



# Tailgate meeting talking topics

**Setting up for a good day**

June 2018

**safetree** 

# Talk with your crew about topics relevant to your work

Most days, things go well in the forest. Good days happen when the job is well planned, everyone knows what's happening and they have what they need to do the job right.

These talking topics will help you set up for a good day.

At your tailgate meeting, pick a topic that's relevant to your day's work and talk about it with your crew. Get their feedback on what's going well, what's making things difficult, and how things could be improved.

These talks are a great way to bring up and talk about any issues before they cause problems with the work or safety.

Whoever is taking the tailgate meeting holds the card up so the crew can see the graphic and key points on the front, while the person reads the text on the other side.

The information in these cards won't be new to you or your crew. They're to remind everyone of the key safety information before they start work.

Making sure this important information is 'front-of-mind' helps you set up for a good day.

## **For more information about any of these topics see:**

- [www.safetree.nz](http://www.safetree.nz)
- the Best Practice Guides on the Forestry homepage at [www.competenz.org.nz](http://www.competenz.org.nz)
- the Approved Code of Practice for Safety and Health in Forest Operations (the ACoP).



# Index

What a tailgate meeting is for _____	1	Steep slope harvesting _____	16
Alcohol and other drugs _____	2	Temporary traffic control for private forestry roads _____	17
Driving – to work, and at work _____	3	The five step felling plan _____	18
Emergency response plan _____	4	The two tree length rule _____	19
Fit for work _____	5	Thinning _____	20
Learning from incidents _____	6	Tree driving _____	21
Machine-assisted tree felling _____	7	Tree felling observer _____	22
Managing fatigue _____	8	Working alone _____	23
Managing visitor safety _____	9	Working at height _____	24
Personal protective equipment (PPE) _____	10	Working in bad weather _____	25
Preventing slips and trips _____	11	Working in cold weather _____	26
Protect your hearing _____	12	Working in hot weather _____	27
Reducing stress on your body _____	13	Working with dust and fumes _____	28
Safe retreat positions in breaking out _____	14	Working with hazardous substances _____	29
Skid site management _____	15	Working with machines _____	30

# What a tailgate meeting is for

- To discuss what happened yesterday
- To plan the day's work
- To discuss the risks and agree controls



# What a tailgate meeting is for

Holding a tailgate meeting before work each morning is the best way to set a crew up for a successful day's work.

This is why we hold tailgate meetings:

## **To discuss what happened yesterday**

- Talk about what went right – share what worked well with the crew.
- Talk about what might have gone wrong yesterday and what should be done differently today.

## **To plan the day's work**

- To make sure there are enough crew on site to do what needs to be done and do it safely.
- Talk about what visitors are expected that day, what risks they might bring, and who's going to meet, induct and supervise them.
- Agree what communications will be used, on what channels.
- If anything changes let the rest of the crew know.

## **To know the risks and agree controls**

- Discuss the danger zones and agree the safe retreat positions for the day.
- Remind everyone about the two tree length rule.

**EVERYONE MUST COME TO THE TAILGATE MEETING – It's the only way to be sure the whole crew knows what's happening that day.**

# Alcohol and other drugs

- We are a drug and alcohol-free crew
- Tell the foreman if someone seems affected
- Ask for help

**Had enough?**  
We can help



**Call or text  
1737**

# Alcohol and other drugs

There is absolutely no place for alcohol and other drugs in the high-risk, highly changeable environment of our forests.

## **We are a drug and alcohol-free crew**

- Don't overdo the alcohol on the nights before work.
- Some pharmacy medicines can affect you (eg, make you sleepy). Tell your doctor what work you do before they prescribe you something.
- Speak to the foreman if you are taking anything that might make you unsafe at work.

## **Tell the foreman if someone looks like they might be affected by drugs or alcohol**

- That's if they look unwell, like they're not looking after themselves, if they're moody or quiet, agitated and jumpy, and generally seem not like their usual self.
- If you feel OK about it, talk to them yourself.

## **Ask for help if you're drinking too much alcohol or taking drugs**

- Making change is not usually something you can do on your own and there's plenty of help available – a lot of it is free:
  - » Call or text 1737 to talk to a trained counsellor.
  - » Find out what other help your employer might give you access to (eg, counselling from Vitae or an Employee Assistance Programme, known as EAP).

# Driving – to work, and at work

- Follow all road rules
- Drive to the conditions
- Manage fatigue





# Driving – to work, and at work

Driving is one of the things most likely to cause injury or death in forestry.

## **Follow all road rules – even on forestry roads**

- Always drive on the left – you're not the only one on the road.
- Obey all road signs, especially the speed limit.
- Wear your seat belt and carry your licence at all times.
- Communicate – tell others where you're going and when you're coming back. Call in your position on the RT.

## **Always drive to the conditions**

- Expect the unexpected – potholes, wildlife, sunstrike, dust, wind gusts, etc.
- If the weather or road conditions are bad, slow down.
- Look out for other vehicles, especially on narrow roads or blind corners.

## **Manage fatigue**

- Take a rest before driving or ask someone else to drive if you don't feel up to it.
- Have driver changeover points during your trip.
- Carry water with you to stay hydrated.

**REPORTING INCIDENTS – Add the number to call to report road conditions or incidents, or wandering stock, to your phone contacts.**

# Emergency response plan

- Be able to communicate quickly
- Be prepared to give first aid
- Know what to do in an emergency



# Emergency response plan

A good emergency response plan may stop an accident becoming a fatality. The plan must be in place and everyone must know about it before the operation starts.

## **Be able to communicate quickly to get help**

- Charge radios and phones each night and regularly test locator beacon batteries.
- Know where you're working – be able to give the road names and GPS co-ordinates in 'degrees decimal minutes'.
- Have one person controlling communications with emergency services.
- Someone must also meet the ambulance at the forest gate and direct them to the emergency.

## **Be prepared to give first aid before emergency services arrive**

- Keep first aid skills up to date and kits well stocked:
  - » Before you head out each day, check you have the first aid equipment you might need.
- Be prepared to drive out by road if a helicopter can't get in.
- Be aware of having enough vehicles available to get everyone out safely if you need to leave in a hurry (eg, before extreme weather closes the forest road).

## **Know what to do in an emergency**

- Treat emergency drills like the real thing – these should be held at least twice a year.
- Have a back-up plan – always think about what you would do if you couldn't follow the emergency plan.

# Fit for work

- Sleep well, eat well, take breaks
- Be a good mate
- It's OK to ask for help



**Ask for help**

**Call or text 1737**

# Fit for work

Being fit for work means looking after your mind and body.

## **Sleep well, eat well and take breaks to look after your body**

- Get enough sleep before work so you can concentrate and make good decisions, and are less likely to become fatigued.
- Eat nutritious food to keep you going – and drink plenty of water.
- Be as fit as you can – stretching and making sure you're warmed up before work helps prevent injuries.
- Be aware of how you're doing. Take a break if you need one, even a short break. Don't just power on through.
- If you work in a machine, so long as it's safe get out and walk around during breaks.

## **Be a good mate – share how you're doing, and stay calm**

- A lot of injuries happen when we get stressed, angry and frustrated. Take a deep breath, refocus and stay calm.
- Tell your foreman if you're not feeling totally with it – maybe you're getting sick, or maybe you're tired from the night before.
- Be a good mate at work:
  - » Tell crewmates when they've done well.
  - » Treat each other with respect.
  - » Have breaks with your team.

## **It's OK to ask for help**

- If you feeling fatigued, stressed or not yourself, talk to someone.
- If someone in your crew doesn't seem OK, it's OK to ask how they are getting on.
- There's plenty of help available – a lot of it is free:
  - » Call or text 1737 to talk to a trained counsellor.
  - » Find out what other help your employer might give you access to (eg, counselling from Vitae or an Employee Assistance Programme, known as EAP).

# Learning from incidents

- Learning to stop it happening again
- Everyone is involved
- Findings are shared
- Also notice and share what went right



# Learning from incidents

When something unexpected happens, we all need to report it. That's so we can investigate what happened to learn from it and stop it happening again.

## **Before the investigation starts: What went wrong?**

- Incident investigations are about learning from something that happened.
- Incidents are usually about system failures rather than individual people doing the wrong thing. Think about how the system can be improved to prevent injuries.
  - » For example, people will always crash cars, but using seatbelts prevents some injuries. What could be the 'seatbelt' in this incident?

## **During the investigation: What can we improve?**

- It's about asking everyone involved what they saw and heard – without pointing fingers.
- Be open and honest – no-one benefits if we hold back information that could stop someone from being injured or killed in the future.
- Important controls are agreed and put in place.

