LBRCA
LIVESTOCK, BULK AND RURAL CARRIERS
NSW

Bushfire Salvage Haulage Operations

HEAVY VEHICLE ROLLOVER AWARENESS PROGRAM
HVRAP

This document aims to guide and assist parties that may not have had previous experience with bushfire salvage operations, by providing practical guidance using learnings, material, and strategies from previous salvage operations.

Background

Bushfires are common in Australia. Often the fires will devastate large areas of native and plantation forests.

Typically, large parts of these forests will have numerous trees that have been killed or badly damaged by the fires, but still have commercial value if they are harvested and salvaged before they lose too much moisture or suffer from other issues such as blue stain.

This may result in localised short-term saturation harvesting and haulage operations, potentially increasing risks on the haulage routes.

Not only will there be an increase in log truck traffic, but there may also considerable bushfire recovery works on roads and bridges. Rebuilding infrastructure and communities will add a noticeable increase in heavy vehicle and other traffic. Tourism operators may also be encouraging visitors to the area to assist the local economy.

For these reasons Bushfire salvage operations should be treated as an “event” outside of normal operations and normal community expectations.

Forests owners and stakeholders should work together to establish a fire salvage risk zone to concentrate their efforts to help ensure a safe and efficient salvage operation.

Experience has shown that these operations can have an increased risk of heavy vehicle crashes and rollovers. Therefore, it is vital that the operations are managed with a high degree of risk identification and mitigation.

Factors that increase the risk of these incidents include:

- **Trauma and vicarious trauma and general fatigue from the fire event itself.** This can affect whole communities. Many foresters, harvesters, haul operators and drivers may have been involved in fighting the fires.
- **Higher than normal traffic.** Not only will there be an increase in log truck traffic, but there may also considerable bushfire recovery works on roads and bridges. Rebuilding communities and infrastructure will add a noticeable increase in heavy vehicle and other traffic. Tourism operators may also be encouraging visitors to the area to assist the local economy.
- **Poor road conditions.** The fires may damage sealed roads. There is an increased chance of falling trees and the loss of roadside vegetation may lead to slips and erosion from heavy rain.
- **New drivers.** Due to the need for extra trucks, often this means an influx of new drivers that will be unfamiliar with the area and may not have the skills and experience in the local operations.
- **Different vehicles.** The need for extra trucks may mean that some of these trucks and trailers could have different design and safety features than the normal fleet.
- **Unfamiliar routes.** Haulage operators may be required to use different routes than normal, due to several factors including, the location of the salvaged timber and receivers or road and bridge damage.
- **Increasing load heights.** The dead, dying and damaged trees are likely to lose moisture content rapidly. This will mean that they will be lighter, and more timber will be required to achieve permissible weights. This typically results in ever increasing load heights and decreasing vehicle stability during the salvage operations. Managing the decreasing stability is vital as this is known to have been the main contributing factor in several rollovers in previous salvage operations.
- **Extra harvest and loading crews may be required.** These crews may not be familiar with the wood species or the required operations.

Experience has shown that the following points should be considered early in the salvage operations:

- Develop a salvage zone.
- Estimate volumes of timber to be salvaged and time period for the salvage operations.
- Establish an effective industry working group and initial communications plan.
- Identify stakeholders and community groups early.
- Identify customers and receival locations for the salvaged timber.
- Identify haulage routes.
- Estimate required truck volumes and traffic flows.
- Identify harvest and haulage contractors early and start the conversation.
- Induction and training of all parties involved in the operations.
- Develop a communications plan and ongoing strategy.
- Consider developing a Code of Professionalism/ Behaviour for the operations.

Develop a salvage zone

In summary we have an event within a zone. This zone may include the forest or plantation to be salvaged and the haulage routes that impact communities and road users. These routes should be considered to be higher risk than normal due to the salvage operations.

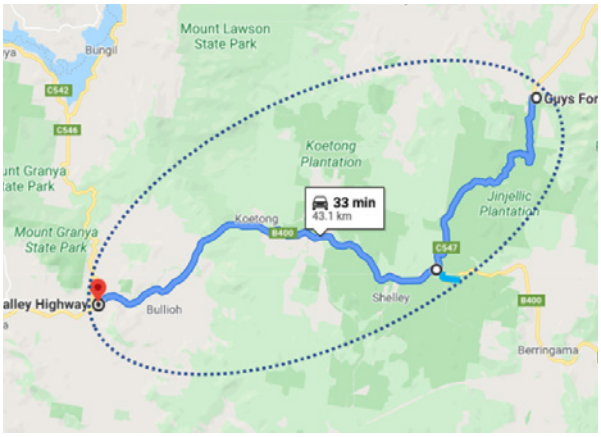


Figure 1: *Example of a previous salvage zone*

Estimate volumes of timber to be salvaged and time period for the salvage operations

These estimates will help determine the scale and timeline of activities and future actions. Longer term operations may mean that load heights will increase as the wood dries out.

