SOUTH + CENTRAL QUEENSLAND REGIONAL FORESTRY HUB

REPORT: ASSESSMENT OF THE CURRENT SAFETY PRACTICES IN FOREST OPERATIONS IN QUEENSLAND

PFOLSEN

30 September 2025

Forest Resource Security

This report was commissioned by the South & Central Queensland Regional Forestry Hub with funding from the Australian Government, Department of Agriculture, Fisheries and Forestry.

NATIVE CYPRESS AND HARDWOOD HARVESTING SAFETY PRACTICES REVIEW

Photo: D. Bennett
PF Olsen, 2025

South East and Central Queensland Regional Forestry Hub

Final report

This report was commissioned by the South & Central Queensland Regional Forestry Hub with funding from the Australian Government Department of Agriculture, Fisheries and Forestry.

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Executive Summary

The South-East and Central Queensland Regional Forestry Hub (the Hub) engaged PF Olsen to review baseline safety practices in native hardwood and cypress forest harvesting and haulage operations. The objective was to support further development of training and support materials, as well as other operational improvements to enhance safety outcomes across the sector.

The project included reviewing current arrangements, a series of stakeholder interviews, benchmarking audits, and a stakeholder workshop.

The key findings of the review were:

- Self-reliance of permittees: The most notable feature of the sector is the self-reliance of its permittees, who are geographically scattered over south-east and central Queensland.
- Lack of centralised safety framework: There is no centralised management framework in place to support the implementation of standardised set of safety management standards. DPI Forestry encourage permittees to find their own solutions and to independently demonstrate compliance with work, health and safety laws.
- Limited success of past initiatives: Previous attempts to support permittees with training and support materials have had limited success, partly due to the challenge of communicating effectively across long distances.
- Challenges with trust and timing: During the project we encountered difficulties building trust amongst permittees. Unfortunately, the project coincided with a DPI Forestry launch of a new safety initiative for permittees. This led to confusion amongst stakeholders.

In total, 19 stakeholder interviews, 2 audits, and an online stakeholder workshop with 13 participants were conducted which inform the below recommendations to enhance safety outcomes.

Short-Term Actions to address issues of immediate concern (no additional resources required):

1. Encourage practical safety initiatives: Timber Queensland could encourage permittees to implement at least one low-cost, high impact safety initiative within the next six months, and share outcomes at the next section meeting. This could be supported by an annual peer-voted safety award.
2. Implement a set of life-saving rules: DPI Forestry staff work with permittees to identify minimum acceptable safety standards and proactively address them with affected workers.

3. **Promote incident reporting**: Establish clear expectations for reporting and sharing incidents.
4. **Adopt an industry safety code**: Use the FIFWA Forestry Safety Code as the preferred industry safety standard, until the Forest harvesting Code of Practice is updated.
5. **Support compliance with heavy vehicle laws**: Seek support from the NHVR to assist permittees in understanding and meeting National Heavy Vehicle Law obligations.

Longer-term Actions (require planning and resources):

1. **Develop online WH&S training resource**: Create and implement online health and safety awareness training for crew supervisors.
2. **Improve training delivery models**: Investigate alternative training delivery models with other existing training providers like the NTHA or AgForce to ensure all field-based crews hold current certificates of competence for the plant and machinery they operate.
3. **Review and implement safety management systems (SMSs)**: In partnership with permittees, review existing standards for SMSs and develop an implementation plan supported by infield mentoring and audits.
4. **Establish and industry safety governance group**: Develop an industry safety governance group is to share incidents and positive safety initiatives whose main purpose is to revise the Forest harvesting Code of Practice over a 12-month period.

Background

The South-East and Central Queensland Forestry Hub (the Hub) engaged PF Olsen to review baseline safety practices in Queensland's native hardwood and cypress forest harvesting and haulage operations to support further development of training and support materials and other operational improvements that will enhance safety outcomes.

This report summarises the findings from the project and provides recommendations for both short and longer term actions to improve safety outcomes.

The key components of the project included:

- A descriptive analysis of safety practices within native forest harvesting operations.
- An evaluation of incident reports and safety breaches.
- Stakeholder engagement with forestry workers, managers and other industry representatives.
- Benchmarking of current Safety Management Systems (SMSs) against a nationally applicable standard that is applied in other states to evaluate harvesting and haulage contractor systems.
- Field observation of operational practices.
- A stakeholder workshop.

Figure 1 outlines the timeframe of the project and the key stages.

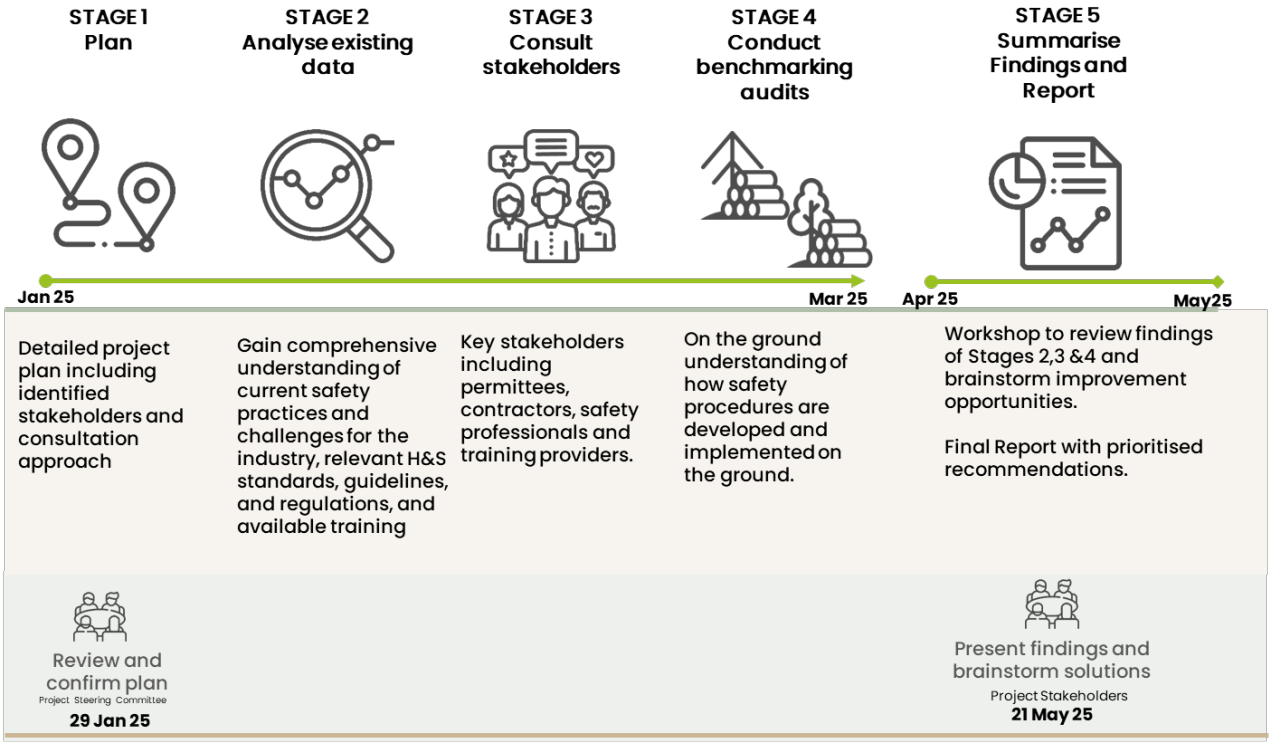

Figure 1 - Overview of project

Methodology

Review of existing data

The existing data considered included:

