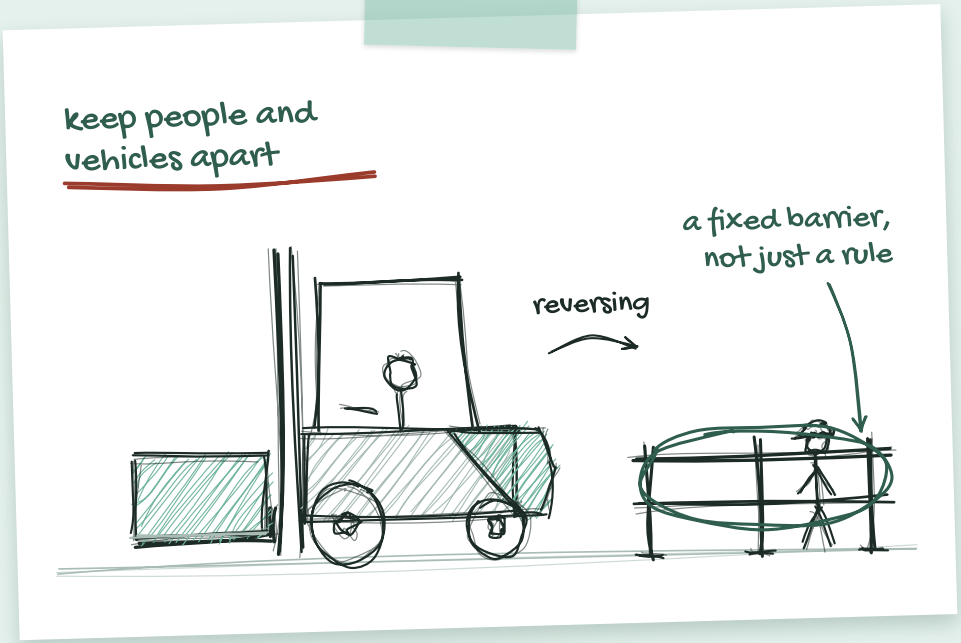
vimes consulting

Field guide 7



Vehicles, mobile plant and traffic

Keeping people and vehicles apart on sites, farms and roads: forklifts, quad bikes, trucks and driving for work.

For middle managers and senior leaders in Aotearoa New Zealand

Health and safety field guide 7
Edition 2.3
Published 27 October 2026

Standing beside the forklift

He was a much-loved father and grandfather. In September 2016 he was at work, standing beside a forklift.

The forklift was moving pallets of freight off a train wagon. As the driver reversed, the pallets fell from the forks. They struck him, and he died at the scene.

His employer, Toll Networks, had not identified the risk of freight falling from the forks onto a person on foot. Its rules for pedestrians were unclear and contradictory.

WorkSafe said his death "would not have occurred if Toll had effective controls in place". It also said: "Administrative controls like rules and procedures are simply not enough."

What the story shows

Nobody set out to put him in danger. There were rules. But nothing physical kept him out of the space the load could fall into. That gap is something a manager can see on any busy morning.

Why this guide starts here

WorkSafe says a vehicle is the main cause of "at least half of all work-related fatalities" in New Zealand. Most of those deaths happen on farms and public roads. On a site or in a yard, the job is keeping people and vehicles apart.

A rule asks people to stay clear. A barrier makes sure they do.

Sources WorkSafe media release, *Fatal interactions between forklifts and people* (25 May 2018); WorkSafe (June 2024), *Overview of work-related harm and risk*, p 2.

See also Page 14 tells what the court decided.

About this guide

Who it is for

Senior leaders who decide site layout, which vehicles to buy, schedules and driving demands.

Middle managers who run yards, sites, farms and fleets, and who see how vehicles and people really mix.

How to use it

Read pages 2 to 6 at your own pace. Then take the spotting pages and the walk-the-route test (pages 7 and 8) and the pocket card (page 20) onto site. Write what you find on page 19. Key words are explained on page 21.

Field guide 6 explains critical risks and critical controls. Field guide 1 explains the ideas behind the series.

