QUARTERLY REPORT



Extractives industry

2025/26 Q4

April to June

New Zealand Government
Te Kāwanatanga o Aotearoa

WORKSAFE
Mahi Haumaru Aotearoa

About this report

This quarterly health and safety performance report has been prepared by WorkSafe New Zealand to provide extractives-specific information to mining, tunnelling and quarrying operations in New Zealand.

The information is derived from a variety of sources but the predominant source is industry itself, through notifiable incident reporting and quarterly reporting.

The report also contains information on the activities of the regulator, as well as commentary on industry performance and focus areas for regulation.

Operators should use the information presented in this report to assist them in improving safety management systems and undertaking risk assessments at their sites.

Foreword

Our core mission is to ensure that people across New Zealand are healthy and safe at work. To achieve this requires the commitment not just of WorkSafe, but of businesses, workers and a wide range of other players in the health and safety system.

The middle months of any calendar year are marked by several significant extractives sector conferences. This year, the Quarry NZ Conference in Invercargill attracted around 750 attendees, while the AusIMM conference in Rotorua welcomed more than 300 participants.

Both events were highly successful and provided attendees with valuable opportunities to learn about industry trends, emerging projects, and new technologies and equipment entering the market.

The extractives sector benefits from a strong and well-established professional network. Industry organisations such as MINEX, IQA, AQA, the New Zealand Minerals Council, AusIMM, and Minerals West Coast either host or contribute to conferences and forums throughout the year. The strong support shown by operators across the sector for this conference network is a significant advantage, helping to share knowledge, experience and good practice.

WorkSafe is almost always invited to participate in these events. This may involve delivering presentations, contributing to panel discussions, or hosting display areas where inspectors are available to answer questions and discuss issues of concern with attendees. These interactions are consistently positive and, we hope, valuable for everyone involved.

I would like to acknowledge everyone who took the time to speak with us during these events. We firmly believe that being accessible and available to provide advice on any issue is just as important as any other aspect of our work.





Paul Hunt
Chief Inspector Extractives

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1.0
Industry profile

IN THIS SECTION:

1.1 Operations

1.2 Number of workers employed

1.3 Developing competence

1.1 Operations

3

Metalliferous opencast mines
Includes 1 suspended operation

23

Coal opencast mines
Includes 2 mines under care and maintenance

9

Metalliferous underground mines
Includes 1 mine under care and maintenance and 2 operating tourist mines

1

Coal underground mine
1 tourist mine under care and maintenance

1

Tunnel
Does not include tunnels that notified commencement but did not begin operating in the quarter

1

Coal exploration
1 operational coal exploration project

77

Alluvial mines
Number of alluvial mines that have been verified (70) or have notified of an appointed manager to WorkSafe (7)

Includes 2 iron sands mines

1,000

Quarries
Number of quarries that have been verified (826) or have notified of an appointed manager to WorkSafe (174)

An important aspect of understanding the health and safety performance of the extractives industry is to understand its makeup in terms of the number and scale of operations and the number and competency of workers involved.

There were 1,111 active operations in New Zealand as at the end of June 2026.

Active mining operations include those that are operating, intermittently operating, under care and maintenance, or undertaking rehabilitation, as well as tourist mines. Active quarries and alluvial mine numbers include operations that have been verified as actively or intermittently operating (that is, visited by WorkSafe), or have notified WorkSafe of an appointed manager.

1.2 Number of workers employed

973

Metalliferous opencast mines
598 full-time equivalent (FTE) workers employed by mine operators and 375 FTEs employed by contractors

787

Coal opencast mines
631 FTEs employed by mine operators and 156 FTEs employed by contractors

891

Metalliferous underground mines
528 FTEs employed by mine operators and 363 FTEs employed by contractors

0

Coal underground mines
0 FTE workers employed by mine operators and 0 FTEs employed by contractors

8

Tunnels
8 FTE workers employed by mine operators and 0.1 FTEs employed by contractors

2

Coal exploration
2 FTE workers employed by mine operators and 0 FTEs employed by contractors

654*

Alluvial mines
Number of workers is known for 62 of the 77 alluvial mines that are verified and/or have notified of an Appointed Manager. The total number of workers has been extrapolated for the remaining 15 operations

3,247*

Quarries
Number of workers is known for 826 of the 1,000 quarries that are verified and/or have notified of an Appointed Manager. The total number of workers has been extrapolated for the remaining 174 operations

There were approximately 6,561 Extractives FTEs in New Zealand as at the end of June 2026. The numbers of workers will also vary from quarter to quarter. Changes in the number of quarry and alluvial mine workers largely reflect the changes in the number of active operations verified by inspectors. Part of those verifications includes determining the number of workers at each operation.

Note: Typically >95% of mining operations and tunnelling operations submit quarterly reports to WorkSafe, and the numbers of workers are reported directly from these figures.

Quarterly reports were provided by 21 alluvial mining operations (27%) and 226 active quarries (23%). That is the reason for the significant difference between the extrapolated numbers of workers and the actual number of workers reported for these sectors in Figure 2. WorkSafe will continue to extrapolate numbers of workers for quarries and alluvial mines until the reporting percentage has improved.

* Approximate number.

Figure 1 shows the total hours worked in Q4 2025/26, reported to WorkSafe in the quarterly reporting. The hours are separated into employees and contractors.

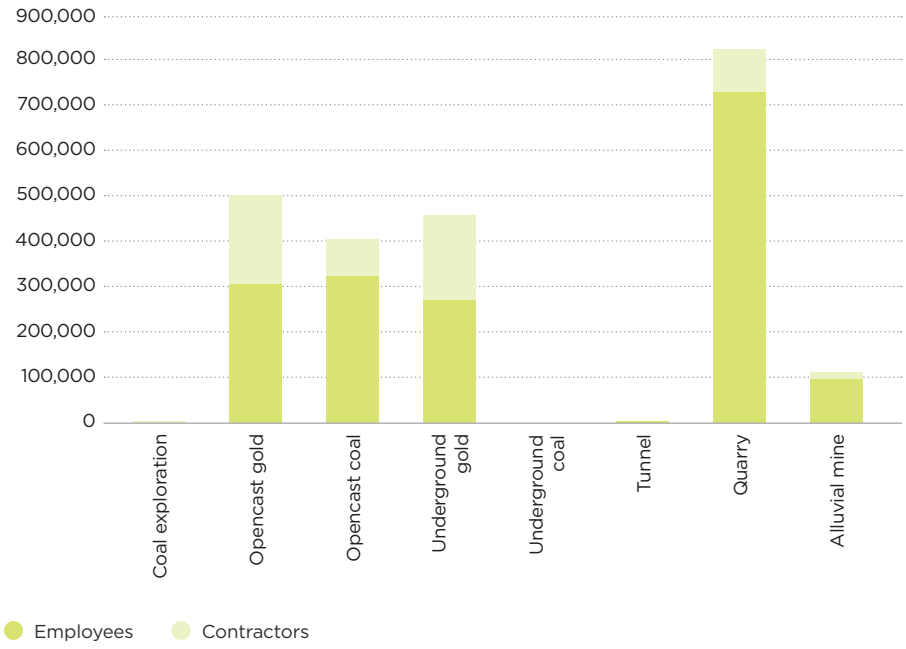


FIGURE 1:
Total hours worked by sub-sector Q4 2025/26

Figure 2 shows the number of FTEs calculated from total hours worked that were reported to WorkSafe in quarterly reports for Q4 2025/26. The hours are separated into employees and contractors.