- Current industry guidance and codes of practice.
- Codes of practices and industry guidance from other states.
- Reported injury claims information for Queensland.
- Timber Queensland industry information.
- AFPA work health and safety guidance.
- Training resources and the Forest and Wood Products Training Package (https://forestworks.com.au/external-resources/).

Information from other jurisdictions (e.g., New Zealand, Canada, USA and the UK) was also reviewed. However, none of this material was found to be directly relevant to cypress and hardwood operations in south-east Queensland.

Stakeholder interviews

A series of interview questions was developed in consultation with the project steering committee (refer Appendix A). These questions were used to guide discussions with stakeholders identified by the Hub.

Two contact lists were supplied by the Hub: stakeholders and licensees.

- The stakeholder list contained 46 entries. The details for 14 were incorrect, of the remaining 32, 23 were contacted.
- The licensee list contained 91 entries. Fourteen were duplicates, and 35 had incorrect information, leaving 42 possible interviewees. Of these, 21 were contacted.
- There were 3 duplicated contacts from both lists. Table 1 summarises the numbers and types of stakeholders interviewed during the project.
- In total 44 unique stakeholders were interviewed.

Table 1 - Total number of stakeholders contacted by category.

Category	Number Contacted	Number of Responses
Small contractor	4	3
Forestry Consultant	2	1
Large harvesting contractor	3	1
Training	4	3
Forest Manager	8	8
Industry Association	3	2
Licensee	18	3
Union	1	-
Total	44	21

Benchmarking audits

In response to the project invitation to submit an expression of interest, the project plan included a plan to conduct field visits to two native cypress permittee's harvesting operations and two hardwood forestry permittee's operations. With the assistance of the Hub steering committee, possible permittee operations were selected to reflect:

- the breadth of technology and techniques currently in use within Queensland's native forestry industry, and
- the size of the permittee's operations.

The planned approach was to use the (Work Health and Safety Audit Standard - Forest Industry (Version 4), 2023) as a benchmarking tool to compare observed practices and supporting SMSs with the standards for harvesting and haulage operations elsewhere in Queensland and in other Australian states.

When permittees were contacted to do this work, they were reluctant to get involved and make time for this confidential independent review of their current practices. This meant that only one review was finalised. A desktop review was conducted in a second operation, but field verification was not completed due to flooding rains and concerns about the auditing process.

Stakeholder workshop

Given the difficulties encountered in completing the benchmarking audits, the project plan was revised to include a more interactive, industry focused stakeholder workshop, held on 21 May. At the workshop, information gathered from the data review, stakeholder interviews and benchmarking audits was presented and discussed.

Participants were invited to:

- share examples of positive safety practices they had implemented,
- outline what they would do to enhance safety outcome, and
- identify barriers preventing the adoption of safety improvement initiatives.

Summary of current arrangements

The review examined and described the current arrangements for managing native forest harvesting and haulage operations in south and central Queensland. These arrangements were then compared with approaches in other states, with a focus on how differences may influence safety outcomes.

The current arrangements were considered from three perspectives:

1. The current operating environment - including the institutional arrangements for authorising and managing operations, as well as a description of the physical environment and technology used in harvesting and haulage.
2. The legal framework – providing a brief overview of Queensland legislation designed to protect the safety of workers and other people that may be affected by harvesting and haulage operations.
3. Training and other resources – outlining the support framework of training, guidance, and tools available to help managers and workers understand their legal responsibilities and implement practices that will reduce, and where possible eliminate, the risks to workers and members of the public.

Ownership and governance

Native forest harvesting and haulage operations in south and central Queensland occur across land with a wide range of tenure types and complex management arrangements. Rights to harvest timber are assigned through a variety of mechanisms, creating a complex environment in which multiple parties and institutions have an interest. Figure 2 illustrates the diversity of stakeholders with a role in, or influence over, native forest management in Queensland on State government enabled operations.

Each party and organisation have the potential effect how harvesting and haulage operations are conducted. It also means that harvesting and haulage activities may not be the only use on a site at the one time. Cattle grazing is also conducted on many of these sites.

On State government enabled operations –the State government agency, the Department of Primary Industries (DPI) collects a royalty from the harvesting of timber. These operations may occur on land that is encumbered by long-term grazing leases.

There are also a number Private operations where a freehold landowner receives a royalty when timber is harvested and sold.

In most cases, timber is purchased at the stump by a sawmill or exporter. In State government enabled operations, the sawmill or exporter will hold a timber sales permit. In these operations, their role is referred to as a permittee. On private operations, there is a direct contract with the rights holder.

The sawmill or exporter engages workers to harvest and haul logs to storage yards or processing facilities. The workers may be engaged directly or via an independent contractor. Because many of the operations are isolated and sawmills operate in specific regions, contractors tend to only work for one sawmill.