Finding your way

Before you start	2
The duty	4
Spotting the dangers	7
What good looks like	9
The duty in court	14
On site	15
Questions and notes	18
Key words and sources	21

Reading these pages

A taped card with footprints: something to try at work



A small compass: the sentence or point after it is this guide's view



A pink box with a red edge: what changes from 1 April 2027



The foot strip: sources. Untinted tables, sketches and checklists are this guide's own



A hatched edge with a compass: this guide's own view

A tinted box: the law, WorkSafe guidance or court facts



A dark box: this guide's lessons from a court case



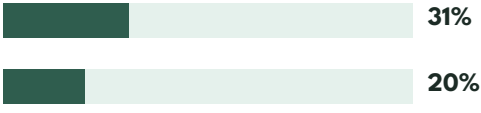
Priority dots (this guide's rating): one means watch, three means act today

In this guide, "the Act" means the Health and Safety at Work Act 2015, "s" means section and "ss" means sections. "The Amendment Act" means the Health and Safety at Work Amendment Act 2026, which became law on 9 July 2026. It is Public Act 2026 No 38. This guide gives general information. It is not legal advice. Written to the plain language standard in the Plain Language Act 2022 (s 5).

Why vehicles matter

Vehicles kill more workers in New Zealand than anything else.

Main cause of work-related deaths from injury, 2011 to 2022



Transport vehicles' share is rising



Trucks and utes alone caused more than one in five deaths. WorkSafe says "most fatal vehicle-related accidents occur on farms and on public roads".

What this means for you

If your people drive, load, or walk where vehicles move, this is probably your biggest risk of a death at work. It deserves your best controls, not your leftover time.

Sources WorkSafe (June 2024), *Overview of work-related harm and risk in Aotearoa New Zealand*, pp 2, 13 to 14, 32. Bars drawn to scale.

How the law applies to vehicles

The Act already covers vehicles.

Rule	What it means for vehicles
A vehicle is a workplace **s 20**	A workplace includes any place where work is done, and "place" includes "a vehicle". A ute, a truck cab or a tractor seat is a workplace.
A vehicle is plant **s 16**	The Act's definition of plant includes "any machinery, vehicle". Mobile plant means machines that move, such as forklifts, loaders, tractors and quad bikes.
The main duty **s 36**	Keep workers and others safe from your vehicles, so far as is reasonably practicable. That includes safe plant and safe systems of work.
Order of controls **GRWM Regulations, reg 6**	Remove the risk first. Then substitute, isolate or engineer it out. Rules and protective equipment come last. Page 10 shows what this means for vehicles.

Commuting is different

Driving to work in a private car is usually not part of work. WorkSafe says an injury on that trip is not a notifiable event.

Shared yards and sites

Drivers from other businesses use your yard every day. Each business has duties, and you need to agree who controls traffic. Field guide 3 explains how.

Sources the Act, ss 16, 20, 36; Health and Safety at Work (General Risk and Workplace Management) Regulations 2016 (GRWM Regulations), reg 6; WorkSafe, *What events need to be notified?*

Vehicles in the new law

From 1 April 2027, many vehicle risks will become critical risks, which the law asks you to manage first.

Vehicle risks on the list

New Schedule 1A lists the use of self-propelled mobile mechanical plant, and, for workers under 15, driving or riding a vehicle that is drawing an implement. WorkSafe's examples of critical risks include "a warehouse worker working around forklifts" and "a road worker operating on the roadside".

Complying with transport law

WorkSafe names the Land Transport Act 1998 as an example. If you meet its requirements for the same risk in the same situation, you are "taken to have complied" with the Act, though any regulations for that risk still apply. **new s 35**

If you have fewer than 20 workers

You are a small PCBU. A PCBU is a "person conducting a business or undertaking", usually an organisation. If numbers vary, as at harvest, you are small if you expect fewer than 20 in at least 9 months of the financial year. **new s 17(3) to (5)** The main duties (ss 36 to 43) then cover only critical risks, as many vehicle risks are. Welfare facilities, notifying WorkSafe and consulting workers (ss 56, 58) still apply. **new s 25A**