Establish an effective industry working group and initial communications plan

This industry working group should include representation from all relevant industry stakeholders. If possible, include people with prior experience in salvage operations.

Identify stakeholders and community groups early

Effective stakeholder and community engagement and cooperation can be a of enormous value. Consider National Heavy Vehicle Regulator (NHVR), state and local Government, road owners, community groups, tourist operators, businesses and road safety groups.

Identify customers and receival locations for the salvaged timber

This is important to identify haulage routes as well as other factors, including opening and closing times, identifying curfews and any access issues.

Identify haulage routes

There are a number of factors to consider including, suitability of routes, access and permits for B Doubles, and PBS vehicles. Haulage route assessments should be undertaken by appropriate stakeholders, including the road owners and haulage contactors. There may be the opportunity for increased use of B Doubles and PBS vehicles under permits for the duration of the operations.

Figure 2. *Identify locations for rest areas, load checking bays and suitable places to drop dust before entering towns.*

Crash and incident history on these routes should be considered and known high risk locations should be identified. Schools, school bus routes, tourist locations and other community factors should be identified and considered.

Figure 3. *Identify high risk rollover and crash locations.*

Locations for slow vehicle turnouts, load checking bays and rest areas should be identified. Suitable locations to drop dust prior entering towns should also be identified. There may be the opportunity to seek funding for road owners to make improvements to these locations.

Figure 4. *Sample salvage awareness sign*

Identify opportunities for salvage awareness and other appropriate signage.

Truck rollover signs at known high risk locations can be of real benefit to warn new drivers to the area. These signs are often co-funded by industry and road owners.

Identify opportunities for vegetation clearing to improve sight distance.

Estimate required truck volumes and traffic flows

This is key to identifying the number of trucks required and if they are available.

Identify harvest and haulage contractors early and start the conversation

It is important to understand the experience and capacity of these contractors as this will heavily influence the efficiency and safety of the operations. Identifying and gaps early is vital.

Induction and training

All stakeholders and staff involved should be inducted into the operations.

All relevant people that have any influence on the loading and transporting of the logs should be trained in rollover awareness.

Develop a communications plan and ongoing strategy

Communications between stakeholders is important. A communications plan that outlines activities and keeps stakeholders up to date with the operations has proven to be effective in past salvage operations. This plan should have clear lines of communication and be kept up to date by a designated person or party.

Consider developing a self-regulating Code of Professionalism/Behaviour for the operations

Codes of driver professionalism/behaviour have been very successful in past operations. They are simply a guide to the professionalism that is expected by the industry. They are written and developed by consultation between relevant stakeholders (including communities) and the drivers. A well written code is of great benefit to new drivers being inducted into the operations. *A sample code is attached.*

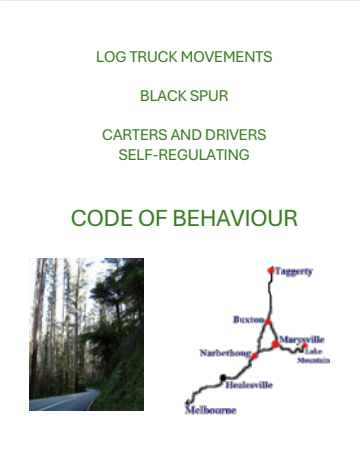


Figure 5.
Front page of a previous code

During the operations

Monitoring the risk of rollovers

The dead, dying and damaged trees are likely to lose moisture content rapidly. This will mean that they will be lighter, and more timber will be required to achieve permissible weights. This typically results in ever increasing load heights and decreasing truck stability during the salvage operations. Managing the decreasing stability is vital as this is known to have been the main contributing factor in several rollovers in previous salvage operations.

A useful strategy is to identify a selection of vehicles with various design features and combinations at the beginning of the salvage. These vehicles should be regularly monitored at roadside checks where load heights should be measured and recorded for future comparison.

Static Rollover Threshold (SRT) calculations could be measured if there are staff with the knowledge to conduct the calculations. Changes in load heights and stability should be communicated to the stakeholders. It is a good idea to take pics of the trucks and loads at regular intervals for comparison.