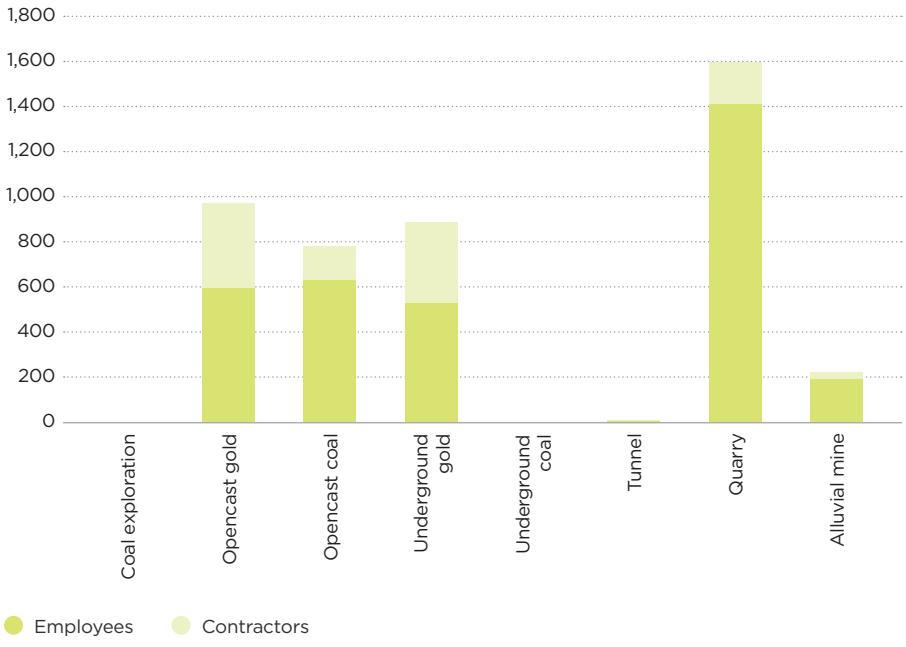


FIGURE 2:
Number of FTEs by sub-sector Q4 2025/26

1.3 Developing competence

WorkSafe has responsibility for setting competency standards in the extractives industry. Improving the competence of the people in the industry is one of the most important aspects of improving health and safety performance. WorkSafe appoints the New Zealand Mining Board of Examiners (BoE) to recommend competency requirements, conduct oral examinations and to issue, renew, cancel or suspend Certificates of Competence (CoCs).

The BoE would like to acknowledge the contribution that panel members make to the issuing of new CoCs.

How CoC applications are assessed

Most people in the extractives industry understand that the BoE issues new CoCs. What may be less clear is the assessment process that sits behind each decision.

Initial application checks

The Board of Examiners secretariat team first checks that the application is complete and that the applicant has met the basic requirements:

- record of learning, showing the required unit standards have been achieved
- current first aid certificate
- Ministry of Justice check
- payment of the required fee
- completed experience logbook.

Board review before the oral exam

- Board members review the experience logbook to confirm the applicant meets the experience requirements for the relevant CoC.
- The Board considers any issues identified through the Ministry of Justice check.

The oral exam is scheduled only after these checks are complete and the application is ready to proceed.

Role of panel members

The original Board recognised that it would not be practical for Board members to conduct every oral examination. To support the process, experienced and respected industry professionals were appointed as panel members. Board members may also act as panel members where they hold the relevant experience and CoC.

Panel members conduct the oral exam and make a recommendation to the Board. This recommendation is either **competent** or **not yet competent** and is supported by a short report that provides the Board with sufficient information to make the final decision.

Oral examinations are usually conducted by a panel of three members and typically take between one and two hours. Panel members also need time to prepare, discuss the outcome, agree on a recommendation, and complete the supporting report. In total, each assessment generally requires two to three hours.

Panel members volunteer their time alongside their regular work commitments to support this process. Their contribution helps ensure extractives workplaces have competent people in critical roles, and the BoE greatly values their commitment.

Recent panel member training

Training days were recently held for both existing and new panel members. The sessions covered legal obligations and included practical discussions on conducting oral examinations fairly and consistently, while helping applicants demonstrate their competence. Feedback from participants was very positive.

Table 1 provides a summary of oral exams conducted during the quarter.

TOTAL NUMBER OF ORAL EXAMS HELD Q4 2025/26	TOTAL PASSES	SUCCESS %
25	19	76

TABLE 1: Oral exams conducted

Table 2 provides a summary of all CoCs issued during the quarter and the current number of CoCs at the end of Q4 2025/26. **Note**: We no longer report lifetime CoCs.

CoC TYPE	TOTAL CoCs RENEWED Q4 2025/26	TOTAL NEW CoCs ISSUED Q4 2025/26	TOTAL TRANS-TASMAN MUTUAL RECOGNITION AGREEMENT TTRMA CoCs ISSUED Q4 2025/26	TOTAL NUMBER OF CURRENT CoCs
A-grade quarry manager	12	7	0	298
B-grade quarry manager	8	14	0	389
A-grade opencast coal mine manager	1	1	0	54
B-grade opencast coal mine manager	2	2	0	50
A-grade tunnel Manager	5		0	31
B-grade tunnel Manager	5	1	0	63
A-grade metalliferous mine manager	3	0	0	7
B-grade metalliferous mine manager	5	0	3	21
A-grade alluvial mine manager	0	0	0	2
B-grade alluvial mine manager	0	3	0	3
Site senior executive	1	3	1	60
First-class coal mine manager	1	0	0	11
First-class mine manager		0	2	23
Coal Mine deputy	3	0	0	17
Coal Mine underviewer	2	0	0	13
Mechanical superintendent	0	1	0	20
Electrical superintendent	0	1	0	19
Ventilation officer	1		0	5
Mine surveyor	0	1	0	12
Manager to manage the quarrying operation specified in the certificate (site specific)	0	0	0	4
Winding engine driver	0	0	0	1
Additional competency for work in operations that use explosives	0	1	0	N/A
Total	**49**	**35**	**6**	**1,103**

TABLE 2: Current and issued Certificates of Competence

2.0
Health and safety performance

IN THIS SECTION:

2.1 Notifiable events

2.2 Injuries

2.3 Types of events

2.4 Extractives sector focus areas

2.5 Regulator comments

2.6 High potential incidents

2.7 High potential incidents – investigation outcomes

2.1 Notifiable events

For all extractive operations, notifiable events are required to be reported to WorkSafe under S23(1), S24(1) and S25(1) of the Health and Safety at Work Act 2015, and under Schedule 5 of the Health and Safety at Work (Mining Operations and Quarrying Operations) Regulations 2016 (the Regulations). Notifiable events include any notifiable incidents, notifiable injuries or illnesses, or fatalities.

MINES AND TUNNELS	2021/22 QUARTERLY AVERAGE	2022/23 QUARTERLY AVERAGE	2023/24 QUARTERLY AVERAGE	2024/25 QUARTERLY AVERAGE	2025/26 Q1	2025/26 Q2	2025/26 Q3	2025/26 Q4
Number of notifiable events	20	21	22	22	26	22	23	42
Number of operations that notified events	11	10	11	9	9	6	7	8

TABLE 3: Mines and tunnels – notifiable events and operations that notified events

QUARRIES AND ALLUVIAL MINES	2021/22 QUARTERLY AVERAGE	2022/23 QUARTERLY AVERAGE	2023/24 QUARTERLY AVERAGE	2024/25 QUARTERLY AVERAGE	2025/26 Q1	2025/26 Q2	2025/26 Q3	2025/26 Q4
Number of notifiable events	14	17	18	21	15	27	19	12
Number of operations that notified events	13	15	17	18	14	25	14	11

TABLE 4: Quarries and alluvial mines – notifiable events and operations that notified events

Figure 3 shows the number of notifiable events reported to WorkSafe by sub-sector from July 2024 to June 2026.

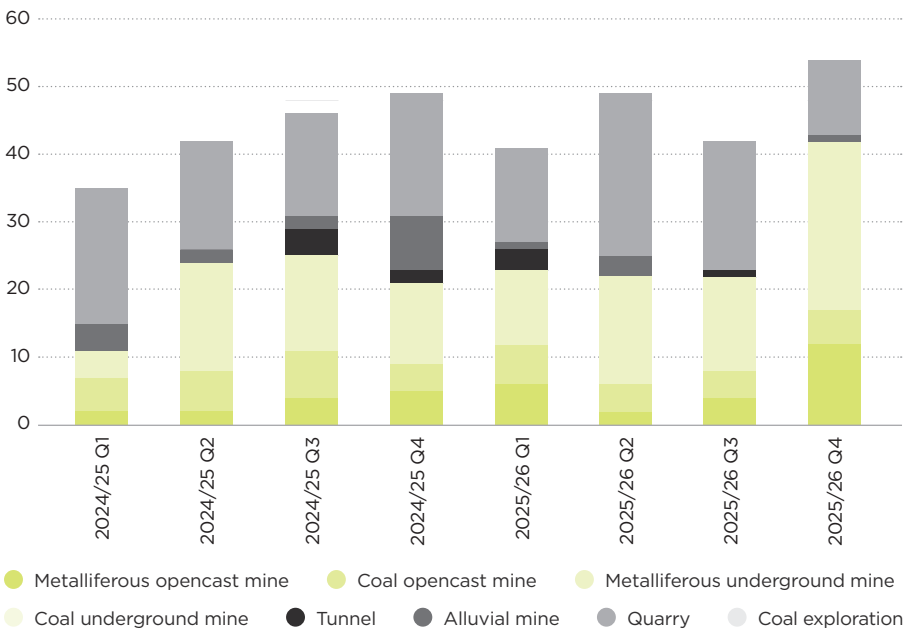


FIGURE 3: Notifiable events by sub-sector

2.2 Injuries

Additional information about injuries is reported to WorkSafe in the form of quarterly reports and records of notifiable events under Schedules 6 and 8 of the Regulations.