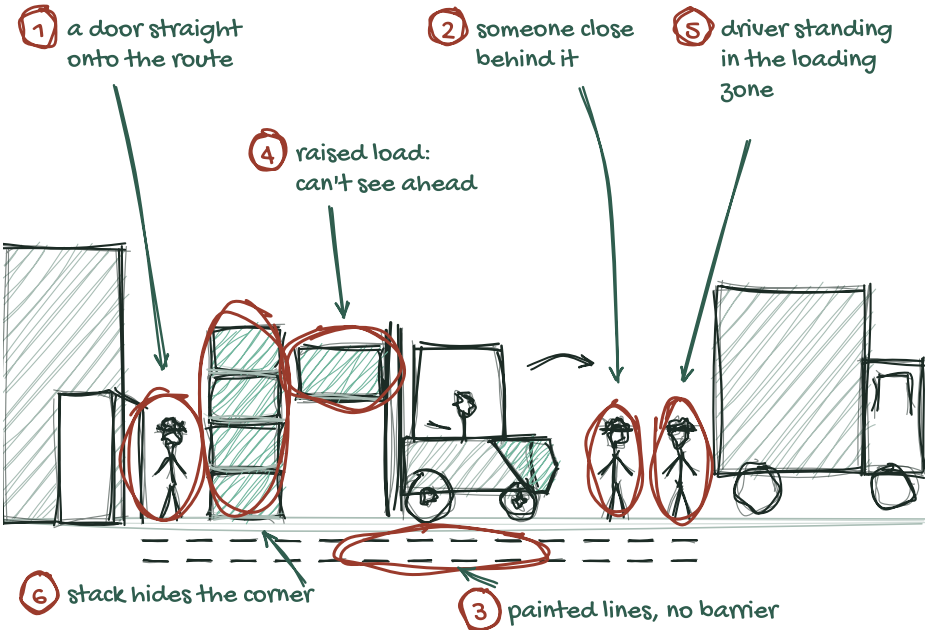
Getting ready

- [ ] Mark every place on a site plan where people on foot and vehicles meet.
- [ ] For each one, write down what physically keeps them apart. If the answer is a rule, plan a barrier.
- [ ] List who drives for work, how far, and for how long.
- [ ] Check which transport laws apply to your vehicles and drivers.

Sources the Amendment Act 2026 (new ss 17(3) to (5), 25A, 35, Schedule 1A); WorkSafe, *What is a critical risk?*, *Managing critical risks for small PCBUs* (September 2026), *Understanding the changes* (July 2026).

What to look for in a yard

On a site, the danger is greatest where people on foot and vehicles share space.



The numbers match the table on the next page. The same six checks work on a farm track, a building site or a car park.

Six things to spot

	What it looks like	Why it matters, and what to do	Priority
1	A door that opens straight onto a vehicle route.	People can be on the route before they see a vehicle. Put a barrier or rail outside the door so they turn before they reach the route.	●●●
2	Someone close behind a reversing vehicle.	The driver may not see them. Remove the need to reverse, or keep people out of reversing areas.	Act now
3	A walkway marked only with paint.	Paint shows the way but stops nothing. WorkSafe suggests barriers or bollards to keep vehicles out of walking areas.	●●○
4	A load carried high, or so big the driver can't see past it.	The driver is moving blind. Carry loads low. Use a spotter to guide the driver if the view is blocked.	●●●
5	A truck driver standing beside the truck while it is loaded.	They are inside the zone a falling load could reach. Give drivers a safe place to wait.	●●○
6	A stack, wall or parked vehicle that hides a corner.	Neither the driver nor the walker sees the other coming. Move the stack, or fit a mirror and slow the traffic.	●●○