Another useful strategy is to identify drivers and loaders to act as champions during the operations. These people can be a useful point of communication between them and other stakeholders. They may identify risks and emerging trends early and suggest useful actions before they become an issue.

Regular roadside checks and discussions should take place between stakeholders. Suitable locations for these checks should be identified and communicated to drivers and operators and agreed etiquettes put in place to ensure drivers are comfortable with stopping.

Figure 6. *Vehicles should be regularly monitored at roadside check and load heights should be measured.*

Keeping stakeholders informed

The Communications plan should be a living document that is regularly updated and distributed.

Single page updates and safety alerts should be developed and distributed in the field as required to keep drivers and field-based staff informed. *A sample safety alert is attached.*

At the end of the operations

Each salvage operation has its own set of challenges.

Learnings from each operation should be documented and shared within the industry. Associations are a great resource for this information. This information will be of value for future salvage operations.

LOG TRUCK MOVEMENTS

BLACK SPUR

CARTERS AND DRIVERS SELF-REGULATING

CODE OF BEHAVIOUR

INTRODUCTION

This document is based on the Thompson Operations area Ash Salvage Heyfield District 2006/07 Code of Behaviour (CoB). This CoB has been modified to suit the haulage operations of logging contractors, particularly the operation of 22m mini B/Doubles on the Maroondah Highway (Black Spur).

The CoB applies to log trucks engaged by VicForests or HVP Plantations using the Black Spur section of the Maroondah Highway that is between Narbethong Camp Park and Healesville outskirts.

This Code of Behaviour has been written with road safety as its number one priority and also addresses the concerns of VicRoads, affected communities and other users of the road. It is designed to reduce the impact of log truck traffic using this road.

The message behind the Code of Behaviour is for drivers to take a little extra care on each trip, and work with each other to ensure that all users of the road can complete their trip safely.

Black Spur
CODE OF BEHAVIOUR

For Cartage Contractors and Drivers

ISSUES AND ACTIONS

VicRoads major concerns about log truck use of the Black Spur include speed, travelling on the correct side of the road, trucks meeting at tight corners and allowing traffic to pass. In addition, there are a number of community concerns that can also be addressed by demonstrating that logging operators will try to meet community expectations wherever possible.

These issues are outlined in more detail below, with corresponding actions that will be implemented by haulage contractors to address them.

USE OF ENGINE BRAKES IN TOWNS

Issue

Engine brakes are a very important and effective component on modern trucks. They decrease the need to use the vehicle brakes, reducing brake overheating and fading, therefore increasing the safety of the vehicle on long downhill runs. Unfortunately, they can be very noisy and annoying in residential areas.

Action

Engine brakes will not be used in residential areas between the hours of 7.00pm and 7.00am. We will take into account farmhouses and other single residences on remote roads. We will keep engine brake usage to a safe but minimum amount in residential areas at all other times.

DROPPING OF DUST

Issue

When operating on dry dusty roads, dust is caught in wheel rims and brake drums and held by centrifugal force. This dust can be carried for many miles and once the truck stops falls to the road. Unfortunately, this is quite often at intersections in townships

and can cause annoyance to residents. It can also create slippery conditions at these intersections. VicRoads and municipalities receive many complaints on this issue.

Action

When we have been operating on dusty roads we will do as much as practicable to drop as much dust as we can before reaching towns. This may include stopping at the end of dusty roads and backing up or tapping rims with a mallet. As each destination has its own issues and opportunities to stop and drop dust we will take these into account during the journey.

LOAD SECURITY

Issue

Many complaints are received about small pieces of wood and other debris falling from log trucks. Many of these are from empty jinkers and skels on their return journeys.

Action

When loaded, care will be taken to ensure that loose pieces of wood and bark are unable to fall from the vehicle. Once the truck is unloaded all remaining loose debris will be removed before leaving. We will observe VicRoads Load Restraint Guide and ensure loads are crowned to half a log height above trailer stanchions.

MASS LIMITS

Issue

Overloaded trucks can dramatically increase rate of road wear and roughness.

Action

We will load trucks to keep within legal mass limits. We will liaise with VicRoads and municipalities to ensure that no bridge or road mass limits are exceeded and obtain necessary permits where required. For vehicles allowed to travel at higher mass limits, care will be taken to ensure that appropriate permits are obtained and the Higher Mass Limit (HML) routes followed.

We are aware that many of our loads will be weighed on industry owned weighbridges at the end of our journey. Where possible we will use these to keep a constant check on our mass.

