile moisture content is important, with moisture promoting microbial growth and enhancing the oxidation processes.
- Large pile size, especially at depth/heights greater than 3metres.
- Modelling from the Scion database of known forestry spontaneous combustion events indicates that fires tend to occur under moderate fire conditions, rather than extreme conditions.
- Fires tend to occur following rainfall and high humidity.
- Foreign objects (e.g. metal or oily rags) can act as a catalyst for ignition.

For this reason Pan Pac have Slash Management practises aimed at preventing the most common causes. Please ensure you have reviewed the practises contained in section 10 Harvesting Operations.

## 13.2 Fire Requirements

All provisions of the Hawkes Bay Rural Fire Plan, which includes the Bay Forests Zone shall be adhered to. Full copies of the Fire Plan are held by each forestry coordinator at each forest HQ and at the Pan Pac Forests Office.

Smoking – Refer to Forestry Operations Fire Danger Codes which is included in the Fire Plan and available as a booklet. From code blue and higher smoking is only permitted on roadsides, skid tracks, or landings clear of vegetation or in (approved) contained areas.

High Fire Risk – Restrictions on activities or operations may be imposed.

During the fire season and during periods of high, very high or extreme fire danger designated firefighting crews shall carry approved helmets and fire overalls to and from work in the crew vehicle.

Lighting of Fires – The lighting of fires in the open is prohibited unless a permit is obtained. It is an offence to throw, leave or drop any burning or smouldering substance. Permits are not required for outdoor cooking with LPG equipment.

Spark Arrestors - All chainsaws, motorbikes, and any other motor-powered equipment, e.g., welders etc., shall be fitted with efficient spark arrestors or turbo charger.

Any vehicle or motor-powered machine within Pan Pac Forests may at any time be subjected to a spark arrestor test.

Welding & Gas Cutting - A permit shall be obtained from a FENZ assessor before any welding or gas cutting is carried out. At all times the hot work area shall be on bare soil, have adequate firefighting equipment available and if necessary, have an observer.

Fire Fighting Requirements for Forest Operations Crews:

Crews of 5 people or less - 1 knapsack pump, Rega type, 2 long handled shovels and 60 litres of water.

Crews of 6 people or more - 2 knapsack pumps, Rega type, 1 long handled shovel per 2 people and 100 litres of water.

Each crew member shall have boots approved for firefighting, a pair of approved fire-resistant overalls with high visibility reflector strips and a safety helmet with a neck flap. A helmet with a chin strap is required when working in the vicinity of an aircraft.

Chainsaw operators - personal fire extinguishers.

Skidders, bulldozers, graders, and excavators - each machine shall carry 1 long handled shovel per machine and either a 10-litre water extinguisher and 1.5kg dry powder extinguisher or a 9-litre foam extinguisher.

Trucks – each vehicle shall carry a minimum 1.5kg dry powder extinguisher and 1 long handled shovel.

All vehicles shall be fitted with a minimum 0.9kg and preferably a 1.5kg dry powder fire extinguisher and 1 long handled shovel.

Excavator loaders and haulers - each machine shall carry either a minimum 1.5kg dry powder extinguisher or a 9-litre foam extinguisher.

Fuel dumps shall have access to either 2 x 1.5kg dry powder extinguishers or 2 x 9 litre foam extinguishers.



Reporting of Fires – Fires shall be reported by phoning 111.

If phone reception is not available report fire by radio on Ops Mill Pan Pac Dispatch and Emergency channel and ask the recipient to phone 111 and pass information on.

Report fire to your Pan Pac Forests Coordinator at the same time or immediately after your emergency call to 111 or Ops Mill Pan Pac Dispatch and Emergency channel.

All fires within Pan Pac Forest areas must be reported to a Coordinator or a Rural Fire Officer.

Reporting at the Fire – In the event of a fire anyone arriving or leaving the fire ground shall identify and report to the Incident Control Point as required by the Bay Forests Rural Fire District Fire Plan.