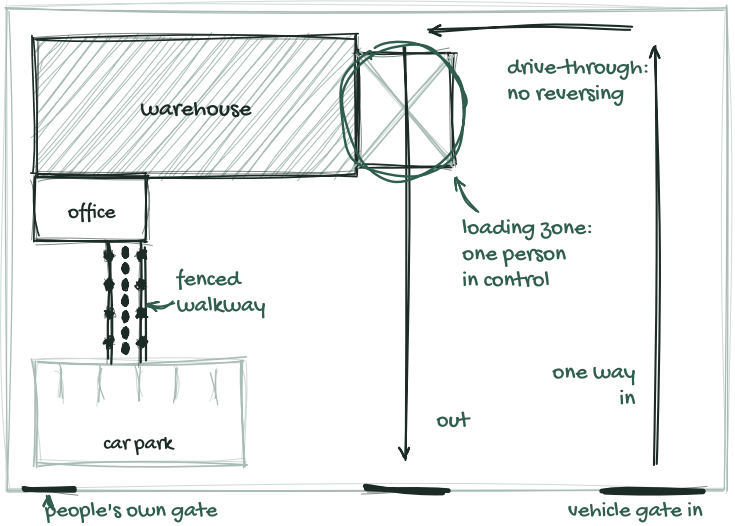
The walk-the-route test

Walk the route a delivery driver takes from the gate to your office. Count how many times you cross a vehicle path with nothing between you and the vehicle. Then fix the worst one first.

Sources WorkSafe, *Managing work site traffic*, s 4.7.

A yard that works

WorkSafe says "the main aim of any work site design should be the separation of vehicles and pedestrians as much as possible".



Topic	What WorkSafe's guidelines say
Routes	"Ideally work sites should have a one-way system with separate entry and exit points."
Walkways	"Walkways leading to and from parking areas should be separated from vehicles and vehicle routes."
Crossings	Where routes cross, use clear ground markings, lights and signs.
Loading	"One person should be in control of the loading zone."
Speed	"Speed limits should be based on the individual circumstances of your work site."

Busy sites "should have a traffic management plan": a written plan for how vehicles and people move around a site. The sketch is that plan, drawn on one page.

Sources WorkSafe, *Managing work site traffic: good practice guidelines*, ss 4.0, 4.2, 4.3, 5.1, 5.2, 8.2.

Strongest controls first

The law sets the order of controls (reg 6). For vehicles, it can look like this.

1. **Remove the risk.** Design one-way routes and drive-through bays, so nobody needs to reverse. WorkSafe says "the most effective way of reducing reversing incidents is to eliminate the need for reversing".
2. **Substitute, separate or engineer it out.** The law treats these as one step: use whichever works best, or several.
   - *Substitute:* a safer vehicle or method for the task, such as a conveyor in place of a forklift.
   - *Separate:* fixed barriers, separate gates and fenced walkways.
   - *Engineer:* speed limiters, cameras, mirrors, reversing sensors and alarms.
3. **Then add rules and people.** Use spotters, high-visibility clothing, training and site rules.

When you need a spotter

WorkSafe suggests a spotter where reversing can't be designed out. The spotter should be in "visible contact with the driver and wearing high visibility clothing".

Before you buy a vehicle

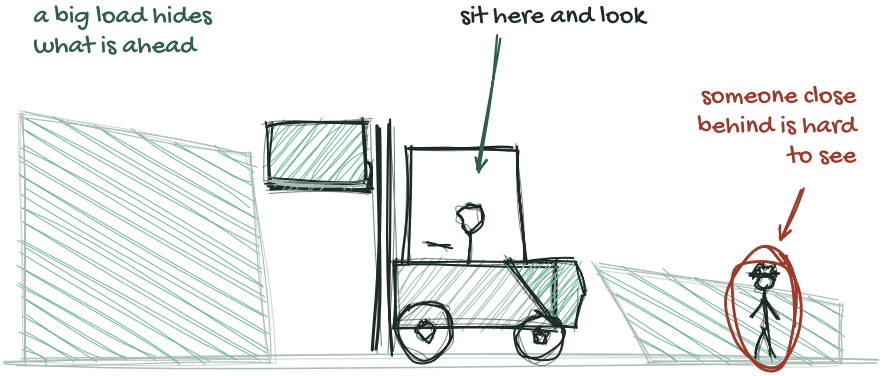
Many vehicle controls are set when you buy. Ask:

- [ ] Is this the right vehicle for the terrain and the task?
- [ ] Does it have rollover and crush protection, seat belts and good visibility?
- [ ] Does it have cameras, proximity alarms or speed limiters?
- [ ] Who will drive it, and what training will they need?
- [ ] How will we maintain it, and who checks it?