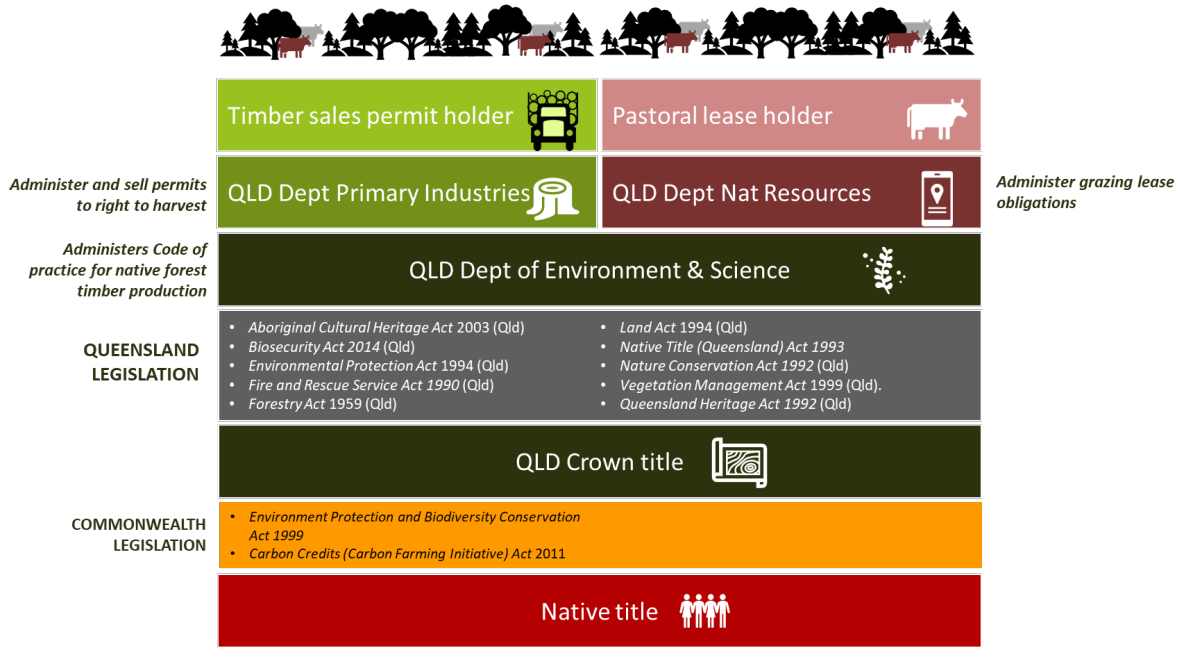

Figure 2 - Pictorial representation of the complex variety of stakeholder interactiond and environmental laws potentially impacting operations of permittees.

These arrangements contrast to most other Australian states, where state government owned forestry business receive payments for the timber they sell after delivery to a mill door. Under these circumstances, they directly engage contractors to harvest and haul wood.

By comparison, the Queensland arrangements involve less direct oversight of health and safety standards by DPI. In other states, agencies such as Forestry Corporation of New South Wales or Sustainable Timber Tasmania play an active management role. In Queensland, the responsibility largely rests with the permittees, whose size and sophistication vary considerably. As a result, the standards applied across the Hub region are inconsistent.

The Code of Practice for Native Forest Timber Production on Queensland's State Forest Estate 2020 (the Native Forest Code) prescribes operational environmental standards that are designed to comply with relevant legislation and policy commitments. This document applies to State owned native timber operations, only.

On private operations, the landowners have little to no input into the way an operation is managed and rely on the standards enforced by the purchasing sawmill or exporter. Native forest operations on private land must be conducted in compliance with the *Planning Act 2016.* In well represented vegetation types, forestry operations are regarded as exempt clearing work under Schedule 21 of the *Planning Regulations 2017.* The environmental rules for these operations are explained in a document published by the Department of Natural Resources and Mines known as *Managing a native forest practice - A self-assessable vegetation clearing code (2014).*

Operation types

The natural forests available for timber production in the Hub's area of influence are either hardwood or native cypress forests. About 38,000 hectares of crown forest land is harvested annually and a similar area of private land is accessed. Annual production is around 280,000 cubic metres of native hardwood and 120,000 cubic metres of native cypress. All timber production must be undertaken in accordance with the applicable environmental laws and regulations.

The most commonly harvested hardwood timber is Spotted gum (*Corymbia citriodora*). The operations are selective harvesting operations, which must be appropriate to the forest and retain a residual stand consistent with the required outcomes of the Code. The harvestable trees in these forests range in height from 25 to 45 metres tall, with volumes up to 30 – 60 cubic metres per hectare in the most productive areas. The majority of areas are drier and less productive, harvestable volumes are estimated to be around 5- 10 cubic metres per hectare.

Both cypress and hardwood operate under the State Forest code which requires selective harvesting and retaining at least 50% of the standing basal area. Cypress operations generally involve smaller trees with lower harvestable yields. Over recent years, harvesting prescriptions have set the minimum target diameter limit to 21cm diameter at breast height. The low intensity, extensive nature of these operations make the use of mechanised harvesting less economically viable. Despite this there are only two manual fallers currently working in cypress operations.

Hazards and risks

Forest workers are exposed to inherently hazardous workplaces. Recent reviews of forestry safety codes in Tasmania (Forest Safety Code (Tasmania) 2021, 2022) and Western Australia (FIFWA Forestry Safety Code, 2024), identified five critical hazards that are usually present in all harvesting and haulage operations. These hazards are based on injury and incident data as well as the knowledge and experience of forest workers.

The five critical hazards are:

Hazardous trees and falling objects (e.g. limbs, dry stags, dead and brittle tops, hollow trees, and **widow makers**)

Sloping, rough, uneven, and unstable terrain

Rolling logs, sliding logs, or materials under tension

Breach of exclusion zones and separation distances by ground workers, mobile plant, or falling trees or objects

Objects ejected or released from machinery (e.g. chain shot)

Additional activity related hazards associated with harvesting operations that were identified in the FIFWA Forestry safety code for the operations similar to those conducted in native forest harvesting and haulage operations in south-east and central Queensland are summarised in Table 2.

Factors that modify or increase the risk posed by these hazards are:

- Characteristics of the harvesting operations and the trees being handled.
- Topography and terrain in the forests.
- Climatic conditions.

Tree sizes in the region are generally manageable by most forestry machinery. Selective harvesting operations carry greater risk than operations where trees can be fallen into clear spaces. However, most of the drier forests in south-east Queensland have minimal undergrowth and are relatively open, providing suitable areas for directional felling. In contrast, wetter forests with more understorey and in some cases, vines, pose a greater challenge to hand fallers.

In general, when compared to other forestry regions internationally, the topography and terrain considerations are modest. Steep terrain is not a feature of the production forests in south-east and central Queensland.

Climatic conditions, however, are a greater issue in the Hub region compared to other forestry areas. High humidity and high temperatures are recognised as a significant issue for forest workers who conduct manual operations. To address this, unlike other Work Health and Safety Codes for chainsaw operators in Australia, Queensland's Forest harvesting Code gives discretion to chainsaw operators to "choose not to wear leg protection after performing a written risk assessment" (Forest harvesting Code of Practice 2007, 2 December 2011).

Table 2 - Activity specific hazards identified in the FIFWA Forestry Safety Code that also apply in south east Queensland.