## **After the investigation: How can we help others?**

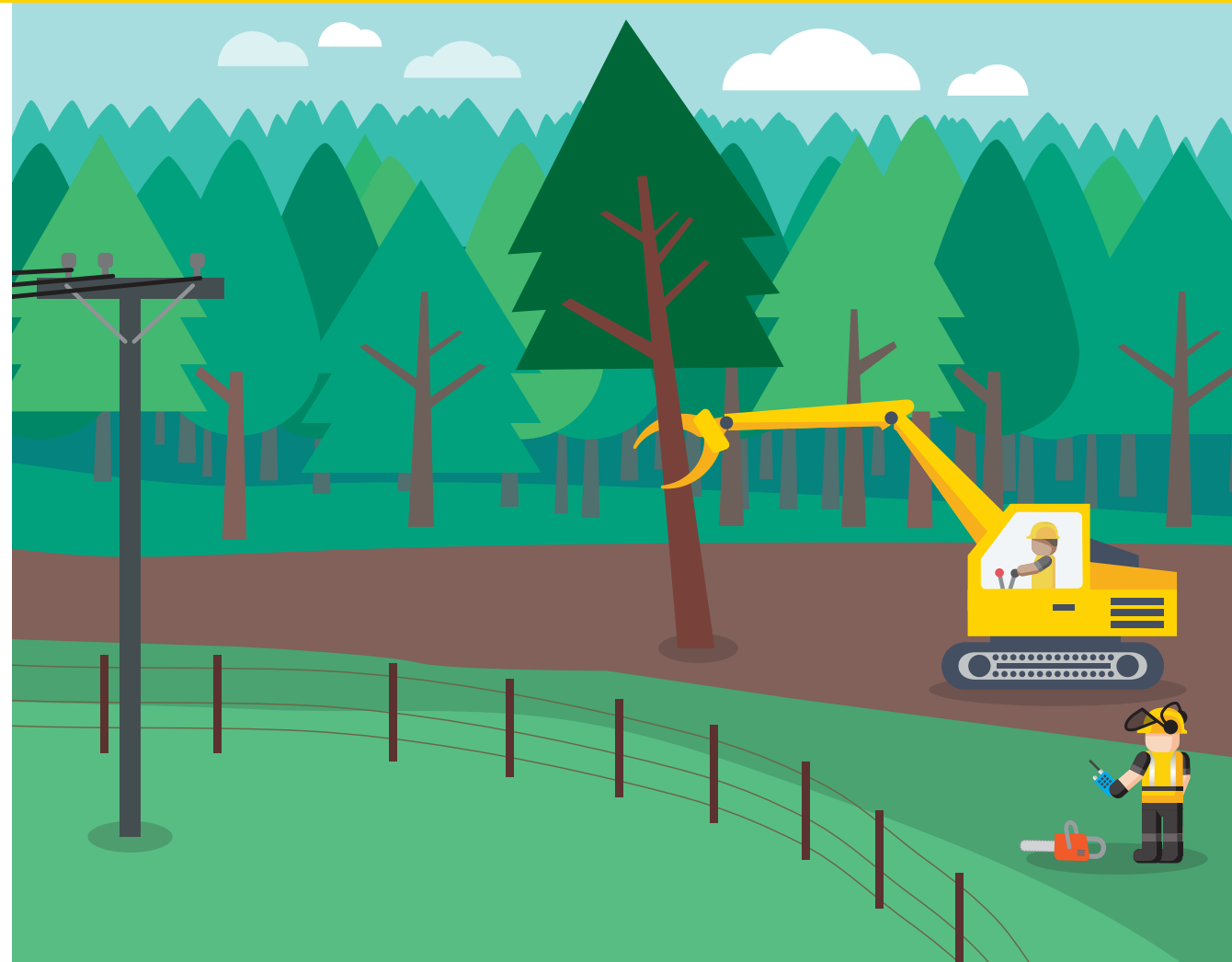
- All findings and recommendations are then shared with the crew, and with the wider industry (via Safetree).

## **Noticing and sharing what went right is also important**

- When something goes well, ask why did it go so well? What should we keep doing to stay successful?
- Notice how you normally work. Things will always change, so how do you adapt to meet those changes?
- If you notice anything going well that you think would be good to share, let your foreman know.

# Machine-assisted tree felling

- Assisting machines may be within one tree length of the feller
- Use the right machine for the job
- The tree feller is in charge





# Machine-assisted tree felling

Use machine assist when a tree is in a hazardous situation, or when its fall must be totally controlled.

## **Machines that are assisting can be used within one tree length of the faller**

- But it can't be in the direct line of where the tree is intended to fall.
- All machines and people not involved in the operation must be at least two tree lengths away from the faller.

## **Use the right machine for the job**

- Plan the operation – decide what kind of machine assist to use.
- The machine must have the right operator protective structures.

## **The tree faller is in charge of the machine-assist operation**

- The faller and machine operator must be trained in machine assist.
- The machine operator must be able to communicate with the faller – ideally by RT.
- The faller must retreat to a safe position before signalling to the machine operator to pull or push the tree.

**Your life is worth more than a tree – leave a tree standing if it's unsafe to fell.**

# Managing fatigue

- Know the signs of fatigue
- Get enough rest away from work
- Manage what you can at work



# Managing fatigue

Fatigue is more than being tired – and it's not something you just push through. If you're fatigued you're a danger to yourself and to your crew. But fatigue can be minimised and prevented.

## Watch for signs of fatigue

- Think about how you're doing – do you feel tired or sleepy, or don't feel refreshed after sleep?
- Look out for physical signs – tripping or stumbling more than usual, blurred vision, yawning, lots of blinking, falling asleep.
- Notice any behavioural signs – feeling grumpy or getting annoyed easily, finding it hard to concentrate, making mistakes.

## Get enough rest away from work

- Make sure your family understands your work and how much you need to sleep and rest.
- Try to stick to a sleep routine, keep your bedroom as dark as you can, and don't use digital devices just before going to bed.
- Don't overdo the alcohol on nights before work so you sleep better.
- Keeping fit – such as by playing a sport – can help fight fatigue.

## Manage what you can at work to avoid fatigue

- Eat nutritious food and drink lots of water so you're well fuelled and hydrated.
- Take breaks, including a brief rest between starting work and the usual morning break if you've had an early start with a long drive to the work site.
- Speak up. Factors that cause fatigue must be managed like any other work hazard, so tell the boss if you think you might be fatigued.

**WHAT'S ENOUGH SLEEP?** People need at least **6 hours' sleep a night** – although 7+ is better. Anyone who's slept less than 5 hours in the past 24 hours, or 12 over the past 48, is at high risk of fatigue. If you're fatigued you're a danger to yourself and your crew because you're more likely to have accidents.

# Managing visitor safety

- Use signs to warn visitors about hazards before they arrive
- Induct visitors on arrival
- Make sure visitors stay safe



# Managing visitor safety

Some visitors may need more of an induction than others – eg, people who may be exposed to more risk need a fuller induction than regular visitors or someone on a short, supervised visit.

## **Use signs to warn visitors about hazards before they arrive**

- Tell them what hazards are ahead and what they need to do to stay safe when arriving – stop, drive slowly, call ahead, etc.
- Show them where to park safely.
- If the crew is mobile and working away from vehicles, make sure the visitor can find safety information and the crew's contact details.

## **Induct visitors straightaway**

- Decide at the tailgate meeting who will meet visitors that day. Immediately take visitors to the safe zone for induction.
- During the induction, find out why the visitor is there and where they need to go.
- Tell them where they can't go, check their PPE (lend them PPE if they don't have it), and decide if they need to be supervised.
- Find out about any risks the visitors introduce and agree how to manage them.

- Tell them about any risks that could affect them and how they are managed.

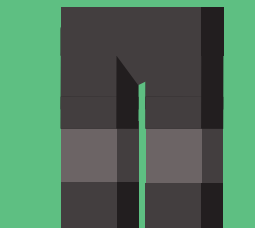
## **Make sure visitors stay safe while on site**

- If conditions or work arrangements change, let your visitors know.
- Have them sign out when they leave, and remind them how to drive out safely.
- If visitors don't follow instructions, they can be asked to leave.

**Don't forget to get all visitors to sign in and out.**

# Personal protective equipment (PPE)

- Check you've got all the PPE you need
- Make sure it's in good condition
- Wear it – every time



# Personal protective equipment (PPE)

PPE is your last line of defence against injury. Wear it every time for every task it's needed for.

## **Check you've got all the PPE you need for what you're doing today**

- Do you need a higher class of hearing protection, dust mask or safety goggles?
- Is your PPE up to standard? Check for the NZ Standards number and/or the 'S' mark of compliance.
- Don't forget about sunscreen – it must be at least SPF 30, broad spectrum, water-resistant and reapplied every 2 hours.

## **Make sure it's in good condition – it's clean and undamaged**

- Are there any rips or creases in the earmuff pads? Are your boots in good condition? Do you need a new dust mask? Are any straps broken on your chaps or helmet?
- Check hi-viz clothing – ideally it has reflective strips for working in low light and it must be in good condition and clean enough so you can be seen easily.
- Does it fit well? Borrowed PPE can be better than none, but badly fitting PPE – such as boots or gloves that are too big – causes its own problems.