Sources GRWM Regulations, reg 6; WorkSafe, *Managing work site traffic*, s 5.2.

Forklifts: see what the driver sees

WorkSafe's chief executive said in 2017: "Forklifts are a known risk – they've been killing and maiming people for many years."



A blind spot is anywhere a driver can't see from the seat. WorkSafe says blind spots matter most "when reversing, or carrying a large load". A person walking close behind a forklift can be out of the driver's view.

The driver's-seat test

Sit in the forklift or truck cab, with the driver's permission, and look around. Ask someone to walk slowly behind you. What you can't see from the seat is where people get hurt.

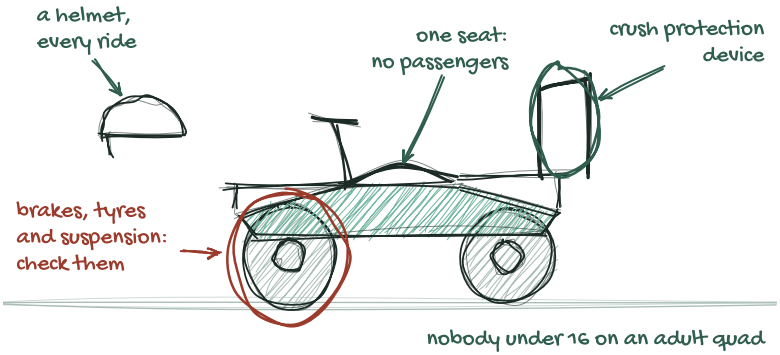
Training and licences

- WorkSafe says each work environment "may require training to suit its individual needs". Train for your site, not just the machine.
- NZTA says a forklift driver on a road "must have a forklift (F) endorsement". A road includes "any place the public has access to".

Sources WorkSafe media release (30 June 2017); WorkSafe, *Managing work site traffic*, s 6.4; *Forklift training*; NZTA (October 2023), *Factsheet 10: F endorsements*.

Quad bikes and side-by-sides

WorkSafe says that, on average, "five people are killed on New Zealand farms each year" in quad bike incidents at work. More than 100 are severely injured.



- "Choose the right vehicle for the job." Only let people with the right training and experience ride.
- WorkSafe strongly recommends a crush protection device, a frame to help stop a rider being pinned. These devices "are likely to prevent serious and fatal injuries".
- "Always wear a helmet while riding a quad bike." On a side-by-side (a small off-road vehicle with a steering wheel and seats side by side), wear a seat belt and a helmet.
- "Quad bikes are not designed to carry passengers." Nobody under 16 should drive a side-by-side.

WorkSafe v Dane Hemphill

In November 2022, a 31-year-old farmhand died on an Eketāhuna dairy farm when a quad bike flipped at low speed. It had worn brakes, uneven tyre pressure and poor suspension, and no crush protection device. In April 2025 the Wellington District Court ordered $75,000 reparation to his family. **ss 36(1)(a), 48**

Sources WorkSafe, *Safe use of quad bikes* (2017); *Policy clarification: crush protection devices on quad bikes* (May 2019); *Using your side-by-side safely* (2019); media release, *Unsafe quad bike killed farmhand* (1 May 2025).

Driving for work and working on roads

A work vehicle on a public road is still a workplace. Your duties go with it.

Fatigue: *WorkSafe v Micheal Vining Contracting Ltd*

A tractor driver worked every day for two weeks, a total of 197.25 hours. At about 2.45 am on 30 October 2016, driving the tractor home on public roads, he was thrown from it and died.

In April 2018 the Huntly District Court fined the company $10,000. It ordered $80,000 reparation for emotional harm, and $9,361 for other losses. **ss 36(1)(a), 48**

What leaders control

- [ ] Hours and rosters, so nobody drives exhausted.
- [ ] Schedules and deadlines that don't push people to speed.
- [ ] Which vehicles you buy, and how you maintain them.
- [ ] Whether the trip is needed at all.
- [ ] Rules on phones, alcohol and drugs, and how you check them.