Operation	Activity specific hazards
Manual felling	⚠ Standing vegetation in the intended direction of fall ⚠ Worker being struck by the butt of the tree ⚠ Kickback or recoil from the chainsaw ⚠ Weather conditions including heat, wind, rain, and cold ⚠ Slips, trips, and falls ⚠ Noise ⚠ Fatigue
Falling hazardous trees. Trees are hazardous if they have any of the features identified in Figure 1.	⚠ Struck by falling limbs ⚠ Struck by falling fire damaged trees ⚠ Struck by another tree lodged in a hazardous tree ⚠ Struck by falling tree or limbs where poor condition of tree affects the ability to control falling direction
Mechanical felling	⚠ Unsuitable machine selected to harvest the tree size in the coupe or harvesting site ⚠ High winds affecting the fall direction ⚠ Slips, strains, and falls as workers get on or off the machine for either operation or maintenance

Operation	Activity specific hazards
	⚠ Loose objects in the operator's compartment ⚠ A machine fire ⚠ Onsite machine maintenance while the machine is energised ⚠ Mechanical failure
Log extraction including forwarding, skidding and snigging.	⚠ Materials striking trees and spars while being moved, causing them to be pulled over ⚠ Inadequate and unreliable communication systems ⚠ Equipment failure ⚠ Objects penetrating the cabin ⚠ Instability of machinery and risk of rolling over or sliding ⚠ Slips, strains, and falls when workers are getting in and out of machinery
Aggregating and processing logs on a landing or roadside dump	⚠ Moving machinery ⚠ Uncontrolled movement of logs ⚠ Chain shot or other material thrown or moved by machinery working on landing ⚠ Slips and trips ⚠ Skin exposure to hazardous chemicals
Loading logs for transport	⚠ Driver injured while tensioning lashings ⚠ Exposure to extreme weather ⚠ Slips and trips while checking load ⚠ Strains from throwing lashings ⚠ Over-centre lever load binders (dogs)

To mitigate these hazards four risk management essentials are specified, which are also suitable for south east Queensland native forestry harvesting and haulage operations.

Safe work practices achieved through relevant training and competencies, licences, PPE, and readiness for work policies

Equipment designed for the task and operated within specifications

Exclusion zones and safe work areas to separate workers from operational and forest hazards. Physical barriers, distance, or time-based means of separation

Communication systems for access, such as signage, for communicating between operators in machines and on the ground, and for emergency and evacuation situations

Many fatalities in commercial harvesting operations are related to unusual or hazardous trees. It is important that workers are able to identify and manage the risks associated with these types of trees.

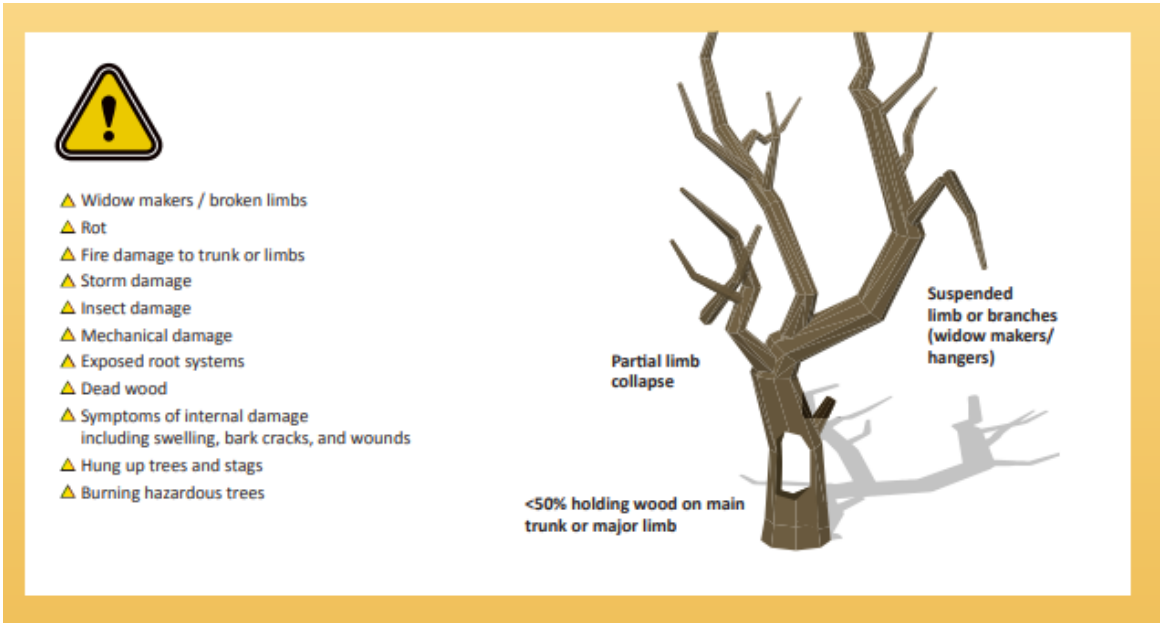

Figure 3 - Features of a hazardous tree (Ref: FIFWA Forestry Safety Code, June 2024, p89).

Injury trends

During stakeholder interviews it was apparent that there was no standard approach to injury reporting and investigation. Only 40% of the contractors and permittees interviewed maintained records of their incidents. Consequently, there is no consolidated list of injuries for the hardwood and cypress operations in the Hub region to review.

Analysis of the workers compensation claims data indicates that the number of claims lodged in logging are too low to be reported in the Industry Comparison Calculator. Elsewhere in Australia, the experience has been that injuries in logging are generally low frequency, but high to very high severity. Stakeholder discussion seemed to support this observation as reflective of the current situation in south east Queensland native forestry operations. At least two recent fatalities have occurred in DPI managed forests in the last 10 years. The information about these workplace incidents is not freely available because of ongoing investigations and legal proceedings.

Figure 4 displays the types of injuries sustained by workers in the Queensland logging sub-division of the workers compensation scheme for the 2023/2024 financial year. The main type of injuries are strains and sprains (38.5%). Fractures (22.1%) and musculoskeletal system diseases (15.4%) are the next two most significant claim types. For strains and sprains and fractures the proportion of these injury types relative to all injury classes is greater for logging than the pooled results for the agriculture, forestry and fishing division and the scheme overall. Open wounds and contusions are the two other claim types that have enough data for them to be reported. These injuries trends reflect the manual nature of many logging operations and that worker and machinery interactions still appear to be a key factor leading to injury claims.