## **Wear it – and wear it right, every time**

- Plenty of injuries happen when doing 'just a quick job' so wear your PPE every time you do a job that needs it.
- Always wear it properly. Do up straps and laces, don't wear earmuffs or helmets over hats or hoodies, and have your visor down when it needs to be.
- Remind your workmates – if you see someone not wearing their PPE, or not wearing it right, speak up.

# Preventing slips and trips

- Check your boots
- Keep your skid site tidy
- Work to the conditions and terrain





# Preventing slips and trips

Slips and trips can cause serious injuries. They're also preventable by using a bit of care and the right PPE.

## Check your boots

- Boots with spikes are good for some jobs (eg, walking over slippery terrain) but not for others (eg, climbing ladders or operating machines).
- Wear boots that are right for the work you're doing.
- Make sure your boots always have good tread for extra grip and strong ankle support.

## Keep your skid site tidy and your machine clean

- Clear away debris and slash from where you need to walk.
- Store equipment and rigging away tidily.
- Keep machine handholds and footholds clear.
- Clean up any fluid or fuel leakages to prevent slips.

## Walk and work to the conditions and terrain

- Weather can make terrain slippery, frosty or icy so walk to the conditions – slow down and watch your step.
- Walk around debris, slash or patches of rough ground rather than trying to walk through/climb over it.
- Don't climb over or work on log stacks (eg, don't trim while standing on log stacks).
- Carry only what you need and what's safe to carry – make another trip if there is too much to hold safely.

# Protect your hearing

- Hearing loss is progressive and permanent
- Builds up from exposure to all sorts of loud noise
- Totally preventable

How can you protect your hearing?



Turn it off



Walk away



Protect your ears



Limit exposure

Noise source	Time to damage hearing without protection
Chainsaw (104–109dBA)	1 to 7 minutes
Disk cutter (100–109dBA)	1 to 15 minutes
Bell logger (99–100dBA)	15 minutes
Hauler (76–96dBA)	30 minutes
Waratah (76–96dBA)	30 minutes
Loader (76–96dBA)	30 minutes

# Protect your hearing

Loud noise damages the tiny hairs in your inner ear. If the hairs are damaged they can't carry sound to your brain, so you can't hear. These hairs don't grow back. Once they are gone, so is your hearing.

## **Limit noise at work as much as you can – that's your first line of defence**

- Turn off equipment and machinery when you're not using it.
- Stay away from someone doing a noisy task if you can.
- If you're in a machine cab, keep the doors and windows closed, and use air conditioning.
- Get your hearing checked regularly.
- Don't think a few minutes of noise doesn't matter – in the long term it does.

## **Use the right PPE – that's your last line of defence**

- Always wear the right hearing protection whenever you're doing a noisy job or around someone else doing one.
- Wear your hearing protection the right way, making sure nothing is breaking the seal. Don't wear it over hats, hoodies or sunglasses.
- Make sure your earmuffs are in good condition, with no creases or rips in the pads.
- Don't listen to loud music while you work – that defeats the purpose of protecting your hearing from noisy equipment.

## **Limit noise away from work as much as you can**

- Turn down the music when driving, especially to and from work.
- Wear hearing protection if you're using power tools or lawn mowers at home, or you're going shooting or hunting.

# Reducing stress on your body

- Use good lifting and handling techniques
- Maintain tools and machinery to reduce vibration
- Take breaks and alternate jobs



# Reducing stress on your body

Holding or carrying a heavy load, working with vibrating machinery or tools, and repetitive movements can all put a lot of stress on your body. Changing the way you work, and lift and carry loads, can help.

## **Use good lifting and handling techniques**

- Bend your knees and tighten your stomach muscles (your core) so you're ready to lift.
- Get a crewmate to help (eg, lift heavy bags or get a load onto a ute).
- Make sure your load is balanced – use a bag with shoulder straps rather than just a cross-body strap.

## **Maintain tools and machinery to reduce vibration**

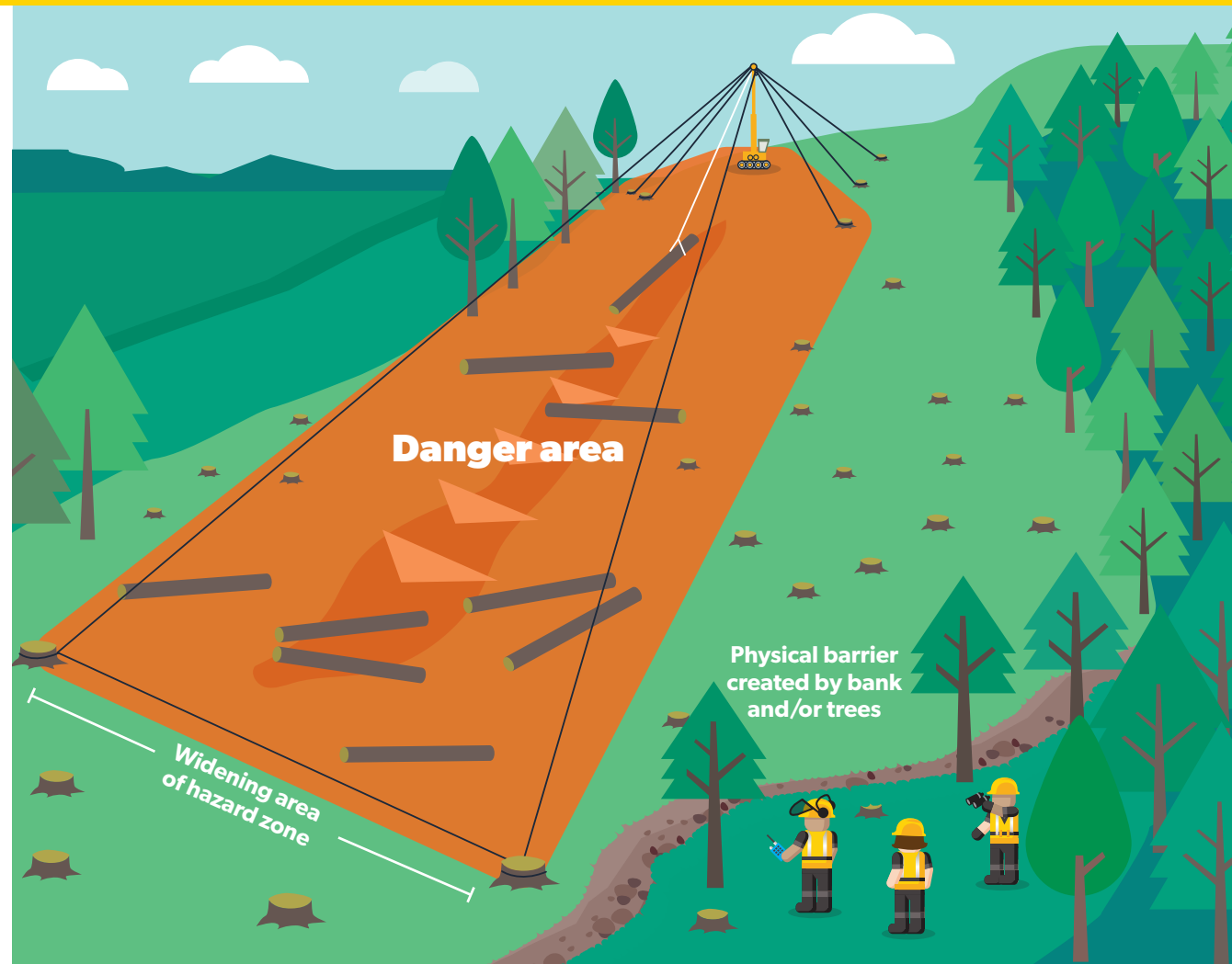
- Cutting tools that aren't sharp, or any tool that's unbalanced, will vibrate more, which can cause vibration disease.
- Make sure all tools and machinery have effective anti-vibration mounts.
- Know how to use your tools the right way – after all, they're there to make the job easier.

## **Take breaks, swap tools and tasks**

- Working one way all the time can stress the body (eg, using the same hand to reach, or walking the same way around a hillside), so swap around.
- If possible, swap jobs and tools with workmates – doing one thing for a long time increases your chance of injury.
- Even if you can swap jobs – and especially if you can't – take frequent breaks and stretch your muscles.

# Safe retreat positions in breaking out

- Identify hazards, plan and test SRPs
- Communicate well
- Regularly check SRP is still safe



# Safe retreat positions in breaking out

Staying safe when breaking out in cable logging means knowing where to stand every time stems or ropes move.