Working on or beside roads

NZTA's *New Zealand guide to temporary traffic management* (April 2023) is "not a mandatory code of practice". It moves to a "risk-based model". NZTA says to use it alongside WorkSafe's guidelines, *Keeping healthy and safe while working on the road*.

Sources WorkSafe court summary, *Micheal Vining Contracting Limited* (Huntly District Court, 6 April 2018); NZTA (April 2023), *New Zealand guide to temporary traffic management*.

Toll: what the court decided

WorkSafe's investigation into the death on page 2 found two failures.



September 2016
Pallets fall from a reversing forklift and kill a worker on foot.

Then
WorkSafe investigates.

May 2018
The Auckland District Court fines Toll $506,300.

25 May 2018
WorkSafe publishes the result, naming Toll.

Failure	What it looked like
The risk was never identified	Toll had not identified the risk of a person on foot being hit by freight falling from forklift tines.
Rules instead of separation	Pedestrian safety relied on administrative controls. They were ambiguous and contradictory.

The sentence

The court also ordered $118,020 reparation, on top of $105,000 already paid to the family, and $6,030 costs. The charge was under ss 36(1)(a) and 48.

> "*Fixed barriers to separate people from moving plant don't work in every workplace,*" but "*a temporary barrier and warning signage would have kept the victim outside of the dangerous area.*"
>
> **Simon Humphries, WorkSafe**

The lesson for leaders

WorkSafe accepted that the yard was always changing. That made a physical barrier more important, not less. A known risk with weak controls is not an accident waiting to happen. It is a decision.

Sources WorkSafe media release, *Fatal interactions between forklifts and people* (25 May 2018).

When the work changes

The same yard needs a different approach on a quiet Tuesday and on the day three trucks arrive at once. Field guide 1 explains why.

What is happening	How to manage it	Priority
A settled layout with set routes Clear	Keep barriers fixed and routes marked. Check vehicles daily. Check the layout still fits the work.	●○○
A new vehicle, a heavy lift or a changed layout Complicated	Get expert help with the traffic plan. Walk it before the change goes live.	●●○
A busy yard, harvest or a long shift Complex	Keep separation fixed. Watch how people really move, and adjust with the drivers and walkers.	●●●
A collision, rollover or person struck Chaotic	Stop all vehicles. Make it safe. Help people and call 111. Then report it and keep the site as it is (field guide 5).	Act now
Several businesses, nobody directing traffic Confusion	Stop vehicles until it is clear. Agree who is in control (field guide 3).	●●○

Clear to Complicated: the bigger machine

A bigger loader or truck arrives. Its blind spots, speed and turning circle don't fit the old layout.

Complicated to Complex: the busy day

Contractors, a delivery backlog and visitors all arrive at once. The traffic plan was drawn for a normal day.

Sources The situation names in colour come from the Cynefin framework (Snowden and Boone, 2007, who called Clear "Simple" and Confusion "Disorder"; current names from Snowden and Friends, 2021).

Signs worth a closer look

You can see most of these from the yard or hear them in the smoko room. None proves a problem. Each is worth a question.

What you might see or hear	What to do	Priority
A barrier moved and not put back.	Put it back today. Ask what it was getting in the way of.	●●●
A worn path across a vehicle route, or a gap in a fence.	The planned route may not suit how people move. Make the safe route the easy one.	●●○
"I didn't see him." Near misses between people and vehicles.	Treat every one as a warning. Go and stand where it happened.	●●●
Queues at the gate, crowded yards, more visitors.	Add a spotter or traffic controller. Stagger arrivals.	●●○
Long hours, early starts, drivers yawning at the wheel.	Cut the hours. Change the schedule. Back anyone who says they are too tired to drive.	●●●
A quad bike with soft tyres or brakes that pull.	Park it until it is fixed.	●●○

The shift-change test

Stand in the yard for the 15 minutes around a shift change. That is when people and vehicles move at once. Watch where people walk, not where the plan says they walk.

Running the yard

It is 7.40 am. Three trucks have arrived at once, a courier is walking across the yard looking for reception, and loading is behind. What you do in the next five minutes is the traffic plan.