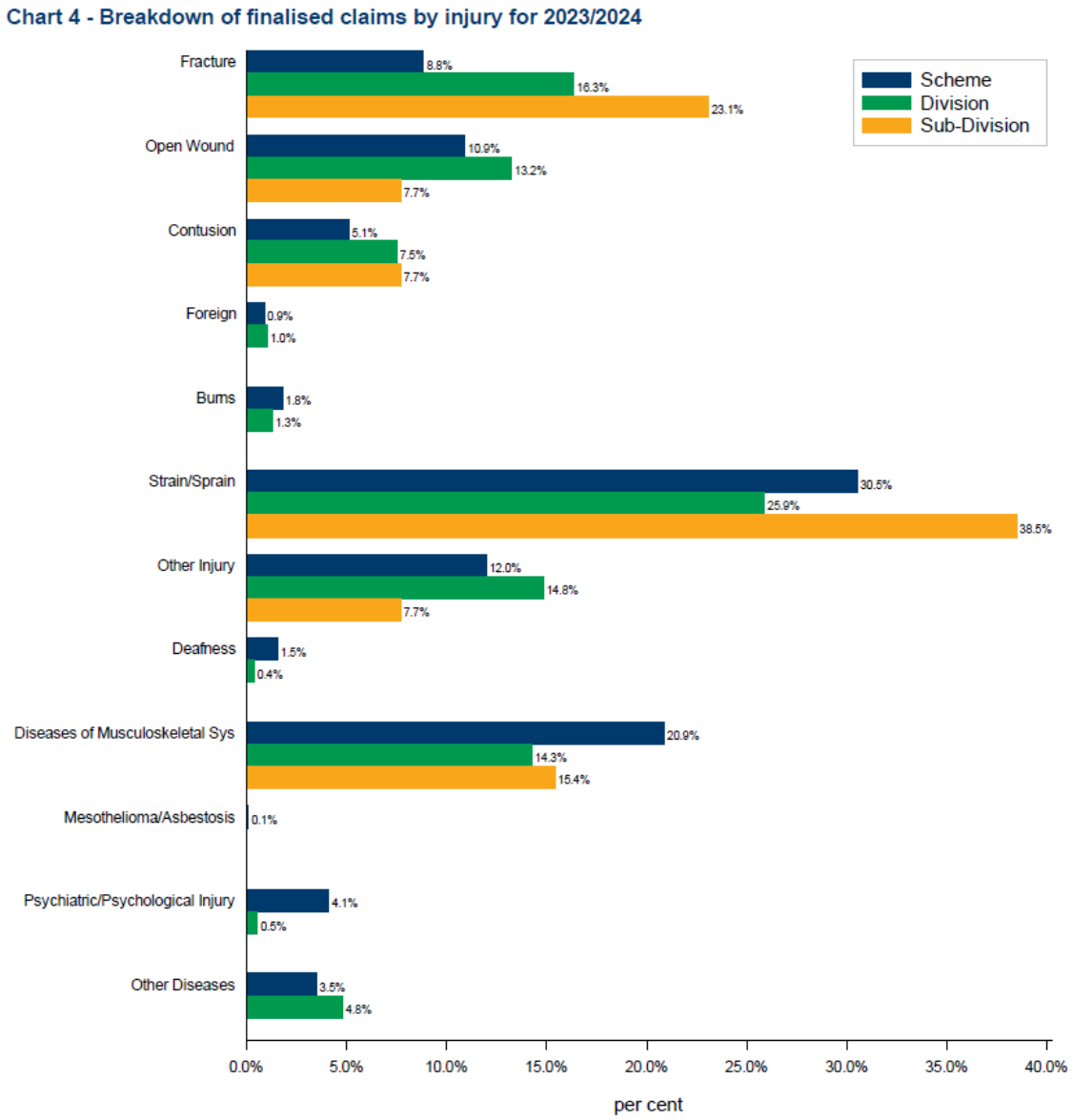

Figure 4 - 2023/24 finalised claims for the Logging subdivision of Queensland's workers compensation scheme (The State of Queensland, 2024).

The mechanisms of injury were reported during stakeholder interviews are summarised in Table 3.

Discussions with stakeholders indicated that the outcomes of some of these incidents were exacerbated because the injured worker was working remotely and was unable to obtain emergency care in a timely manner.

Table 3 - Mechanisms of injury reported during stakeholder interviews.

Activity	Specific mechanism of injury
Chainsaw use	• Cut leg with chainsaw • Chainsaw kickback • Stabbed with own chainsaw file causing major bleed
Tree falling	• Branch falling while felling with chainsaw
Loading trucks	• Broken leg while loading • Shoulder injury throwing straps over a load of logs
Working in forest environment	• Snake bite • Sprained ankle

In addition to incidents that resulted in injuries, stakeholders identified other circumstances where people's safety was put at risk. These include:

- Unauthorised access to harvesting sites by members of the public.
- Cattle on access roads

Legal framework

The *Work Health and Safety Act 2011* (WHS Act) establishes the framework to protect workers from injury and disease resulting from persons conducting business in Queensland. The legislation is aligned to the Model Work Health and Safety Bill (the Bill) which was developed under the Inter-Governmental Agreement for Regulatory and Operational Reform in Occupational Health and Safety (IGA) to underpin a harmonised work health and safety (WHS) framework in Australia. All States in Australia except for Victoria have adopted this framework.

The current version of the Workplace Health and Safety Queensland Forest harvesting Code of Practice (the Code) was first published in 2007. The form of the Code reflects the legal framework that existed when it was written. It was preserved under section 284 of the WHS Act and minor amendments were made to reflect the new framework of duty holders in 2011 and 2018. However, the language is very directional and is not reflective of more modern safety Codes that attempt to explain how the duties to provide a safe workplace are shared amongst multiple duty holders.

During the stakeholder consultation, there was concerns raised with the content of the Code and several observations that it was no longer fit for purpose.

Person conducting a business or undertaking

Under the WHS Act, a person conducting a business or undertaking (PCBU) has one primary duty. This is to ensure, 'so far as is reasonably practicable', that workers and other people are not exposed to workplace health and safety risks arising from the business or undertaking.

An undertaking is the activity conducted by the business, such as building access roads, harvesting timber, or carting timber to a mill.

A PCBU in the south-east and central Queensland native forest industry includes:

- landowners who grow or harvest timber on their own property, even if it is for their own use,
- landowners or permittees who engage contractors to harvest or transport forest products, or
- contractors and business owners who harvest, transport or process forest products within a forest.

A PCBU's duty includes managing risks by providing:

- a safe work environment,
- safe plant,
- safe systems of work,
- adequate facilities, and
- health monitoring.

Providing information, training, and instruction or supervision to manage risks is an important part of a PCBU discharging their duty of care.

During the project, it was apparent that a lot of work by the industry had focused on understanding what the term PCBU means and how it may apply. Two of the ten toolbox talk resources developed by Timber Queensland under the Native Forest Operations Capacity Building Project focused on this concept. Ultimately, the key message is that no matter what contractual or other legal arrangements are in place, if a person or an organisation engages, directs or influence workers involved in a timber harvesting operation, they hold a duty to ensure the safety of those workers.

