QUARTERLY REPORT

Extractives industry

2024/25 Q4

April to June

Te Kāwanatanga o Aotearoa
New Zealand Government

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 mission is to transform New Zealand's health and safety performance towards world-class. To achieve this requires the commitment not just of WorkSafe New Zealand, but of businesses, workers and a wide range of other players in the health and safety system.

Just prior to writing this forward, I attended the 2025 Quarry NZ conference. As always, the event was high class and is certainly valued by all those involved in the sector.

The event brings together equipment suppliers, quarry operators, managers and other workers, regulators, politicians and a well-considered line up of speakers.

Many believe that conference attendance (800 this year with about 650 of those delegates) has grown steadily after the introduction of CPD.

The organisers are careful to include clearly identified CPD opportunities, and it is possible for many of those attending to achieve all, or almost all, of their required annual CPD hours.

I am always grateful when asked to speak. The opportunity to address so many of those in Safety Critical roles within the sector is too good to miss.

This year I focused on a simple update of where NZ Health and Safety performance sits relative to other countries that we would like to compare ourselves with. I also elaborated on the Extractives sector's performance and explained how well we felt the quarrying sector had implemented the regulations after coming into the full regime.

The simple message was NZ has too many workplace fatalities. That compared to Australia we are 60% more likely to have a fatality in the workplace, twice as likely to have a fatality than Singapore, and almost three times more likely to have a fatality than in the UK. (Fatality rate – deaths per 100,000 workers stands at 2.3 in NZ, 1.6 in Australia, 1.1 in Singapore, and 0.8 in the United Kingdom).

I finished my talk with a discussion about two fundamental principles in NZ legislation which in my opinion are not always understood or put into practice very well. My view is that if correctly implemented these 'requirements" would likely impact on the current rates of fatalities and other harm.

The principles I talked about were the requirement to take "So far as is reasonably practicable" steps (HSWA), and the requirement to apply the "Hierarchy of controls" (General Risk and Workplace Management Regulations) when deciding what those practicable steps might be.

This year the Extractives team will look closely at an Extractive operation's underlying hazard and risk identification and check that the rational for choosing controls is consistent with these two important pieces of legislation.

Paul Hunt
Chief Inspector Extractives

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1.1 Operations

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Metalliferous opencast mines

21

Coal opencast mines
Includes 2 mine in care and maintenance

8

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

1

Coal underground mines
Includes 1 tourist mine under care and maintenance

5

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

3

Coal exploration
Three operational coal exploration projects

77

Alluvial mines
Number of mines that have been verified (61) or have notified of an Appointed Manager to WorkSafe (16)

Includes 2 iron sands mines

1,019

Quarries
Number of quarries that have been verified (863) or have notified of an Appointed Manager to WorkSafe but not yet verified (156)

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 1,137 active operations in New Zealand as at the end of June 2025.

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 People

885

Metalliferous opencast mines
641 FTEs employed by mine operators and 243 FTEs employed by contractors

898

Coal opencast mines
755 FTEs employed by mine operators and 143 FTEs employed by contractors

710

Metalliferous underground mines
549 FTEs employed by mine operators and 162 FTEs employed by contractors

0

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

294

Tunnels
236 FTEs employed by mine operators and 58 FTEs employed by contractors

2

Coal exploration
4 workers employed by mine operators and 8 workers employed by contractors

679

Alluvial mines
Number of workers is known for 54 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 23 operations

3,224

Quarries
Number of workers is known for 688 of the 1,019 quarries that are verified and/or have notified of an Appointed Manager. The total number of workers has been extrapolated for the remaining 331 operations

There were 6,692 Extractives FTEs in New Zealand as at the end of June 2025. 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 16 alluvial mining operations (21%) and 217 active quarries (21%). 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.

Figure 1 shows the total hours worked in Q4 2024/25, reported to WorkSafe in the quarterly reporting. The hours are separated into Employees and Contractors.