Figure 4 shows the number of injuries by injury type reported to WorkSafe from July 2023 to June 2026. The graph also shows the rolling 12-month average for the Total Recordable Injury Frequency Rate (TRIFR), the rate of recordable injuries that occurred per million hours worked. The current rolling 12-month average TRIFR is 1.88. Rates have fluctuated over past two years without any clear trend.

While TRIFR is not the only measure indicating the health and safety performance of the industry, it is a useful indicator of how workers are being injured and should be interpreted in conjunction with other data such as notifiable event information.

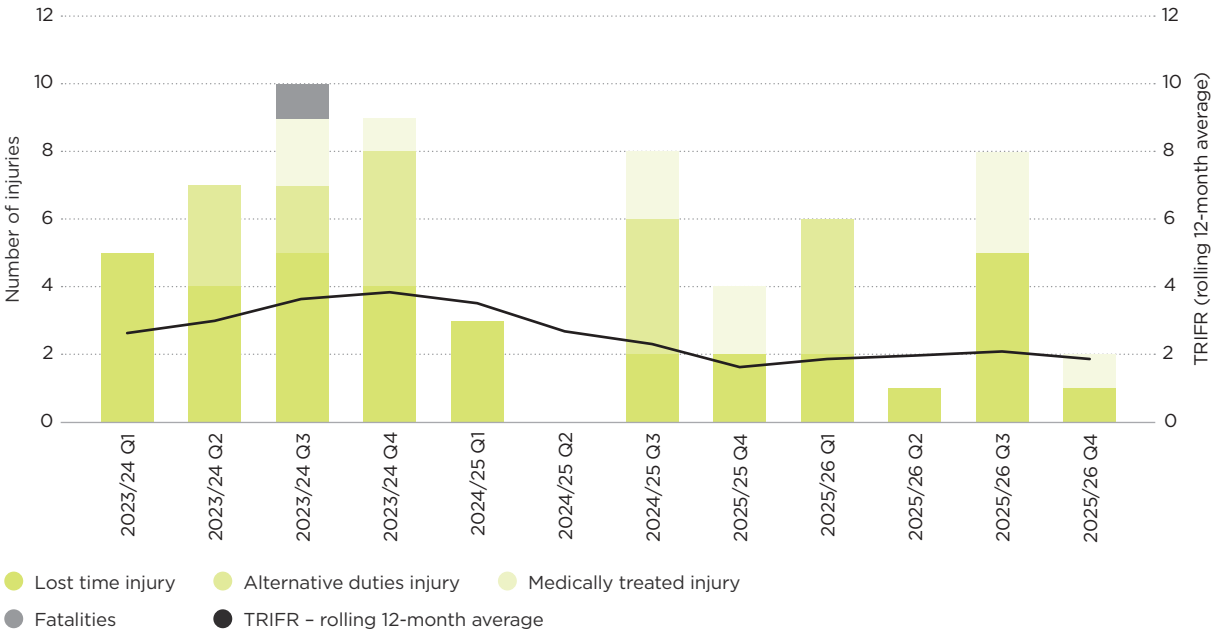


FIGURE 4: Total recordable injury frequency rate (TRIFR)

The following injury definitions are taken from Schedule 8 of the Regulations:

- **Lost-time injuries** are events that involved injury or illness of a mine worker that resulted in the inability of the worker to work for one day or more (not including the day of the event) during the reporting period (whether the worker is rostered on that day or not).
- **Alternative duties injuries** are events that involved injury or illness of a mine worker that resulted in the worker being on alternative duties during the reporting period.
- **Medical treatment injuries** are work-related injuries to mine workers that required medical treatment during the reporting period but did not require a day lost from work or alternative duties (other than the day of the event).

2.3 Types of events

Figure 5 shows the notifiable event categories for events notified to WorkSafe in the previous 12 months. The data shows that 43% of notifiable events in the past 12 months have occurred in relation to vehicles and plant (28%), and fire, ignition, explosion or smoke (15%). These two categories are broken down in more detail in the following section. A further 23% of notifiable events in the past 12 months occurred in relation to shotfiring.

The increase in the number of notifiable events (and high potential incidents) reported for mines and tunnels this quarter is due to a series of shotfiring notifiable events that occurred at a single mining operation.

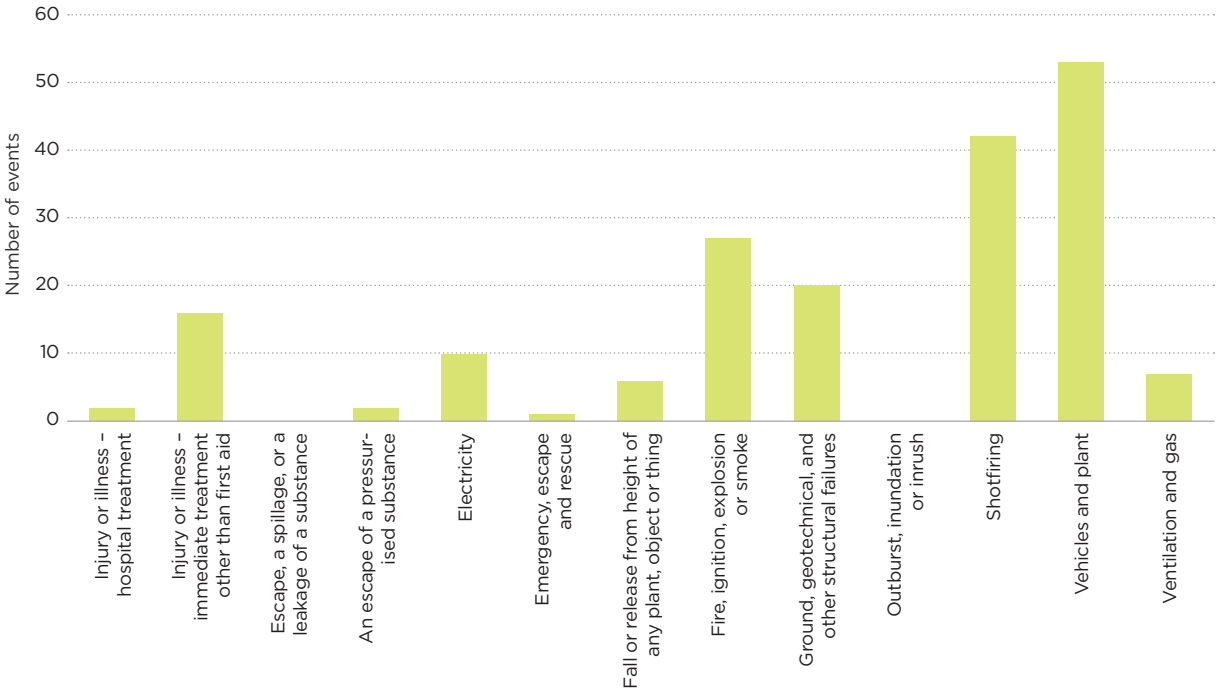


FIGURE 5: Notifiable event categories for the previous 12 months

2.4 Extractives sector focus areas

Where there is a high frequency of notifiable events in any Schedule 5 category, we have broken these events down in more detail to identify key focus areas. We will target our inspections to ensure that operators have adequate controls in place to address these risks.

Figures 6 and 7 break down the two largest notifiable event categories in the past 12 months into the corresponding Schedule 5 sub-categories. The data shows that for notifiable events related to fire, ignition, explosion or smoke, 96% involved fires on plant, mobile plant or in buildings associated with mining or tunnelling activities, and 4% involved the outbreak of a fire on the surface or underground. The vehicle and plant-related notifiable events involved collision of mobile plant with other plant (53%), overturning of mobile plant (34%).