PCBU's duties are not absolute but are qualified by the term 'so far as is reasonably practicable'. This qualifier is applied to the responsibility to eliminate or reduce risks. To establish what is reasonably practicable, the WHS Act lists five variables the PCBU must consider:

1. the likelihood of the hazard or the risk concerned occurring,
2. the degree of harm that might result from the hazard or the risk,

3. what the person concerned knows, or ought reasonably to know, about the hazard or risk, and about the ways of eliminating or minimising the risk,

4. the availability and suitability of ways to eliminate or minimise the risk, and

5. after assessing the extent of the risk and the available ways of eliminating or minimising the risk, the cost associated with available ways of eliminating or minimising the risk, including whether the cost is grossly disproportionate to the risk.

Only after all the other factors have been considered is cost taken into account. Risk controls should be implemented unless the cost is so disproportionate to the benefit (in terms of reducing the level of the risk) that it would be clearly unreasonable to require the expenditure.

For more information on the concept of 'reasonably practicable', refer to the WorkSafe Western Australia interpretive guideline How to determine what is reasonably practicable to meet a health and safety duty.

DPI Forestry's role

DPI Forestry's role is less clear. Their business involves enabling harvesting where they are responsible for the sale of state-owned forest products. These may be on state forest, other crown land and in some instances on freehold land. Custodial responsibility for state forests is vested with the Department of Environment, Science, Tourism and Innovation. DPI collects the royalty from the trees harvested and set the rules and conditions in their sales permits. They have a capacity to influence the way harvest and haulage operations are conducted when planning and inspecting operations.

During the project, DPI launched a Forest Harvesting Safety Project in the Hub area. The objective of this project is "*To improve safety outcomes on forest harvesting sites and ensure alignment of safety obligations with the parties that have control.*" (Forest Harvesting Safety Project, 2025).

The project sets the following expectations:

- Permittees must have a safety plan for each sale area and confirms that DPI Forestry will provide information, including known hazards and emergency meeting points, to assist in the development of these plans.
- Permittees must make all people (including DPI Forestry staff) that work on or use a sale area aware of the contents of their harvesting safety plan via a formal induction.
- Permittees are required to have a Safety Management System (SMS) to systematically manage safety, but DPI will not specify the standard for these systems. DPI may periodically ask permittees to demonstrate their systems active application and effectiveness. To support this, they have established an assurance process, to ensure that safety management systems are in place and being used.

- ForestFit® will be recognised as a method for demonstrating an active and effective system.
- DPI Forestry staff will formally communicate safety matters that they observe via safety observations and ask permittees to investigate and take suitable corrective action.

Haulage operations

The National Heavy Vehicle Regulator released a new Code of Practice for Log Haulage (Log Haulage Industry, Code of Practice, 2025). The guidance in this Code applies to all log haulage in Queensland. It is a registered Code of Practice under Section 706 of the Heavy Vehicle National Law. As indicated in the Code "It is not obligatory to use controls recommended by a registered code, so long as there is effective risk management in place, that meets the standard of reasonable practicability."

The Code applies to all parties in the supply chain. For haulage in the south east Queensland native forestry operations this will include permittees and their contractors.

Training and other resources

The Code indicates that it is a PCBU's duty to ensure workers are:

- trained and instructed in the use of any power-driven tool, machine or equipment, and
- competent in all forest harvesting activities. It is a PCBU's duty.

It explicitly allows for 'in house' training programs if they cover some specified content.

There is a national training package for Forest Management and Harvesting that includes units of competency and qualification that are applicable to address the requirements outlined in the Code. In September 2018, the Australian Forest Products Association (AFPA) and the Australian Forest Contractors Association (AFCA) committed to the Safe and Skilled program. As the key forest industry safety training program, it requires that forest workers hold a statement of attainment in nationally endorsed units of competency relevant to forest operations (Safe & Skilled Approved Competencies). This expectation has since been adopted in both the (Forest Safety Code (Tasmania) 2021) and (FIFWA Forestry Safety Code). This is a long-standing requirement applied by DPI.

During the benchmarking audits, the audit confirmed that formal training records were observed and the operators "were skilled people who know and understand the job, equipment and operational practical requirements".

However, during stakeholder interviews, several respondents were concerned about:

- the accessibility of quality training,
- finding registered training organisations that had the scope to deliver relevant units,
- the cost of training, and
- the content of the training courses.

Training providers reported concerns that the low number of workers seeking qualifications in harvesting and haulage units made it difficult to service the industry. This is also confounded by the large geographical spread of permittees and contractors.

Group training was explored as a concept to address the thin training markets. Other sectors within the forestry sector are currently being supported by the National Timber and Hardware Association through a group training model. Currently several permittees have trainees working in their sawmills engaged and supported by the NTHA via a group training model. There appears to be a good opportunity to support the forest workers working for permittees via a similar framework.

ForestFit™

ForestFit™ is a training and certification framework established by the Australian Forestry Contractors Association. Organisations, typically harvesting or haulage contractors can voluntarily choose to have their business management system certified to conform with the standards established under this framework. The stated objective of Standard 3 is "Minimising risk and improving health and safety".

Most stakeholders interviewed were familiar with the ForestFit™ program. Forest managers and trainers involved in its implementation regarded it as a positive initiative. One trainer involved in its implementation regarded the effort involved in developing materials as top class.

However, contractors and permittees in cypress and hardwood operations felt it was not suitable for their operations. Permittees that did not work for other for other business could not see the value in it.

The auditor that reviewed contractor business systems during this audit made the following comment, "Forest Fit is a Management System, not a SMS, and in its current form does not meet the standards required for compliance. I do not think it is appropriate for these small businesses that operate on a shoestring."

Timber Queensland materials

Timber Queensland has sought to provide support to its members and their contractors for many years. These initiatives included hosting consultative health and safety committees and engaging a member of staff to run a capacity building project.

The capacity building project generated a legacy of "toolbox talks". These are written materials that PCBU's can use to improve the safety performance. Issues addressed in these materials include:

- chain shot awareness,
- working alone,
- clarification of PCBU duties,
- visitor guidelines,
- signage,
- WHS Barriers,
- hierarchy of Controls, and
- Safe Work Zones (SWZs)

Conversations with people involved in this program indicated that the project had limited success in effecting any lasting change because permittees were reluctant to engage with the project.

Summary of findings from stakeholder interviews

There was no overwhelming consensus among respondents indicating a concern about safety standards within Queensland native forestry. All regulatory forest manager representatives indicated they were concerned. Owner operators, forestry consultants and permittees indicated they were not concerned. However, permittees had a more nuanced response and indicated risks still exist and getting the industry to work together could enhance the safety requirements.