TIGHT CORNERS - USE OF UHF CB RADIO ON COMMON CHANNEL

Issue

Although it is important to assume that another road user may be using the road at all times, UHF radios can assist in keeping track of other trucks and road user movements, therefore increasing road safety. There are three very tight corners between Dom Dom Saddle and Fernshaw at which extreme care should be taken by log trucks, especially B/Doubles, to pass. It is crucial that trucks do not meet at these corners.

Action

Log trucks should avoid meeting at these corners by communicating their position on the UHF radio. In the event that two trucks are approaching a corner from opposite directions, then the empty truck should back off and allow the loaded truck to negotiate the corner first. At no stage should two B/Doubles meet at these corners as it is illegal for these vehicle types to reverse.

We will use the airwaves in a responsible and courteous manner and not use offensive language.

ALLOWING TRAFFIC TO PASS

Issue

On narrow, hilly and winding roads, loaded log trucks generally travel slower than other vehicles. It is well known that many drivers get impatient when travelling behind a slower truck.

Action

Loaded trucks must pull over at Dom Dom Saddle and Fernshaw when traffic builds up behind them to allow traffic to pass.

We will, as much as practicable (when safe and appropriate), slow down and pull to the side of the road to allow traffic to pass. When travelling behind another truck we will take into account the passing opportunities for other vehicles and not travel too close.

ROAD WORKS

Issue

Increased road use will mean increased road maintenance. Although signs are erected on roadwork sites, many complaints are received from road workers about trucks and other vehicles travelling too fast between these signs. This creates a hazardous and unacceptable work environment.

Action

We will take extra care when travelling through roadworks and behave in a courteous and responsible manner.

TRAVELLING ON CORRECT SIDE OF ROAD

Issue

VicRoads and Police receive many complaints from the public about trucks, particularly B-doubles, travelling on the incorrect side of the road and cutting corners. Trucks can endanger other traffic if they cut corners and stray onto the incorrect side of the road.

Action

Trucks will travel on the correct side of the road and will take extra care when negotiating corners and narrow sections of the road.

TRAVELLING THROUGH TOWNS AND SCHOOL CROSSINGS

Issue

Due to their size and appearance the public is very aware when log trucks travel through small towns and are often under the impression that they are travelling too fast. Police and Vic-roads receive many complaints.

Action

When travelling through small towns we will use extra care to keep our speed and noise down, particularly in the vicinity of school crossings.

TIMES OF TRAVEL

Issue

We are aware that at certain times some roads have extra traffic on them. Many of these vehicles are not accustomed to driving these roads and can create extra hazards This may be due to specific events or at times when tourist traffic increases (Friday night prior to a long weekend for example).

Action

When we are aware of any increase in traffic flow we will take this into account and adjust our travel times or driving behaviour to suit. We will also familiarise ourselves of school bus travel times on remote roads and take due care.

FATIGUE MANAGEMENT

Issue

Long cartage distances on narrow winding roads, particularly without some sort of regular activity break, (such as unloading), may lead to abnormal levels of fatigue.

Action

Drivers should aim for most driving to be done during daylight periods, where possible avoiding night and early afternoon periods of low alertness.

Ensure that trip planning takes account of typical delays and road conditions.

For more detailed guidance all stakeholders should refer to the Fatigue Management Guidelines for the Forestry Industry (Victorian Workcover Authority, March 2004).

GENERAL DRIVING BEHAVIOUR

Issue

Log trucks are very obvious on public roads. The forest industry is often judged by the public by the driving behaviour of log truck drivers. Behaviour such as tailgating and travelling in convoys with no space between trucks is unsafe and results in much criticism from the public and authorities. UHF radio traffic can be heard by other radio users therefore it is important that appropriate language is used.

Action

Log Trucks must not tailgate other vehicles or travel too close behind other log trucks. UHF radio traffic must be civil and courteous.

SPEED

Issue

Log trucks should be travelling at the appropriate speed for the conditions. This will enable them to stay on the correct side of the road, and reduce the effects of road damage to the inside shoulder areas of the pavement near the edge line.

Action

Trucks are to travel at a speed that is appropriate for the particular section of road that will enable them to stay on the correct side of the road. Trucks, both loaded and empty, are not to exceed the posted speed limit. Loaded log trucks are not to cut inside corners where pavement damage will occur.

Bushfire salvage operations in Shelley area in 2020

HVP and stakeholders are currently undertaking salvage operations in the Shelley area.

Fire salvage can be higher risk than normal operations due to a number of factors.