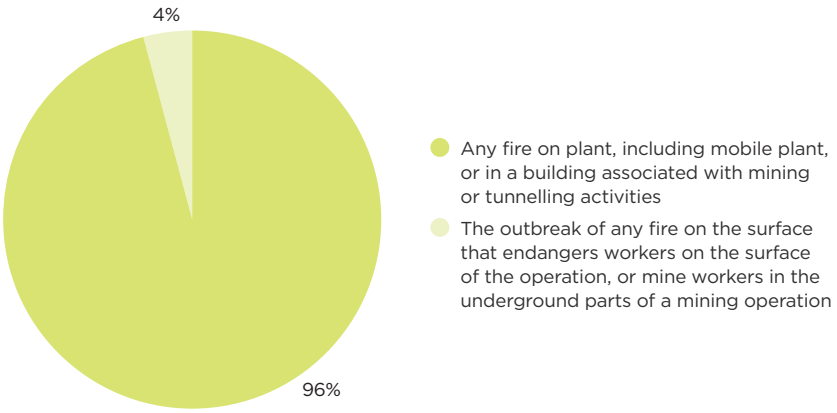


FIGURE 6:
Fire, ignition, explosion or smoke-related notifiable event sub-categories

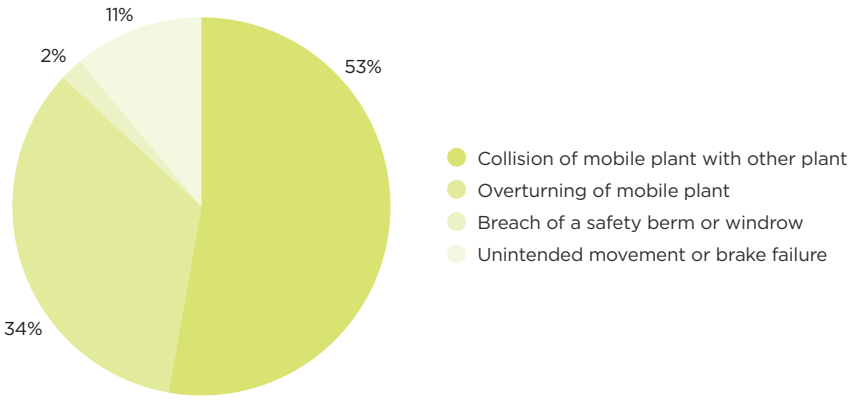


FIGURE 7:
Vehicles and plant-related notifiable event sub-categories

Consistency of reporting

Mining and tunnelling data are received from a high proportion of mining and tunnelling operations and are considered to be accurate. Notifiable events were reported by 22% of mining and tunnelling operations in the past quarter, and quarterly reports were submitted by 100% of mining and tunnelling operations this quarter.

Quarrying and alluvial mining data are received from a much lower proportion of those operations and are likely to be less accurate. Notifiable events were reported by 1.1% of operations in the past quarter. Quarterly reports were provided by 21 alluvial mining operations (27%) and 226 active quarries (23%).

Online Mining and quarrying operations notification form

The *Mining and tunnelling operations notifications and reporting form* and the *Quarry and alluvial mine operations notification and reporting form* have now been combined into a single online form.

Please use the online form for all future notifications.

Submit future Mining and quarrying operations notifications here

- Select *Mining and Quarrying Operations* from the drop-down list.

A few things to know about the new form:

- You can find information about mining, quarrying and tunnelling notifications, including a link to the new form, on the WorkSafe website Mining, quarrying and tunnelling notifications
- Mandatory fields are marked with a red asterisk.
- The form is broken into sections; you will need to complete each section before moving to the next and complete all sections before submitting.
- You can select and submit multiple notification types on the same form.
- If notifying of commencement, please also notify of manager.
- Once your notification has been submitted successfully, you'll receive an on-screen confirmation and email with your notification reference number and next steps.

Please also:

- Delete any saved copies of the old PDF form.
- Update any internal guidance, bookmarks, or templates that reference the PDF form.
- Share the new online form link with anyone in your organisation who may need it.
- Bookmark the online form, to make it easy to find again.

Please continue to use the Notify WorkSafe 'report an injury or illness' or 'report an incident' forms to report any notifiable events.

Please continue to use the Notify WorkSafe 'report mining, tunnelling, quarrying and alluvial operations (quarterly report)' form to submit quarterly reports to WorkSafe.

If you have any trouble using the online form, please contact myworksafesupport@worksafe.govt.nz

2.5 Regulator comments

Unwanted events don't have to be emergencies: Plan for unplanned events

The primary focus of risk management at a mining or quarrying operation is preventing events that could result in injury, ill health, or death. These can be described as unwanted events. Most potential unwanted events can be anticipated through careful identification and assessment of hazards present on a site.

In many cases, it is not possible to completely eliminate the potential for an unwanted event to occur. Instead, controls are put in place to either prevent the event or minimise its consequences. This is commonly represented using the bow-tie approach to risk management.

The process involves identifying and implementing all possible preventive barriers designed to stop an unwanted event, often referred to as the top event, from occurring. It then requires identifying recovery barriers that will minimise the consequences to an acceptable level should the event still occur.

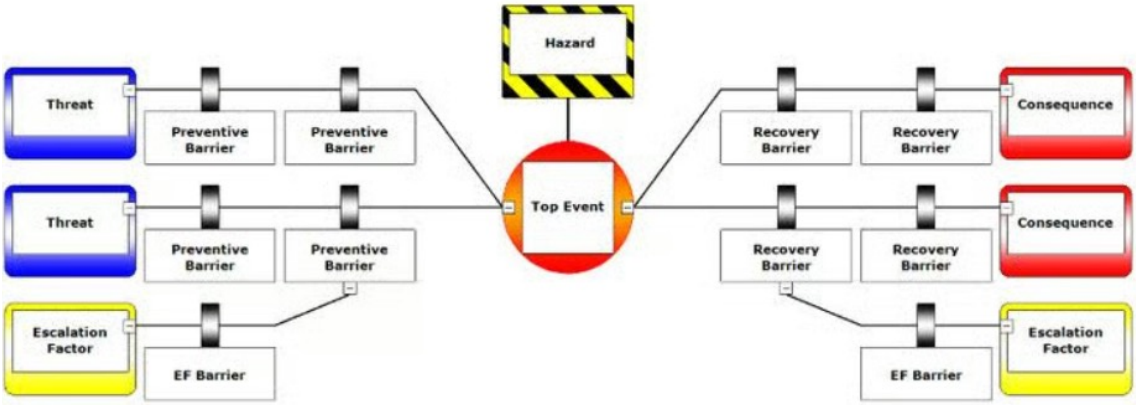


FIGURE 8: Bow-tie approach

The definition of a top event can sometimes be debated, as it represents the point at which control is lost. For example, a leaking diesel tank could be considered a loss of control. However, if the tank is located within a bunded area, the consequences of the leak are contained. Some may argue that the hazardous substance remains under control because an effective barrier, the bund, continues to function as intended. Another foreseeable unwanted event at an extractives site is the loss of control of a vehicle. Controls that can reduce the consequences of such an event include windrows, rollover protection systems, seatbelts, and other vehicle safety features.

What is important is that the analysis of any potential unwanted event first focuses on preventing the event from occurring. It should then consider how consequences can be reduced if preventive measures fail. The ultimate objective is to ensure no one is harmed, regardless of whether the outcome is expected or unexpected.

Unwanted events do not necessarily constitute emergencies. While emergency definitions vary, it is useful to think of an emergency as a sudden and unexpected event that poses an immediate threat to people, property, or the environment. It overwhelms normal operational controls and requires urgent intervention to prevent harm and stabilise the situation.

This definition suggests that an emergency arises when normal controls are no longer effective or are no longer in place. At that point, emergency plans are activated and rapid decision-making is required to minimise the consequences.

Operations can often avoid an emergency, or significantly reduce its complexity, by implementing effective recovery barriers in advance. These barriers are designed to minimise the consequences of the most foreseeable unwanted events and help maintain control, even when preventive measures fail.

2.6 High potential incidents

A high potential incident at a mine, quarry or tunnel is an event, or a series of events, that causes or has the potential to cause a significant adverse effect on the safety or health of a person.

Table 5 provides a summary of high potential incidents notified to WorkSafe in Q4 2025/26. The summaries are an abridged version from the operators' notification reports.