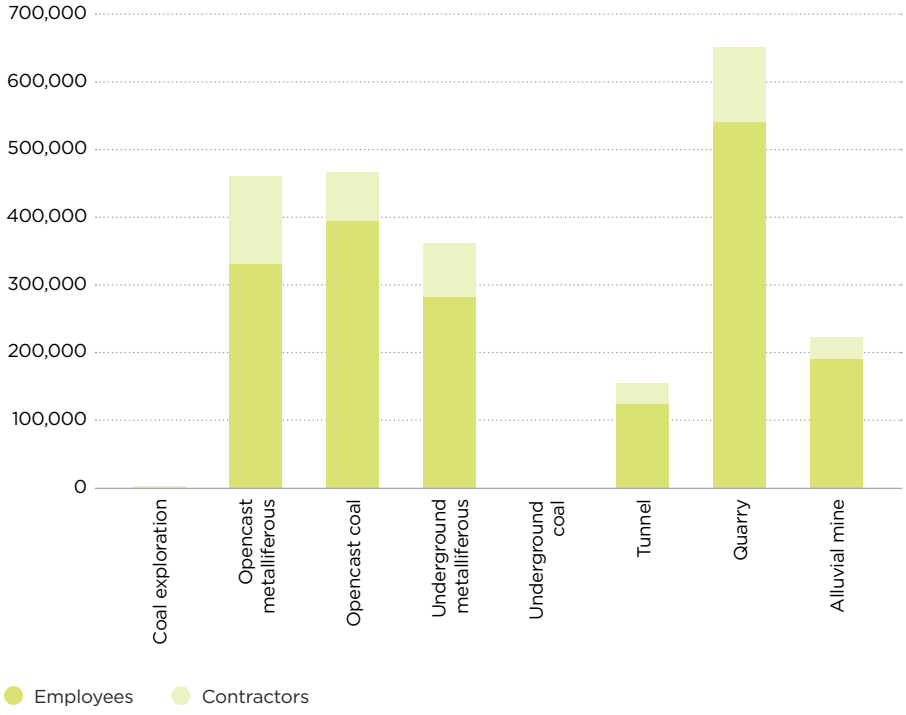


FIGURE 1:
Total hours worked by sector 2024/25 Q4

Figure 2 shows the number of Full Time Equivalents (FTEs) calculated from total hours worked that were reported to WorkSafe in quarterly reports for Q4 2024/25. The hours are separated into Employees and Contractors.