In the event of a Fire – Small fire:

- Extinguish immediately.
- Report to Pan Pac Forests

#### **Larger Fire:**

- Notify Pan Pac Forests
- Do not enter fire line without due consideration for safety.
- Extinguish, control, or minimise the extent of the fire with whatever resources you have available.
- If the fire is beyond controlling with available resources, evacuate crew to a safe area and await further instructions. Remain alert to changing conditions.
- At all times ensure that all crew members are accounted for.
- Maintain R/T or telephone contact.

### **13.3 Fire Procedures**

#### **Restricted Season**

A permit is required for all open-air fires including welding 365 days a year.

#### **Permits**

Can be obtained from:

[www.checkitsalright.nz](http://www.checkitsalright.nz) or phone 0800 658 628

#### **Actual Fires**

Utilise the resources available to you and conduct an initial attack to minimise the spread of the fire until support arrives. In this situation as with any firefighting, remember “Safety First” and the “Standard Vegetation Fire Orders”



### **Safety at Fires**

- Personnel safety is the first priority
- Approved fire-resistant overalls have spare warm woollen clothing available
- Maintain fluid intake
- Pace yourself and beware of fatigue
- Standard vegetation fire orders
- Keep informed of weather conditions
- Know what your fire is doing at all times
- Base all actions on current and predicted fire behaviour of the fire
- Escape routes for everyone and make them known
- Post a lookout where there is possible danger
- Be alert, keep calm, think clearly and act decisively
- Always maintain good communications
- Give clear instructions and make sure they are understood
- Maintain control of your personnel at all times
- Fight the fire aggressively, but provide safety first

### **Structural Fires (including vehicles)**

If FENZ is already in attendance assist by following their instructions implicitly.

If FENZ is not in attendance your object is to secure the surrounding area i.e. extinguish spot fires in neighbouring vegetation and protect adjacent threatened structures with the application of Class A foam. Ensure you leave parking space for any fire appliance. If in the opinion of the Initial Attack Boss, the best way to protect the site or to save a portion of the structure, is a direct attack on the structure fire, then by all means do so but – the attack must only be carried out from the outside of the structure, with a 1.0% foam mix applied through aspirated or fog type branch (beware, jet application of water may relay electricity to the hose operator).

Be aware of the following hazards:

- Electricity – treat all situations as “live” until confirmed inactive by the appropriate Power Authority.
- Fuels – Explosive potential. Keep clear.
- Hazardous substances – chemicals and furnishings can produce toxic fumes. Keep out of the smoke

- Power wire breakage resulting in vegetation fire. Treat all wires as “live” until confirmed inactive by the appropriate authority. No mop up activity to be carried out until this occurs. In the interim contain the spread of the fire
- Training
- All silviculture contractors and staff shall hold unit standard 3285.
- Selected staff and contract personnel will be encouraged to obtain unit standards at all levels of the fire command structure.

## **15. Cartage Operations**

### **Risk Assessment**

Log Cartage operators and drivers work under the standard practises of the Log Transport Safety Council and must adhere to these requirements at all times.

As such, Log Cartage operators and drivers (except for Self Loaders) are exempt from the requirement to complete a site specific hazard identification and risk assessment or tailgate as per the Critical Rules.

### **Passengers**

Any carriage of passengers in trucks shall be notified to Base by RT or phone.

Passengers shall comply with all Pan Pac Forests regulations and are always the responsibility of the driver.



### **Urban Road Restrictions**

The standard Mill to Port route will be via the Expressway and Prebensen Drive.

### **RT Communication**

Truck drivers shall advise dispatch, as early as practicable, of:

- Drivers nearing the end of their rostered day shall call dispatch with their approximate ETA, final destination and available legal hours left for driving.
- Nightshift trucks nearing the end of their day shall call dispatch with their ETA and final destination ready for nightshift. Any alterations in this time shall be reported to dispatch.
- If backload crew confirmation is required, call dispatch from an area that enables them the most flexibility in the backload crew. Calling from inside the forest is too late.

### **Vehicle Repairs and Maintenance**

Truck drivers shall advise dispatch, as early as practicable, of any time that they are off the road in the usual working day for repairs and maintenance.

Truck drivers shall give dispatch an approximate time to be back on the road and notify dispatch of any changes to this time.

### **Drivers**

The principal contractor shall advise dispatch if there is any change of driver on their truck other than the usual day / night swap. This includes the use of relief drivers for a day.