INCIDENT DATE	SUMMARY	CONSIDERATIONS
Apr 26	Electric shovel cable was caught on a sharp rock during relocation, penetrating the outer sheath and causing an electrical short to earth. Operator witnessed a small flash as protection systems activated.	– Electricity – Job planning – Risk assessment – Supervision – Training
Apr 26	Excavator uncovered a 250 g booster with no detonator attached while digging the first bench after a blast.	– Shotfiring – Workplace inspection – Risk assessment – Supervision – Training
Apr 26	Shovel operator uncovered a booster and electric detonator in a nonel (non-electric) shot area. Scene was frozen, survey conducted to determine origin. Misfire procedure was followed.	– Shotfiring – Workplace inspection – Risk assessment – Supervision – Training
Apr 26	Excavator uncovered a nonel detonator and booster while digging. Area was frozen and cordoned off immediately. Misfire SOP followed and WorkSafe contacted.	– Shotfiring – Workplace inspection – Risk assessment – Supervision – Training
Apr 26	Contractors sorting steel from ore on ROM pad identified an underground development primer with detonator inserted. Both were uninitiated.	– Shotfiring – Workplace inspection – Risk assessment – Supervision – Training
Apr 26	Integrated tool carrier transporting tyres on a pallet moved on uneven ground, causing retention straps to fail. Tyres fell from pallet to ground.	– Job planning – Risk assessment – Supervision – Training
Apr 26	Excavator operator identified an underground development primer with detonator inserted. Both were uninitiated.	– Shotfiring – Workplace inspection – Risk assessment – Supervision – Training
Apr 26	Primer set (electronic detonator and 250 g booster) was accidentally dropped down a blast hole while being lowered during priming operations.	– Shotfiring – Workplace inspection – Risk assessment – Supervision – Training
Apr 26	Day shift operator identified a misfired booster and detonators during bogging operations. Operator ceased work and notified supervisor. Misfire was collected by charge crew and transported to magazine for investigation.	– Shotfiring – Workplace inspection – Risk assessment – Supervision – Training

INCIDENT DATE	SUMMARY	CONSIDERATIONS
Apr 26	Potential misfire hole identified in shot with double-primed holes. One downline was lost down hole during stemming and could not be retrieved.	– Shotfiring – Workplace inspection – Risk assessment – Supervision – Training
Apr 26	Charge crew identified a signal tube in face during charging operations. Upon removal, found to be an uninitiated detonator in a booster.	– Shotfiring – Workplace inspection – Risk assessment – Supervision – Training
Apr 26	Dump truck operator reversed onto an adjacent pile in incorrect area while tipping silt. One wheel was approximately 1.5 m higher than the other, causing tray to roll.	– Roads and vehicle operating areas – Tips, ponds and voids – Risk assessment – Supervision – Training
Apr 26	Jumbo operator found signal tube in middle of face. Face was bolted to make safe. Signal tube was attached to an uninitiated detonator and booster.	– Shotfiring – Workplace inspection – Risk assessment – Supervision – Training
Apr 26	Detonator with good communication could not be programmed after stemming. All loading ceased and remaining detonators in loaded holes were rechecked. Holes with affected batch were double-primed with different batch. Operations suspended pending supplier assurance.	– Shotfiring – Workplace inspection – Risk assessment – Supervision – Training
Apr 26	Uninitiated electronic detonator and primer found on ROM pad by reclaim team. Incident involved different detonator type than previous misfires. Procedures followed to transport explosives to magazine for investigation.	– Shotfiring – Workplace inspection – Risk assessment – Supervision – Training
Apr 26	Excavator bucket impacted a live low voltage electrical cable while excavating a trench.	– Electricity – Job planning – Risk assessment – Supervision – Training
Apr 26	Extreme weather event caused multiple slips and washouts on site.	– Ground or strata instability – Workplace inspection – Risk assessment – Supervision – Training
Apr 26	Two misfired detonators and boosters were identified on underground ROM by operator while cleaning steel. Misfire was immediately reported to Shift Supervisor following site procedures.	– Shotfiring – Workplace inspection – Risk assessment – Supervision – Training
Apr 26	During shot loading, runaway holes were encountered. Gas bags were used to air deck affected holes. One gas bag failed, causing explosive product to run down hole and pull both downlines in. One booster and detonator recovered; second booster and electronic detonator remain unrecovered. Area redesigned with smaller hole diameter and shorter bench height to manage conditions.	– Shotfiring – Workplace inspection – Risk assessment – Supervision – Training

INCIDENT DATE	SUMMARY	CONSIDERATIONS
May 26	Dump truck backed over edge of tipping pile, causing tray to tip over.	– Roads and vehicle operating areas – Job planning – Risk assessment – Supervision – Training
May 26	Operator bogging underground observed uninitiated booster containing detonator in muck pile. Task stopped, supervisor notified, and explosives removed to magazine. Area inspected with no additional misfires found.	– Shotfiring – Workplace inspection – Risk assessment – Supervision – Training
May 26	Fire occurred on vaporiser, believed to be regulator overpressure event. Fire service attended. No personnel on site, no injuries. Damage restricted to vaporiser only.	– Fire or explosion – Risk assessment – Supervision – Training
May 26	Integrated tool carrier and light vehicle were coordinating movements in decline. Light vehicle was stationary when reversing tool carrier made contact. No injuries sustained. Minor damage to light vehicle. Investigation indicated ineffective communication between operators.	– Roads and vehicle operating areas – Risk assessment – Supervision – Training
May 26	Misfired detonators found at two locations. Signal tubes had initiated but detonators had not.	– Shotfiring – Workplace inspection – Risk assessment – Supervision – Training
May 26	Misfired detonator found on left side of face approximately 1.5 m above floor. Signal tube had initiated but detonator had not.	– Shotfiring – Workplace inspection – Risk assessment – Supervision – Training
May 26	Integrated tool carrier reversed into parked personnel carrier while installing brow straps. Operator forgot personnel carrier had not been moved. Back door damaged. No personnel in or around vehicle.	– Roads and vehicle operating areas – Risk assessment – Supervision – Training
May 26	Misfired detonator found in heading fired at end of day shift. Signal tube had initiated but detonator had not.	– Shotfiring – Workplace inspection – Risk assessment – Supervision – Training
May 26	Maintenance team reinstalling piping using crane when boom became caught on overhead structure. Uncontrolled release lifted worker off feet via sling. Worker fell backwards down stairway approximately 2 m to next level.	– Lifting – Job planning – Risk assessment – Supervision – Training
May 26	Electronic blast completed without issues. During subsequent digging, nonel booster and lead reported in heave. Area made safe and frozen. Investigation indicates material may be from adjacent or above-bench shot.	– Shotfiring – Workplace inspection – Risk assessment – Supervision – Training
May 26	Bogger operator found misfired detonator while cleaning out heading. Signal tube had initiated but detonator had not.	– Shotfiring – Workplace inspection – Risk assessment – Supervision – Training

INCIDENT DATE	SUMMARY	CONSIDERATIONS
May 26	During loading operations, rock was dislodged by mechanical hose and contacted downline, breaking it. Hole to be reprimed and fired.	– Shotfiring – Workplace inspection – Risk assessment – Supervision – Training
May 26	Contractor truck and trailer experienced brake failure while leaving quarry. Vehicle crashed into guardrail on state highway. No injuries or third-party involvement. Police attended.	– Roads and vehicle operating areas – Mechanical – Risk assessment – Supervision – Training
May 26	Wheel strut bolts sheared off, causing wheel assembly failure on haul truck.	– Mechanical – Risk assessment – Supervision – Training
May 26	Articulated dump truck tray overturned while tipping waste load in overburden area. No injuries reported.	– Roads and vehicle operating areas – Tips, pond and voids – Risk assessment – Supervision – Training
May 26	ADT was tipping at top of stockpile with no edge protection in place.	– Roads and vehicle operating areas – Tips, pond and voids – Risk assessment – Supervision – Training
May 26	Charge crew identified booster in windrow during routine inspection. No development ore loaded from this location for several weeks. Items returned to magazine for assessment. Investigation underway.	– Shotfiring – Workplace inspection – Risk assessment – Supervision – Training
Jun 26	High intensity rainfall event over long weekend triggered rockfall (estimated 416 tonnes) at highwall location known to be susceptible. Quarry unattended at time of event.	– Ground or strata instability – Workplace inspection – Risk assessment – Supervision – Training
Jun 26	Detonator found in face during ground support installation. Signal tube had partially initiated but detonator had not.	– Shotfiring – Workplace inspection – Risk assessment – Supervision – Training
Jun 26	Single explosive did not initiate from development face.	– Shotfiring – Workplace inspection – Risk assessment – Supervision – Training
Jun 26	Customer unloading cleanfill when hydraulic ram failed at maximum extension. Ram component protruded through back of cab.	– Mechanical – Workplace inspection – Risk assessment – Supervision – Training

INCIDENT DATE	SUMMARY	CONSIDERATIONS
Jun 26	ADT operator transporting gravel over-corrected while negotiating S-bend on haul road, causing tray to roll onto its side. Operator notified site personnel immediately. Scene isolated and made safe. No injuries.	– Roads and vehicle operating areas – Job planning – Risk assessment – Supervision – Training
Jun 26	Dozer was maintaining pit floor when haul truck arrived and parked at cut entrance waiting to be loaded. After another truck exited, dozer reversed and contacted waiting haul truck.	– Roads and vehicle operating areas – Risk assessment – Supervision – Training
Jun 26	Excavator bucket made contact with live 240 V cable during trenching operations. Cable arced and tripped.	– Electricity – Job planning – Risk assessment – Supervision – Training

TABLE 5: High potential incidents – 2025/26 Q4

Table 6 and Figure 9 shows the number of high potential incidents per quarter during the last two years for all extractives operations.