## Identify hazards and plan safe retreat positions (SRPs)

- Set these at the daily tailgate meeting – make sure you understand and agree what SRPs will work for today.
- Test them on the slope before work starts – use a range finder and ideally mark the SRPs (eg, with marker paint or hi-viz clothing).
- The person in charge (usually the HBO) is responsible for setting SRPs – everyone must stand behind the SRPs and follow instructions.

## Communicate – look and listen

- Have effective communication within the breaking out crew, and between the crew and the hauler operator and the chute machine operator.
- Understand what type of communication is being used that day, on what channels, and what any signals mean.

## Keep checking your SRP – and always watch out

- Remember anything can happen when stems or ropes are moved – or even when they aren't.
- Never stand under the working ropes, and keep clear of the rope's bight.
- Look behind you – that could be where the danger is.
- You need to stand in the right place every time you retreat. If the SRP needs to increase to keep everyone safe, increase it.
- There's a lot to look out for during breaking out and unexpected risks can crop up very quickly, meaning your SRP isn't safe anymore.

**Any reduction in SRPs must be agreed with the foreman or crew boss.**

# Skid site management

- Know the safe zones and danger areas
- Make sure people and machines stay apart
- Use communications systems





# Skid site management

Skid sites are busy with people, machines and moving logs, so there must always be enough room to work safely.

## **Know the safe zones and danger areas, which must be marked out**

- But remember these can change – if the skid becomes crowded safe zones can become unsafe.
- If that happens, operations may need to stop until the log stocks become manageable.
- To keep the skid area safer, make sure all vehicles park in parking areas – not where you need to work – and that log trucks use a dedicated turn-around area.

## **Make sure people and machines stay away from each other**

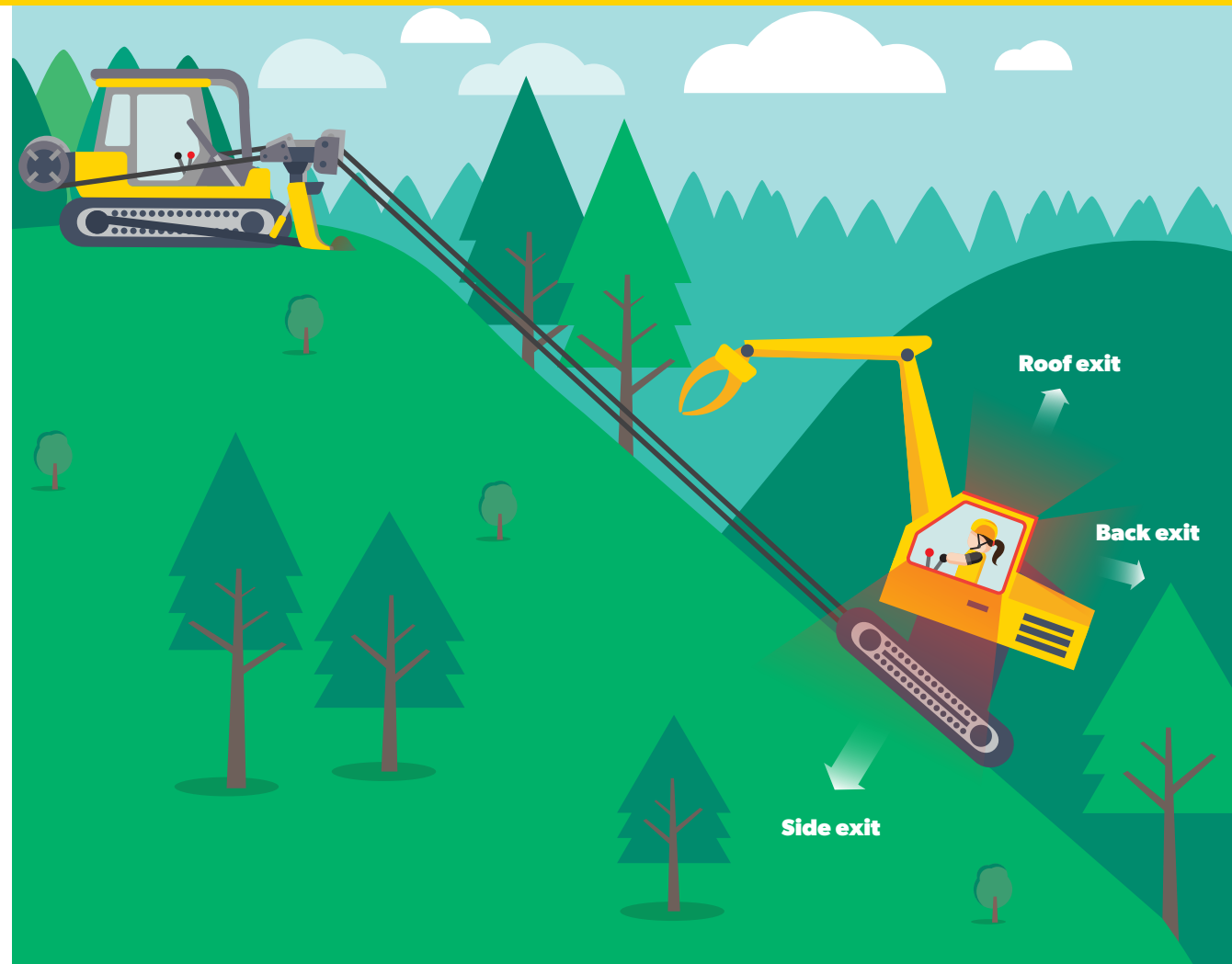
- All machine drivers must come onto the landing slowly.
- If you're working on the skid, remember the machine operator often has limited vision and might not see you, so:
  - » wear hi-viz gear
  - » work facing machines, and don't move behind them
  - » make sure the machine operator has seen you, and signals you have been seen.
- Machine operators must look around, use mirrors and reversing cameras to be sure everyone is clear before moving the machine.

## **Use communications systems**

- Everyone must clearly understand the communication systems used on site.
- Remember to tell the machine operator you are changing where you are working, so they know where you are.
- If anything on site changes – including safe or danger zones – communicate the changes to everyone straightaway.

# Steep slope harvesting

- Make sure your machine is up to the job
- Check your ropes
- Have multiple exits to use in an emergency



# Steep slope harvesting

You must make some extra checks when working on steep slopes, including a pre-start check of the machines, winch-assist computer system, and ropes and rigging. You must also always use your operator restraint, ideally a multi-point harness.

## **Make sure your machine is up to the job**

- Is your machine-mounted winch securely anchored?
- Will the winch-braking system hold if the machine loses traction, stability or the machine brakes fail?
  - » Can the machine brakes hold if the tether rope or winch fails?
- Make sure someone who is trained, skilled and experienced checks the plant and the winch for wear and tear each day.
  - » If your winch is retro-fitted to existing plant, it must be fitted, checked and certified by a professional engineer.

## **Check the ropes**

- Is there any wear and tear on your tether rope? If the rope is damaged at the end connector, it can be cut and the end connector refitted or spliced. If the rope has damage anywhere else it should be replaced. If you're not sure, ask someone with more experience.
- Have at least one back-up rope available.
- Make sure the ropes aren't used for any other purpose (like cable rigging).

## **Have multiple exits – know how to get out in an emergency**

- Have another way to get out in case the cab door is blocked in a rollover.
- Make sure there's nothing loose in the cab that would fly around in a rollover.
- Exits must be able to be opened from inside AND outside.
- Make sure nothing is in the way of the exits.

# Temporary traffic control for private forestry roads

- Use the right kind of sign
- Put them in the right place
- Document what you have done



# Temporary traffic control for private forestry roads

You must use temporary traffic control road signs to warn drivers on private forestry roads if they are entering a hazardous area, and tell them what to do when they get there.

## Use the right kind of road sign

- There are three main types of signs:
  - » **Initial, advance warning** – tells of hazards ahead (eg, 'tree felling', 'logging operations' or an exclamation mark '!')
  - » **Direction and protection signs** – tell drivers what to do (eg, slow down, be prepared to stop)
  - » **Information** – cover more information about site hazards and what the visitor must do (eg, multi-hazard, what PPE to wear).
- Banners, tapes and barriers may also need to be used, especially behind a STOP sign. These must be hi-viz and easy to see.