### **Unloading**

At all times, the specific rules and regulations of the unloading point shall be followed:

#### **Whirinaki Mill**

Do not leave your cab in the log yard unless absolutely necessary. In such cases, call your intentions to the Log Yard Loader prior to exiting the cab.

Give way to empty trucks at all times when approaching the weighbridge.

Loads shall only be unchained in the Unchaining Bay.

The speed restrictions on site shall be followed.

If the ISO e-docket integration is not working call up the log grade, felling date and logging crew to the Log Yard Loader on PPF Log Yard channel.

### **Hazard Identification**

All drivers shall identify and report hazards within the log transport operations. Hazard ID forms shall be filled in and handed to dispatch.

### **Contamination**

Drivers shall ensure that no foreign material enters the mill processing plants, via the logging truck or the load. Drivers are responsible for the disposal of their rubbish within these guidelines.

### **Damage / Maintenance Requirements**

Any damage to Pan Pac Forests property or equipment that requires maintenance shall be reported to dispatch.

### **Dockets**

Log Cartage Dockets:

- Truck drivers are responsible for their own dockets using the Logrithm edocket app. This is normally received from the loader driver if coming from a Pan Pac crew. Drivers shall check the grade, customer, destination, and truck details are correct before leaving the skid.
- Any paper docket shall be handed in to Security on the day the load is delivered with the appropriate rate qualifier (or backload crew) written on the docket if required.
- Loads dropped at the mill to be later reloaded onto the same truck shall be clearly marked with the truck number and dispatch shall be notified.

### **Trucking Signage**

Drivers shall display the Logtruck.co.nz sign on the rear of their trailer as per the LTSC specification. These are to be kept clean, in good order so that they can be clearly seen by following motorists.

### **Self-Loaders / Loader Driving**

Crane trucks working on their own shall establish and maintain radio contact with another competent person. The truck driver shall notify the other person when loading commences and ceases.

- Truck drivers loading themselves shall not commence loading operations until there are two competent people (be it a passenger / another driver / or loader operator) on the skid at the same time as any loading operation they are undertaking.
- There shall be a competent operator at the controls of the loader throughout the entire process of attaching a trailer to the truck.
- Truck drivers loading themselves shall hold the appropriate unit standard or be under training for them.
- Truck drivers will provide Pan Pac with evidence of approval to use the loader for self-loading operations to be uploaded into Beakon.

### Stem Units



Stem units turning into the mill loaded from the North shall, as an added precaution, only turn when there is no traffic passing them on the left southbound lane.

### Load Audits

On a random basis Pan Pac Security providers may perform audits on trucks leaving the site. The driver will move his truck to the wayside and present his dispatch docket for checking. All packet identification must be made clearly visible to the checker.

### Truck Routes

All Pan Pac Forests logging trucks must use the Waitara Road/Pohokura Rd route when travelling to and from Pohokura Forest. No logging trucks shall travel on the section of Pohokura Road towards Tutira from Jeph Everett Road.

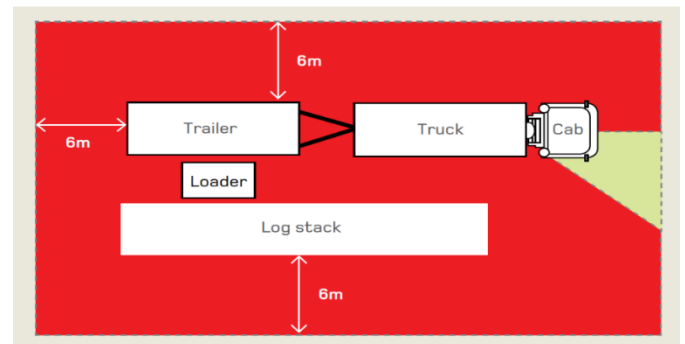
A satisfactory system of communication and procedures shall be arranged between the loader operator and truck driver before loading commences.

While unloading empty trailers the driver shall be forward of the cab frame.

When turning the drawbar, trailers shall be suspended as close to the ground as practicable. When the trailer is being hooked into the tow coupling the driver is to be in a position where the loader operator has vision of both the drawbar and the tow coupling.