QUARTER	Q1 JUL-SEP 2024	Q2 OCT-DEC 2024	Q3 JAN-MAR 2025	Q4 APR-JUN 2025	Q1 JUL-SEP 2025	Q2 OCT-DEC 2025	Q3 JAN-MAR 2026	Q4 APR-JUN 2026	TOTAL PREVIOUS 12 MONTHS
Number of high potential incidents	27	35	32	32	28	32	28	44	132

TABLE 6: High potential incidents per quarter

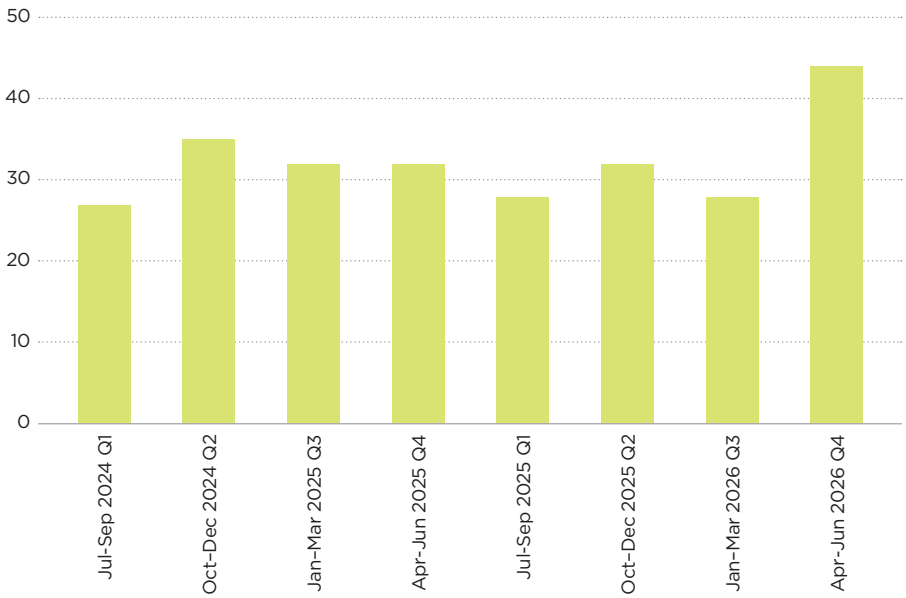


FIGURE 9: High potential incidents per quarter

2.7 High potential incidents – investigation outcomes

Case study

Apr 26: Excavator bucket impacted a live low voltage electrical cable while excavating a trench.

The incident

While undertaking final trench tidy-up works, an excavator bucket struck and damaged an underground 400 V electrical cable located outside the planned excavation area at a depth of approximately 2 m.

Background

- Workers were carrying out final tidy-up activities on an excavated trench as part of a service relocation project.
- A hydro-excavated trench running parallel to the work area had previously exposed underground services, including a 400 V power cable.
- Recent rainfall had caused a partial collapse of the hydro-excavated trench, covering some of the previously exposed services with soil.
- A dig permit and Job Hazard Analysis (JHA) were in place.
- The work area was constrained, with limited manoeuvring space.
- The excavator operator was experienced and was operating the machine in a controlled manner.
- A dedicated spotter was positioned with a clear view of the bucket and was continuously guiding the excavation activities.

What happened

- All known underground services had been identified using ground-penetrating radar (GPR) and cross-checked against site service plans. However, the surface markings applied during the original survey had deteriorated over time and had not been reinstated.
- There were no clearly defined visual or physical boundaries marking the end of the excavation area or identifying a no-dig zone (for example, paint markings, pegs, bunting, or offsets).
- While tidying the trench, the excavator bucket moved beyond the planned excavation footprint.
- Although the 400 V cable was exposed within the parallel hydro-excavated trench, part of the cable curved into the corner of the excavated trench where it had not been exposed.
- Because the full cable alignment had not been exposed or clearly identified above ground, its location was not visible to either the operator or the spotter.
- As the bucket was lifted, the spotter observed damage to the cable and immediately instructed the operator to stop work.
- The warning tape and cable protection were installed directly on the cable and therefore did not provide an effective early warning during excavation.
- No sparks, arcing, or unusual sounds were observed or reported.
- Work was stopped immediately, the area was made safe, and the incident was reported in accordance with site procedures.
- No injuries occurred.

Key findings from the PCBU investigation

CONTRIBUTING FACTORS

Incomplete identification of the service alignment

- Hydro-excavation had only partially exposed the 400 V cable, and the complete cable alignment, including the section that curved into the trench, had not been positively identified.
- Recent rainfall caused a partial collapse of the hydro-excavated trench, re-covering sections of the exposed services and further reducing visibility.

Lack of visual and physical excavation boundaries

- No clear visual markers or no-dig boundaries, such as paint markings, pegs, bunting, or offset markers, were in place to define the excavation limits and maintain the excavator within the approved work area.
- As a result, the excavator was able to operate beyond the planned excavation footprint during trench tidy-up activities.

Permit and JHA controls were not adequate for the construction environment

Although a dig permit had been approved, it did not adequately address or verify critical controls required for excavation work around underground services. Identified deficiencies included:

- the permit applied to the entire site rather than specific work locations
- there was no requirement to review or revalidate the permit after issue
- open permits were not subject to a defined expiry period
- there was no requirement for documented daily excavation inspections
- the permit did not require service locations to be clearly marked and maintained throughout the work
- there was no process for reinstating service markings if they became obscured or removed
- there was no requirement for the routine use of a cable locator during excavation activities.

Additional controls, including markings identifying the dig area and cable location, were implemented at the start of the work. However, these controls were not maintained or systematically managed after the markings were lost because they were not embedded within the permit system.

Supervision and experience

- While experienced, the supervisor had limited experience managing higher-risk trenching and excavation work near live underground services and did not identify deficiencies in the permit and control measures.
- The permit system being used was unfamiliar to both the supervisor and the work crew, which contributed to the oversight of key controls.

Root cause

System and process failures

The investigation identified the following root causes:

- the full cable alignment was not positively identified and clearly marked before excavation commenced
- visual and physical excavation boundaries were not established or maintained

- the dig permit and JHA did not adequately address critical construction-phase controls, including daily inspections, service marking requirements, no-dig zones, and cable-locating processes
- existing controls were either not maintained or were insufficient to prevent the excavator from operating outside the planned excavation area.

As a result, the excavator entered an area where the underground cable had not been adequately identified or protected, leading to the cable strike.



FIGURE 10:
Incident scene

Regulator comments and recommendations

Underground services continue to present a significant risk during excavation and trenching activities. While service plans, permits and hazard assessments are important controls, they should not be relied on as the sole means of identifying and protecting underground services. Operators must ensure that service locations are positively identified, clearly marked, and regularly verified throughout the duration of the work.

This incident highlights how changing site conditions, such as weather events, can alter the effectiveness of established controls. Rainfall had obscured previously exposed services and contributed to the loss of visual indicators. Critical controls that are not maintained throughout the work can quickly become ineffective.