Some of the programmatic changes were presented in terms of more awareness around hand falling risk, improvements to mechanised harvesting equipment, and better management of unauthorised access of public to worksites. This issue was repeated by several owner/operators who don't have staff that are near entry points to active worksites. Government representative responses ranged from more structure and compulsory SMS development to industry needs to improve the safety culture amongst all workers. One response pointed to improvement in PPE during hand-falling operations would eliminate most issues.

All responses indicated that safety management starts with everyone, but ultimately the operator on the ground is responsible for day-to-day safety risk management.

Only one respondent, an owner/operator, indicated they did not have a SMS. The small entities interviewed rely on the harvest plan and the code of practice as their SMS. Medium to large entities all had SMS developed outside of the Code of Practice.

There was a split between use of mechanised harvesting and hand-falling. All small size entities still use hand-falling. Medium and larger companies have moved completely away from hand-falling however, chainsaws are still used by nearly all respondents.

Places where workers are most likely to get injured occur when workers are physically working on the ground, outside of machinery, at landing, loading a log haulage truck, and using chainsaws. Any respondent that indicated they use chainsaws, stated that the use of chaps was not uniform. Some contractors left the use of chaps to individual worker discretion. Most reasoning was due to weather conditions in Queensland. Most felt the way to manage this risk to safety was through frequent awareness, discussions, training, and common sense.

Respondents had a range of suggestions for how things could improve. Several suggested a complete phase out of hand falling. Others indicated a more active industry wide communication initiative that addresses:

- safety working with mobile plant,
- PPE,
- risk management improvements, and
- safety incident sharing.

One response stated that a move away from individual log scaling on hardwood operations would drastically reduce injuries on the ground.

Key concerns identified and recommended improvements identified by multiple stakeholders are summarised in Table 4.

Table 4 - Summary of stakeholder concerns and improvement recommendations

Area of Concern	Specific Issue
Operational	• pay by tonne for all logs - remove the scaling aspect • public access issues • enhance PPE standards specifically for footwear • risk assessment for chainsaw chaps needs revision
Culture	• need to enhance safety culture • get industry together to work through issues on a frequent basis • Promote positive initiatives
Governance	• chain of responsibility needs to fit the format of how workers are distributed • cookie cutter approach "one size fits all" safety regulations doesn't work • mandatory SMS
Training	• Training tailored to forestry • Integrate practical, hands-on learning alongside theoretical knowledge • Improving accessibility to training programs

Summary of findings from benchmarking audits

During the planning phase of these operations, many permittees expressed a concern that if they let an auditor review their operations, they would become more accountable for safety. This appears to indicate a misunderstanding of how the WH&S Act applies. Ignorance of a flaw in a safety system or a failure to meet a well-established safety norm is unlikely to be an effective defence in any regulatory action. It appears that permittees need assistance to understand what minimum standards apply to their operations.

General comments from the benchmarking audits that have not been covered elsewhere are:

- Well trained skilled in equipment they use – and looking for ways to reduce injury potential – Last 3 years they have gone from manual felling to mechanised felling.
- Safety is considered during the operations and discussed but key parts are not documented.
- Machinery well maintained and good maintenance records kept – Daily site inspections completed and recorded.
- The systems are basic and cover most essential areas – just need to be more recording of essential information.
- Neither business had an incident register, but both also communicated they had had no incidents – when quizzed they also did not report near misses. Both businesses had log transport operations. It is unusual for log transport operations to have no near misses.

Concerns identified are:

- Log loader had forklift forks not a log forks with beak (see Figure 5).
- Little knowledge of hazardous substances management – No SDS on site, spill kit or product risk assessments.
- Businesses lacked emergency response procedures or working alone procedures and no records of drills. This is concerning given they are 1-2 person operations.
- Businesses had documented systems that were not being used and no records to back up what they are doing. If a serious incident occurred, and regulator decided to investigate they were serious gaps.
- The low level of understanding on what the health and safety responsibility and accountabilities for PCBU's and supervisors.
- The lack of written safe work procedures and risk assessments.
- Poor mechanisms assessing and engaging sub-contractors.

Figure 5 - Loader without log grab being used to load Cypress logs.

Summary of feedback from stakeholder workshop

New issues

The following issues new ideas and issues were raised during the stakeholder workshop:

- Difficulties contractors encounter with evolving safety codes, in particular the NHVR"s recently published Code. This is a particular concern when they do not have full control of the underlying issues.
- The impact of payment structures on contractor's ability to prioritize safety.
- The necessity of having safety measures in place prior to starting work to avoid complications.
- The importance of due diligence and clear communication regarding responsibilities among all parties involved in forest operations.

One attendee stressed that consultation under the WHS Act is a requirement. It needs to be real and effective. Trained health and safety representatives can really help.

Positive safety practices implemented

These initiatives were discussed during the workshop and received support from other attendees:

- Electronic trackers for individual working alone.
- Formal incident reporting and robust investigations.

Workshops and training programs delivered by AgForce were also identified as readily available resource.

Actions to enhance safety outcomes

Attendees recommend the following actions to enhance safety outcomes:

- Provide training and information to older contractors.
- Get people off the ground.
- Review the impact of extraction distances on fatigue risks.
- Use AgForce training to fill training gaps in rural and remote areas.

Ideas to address blockages to safety initiatives

- Improve the communication about audit processes and how they can benefit businesses.
- For landowners there need to improve access to training and information.
- Change the way contractors are paid. Focus on value delivered not volume.

Key findings

Operational

Low-cost high impact actions

Contractors working in cypress and native hardwood operations are working on 'shoestring' budgets and have limited capacity to invest in new technology. Safety solutions will need to focus on low-cost high impact actions. These could include:

- Supporting contractors to ensure that all operational plant meets minimum standards, e.g. ensuring log grabs are used on all loading machines.
- Implementing lone worker alarms across all operations.
- Focusing on an enforcement of safe separation distances for loading activities.
- Continue to encourage investment in machinery that will get workers off the forest floor.

National Heavy Vehicle Law compliance

Permittees should familiarise themselves with the (Log Haulage Industry, Code of Practice, 2025) and ensure that the haulage operations have controls in place to address the hazards identified in this document.

Enforce minimum standards for heavy plant

DPI Forestry staff should familiarise themselves with the Machine guarding standards specified in section 15 of FIFWA Forestry Safety Code and ensure plant on their operations meet these requirements.

Culture

The governance arrangements and geographic distribution of permittees and their operations have created a culture of self-reliance. Several attempts to support and assist permittees with safety resources have failed. This appears to be in part because of a misapprehension that ignorance of basic safety standards is acceptable.