The truck driver shall be aware of the loader operator activity at all times and be forward of the cab frame during the entire loading process.

Wherever possible, side loading should be the method used.



Under no circumstances are logs to be swung over the truck cab.

If the truck driver needs to go into the loading zone for any reason (e.g. adjust equipment, make repairs, inspect load etc), he shall only do so with the loader operator's approval. No loading activity shall occur while the truck driver is in the loading zone.

Chaining can only occur after all loading is completed.



Logs will be loaded and secured in accordance with the LTSC Log Load Securing Requirements. The use of self tensioning load security systems such as air-winches should also follow LTSC guidelines. **If trucks do not have these fitted, then all loads must be belted.**

All operators shall use a “lock on” non-explosive type twitch extension bar for securing load-binding twitches.

Operators must adhere to the following safe work practices for securing twitch bars:

Always lock the twitch tensioner bar handle securely into the correct position on the twitch before applying downward pressure.

Always check that the twitch tensioner bar handle is at the position of 3 ‘o’clock before securing the belly chain into place. Loosen another link on the chain if required.

Make sure the chain is free of kinks, rolling flick it to check it’s not caught on chain hangers or anchor points.

Maintain good footing while tensioning the twitch. Ensure your face/head remains clear of the area where the bar or handle moves. Keep your feet on the ground.

Only use your shoulder weight, **never use your full body weight!**

Always maintain a firm grip on the twitch bar. Wear gloves for added grip and protection.

The truck driver has full responsibility for his load and shall observe the whole loading procedure to ensure the load complies with all safety and statutory requirements.

Log delivery dockets will only be made available to the truck driver on completion of the loading activities so there is a clear break between truck loading and other activities.

Truck drivers are responsible for their particulars on the docket being correct and for the correct counting of log numbers for loads that require log counts.

Log truck drivers shall sign the log delivery docket.

Recheck all chains, twitches, belly chains before entering public roads or sooner if over 10km from the skid.

### Layout of Trailer Shorts (3.6m or greater)

Where possible configure logs with small ends facing away from centre of trailer if the slope is too excessive lay some logs with small ends facing inwards against stanchions.

Export logs are measured (i.e. scaling) at small end upon arrival at Port. For logs 3.6 metres or greater it is preferable that trailer units are loaded so that the small ends can be accessed.

#### *Option 1 – All small ends away from centre of trailer*



#### *Option 2 – A few small ends facing towards centre against stanchions to “level load”*



#### *Option 2 – Front View – a few small ends facing towards centre placed against stanchions to “level” load. Where space is limited personnel can reach in and measure logs on outside edges.*



#### *2-3 logs small ends facing inwards*

Of the two options there is no preferred layout, the main points being:

- That load does not have excessive slope.
- Small ends can be accessed for scaling small ends.

There are no sharp ends (slovens) and no excessive mud on the ends of logs.

## 16. Yards

### 16.1. Log Yard

No entry is allowed into the Log Yard without a radio telephone (R/T), programmed with the PPF Log Yard channel or alternatively if operations are notified by Security. Under all circumstances, any access that may create an upset condition (maintenance activities, etc.) must be discussed and approved by Log Yard operations.

PPE shall be worn at all times when outside of a vehicle.

All vehicles and mobile plant shall call the Log Yard Operators or Log Yard Manager on the PPF Log Yard channel to seek permission to enter and inform them of their planned movements **before** they enter the Log Yard. Be specific "Truck/Loader/Ute wishing to enter at Middle Road, heading through to weighbridge, C Deck, Bark Mill, etc."

Any person on foot in the Log Yard (includes vehicle drivers who intend leaving their vehicles) shall inform the Log Yard Operators by R/T of their movements. This is to include any movement from one area to another.

All vehicle travel within the Log Yard shall be as per the Log Yard traffic flow diagram (Fig 12).

All pedestrians and vehicles (other than logging trucks) are to inform the Log Yard Operators when they have left the Log Yard.

All log trucks must wait at the Log Yard entrance, until the Loader Operator requests details and provides instruction on where to go via R/T.

When unloading conventional trucks, the driver will remain in their truck at all times.

Should any truck drivers need to leave their truck cab for any reason, while inside the Log Yard, they must make R/T contact with the Loader Operator and receive permission to exit their cab.