Before work starts

- [ ] Walk the site. Check barriers, walkways and gates are in place.
- [ ] Check vehicles before use: brakes, tyres, lights, alarms and protection.
- [ ] Tell visitors, drivers and contractors the routes and no-go areas.

While work is happening

- [ ] Make sure one person controls the loading zone.
- [ ] Stop anyone walking into an exclusion zone, whoever they work for. That is an area people on foot must keep out of while a vehicle or load is moving.
- [ ] Watch for tiredness, and for pressure to catch up.

Afterwards

- [ ] Share near misses between people and vehicles with your team and manager.
- [ ] Pass up layout problems you can't fix yourself.
- [ ] Check hours, and plan so nobody drives exhausted.

What to say at the gate

"Wait here. I'll walk you in." Ten seconds of your time keeps a visitor out of the reversing area. People copy what they see you do.

Take these to your next meeting

Senior leaders and officers

- [ ] Where do people and vehicles mix in our work?
- [ ] Do we separate them physically, or rely on rules?
- [ ] Do our schedules and rosters push people to drive tired or fast?
- [ ] Do we buy vehicles with safety in mind?
- [ ] How do we know vehicles are maintained?
- [ ] Who controls traffic on shared sites?
- [ ] Are vehicle risks on our critical risk list for 2027?
- [ ] As an officer, how do I check for myself that people and vehicles are kept apart where they mix? (s 44)

Middle managers

- [ ] Is every barrier and walkway in place today?
- [ ] Who controls the loading zone?
- [ ] Where could we remove the need to reverse?
- [ ] Does every quad bike have a crush protection device?
- [ ] Is anyone driving after a long shift?
- [ ] What near misses have we had with vehicles?
- [ ] Do visitors and contractors know the routes?

Which of our drivers would tell us they were too tired to drive, and what would we say back?

Two measures a board can track: crossings where people meet vehicles with a physical barrier, checked this month; near misses between people and vehicles reported.

Notes

Field notes

Back of your pocket card

My critical risks here:

Who to call:

ideas for this page:

- where people and vehicles cross
- what the drivers told you
- near misses this month
- a barrier to add, and who owns it
- who drove the longest hours

write it down here

Pocket card

Cut out and fold in half.

Walk the route

1. Start at the gate, as a visitor would.
2. Walk to reception and the loading zone.
3. Count each vehicle path you cross with nothing between you.
4. Sit in a driver's seat and look.
5. Fix the worst crossing first.

Paint shows the way. A barrier keeps people out.

Before you drive

1. Walk round: tyres, brakes, lights, alarm.
2. Seat belt on. Helmet on a quad bike.
3. Know the route and the no-go areas.
4. Rested enough to drive? If not, say so.
5. Check nobody is behind before you reverse.

Can't see? Stop, and get a spotter.

Card text from pages 8, 11, 12 and 17. Field guide 7, Vimes Consulting.

Key words

The words people use around vehicles at work, in plain English.

Word	What it means
PCBU	A "person conducting a business or undertaking". Usually an organisation.
Plant	The law says plant includes "any machinery, vehicle". s 16
Mobile plant	Machines that move, such as forklifts, loaders, tractors and quad bikes.
Workplace	Anywhere work is done. The law says this includes a vehicle. s 20
Traffic management plan	A written plan for how vehicles and people move around a site. WorkSafe says it should cover "the desired flow of pedestrian and vehicle movements" and when drivers give way or stop.
Exclusion zone	An area people on foot must keep out of while a vehicle or load is moving.
Spotter	WorkSafe says a spotter's job is "to guide drivers when reversing and make sure reversing areas are free of pedestrians".
Blind spot	Anywhere a driver can't see from the seat. WorkSafe says blind spots matter most when reversing or carrying a large load.
Crush protection device	A frame fitted to the back of a quad bike, to help stop a rider being pinned if it rolls.
Side-by-side	A small off-road vehicle with a steering wheel and seats side by side.
F endorsement	The licence endorsement a forklift driver needs on a road. NZTA says a road includes "any place the public has access to".