## Put them in the right place

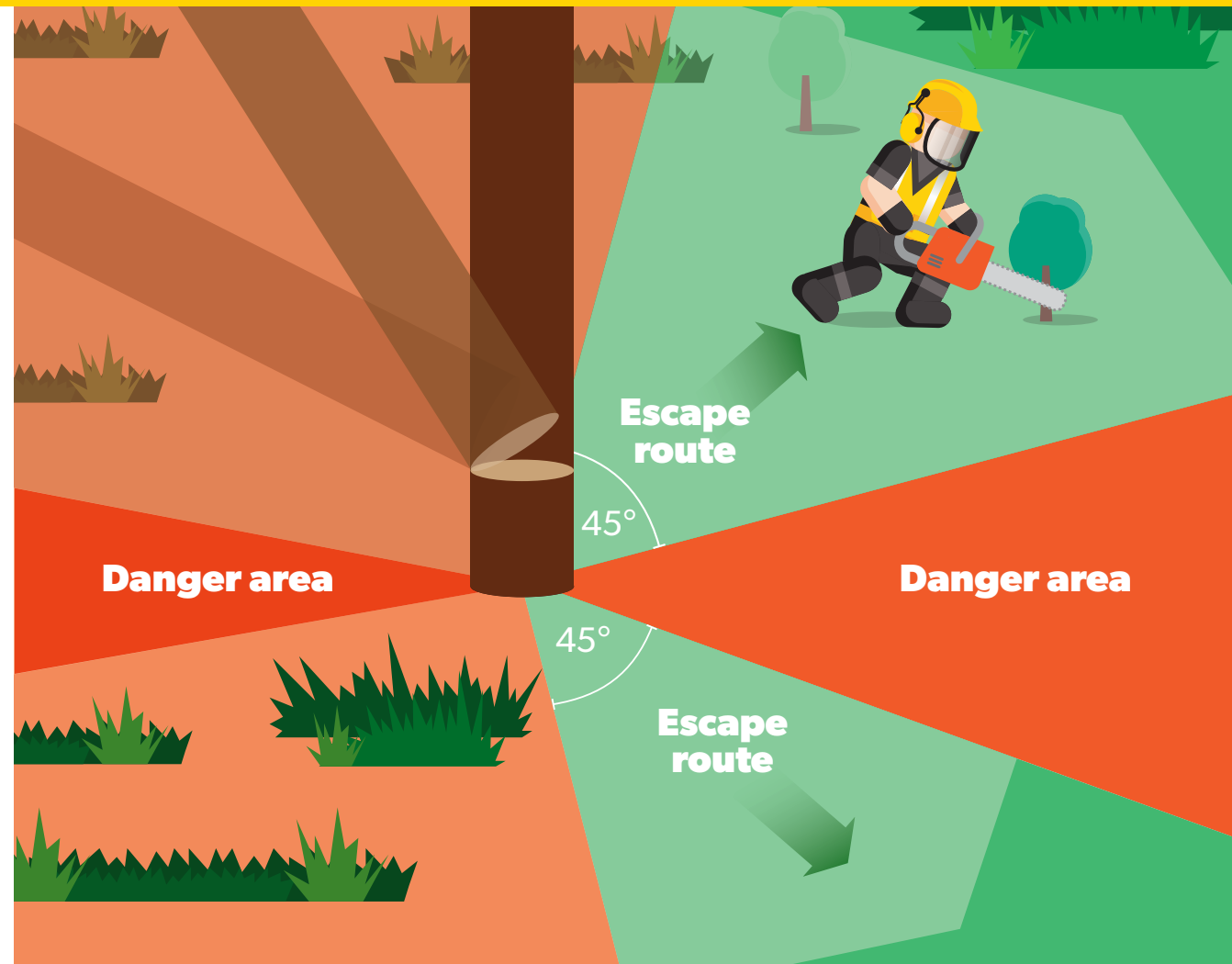
- Where the signs go will depend on the road conditions, corners in the road, and how fast the vehicles are driving.
  - » Increase distance if the hazardous area is around a blind corner, or visibility isn't good (eg, because of smoke, dust, fog, rain).
- Make sure the signs are secure – and regularly check them.
- Cover them up or take them away when you stop working or the hazard is gone.

## Document what you have done

- If you're managing traffic to deal with a hazard, write down, draw up, or take a photo of what you have done for the operation's records.

# The five step felling plan

- 1** Assess the site
- 2** Assess the tree
- 3** Prepare work area and escape route
- 4** Use the correct, safe felling techniques
- 5** Retreat and look up!



# The five step felling plan

You must carry out each step of the five step felling plan to do the job safely and properly.

## 1 Assess the site

- Assess the stand for hazards – the terrain, roads, tracks, other operations, powerlines.
- Wind strength and direction – will it affect safety?

## 2 Assess the tree

- Any defects? Rotting wood, heavy lean, interlocked branches, debris in branches, dead tops.
- Soil very wet or dry? Could that affect stability?

- Falling direction? What could the tree hit as it falls? Which way will you escape?
- If you can fell it safely, decide which cuts to use.

## 3 Prepare work area and escape route

- Clear around the base of the tree – leave no vegetation or obstacles.
- Plan your escape route – ideally 45 degrees behind the tree.

## 4 Use the correct, safe felling techniques

- Over 200mm at the stump? Always use a scarf and back cut.
- Work out the lean. How many wedges do you need? Need machine assistance?

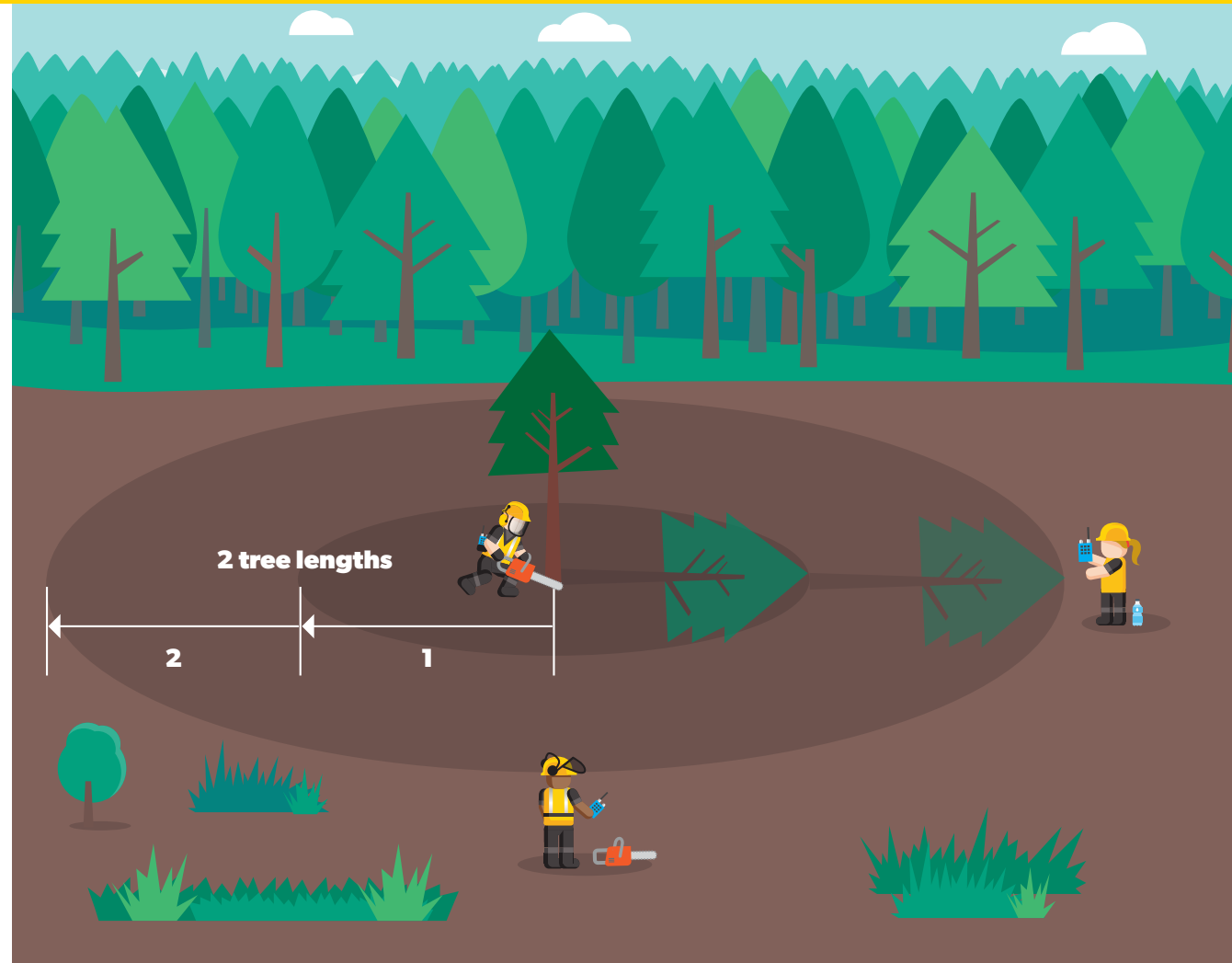
## 5 Retreat and look up!

- Finish cut on the safe side of the tree. **Use your escape route as soon as the tree begins to fall.**
- Watch out for kick back, butt swing or bounce, anything falling or being flicked back.
- Don't walk directly behind the tree.