WorkSafe recommends operators consider the following controls when undertaking excavation or trenching activities around underground services:

- positively identify the full alignment of all underground services before excavation begins, including any changes in direction, depth, or location
- clearly mark service locations and excavation limits using durable methods such as paint, pegs, offset markers, bunting, or physical barriers
- establish and maintain clearly defined ‘no-dig’ zones around known services
- re-establish service markings whenever they become obscured, removed, or are no longer clearly visible
- verify the location of underground services regularly during the course of the work, particularly after weather events, ground movement, or changes to the excavation scope
- use non-destructive excavation techniques, such as hydro-excavation or hand digging, to expose services where uncertainty exists

- ensure cable locators, service drawings, and other service identification methods are used together, recognising that no single method is completely reliable
- implement daily inspections to confirm that critical controls remain in place and effective
- ensure permit-to-dig systems include location-specific controls, defined review periods, and requirements to verify service markings throughout the work.
- clearly communicate excavation boundaries and underground service locations during pre-start meetings and shift handovers.
- provide supervisors and workers with appropriate training and competency in excavation safety and the management of underground services.

No single control should be relied upon to prevent underground service strikes. Service plans, BeforeUdig records, cable locators, permit systems, hydro-excavation, physical markings, competent supervision, and exclusion zones should be used together as part of a layered risk management approach.

Where the location of a service cannot be positively confirmed, excavation work should stop until the service has been exposed, verified, or otherwise identified using a suitable method. Operators should regularly reassess controls throughout the work, particularly following weather events, ground disturbance, or changes to the scope of excavation.

Striking underground electrical, gas, water, telecommunications, or other buried infrastructure can result in serious injury, fatality, service outages, environmental harm, and significant property damage. Early planning, positive service identification, and the maintenance of effective controls throughout the work are critical to preventing these events.

Further guidance

WorkSafe recommends operators refer to the following guidance and industry resources when planning and undertaking excavation or trenching activities around underground services:

- Excavation safety good practice guidelines

  Covers excavation planning, service identification, ground conditions, excavation support, inspection requirements, and safe systems of work.

- BeforeUdig New Zealand

  Provides plans showing the location of underground infrastructure from participating asset owners. BeforeUdig should be used as part of the planning process, but plans must always be verified on site before excavation begins.

- Electricity Engineers' Association (EEA) Guide to Safe Excavation Near Underground Electrical Assets

  Guidance on identifying electrical assets, using cable location equipment, maintaining separation distances, and managing excavation risks near live electrical infrastructure.

- New Zealand Utilities Advisory Group (NZUAG) National Code of Practice for Utility Operators' Access to Transport Corridors

  Contains requirements and good practice for working around underground utilities and maintaining asset information.

- Utility owner requirements

  Operators should consult the relevant utility owner before commencing work near known services and comply with any permit, isolation, notification, or supervision requirements specified by the asset owner.

3.0
Regulatory insights

IN THIS SECTION:

3.1 Why do operations get guarding so wrong?

3.1 Why do operations get guarding so wrong?

Extractives operations face unique and ongoing challenges when implementing effective machine guarding across processing plants. Production takes place in a harsh, high-impact environment where rock, grit, dust and constant vibration place significant demands on structures and equipment.



FIGURE 11: Unguarded drive roller



FIGURE 12: Multiple areas of entrapment

Crushing plants, vibrating screens and heavy-duty conveyor systems are subjected to intense mechanical stress. As a result, brackets can crack, bolts can loosen, and guards can deteriorate over time. These harsh operating conditions mean that even well-designed guarding systems require regular inspection and maintenance to ensure they remain secure and effective. In addition, the large scale and often customised layout of processing plants mean that off-the-shelf guarding solutions are rarely suitable without significant modification, adding both cost and complexity.

Some operators choose to install perimeter fencing around sections of a processing plant rather than fit close-fitting guards. However, perimeter fencing does not adequately protect workers if they still need to enter the fenced area while machinery or conveyor systems are operating. Many managers state that workers are not permitted inside the perimeter while the plant is running. While that may be the intention, experience has shown that serious injuries and fatalities can occur when workers enter restricted areas for reasons they believe are justified at the time. Perimeter fencing also generally requires the plant to be shut down for cleaning and maintenance activities. In contrast, properly designed close-fitting guards can allow workers to safely carry out certain tasks around operating equipment while maintaining production.



Dave Bellett
Manager Extractives

Inspectors frequently direct extractives operators to improve existing guards or reinstall guards that have been removed. In many cases, the underlying issue is poor guard design. For example, some guards trap material, creating maintenance problems, while others restrict access to greasing points or adjustment mechanisms. In some instances, guards are so heavy that there is no practical means of lifting and refitting them once removed. Many guards are manufactured by on-site fitters or local contractors who may have limited knowledge of relevant design standards, such as the *AS/NZS 4024 Safety of Machinery* series. This can result in guarding systems that are difficult to use, poorly maintained, or ultimately removed from service altogether.

Careful consideration is therefore needed during the design stage. Mesh openings should be large enough to allow spilled material to pass through, reducing product build-up around the guard. However, as mesh size increases, the guard must be located further from the entrapment point to maintain effective protection. The photographs below illustrate this principle.



FIGURE 13: Mesh openings

For more guidance go to the WorkSafe website Ergonomics of machine guarding guide

4.0
The regulator

IN THIS SECTION:

4.1 Our activities

4.2 Assessments

4.3 Enforcements

4.1 Our activities

The extractives specialist health and safety inspectors at WorkSafe use a range of interventions to undertake their duties. Inspectors strive to achieve the right mix of education, engagement and where required enforcement. This section of the report includes a summary of the interventions used by the extractives inspectors during the quarter.

4.2 Assessments

Proactive assessments aim to prevent incidents, injuries and illness through planned, risk-based interventions. Reactive activities are undertaken in response to reported safety concerns or notifiable events. Assessments can be either site- or desk-based in nature.

For proactive site-based assessments, the objectives of each visit are determined by the extractives team and the appropriate assessment tool is selected. Regulatory compliance assessments can take several days on site with a team of inspectors attending. Site inspections and targeted inspections are generally completed in a one-day site visit. Targeted inspections focus on specific principal hazards and verify that critical controls from the site's principal hazard management plan (PHMP) or Principal Control Plan (PCP) have been implemented in practice.

As well as site-based assessments, the inspectors spend considerable time undertaking desk-based assessments. Proactive desk-based assessments include the review of PHMPs, PCPs, mine plans, and high risk activity notifications.

Table 7 shows the range of assessments undertaken in Q4 2025/26 by sub-sector.

		ASSESSMENTS	MINE	TUNNEL	ALLUVIAL MINE	QUARRY
Proactive	Site-based	Regulatory compliance assessments	0	0	0	0
		Site inspections	10	0	12	31
		Targeted inspections	2	0	0	0
	Desk-based	PHMP/PCP review	15	4	0	0
		Mine plan review	12	0	0	0
		High risk activity	1	0	0	0
		Other	0	0	0	23
Reactive	Site-based	Concerns – inspection	0	0	0	1
		Notifiable events – inspection	1	0	0	0
	Desk-based	Concerns – desk-based	1	1	1	3
		Notifiable event – desk-based	41	2	0	15

TABLE 7: Proactive and reactive site- and desk-based assessments conducted in Q4 2025/26

Figure 14 shows the number of proactive and reactive site- and desk-based assessments undertaken by WorkSafe in Q4 2025/26. This quarter 37% of our activities were site-based, and 57% of activities were proactive. Inspectors also followed up on 31 notifiable events during proactive site inspections.

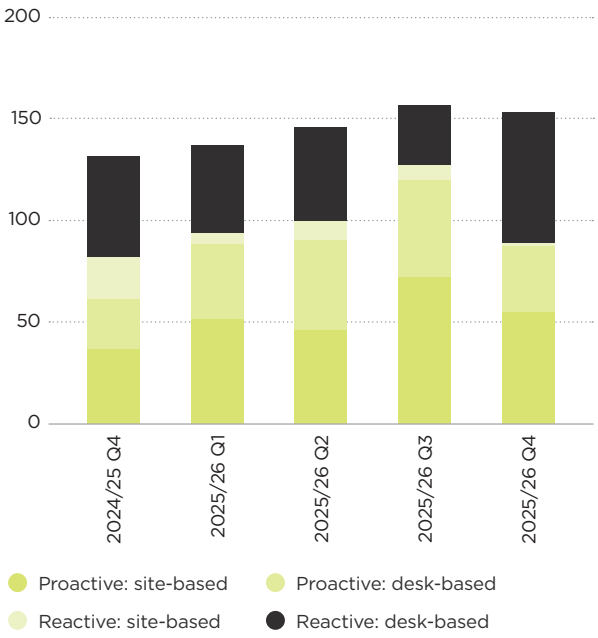


FIGURE 14: Proactive and reactive site- and desk-based assessments

Figure 15 shows the number of assessments undertaken by WorkSafe in Q4 2025/26 by sub-sector. This quarter, 41% of our assessments were for quarries, 47% for mines, 4% for tunnels and 7% for alluvial mines.