Sources the Act, ss 16, 20; WorkSafe, *Managing work site traffic*, ss 5.2, 6.4, 8.2; NZTA, *Factsheet 10: F endorsements*.

Check it yourself

How this guide was checked

Every statement of law or fact in this guide was checked against a primary source before printing: the Act, the Amendment Act 2026 as passed, WorkSafe and NZTA guidance, or WorkSafe's case reports. Each check is recorded in a claims register, with the source and date checked. Statements that could not be checked were removed. Facts checked on 12, 22, 23 and 24 October 2026.

Law

1. Health and Safety at Work Act 2015, ss 16, 20, 36, 44, 48, 56, 58. legislation.govt.nz
2. Health and Safety at Work (General Risk and Workplace Management) Regulations 2016, reg 6.
3. Health and Safety at Work Amendment Act 2026 (became law on 9 July 2026): new ss 17(3) to (5), 25A, 35 and Schedule 1A.
4. Plain Language Act 2022, s 5.

Guidance and data

5. WorkSafe (June 2024). *Overview of work-related harm and risk in Aotearoa New Zealand*.
6. WorkSafe. *Managing work site traffic: good practice guidelines*, ss 4.0 to 8.2; *Forklift training*; *What events need to be notified?*
7. WorkSafe. *Safe use of quad bikes* (2017); *Policy clarification: crush protection devices on quad bikes* (2019); *Using your side-by-side safely* (2019).
8. WorkSafe (2026). *What is a critical risk?*; *Managing critical risks for small PCBUs*; *Understanding the changes to health and safety law*.
9. NZTA (October 2023). *Factsheet 10: F endorsements*; (April 2023) *New Zealand guide to temporary traffic management*. nzta.govt.nz

Cases (WorkSafe reports)

10. Toll Networks (NZ) Ltd, media release (25 May 2018); Micheal Vining Contracting Ltd, court summary (6 April 2018); Dane Hemphill, media release (1 May 2025); forklift media release (30 June 2017). worksafe.govt.nz

Research

11. Snowden, D. J., and Boone, M. E. (2007). A leader's framework for decision making. *Harvard Business Review*, 85(11), 68 to 76. The Cynefin framework, with Clear called 'Simple' and Confusion 'Disorder'.
12. Snowden, D., and Friends (2021). *Cynefin: Weaving sense-making into the fabric of our world*. Cognitive Edge, The Cynefin Co. The current situation names on page 15.

Other guides that help

Vehicle risk touches most of the series.

Guide	Read it for
3	Shared duties. Who controls traffic when several businesses share a yard or site.
4	Worker voice. Drivers know where the near misses happen. Ask them.
5	When things go wrong. The first hour after a collision or rollover.
6	Critical risks and critical controls, and the legal test for 2027.
13	Machinery, plant and energy isolation, for fixed machines and maintenance.
14	Remote, isolated and lone work, for people who drive alone.

The whole series

1 Leading health and safety · 2 Trust and verify · 3 Shared duties · 4 Worker voice · 5 When things go wrong · 6 Critical risks and critical controls · **7 Vehicles, mobile plant and traffic** · 8 Working at height · 9 Psychosocial risk and mental health · 10 Work-related health · 11 Hazardous substances · 12 Asbestos · 13 Machinery, plant and energy isolation · 14 Remote, isolated and lone work

Sources

Vehicles in one minute

- A vehicle is the main cause of at least half of all work-related deaths in New Zealand.
- Keep people and vehicles apart. A barrier beats a rule.
- Design out reversing. One-way routes and drive-through bays.
- Look from the driver's seat. Blind spots are where people get hurt.
- Hours are a control. Nobody should drive exhausted.
- Walk the route a visitor takes, and fix the worst crossing first.

The field guides

1 Leading health and safety
2 Trust and verify
3 Shared duties
4 Worker voice
5 When things go wrong
6 Critical risks and critical controls
7 **Vehicles, mobile plant and traffic**
8 Working at height
9 Psychosocial risk and mental health
10 Work-related health
11 Hazardous substances
12 Asbestos
13 Machinery, plant and energy isolation
14 Remote, isolated and lone work

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