**If anything looks unsafe, stop felling, reassess, and consider getting help.**

# The two tree length rule

- Stay two tree lengths from where a faller is working
- Two tree lengths is a minimum
- The faller or thinner can authorise some people to come closer – you must get their OK





# The two tree length rule

The two tree length rule is about keeping everyone safe during the operation, as it creates a safety zone right around the tree being felled or thinned.

## **Stay two tree lengths from where a faller is working**

- In case something falls from the tree.
- The tree falls in the wrong direction.
- Or the tree falls onto another tree and they both come down.

## **Two tree lengths is a minimum – it can be increased**

- When felling on a steep slope.
- If two trees are being felled together (tree driving).
- If for any reason the faller/thinner or foreman says it must be increased.

## **The faller can authorise some people to come closer**

- A supervisor, observer, auditor or trainer, or someone being trained.
- A machine operator assisting with felling or thinning – so long as the cab has the right guards and safety features, and the operator stays in the cab and can communicate with the faller and/or observer.
- The faller or thinner runs the operation and nothing happens without their OK.

**The faller or thinner has total responsibility for the zone – no-one can come into that safety zone without their permission.**

# Thinning

- Always follow the two tree length rule
- Use the right felling techniques for the tree and environment
- Have the right gear – maintain it well
- Know your emergency procedures



# Thinning

Trees to be thinned are smaller than trees to be felled, but this work can still cause serious injuries.

## **Always follow the two tree length rule**

- Make sure you're not within two tree lengths of anyone working near you.
- Take breaks and eat well so you manage any risks of fatigue, because fatigue makes it harder to judge distances.

## **Use the right felling techniques for the tree and environment**

- Follow the five step felling plan.
- Check for hazards caused by felling into standing trees.

## **Have the right gear – maintain it well**

- Make sure you have all the PPE you need for the day, including hi-viz gear, a first aid kit and a cellphone or RT.
- Your chainsaw must be sharp with a well-fitting chain, and with all parts of it working well.
- Activate any 'man down' technology – like a motion detector or an RT that sends an alarm if the thinner doesn't move for a set time.

## **Know your emergency procedures**

- At least two people must be on site during thinning.
- Have agreed check-in procedures – check-in at regular times and know what to do if the other person doesn't respond.

# Tree driving

- Consider all other options before a tree drive
- Follow the ACoP's rules
- Follow the plan



# Tree driving

Never attempt a tree drive unless you are trained, skilled and experienced, and you have told someone you are doing it.

## **Consider all other options before a tree drive**

- Call in machine assistance.
- Call in a more experienced faller.
- Leave the tree standing.

## **If a tree drive is the only option, follow the ACoP rules**

- Tell someone you're doing a tree drive (your check-in person needs to know you're doing a particularly dangerous task) and when you have finished it safely.
- Call up a competent tree falling observer if a one-onto-two tree drive doesn't work. Stop falling until they arrive and can agree on a plan.
- Insert a wedge in the back cut of the driven tree – have at least two with you that you can use on the driver tree.

## **Follow the plan**

- Use the right tree – make sure your driving tree is the right condition, size, weight and distance from the tree that needs to be driven.
- Know how you are going to escape when it starts to move – make sure your escape route is clear before you start the drive.
- Keep looking up – regularly stop work and look up to see if anything is moving above you.
- Always use the right cuts and know when there's the right amount of hinge wood and it's time to stop cutting.

# Tree felling observer

- Must be a trained, skilled and experienced tree faller
- Must be able to communicate
- Must always stand in a safe position



# Tree felling observer

Use a tree felling observer when there's a particularly tricky or dangerous tree to be felled. All felling must stop until the observer arrives.

## **They must be a trained, skilled and experienced tree faller so they can:**

- Help make a felling plan with the tree faller. This includes whether to use machine assistance, or leave the tree standing if it's too dangerous to fell.
- Help identify and manage hazards.
- Watch and warn the faller if something starts to move or fall during the cutting.

## **Observers must be able to communicate with the faller and anyone else involved**

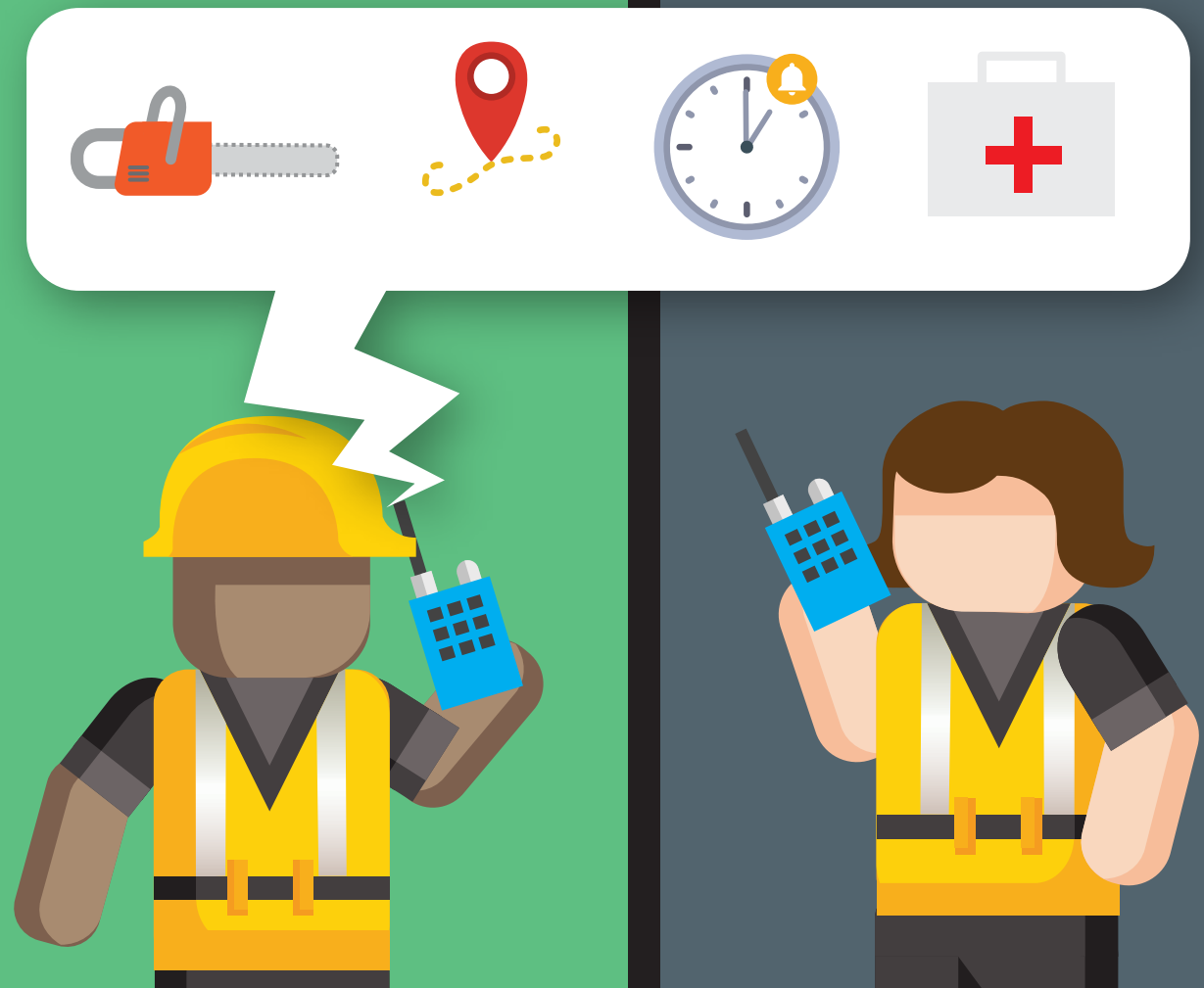
- Must be in visual and/or RT contact – can use hand signals.
- Be aware of anything that could make communication difficult – noisy chainsaws, wearing earmuffs, limited visibility, distance from faller.
- The faller and observer must agree on communication procedures before starting work.

## **Observers must always stand in a safe position**

- They must stay out of the way – and keep checking their position is safe as the felling continues.
- They must be able to easily see the tree the faller is working on, with nothing blocking their view.

# Working alone

- Tell someone exactly where you are working and what you are doing
- Have agreed check-in procedures
- Know what to do in an emergency





# Working alone

Everyone working alone must be trained, skilled and experienced in the task they are doing. They must also be able to get help quickly.

## **Tell someone exactly where you're working and what you are doing**

- Always have a two-way communication method with your check-in person.
- Don't change location without updating them on where you're going and what you're doing.
- Plan your work. If anything looks wrong, stop working immediately – help could be a long way off.
- Consider using equipment such as personal locator beacons and man-down technology.