Trucks wishing to exit the Pruned Log Yard, via the Sawmill Deck (A-Deck), shall call for clearance from the Sawmill Loader. If permission is granted, trucks may exit past the Sawmill Deck and join the normal traffic flow in front of the Chipmill Deck (C-Ramp). If access is denied, trucks are to exit using normal procedures via the Settling Pond Junction entry point and into the traffic flow.

When unloading self-loading trucks, the truck driver will either lift their crane before entering the Log Yard or call the Log Yard Operators to obtain permission to exit the cab to lift the crane into the "truck unload position". The truck operator will then **return to the truck cab while the truck is unloaded**. Loader Operators will only start to unload when they have confirmed the truck driver has returned to the cab. Once the truck is unloaded the truck operator will then obtain permission from the Log Yard Operators to again exit the truck cab and replace the crane in the rest position. Self-loading trucks are not to lift their trailers in the Log Yard.

Any log truck loading in the Log Yard shall be as per the ACOP and LTSC loading procedure (permission to leave the cab must be gained from the Log Yard Operators).

For any log storage areas outside the Log Yard, the above rules will apply.

Fig 12 – Log Yard Traffic Flow



## 16.2. Processing Yard (3PY)

No entry shall be permitted into the 3PY without a radio telephone (R/T) fitted with the 3PY frequency.

Safety helmet, high visibility clothing, eye protection (if required) and steel capped footwear shall be worn at all times, when outside of a vehicle.

Before entering the 3PY, all vehicles and mobile plant shall call the Wheel Loader operator on the 3PY channel to inform them of their planned movements.

Any person on foot in the 3PY (includes vehicle drivers who intend leaving their vehicles) shall inform the 3PY operators by R/T of their movements. This is to include any movement from one area to another.

All light vehicle travel within the 3PY should be kept to a minimum and follow the Yard traffic flow diagram in the Log Yard section above.

All pedestrians and vehicles (other than logging trucks) shall inform the 3PY operators when they have left the 3PY.

All log trucks must wait at the 3PY entrance until the Loader Operator calls them in.

When unloading both stem and conventional trucks the driver shall remain in their truck at all times.

Should any truck drivers need to leave their truck cab for any reason while inside the 3PY, they shall make R/T contact with the Wheel Loader operators and have received permission to exit their cab.

Trucks exiting the 3PY, that need to transit the Log Yard, must call for clearance on the PPF Log Yard channel before joining the normal traffic flow.

Trucks waiting to be loaded at the 3PY shall park on Tinker Rd and wait to be called in.

Trucks loaded at the 3PY shall clear the active area and chain up in the designated zone at the exit to the 3PY. If the area is non-operational and permission is granted by the 3PY machine operator, chaining up may occur within the 3PY yard.

Any log truck loading in the 3PY shall be as per the ACOP and LTSC loading procedure (permission to leave the cab must be gained from the 3PY operators).

Any person on foot or in mobile plant not fitted with a FOP's structure shall stay 30m away from Loaders lifting stems and processing machines.

## 17. Firewood



To ensure firewood operations, within Pan Pac Forests, are carried out safely the following rules will apply:

### ***Private Firewood Collection (personal use – not for sale or reward):***

- A permit must be obtained to recover firewood. Permits must be arranged through the Forestry Coordinators / Forestry Manager.
- All Pan Pac Forests rules apply when obtaining firewood from the forests. Chainsaw operators shall be qualified and competent and shall meet the minimum requirements of the Pan Pac Operations Manual for chainsaw use.
- Under no circumstances shall merchantable wood be cut into firewood.

## 18. Appendix 1: Definitions

<b>ACOP</b>
Approved Code of Practice for Safety and Health in Forest operations.
<b>Base</b>
Refers to the logistics and distribution operations room located at the gates of Pan Pac Forest Products mill at Whirinaki. “Base” is also used to contact this site in R/T communication.
<b>Contractor</b>
A person engaged by Pan Pac Forests to do work for gain or reward under a ‘Contract for Services’.
<b>Competent Person</b>
A person who can consistently demonstrate the skill and knowledge derived from experience and/or training for the type of work in which the person is employed and the approved code the person is required to work under.
<b>Event</b>
Any event that: causes any person to be harmed, or in similar circumstances might have caused any person to be harmed (also called ‘near miss’) causes damage to property or the environment.
<b>Fatality</b>
A fatality is a death resulting from a work injury.
<b>First Aid</b>
First Aid Case (see minor injury)
<b>Forestry</b>
Refers to establishment, silviculture, protection, and mensuration operations.