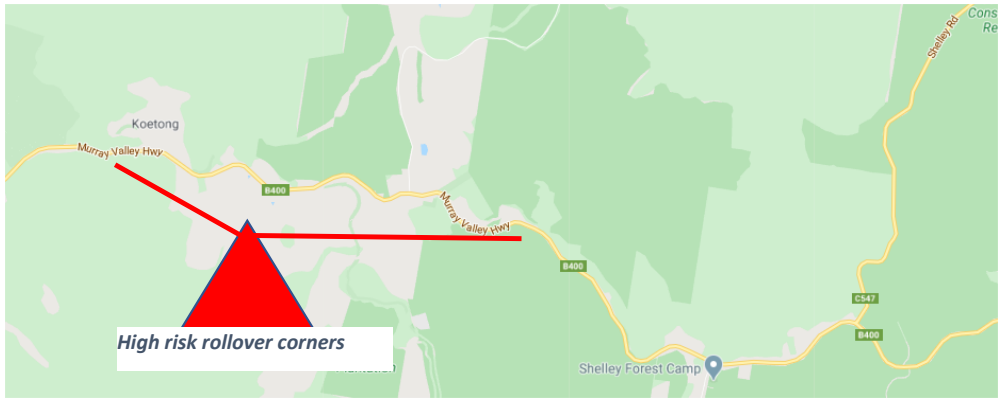
Potential risks include:

- Rollovers- Fire salvage operations are historically high risk for log truck rollovers.
- Collisions with 3rd parties on salvage routes- There is likely to be many other vehicles including light vehicles unfamiliar with the area using roads
- Concerns and complaints from communities about increased traffic in towns and around schools, driver behaviour and noise
- Fatigue and trauma resulting from the effects of the recent fire on the community, Timber industry employees and our log truck drivers.

It is important for us all to work together to identify and assess the risks with our operation and have actions in place to address them. We are also likely to have new drivers in the area and need to ensure they are aware of the risks.

- **Our highest identified initial risk is rollover crashes in the Shelley / Koetong area. There have been several log truck rollovers on these corners in recent years. Please take extra care when travelling in loaded trucks in this area**

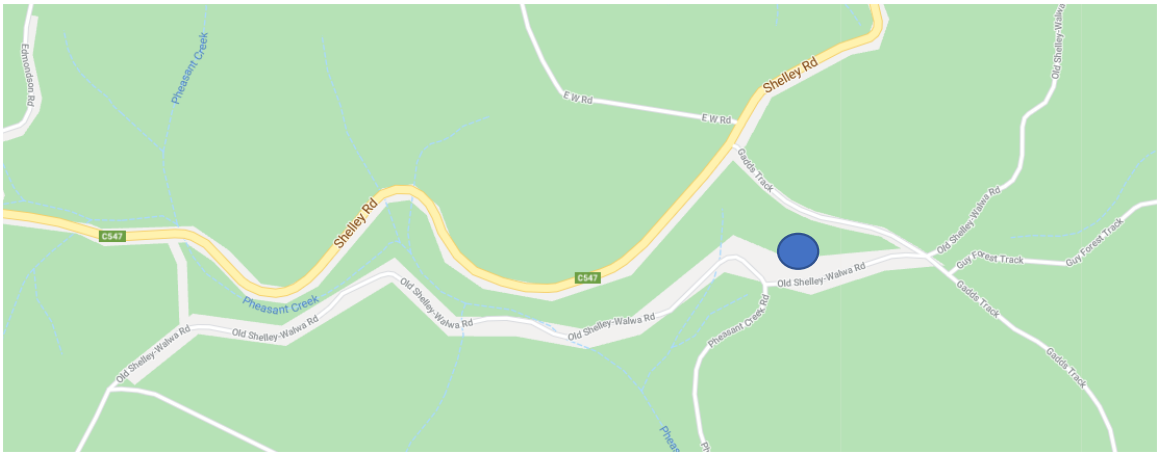
Take extra care on corners in the Shelly Koetong area



HVP will be working with stakeholders to monitor the salvage haulage operations.

Drivers can expect to be engaged by HVP staff and contractors at a suitable safe location on Gadds Rd. We will be checking and monitoring loads and load heights and looking for any emerging issues.

Most importantly we will be asking for drivers' feedback on any concerns or ideas to ensure the operations continue safely and efficiently.



We will be working together on a number of initiatives and are asking drivers to be the driving force behind these initiatives. We want your ideas and feedback to help.

Some suggestions may be-

- Signage
- Vegetation clearing for sight distance
- Load checking bays
- Driver mentoring for new drivers
- Ways to share the roads with other vehicles

If you have any ideas, thoughts or concerns please pass them on to your management.

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