## **Have agreed check-in procedures – and stick to them**

- Check in exactly when you say you will – maybe when you refuel your chainsaw, maybe every hour. Always check in at the end of the day.
- If you're the check-in person, set up an alarm or notification system to keep track of check-in times. Or have a system that goes off if the person working alone doesn't check in.
  - » Know what to do if there's no response.
- If constant radio contact isn't possible, fallers should always have an observer with them.

## **Know what to do in an emergency**

- Have a current first aid certificate and always carry a personal first aid kit.
- Make sure someone is close enough to get to you, ideally within 10 minutes of calling for help.
- Know exactly where you are so you can give clear co-ordinates to emergency services – be able to give your position in degrees decimal minutes.

# Working at height

- Use fall restraints
- Use the right equipment for the job
- Have a spotter



# Working at height

Falls – even from relatively low heights – can cause injuries.

## Remember to use fall restraints

- Safety harnesses, belts and lanyards will reduce your chances of a fall.
- Look for the 'S' compliance mark to check your gear is up to safety standards.
- Secure the ladder's feet before climbing up.

## Use the right equipment for the job

- Carry your tools on a belt – not in your hands – so you can use your hands for climbing.
- Choose the right ladder for the job.
- Climb down and move the ladder – rather than stretching out too far.
- Cover your blade when not in use.
- Consider your footwear – is it right for the job you're doing?

## Have a spotter/observer

- Where practical, have someone who is currently trained, skilled and experienced watch you while you work to tell you about new hazards.
- The spotter must always stand in a safe place that's close enough to see you working, but far enough away not to be in danger.

**IF YOU'RE WORKING IN A MACHINE** – Make sure all foot and hand holds on the machinery are clean and not slippery, and that all railings are in place and not loose, so you can't slip or fall.

# Working in bad weather

Stop work if:

- The wind is blowing things off the trees or around
- Wind and very wet soil make trees unstable
- There's heavy rain and/or you don't have the right clothes

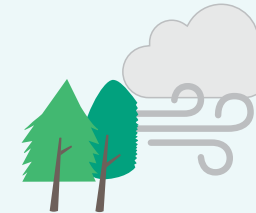
## Fresh winds



30 – 39 km/h

Small trees sway

## Strong winds



40 – 50 km/h

Large branches move, whistling in wires

## Near gale



51 – 62 km/h

Whole trees move, quite hard to walk against wind

**STOP WORK – DO SOMETHING ELSE**

## Gale



63 – 75 km/h

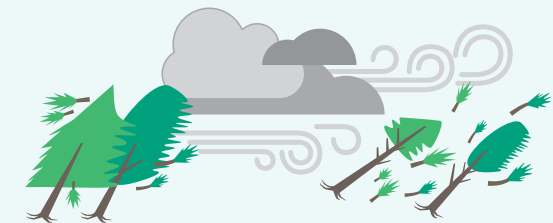
Twigs break off trees, very hard to walk against wind

76 – 87 km/h

Larger branches break off, some structural damage happens

**STOP WORK – DO SOMETHING ELSE**

## Storm



88 – 102 km/h

Trees uprooted, a lot structural damage

Above 103 km/h

Very rarely seen – widespread damage

**NO FOREST WORK**

# Working in bad weather

If the weather conditions become too bad – too rainy, cold or windy – you must stop work and/or find another task to do. Contact your foreman about stopping work when:

## **The wind is blowing things off the trees or around**

- The wind is bending the trees.
- Debris is being blown down.
- You can't walk against the wind.

## **Wind plus soil conditions make it unsafe**

- If it's too wet, poorly rooted or non-windfirm trees can become unstable.

## **Other weather conditions make it unsafe**

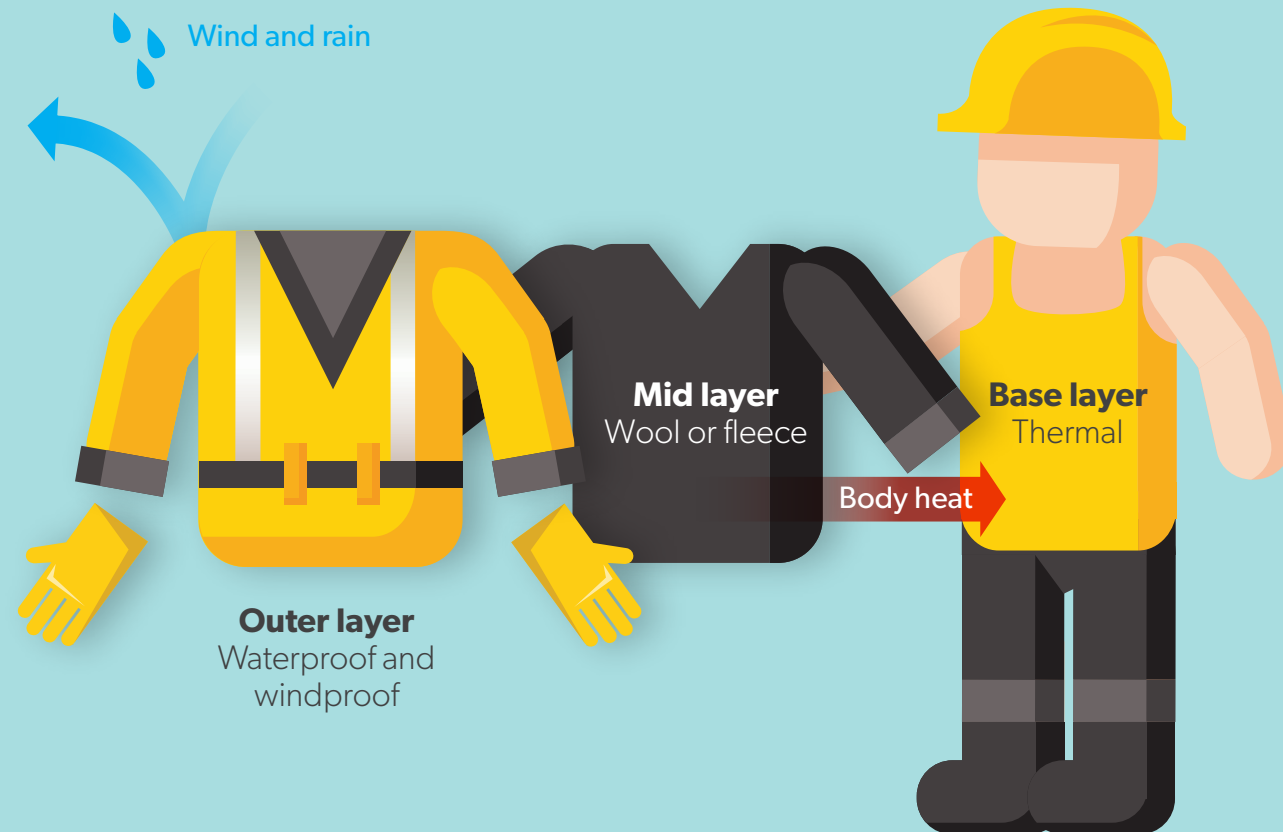
- Heavy rain stops you looking up to check for tree movement or debris in the tops.
- You don't have the right gear (wind/waterproof) to keep you warm and dry while working.

**REMEMBER TO KEEP IN TOUCH** – Always check in with others if you're working in bad weather as the chance of injury is higher than usual.

**BAD WEATHER CAN MAKE GETTING TO WORK DANGEROUS TOO** – If you don't think you can get to work safely, check in with your foreman.

# Working in cold weather

- Wear the right gear
- Fuel the right way
- Watch for hypothermia



# Working in cold weather

If you're not wearing the right gear for cold or wet weather, or you haven't had enough to eat or drink, you can become clumsy and are more likely to get injured. If it's really cold you might even get hypothermia.

## Wear the right gear

- Layer up – wear a layer next to your skin made from a fabric that takes ('wicks') sweat away from your skin, followed with a light insulating layer, a heavier insulating layer, and finally a windproof, waterproof layer.
- Remember your hands and feet – wear gloves that let you work safely, and socks and boots that keep your feet warm and dry.
- Make sure it all fits with your PPE needs.

## Fuel right

- Snacking frequently can be better than eating big meals because you're taking in your calories steadily.
- Drink lots of water as you can become dehydrated in the cold. Drink at breaks and while working – stay away from caffeinated drinks.

## Watch for hypothermia – know the symptoms

- **Mild and moderate hypothermia** – shivering, grogginess, confusion, weak pulse and shallow breathing.
- **Severe hypothermia** – no shivering, unconscious, shallow or no breathing, weak and irregular or no pulse.
- **Take action** – stop work, get into shelter, eat and drink something warm, communicate what's happening and/or call for help.
- **Keep an eye on each other** – we often don't recognise hypothermia in ourselves.

# Working in hot weather

- Remember to Slip, Slop, Slap, Wrap
- Drink heaps of water
- Look out for signs of heat stress in your workmates





# Working in hot weather

It's important to protect yourself from overheating and sunburn during the hotter months.