<b>Forests</b>
Forests or woodlots owned, managed or where work is carried out by Pan Pac Forests.
<b>Forest Operations</b>
Includes harvesting, forestry, roading and quarrying operations.
<b>HSWA</b>
Health and Safety Act Work Act 2015
<b>Logistics (Operations)</b>
Refers to logging, loading, transport and processing operations.
<b>Log Yard</b>
Refers to the log yard at the Pan Pac mill site. Log yard activities incorporate all loading, unloading, scaling, and transferring of logs to the mills production units.
<b>Lost Time Injury (LTI)</b>
A lost time injury is an injury that results in a person being unable to return to work during their next rostered shift or day – e.g. if Joe injures himself on Monday and returns to work on Wednesday, it is a lost time injury with one day lost. If Joe had returned sometime on Tuesday, it would not be an LTI.
<b>LTIFR</b>
Lost Time Injury Frequency Rate (# of Lost Time Injuries *1000000) / hours worked for period.
<b>LTSC</b>
Log Transport Safety Council Industry Standards.
<b>Loader</b>
Large log handling machine predominantly used for unloading trucks and loading log decks.



<b>Medical Treatment Injury (MTI)</b>
A medical injury is where the injured person required professional medical intervention that a first aider is unqualified to provide, and the person was able to return to work during their next rostered shift (no lost time).
<b>Minor Injury (First Aid Case)</b>
A minor injury is generally where the injured person required treatment by a First Aider.
<b>Near Miss</b>
An event that given similar circumstances, could have resulted in injury or property damage. A near miss may be a warning that control measures may not be working as intended or management of a hazard is absent.
<b>Pan Pac Forests</b>
Pan Pac Forest Products Limited.
<b>Property Damage</b>
Unintentional damage to property or machinery as a result of operational activity. No threat to personal safety.
<b>Qualified for Task</b>
A person is 'qualified for a task' when they hold the relevant NZQA unit standards for the task that they are performing.
<b>Quarrying (Operations)</b>
Refers to extraction in metal pit operations.
<b>Roading (Operations)</b>
Refers to all construction and maintenance of roads, landings, and tracks.
<b>R/T</b>
Radio Telephone.
<b>Shall</b>
A mandatory requirement.

<b>Should</b>
Best practice.
<b>Staff (member)</b>
A person employed by Pan Pac Forests to do work for gain or reward under an 'Employment Contract'.
<b>TIFR</b>
Total Injury Frequency Rate (# of Lost Time Injuries + # Medical Treatment Injuries * 1000000) / hours worked for period.
<b>Transport</b>
Refers to forest transport activities i.e. log transport, machine transporting.
<b>Vehicle</b>
A machine that transports people or cargo
<b>Worker</b>
Under this manual any person employed by a contractor, sub-contractor, or service agent.
<b>3PY</b>
Pan Pac Processing Yard.

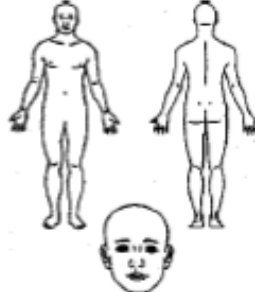
## 19. Appendix 2: Adverse Weather

<b>CLOSURE</b>	<b>Your Name:</b>	
	<b>Location:</b>	
	<b>Situation:</b>	
	<b>Name of Manager Contacted:</b>	
	<b>Decision:</b>	
	<b>Name of Approving Manager:</b>	
	<b>Date of Closure</b>	
	<b>Time of Closure</b>	
	<b>Have all the contractors and staff in the forest been informed of the closure?</b>	
	<b>Have permit holders been notified?</b>	
	<b>Has notification been given on when the road/area has been re-opened?</b>	
	<b>Date re-opened:</b>	
	<b>Time re-opened:</b>	
	<b>Name of Authorising Manager:</b>	