Field based mentoring and audits

There are many tools and solutions to some of the shortcomings identified during this review. Other States have adopted approaches that focus on clearly defining minimum standards for common hazards in forestry and focus on enforcing these by face-to-face mentoring and audits.

Industry safety governance committee

Given the fragmentation and culture of self-reliance, it is unlikely that any safety initiative will be successful unless it is supported and championed by hardwood and cypress permittees collectively.

A first step may be the reinstatement of the Timber Queensland health and safety forums for permittees. The design of these forums needs to be designed to encourage engagement and empower organisation to decide what will work for their business.

Initiatives that focus on sharing positive safety practices can be beneficial.

Adapting, adopting and implementing minimum standards

On DPI authorised operations, DPI staff can help identify issues that do not conform with minimum standards and ensuring that Permittees work with the forest workers at risk of injury to find solutions. An approach used in other jurisdictions is to focus on a set of minimum standards. The AFPA work health and safety subcommittee recommend 12 Life Saving Commitments under the Safe and Skilled initiative. Section 15.4 of the (FIFWA Forestry Safety Code, 2024) provides a framework for integrating these with standard safety practices. These could be reviewed and adapted in consultation with permittees.

Incident reporting and investigation

There should be a renewed focus on encouraging incidents to be actively reported and shared. Part of this practice should include ensure that basis investigations determine contributing factors and a mechanism to reduce the likelihood of similar events. AFPA members have an opportunity to report their safety performance into the FWPA health and safety statistics portal. This enables members an opportunity to benchmark their performance against industry standards.

Trained Designated Safety Representatives

Permittees should consider encouraging the appointment and training of Designated Safety Representatives could help improve safety on their operations.

Governance

Minimum safety system standards

Consideration should be given to adopting and adapting the (Work Health and Safety Audit Standard - Forest Industry (Version 4)) for harvesting and haulage operations in south east Queensland. Permittees could then be encouraged to periodically self-report their performance against this or a similar standard.

Simplification of ForestFit™

Work with AFCA to leverage their investment in creating training materials and resources to support sustainable small businesses in the forest industry to ensure the materials are suitable for the scale and nature of operations in south-east Queensland native forestry.

Code of Practice Review

The (Forest harvesting Code of Practice 2007) is no longer supported by industry stakeholders. Several standards like the optional use of safety chaps are questioned and need to be reviewed. It should be reviewed. Until this happens, Cypress and native hardwood permittees should consider adopting the relevant parts of the (FIFWA Forestry Safety Code, 2024). In particular, the risk management essentials.

Training

Online health and safety awareness training

Provide contractor crew leaders and manager with short (3-4) information sessions on:

- Health and safety responsibilities and accountabilities.
- Practical risk assessment and mitigation, including the importance of communicating information about risk to all people on their work sites.
- Critical record keeping.

Group training model

Investigate the feasibility of extending the NTHA's group training model to forestry workers in the hub region.

Partner with AgForce

Build on the existing relationship with AgForce to develop the training infrastructure to support landholders and permittees in rural and remote areas.

Recommendations

Quick wins

1. Timber Queensland could encourage permittees to implement at least one low-cost high impact safety initiative in the next six months and to speak about it at the next section meeting. This could be supported by an annual peer voted safety award.
2. DPI Forestry staff work with permittees to identify minimum acceptable safety standards and proactively address them with affected workers.
3. Introduce an expectation that incidents are reported and shared.
4. Adopt the FIFWA Forestry Safety Code as the preferred industry safety standard until the Forest harvesting Code of Practice is updated.
5. Seek support from NHVR to assist permittees understand and meet their National Heavy Vehicle Law obligations.

Strategic projects

1. Develop and implementation of online health and safety awareness training for crew supervisors.
2. Investigate alternative training delivery models with other existing training providers like the NTHA or AgForce.
3. In partnership with permittees, review existing standards for SMSs and develop and implementation plan based on infield mentoring and audits.
4. Develop an industry safety governance group is to share incidents and positive safety initiatives whose main purpose is to revise the Forest harvesting Code of Practice over a 12-month period.

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About PF Olsen

PF Olsen is Australia's leading independent and professional forest and land manager. PF Olsen currently manages approximately 185,000 hectares of forest and agricultural lands across Australia on behalf of institutional and private clients. PF Olsen routinely establishes between 3,000 to 5,000 hectares of plantations per year across five states of Australia.

The areas we manage include close to 30,000 hectares of conservation areas and approximately 20,000 hectares of carbon projects registered with the Clean Energy Regulator under the Plantation and Environmental/Mallee Carbon methods in the Australian Government's ACCU Scheme. Current CER registered projects we manage are projected to generate more than 3.1 million ACCUs.

We work with our clients to identify ecological values and can develop plans to protect and enhance ecological and other values across our projects. An example of our work is available here.

We also undertake consulting assignments across a range of forest management disciplines and are established as Australia's premier forestry sector safety services provider.

PF Olsen (Australia) is a wholly owned subsidiary of the New Zealand based PF Olsen Group Ltd. In addition to the Australian operations, the Group is responsible for management of approximately 170,000 hectares of forests and up to 4 million tonnes annual harvest in New Zealand. The PF Olsen Group was established in 1971 and has grown to become the leading independent forest management services provider in Australia and New Zealand.

Appendix A – Stakeholder questionnaire

Questions for all Stakeholders

What is your role Queensland native forestry?
Are you concerned with safety standards within Queensland native forestry?
If so, why?
What changes would you like to see?
Why?

Additional questions for Permittees, DPI Forestry staff & PFSQ

Who has responsibility for safety on a timber harvesting site?
What role does your business play?
Do you have a safety system
Who created it and how do you know whether it is adequate?
Do your contractors have a safety system?
Have you reviewed their safety system? If so, how do you know whether it is adequate?
What do you think are the most likely ways that a worker may get injured?
What things are in place to stop this happening?
Do you think you could/should do anything extra?
What are the barriers to doing more?
What safety rules should be changed?
Have you had any injuries in your operations?
Can you explain what happened and what the underlying causes were?
What have you changed since this /these incidents?
Have you got records of all incidents?
What harvesting systems / methods do you use?
How many people work in your forestry operations?
What training have they had?

Who did the training and was it useful?
Have you got training records for all operators, including contractors?
Have you heard of ForestFit and what are your impressions?
When was your last H&S safety interaction with DPI, WHSQ or Permittee?
Is there anything else you think should be addressed to improve safety standards?

Additional questions for Training Organisations

How much training have you / is being delivered to Queensland native forestry workers?
What are the main units delivered?
What are the main problems?
How could the system be improved?