## Be SunSmart – remember to Slip, Slop, Slap, Wrap

- **Slip** on a light, breathable, long-sleeved shirt, and **Slip** into shade as much as possible when working and resting.
- **Slop** water-resistant, broad-spectrum sunscreen (at least SPF 30) onto all uncovered skin. Put it on 20 minutes before you go out, and reapply at least every two hours.
- **Slap** on a helmet with a visor and neck flap.
- Wear **Wrap-around** sunnies – make sure they fit with your PPE needs.
- Get your skin checked by a doctor if you're worried about anything on your skin that looks unusual or has changed.

## Drink heaps of water

- Carry a bottle of water with you all the time and aim to drink at least a litre every hour.
- Don't drink coffee or caffeinated drinks – or lots of alcohol the night before – because this will dehydrate you.
- Watch your pee – ideally it's a light yellow/pale straw colour, not dark yellow. If it's dark, you need to drink more water.

## Look out for signs of heat stress

- You might not notice these symptoms in yourself so keep an eye on your workmates.
- Mild heat stress – watch out for heavy sweating, panting, fast and weak pulse, tiredness, fainting, nausea, headache, grumpiness, wonky vision.
  - » Stop work, rest, drink water, cool down immediately.
- Severe heat stress – watch out for really hot and dry skin, rapid and strong pulse, throbbing headache, dizziness, nausea, confusion, unconsciousness, diarrhoea, tingling and numbness in hands/feet.
  - » **Call 111 if you think someone has severe heat stress** – it's a medical emergency.

# Working with dust and fumes

- Chainsaw fumes can collect in enclosed spaces
- Watch out for fumes, dust, pollen
- Use respiratory protective equipment if necessary



# Working with dust and fumes

While most forestry work takes place outside, we can still be affected by some of the things we breathe in. Basically, that's anything other than fresh air.

## **Chainsaw fumes can collect in enclosed spaces**

- Remember, dense bush or narrow valleys can trap chainsaw fumes.
- If possible, cut a gap in the bush to let air into where you're working – if not, take regular breaks in fresh air.
- Have an escape path so you can get out into fresh air quickly.

## **Watch out for other fumes, dust, pollen**

- Try to work as close to open air as possible so you don't breathe in fumes or gases from equipment you're working with (eg, petrol or chemical fumes).
- If the site is dusty, think about wetting it down.
- Be aware of bracken spores and pollen count – make sure any antihistamines you use are the non-drowsy kind.

## **Use respiratory protective equipment (RPE)**

- If you can't stop the dust or fumes, use RPE.
- Make sure the masks are up to the job, clean and well maintained, and fit snugly over your face – a clean shave makes the best seal.

# Working with hazardous substances

- Transport, store, label and dispose of chemicals according to Safety Data Sheets
- Use fuel and chemicals properly
- Transport fuels, oils and chemicals separate from passengers



# Working with hazardous substances

Only people who are trained to use hazardous substances should use them.

## **Transport, store, label, and dispose of chemicals according to the Safety Data Sheet (SDS)**

- Check the SDS before using the substance – make sure the SDS is up to date.
- Follow what the SDS says the risks are, how they are managed and what PPE to use.
- Know what to do if something goes wrong:
  - » How to give first aid.
  - » How to get help.

## **Use fuel and chemicals properly – and only if you're trained to use them**

- Some hazardous substances may only be handled by certified people (eg, explosives and some chemicals and herbicides).
- Always work in a way that means you won't breathe in fumes or spray drift.
- Remember your PPE – double check what the SDS says to use.

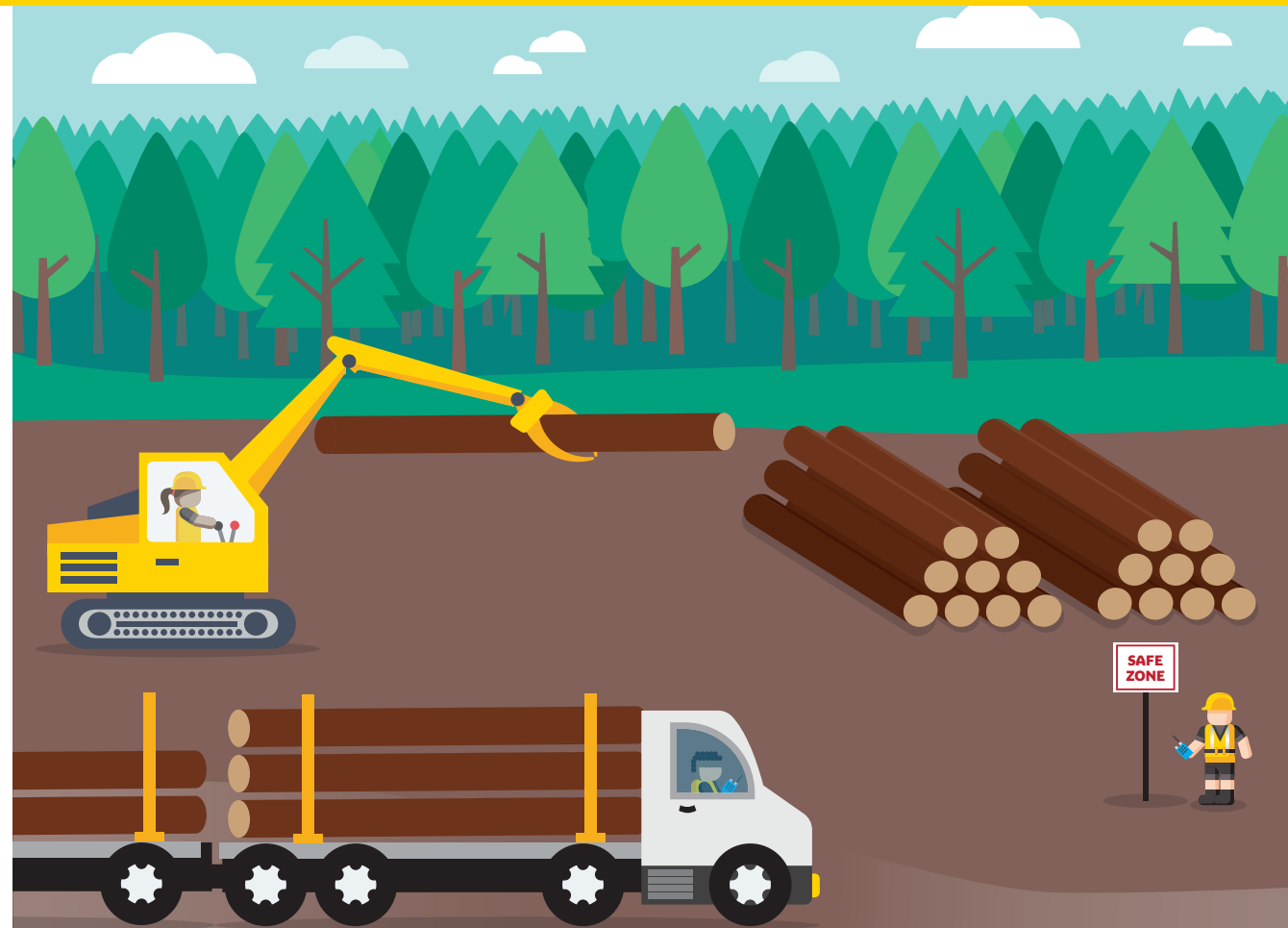
## **Transport fuels, oils and chemicals separate from passengers**

- It must be ventilated to the outside.
- Make sure all hazardous substances are secured so they can't move around in transit.

**Never smoke, eat or drink while handling chemicals.**

# Working with machines

- Make sure the machine is right for the job
- Be trained, skilled and experienced
- Keep people and machines separated



# Working with machines

As forestry becomes more mechanised, machines – also known as mobile plant – are becoming a bigger factor in incidents and injuries. Here are some ways to stay safe around machines.

## **Make sure the machine is right for the job – and well maintained**

- Have someone who is trained, skilled and experienced check the machine before you use it to make sure it's safe.
- Only use a machine to do the job it's intended to do.
- Make sure all guards and cab certificates are in place and current.

## **Be trained, skilled and experienced on that machine**

- Never use a machine alone unless you are fully trained to use that particular one.
- For anyone still training to use a machine, have someone who's trained, skilled and experienced supervise you.
- Always follow the manufacturer's instructions on how to use and maintain the machine.

## **Keep people and machines separated**

- Machine cabs can have limited vision so always check your mirrors and reversing cameras and make sure everyone is clear before moving the machine.
- Never speed – and remember to slow down when approaching the skid.
- If you're working on the ground remember the machine operator may not be able to see you, so:
  - » stay in the safe zones and wear hi-viz gear
  - » work facing machines, and don't move behind them
  - » make sure the machine operator has seen you, and signalled they have.

**Machine operators and others on site must be able to communicate, ideally by RT.**

**safetree** 