## 20. Appendix 3: All Event Reporting Form



# ALL EVENT REPORTING FORM

Date of Event:		Time:		Date Reported to Pan Pac:	
Company:				Crew No.:	
Forest:		Block:		Stand (OPT):	
Road Name:				Position:	
Worker Involved:				Position:	
Time Started Work:			Date of Birth:		Experience in Years / Months:
<b>EVENT TYPE (Tick only one)</b>					
<input type="checkbox"/> Near Miss/Hit		<input type="checkbox"/> Property/Plant/Equipment Damage		<input type="checkbox"/> Environmental	
<input type="checkbox"/> Injury		<input type="checkbox"/> Vehicle		<input type="checkbox"/> Complaint	
<input type="checkbox"/> Illness		<input type="checkbox"/> Fire		<input type="checkbox"/> Other: (Detail)	
<input type="checkbox"/> Fatality		<input type="checkbox"/> Non-compliance			
<b>CARTAGE</b>	<b>HARVESTING (tick one)</b>		<b>FORESTRY</b>		<b>FOREST ENGINEERING</b>
	Groundbase <input type="checkbox"/> Hauler <input type="checkbox"/> Roadline <input type="checkbox"/>				
<b>Transport</b> Loading/Unloading Trailer Loading/Unloading Truck Log Cartage Maintenance Tensioning Load In/out of cab Other	<b>Clearfell</b> Breaking Out Delimiting/Trimming Felling – Manual or Machine Assist (circle) Felling – Mechanised Tethered or Non Teth. Fleeting/Sorting/Stacking In/out of cab Loading		<b>Pruning</b> Ground-manual/chainsaw (circle) Ladder-manual/chainsaw (circle) <b>Releasing</b> Spot-manual/spray (circle) Regen treatment <b>Thin to Waste</b> Felling		<b>Engineering</b> Carting aggregate Harvest planning In/out of cab Road construction, Upgrade or Maintenance Travel Harvesting Operations Other
<b>Operations Management</b> Travel Other	Log Processing/Skidwork Machine Extraction or Grapple Extraction Maintenance		<b>Establishment</b> Land Preparation-ground Planting Manual Fertilising		Mechanical land prep <b>Operations Management</b> Other
<b>3PY</b>	Shovel logging Travel		<b>Pest and Weed Control</b> Ground Poison/Trapping Noxious weed Shooting		Travel <b>Quarry</b> Blasting Crushing Loading aggregate Stripping/winning
<b>Log Manufacturing</b> Log processing Maintenance	Wind throw Other		<b>Inventory/Data Collection</b> Plotting <b>Operations Management</b> Other		Travel
<b>LOG YARD</b>	<b>Hauler specific</b> Hauler Setup/Shifting Line/Rope Shifting Rope Renewal		<b>Production Thinning</b> Other		<b>ADMINISTRATION</b>
<b>Loading/unloading</b> Driving in yard Load/unload log trucks Log Handling - Loader In/out of cab Loading chip lines <b>Log Scaling</b>	Two-staging Other <b>Operations Management</b> Other		<b>Other</b>		Admin/Other Office Work Office Work Other Travel
<b>Operations Management</b> Travel Other	Log Scaling/Quality Control Auditing				
<b>Mark Body Part Injured</b>	<b>Injury Type (circle)</b>		<b>Treatment Details (circle)</b>		<b>Current Medical Condition:</b>
	Ache/pain (gradual) Ache/pain (sudden) Amputation Bruising Burn Concussion Crush Cut/laceration Dental injury Dermatitis Dislocation Electric Shock		Fracture Foreign Body Infection Internal Injury Head Injury Hearing Loss Multiple Injuries Poisoning Sprain/strain Sting/bite Other: (Details):		None First Aid Treatment Doctor – Precautionary Doctor – Medical Treatment Hospital - A&E Hospital - General admission Physiotherapy Other (Detail)
					Fully Fit Restricted/Light Duties Absent from Work Number of workdays absent from work (LTI injury): Pre-existing injury Yes / No
Post Event Drug Test:		YES / NO		Date	
<b>What Happened?</b>					