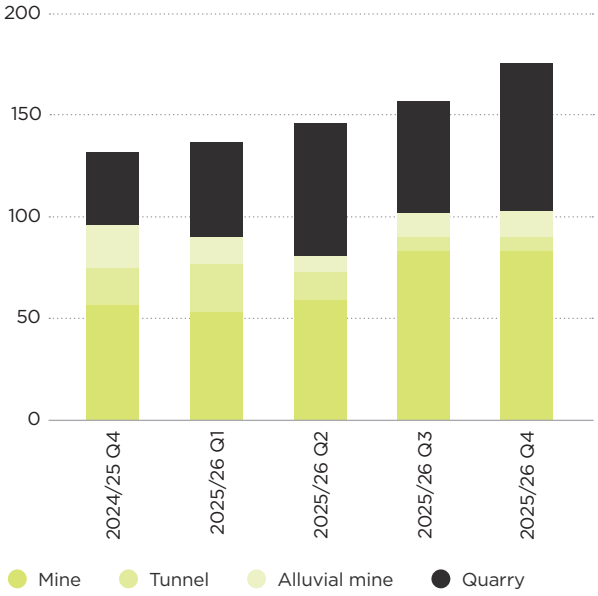


FIGURE 15: Assessments by sub-sector

4.3 Enforcements

Enforcement actions issued by WorkSafe include prohibition and improvement notices and directive letters. Enforcement actions are issued according to our Enforcement Decision Making (EDM) model when health and safety issues are identified through assessments.

Figures 16 and 17 show the number of enforcement actions issued in Q4 2025/26 by notice type and by sector. This quarter, a total of 115 enforcement actions were issued. Of those, 6% of were prohibition notices, 53% were improvement notices, and 41% were directives. The majority of the enforcement actions were issued to the alluvial mining (23%), and quarrying (63%) sub-sectors.

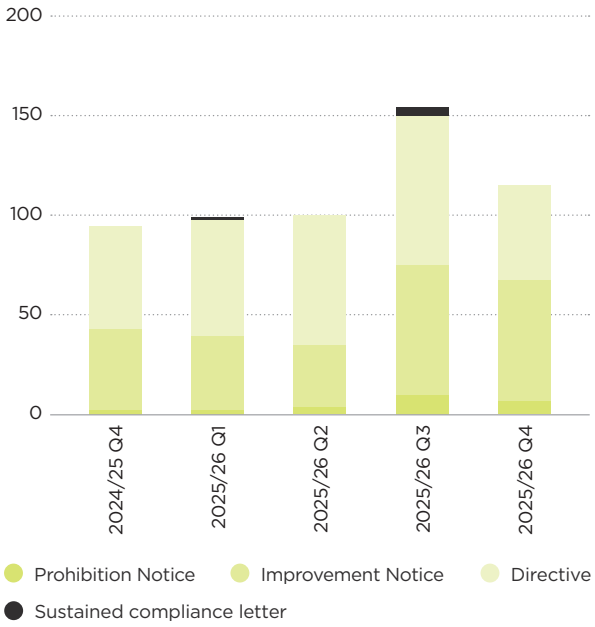


FIGURE 16: Enforcement actions issued by type

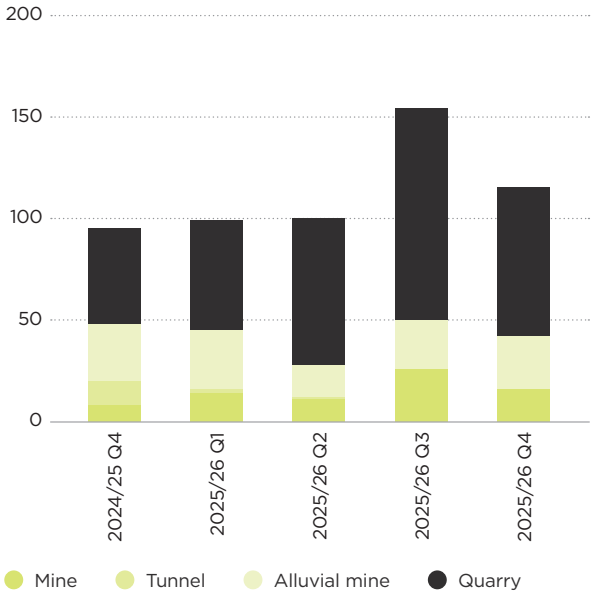


FIGURE 17: Enforcement actions issued by sub-sector

Figure 18 shows the number of enforcement actions issued in Q4 2025/26 by category, and provides an indication of the key areas of concern to our inspectors. This quarter, the majority of enforcement actions were issued for health and safety issues relating to roads and other vehicle operating areas (25%), guarding (32%), and health and safety management systems (12%).

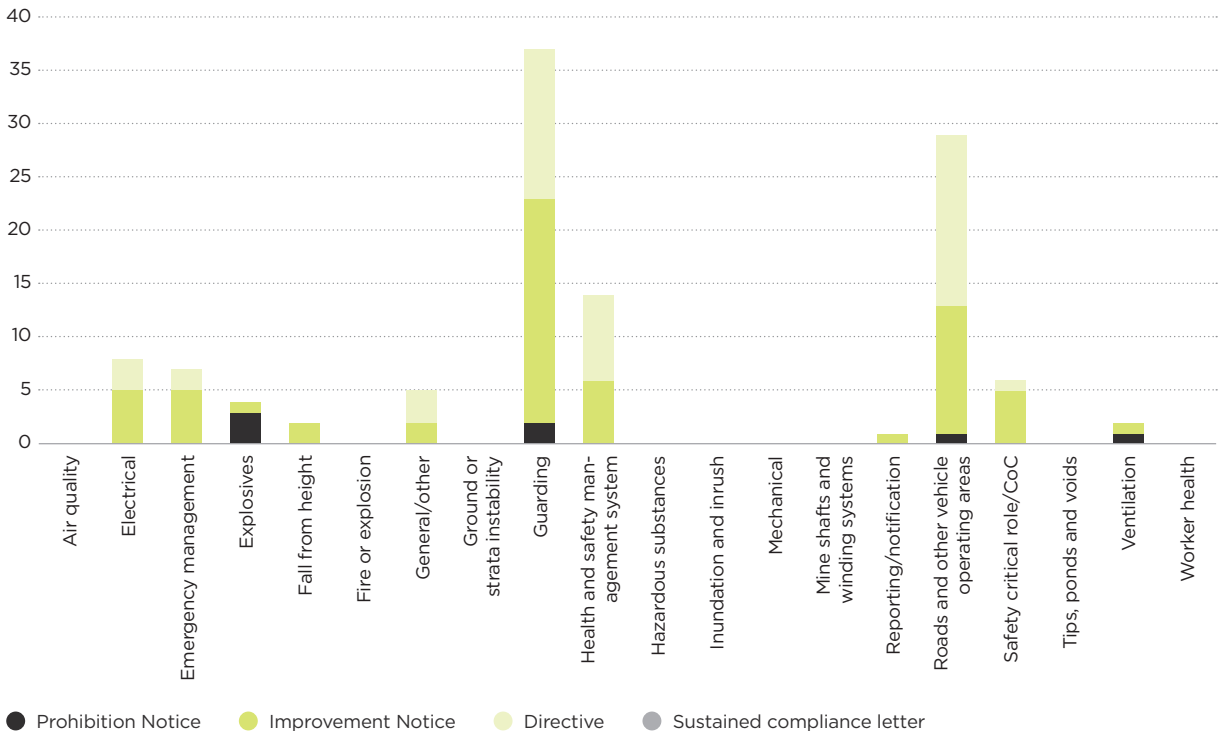


FIGURE 18: Enforcement actions issued by category 2025/26 Q4

Regulator activity comment

This year, the extractives team completed 249 site inspections, exceeding the planned target of 225 inspections. Most inspections were undertaken as part of the planned inspection programme and were prioritised according to each site's risk profile.

Twenty-five inspections were carried out in response to a high-potential incident (HPI) requiring immediate follow-up, or because of a complaint made to WorkSafe. It should be noted that many notifiable events, including some HPIs, were also followed up during a scheduled general inspection rather than through a separate site visit.

Notes

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