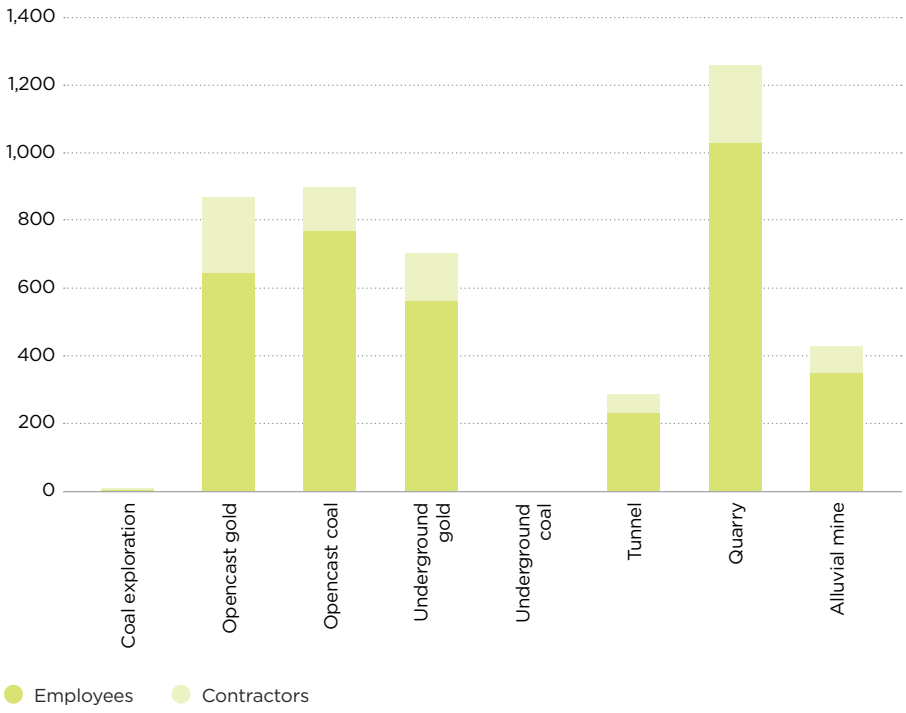


FIGURE 2:
Number of FTEs by sector 2024/25 Q4

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 updated Extractives sector Safe Work Instrument (SWI) prescribing the required competence for all CoCs has come into force. The following link takes you to the original SWI and to the Amendments: Mining Operations and Quarrying Operations – Safe Work Instruments | WorkSafe. Currently the changes sit in the Amendment document, so you must read both to understand the current requirements. Soon the changes will be incorporated into one document for easier access and understanding.

The changes are not very significant for most COCs. Only three changes affect the majority of the CoCs:

- The removal of the requirement to complete 19522 Undertake Job Safety Analysis for any CoC
- The addition of a Leadership unit standard (Dependent on the level of CoC):
  - 27563 Demonstrate knowledge of teams and team leadership in an organisation (For A- or B-grade level CoCs) or
  - 27564 Demonstrate knowledge of leadership in an organisation (For B-grade level CoCs).

    Note that you only need to do 27563 if you wish – it is suitable for either A- or B-grade CoCs, and if you complete the higher-level unit standard (27563) when doing a B-grade CoC, you would not need to do the unit again when you decided to apply for an A-grade CoC.
- The addition of a Worker Health unit standard (Dependent on level of CoC):
  - 31761 Demonstrate knowledge of assessing, monitoring, and controlling risks to worker health in the extractive industries (For A- or B-grade level CoCs) or
  - 31762 Demonstrate knowledge of worker health in the extractive industries (For B-grade level CoCs).
  - Note again you may choose to do only the higher-level unit standard (31761) if you wish – it is suitable for either A- or B-grade CoCs.

The other changes are to provide more suitable unit standards for the specific requirements of underground coal, Tunnel and Metalliferous CoCs. For example, underground coal mines have different ventilation considerations than metalliferous underground mines or tunnels. The unit standards are now divided into coal and non-coal versions due to risks associated with the more gassy coal mines or the risk of coal spontaneous combustion. Any applicants for these CoCs will need to understand the changes as detailed in the SWI.

The SWI came into force on 30 June 2025, but due to a three-month transition period, the new requirements for applicants only take effect on 30 September 2025. This means that those applying for a COC after 30 September 2025 must have achieved the new unit standards.

If any potential applicant is confused about what unit standards are required, please contact the BOE Secretariat.

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

TOTAL NUMBER OF ORAL EXAMS HELD Q4 APR-JUN 25	TOTAL PASSES	SUCCESS %
16	15	93.75%

TABLE 1: Oral exams conducted

Table 2 provides a summary of all CoCs issued during the quarter and the current number of CoCs in circulation at the end of Q2 2024/25.
Note: We no longer report Life Time CoCs.

COC TYPE	TOTAL COCs RENEWED Q4 Apr-Jun 25	TOTAL NEW COCs ISSUED Q4 Apr-Jun 25	TOTAL NUMBER OF CURRENT COCs
A Grade Quarry Manager	3	9	331
B Grade Quarry Manager	5	3	432
A Grade Opencast Coal Mine Manager	1	0	60
B Grade Opencast Coal Mine Manager	0	3	54
A Grade Tunnel Manager	0	0	42
B Grade Tunnel Manager	0	0	79
A Grade Alluvial Mine Manager	0	0	1
B Grade Alluvial Mine Manager	0	0	0
Site Senior Executive	0	1	58
First Class Coal Mine Manager	0	0	12
First Class Mine Manager	0	0	20
Coal Mine Deputy	0	0	27
Coal Mine Under viewer	0	0	18
Mechanical Superintendent	0	0	24
Electrical Superintendent	0	1	21
Ventilation Officer	0	0	6
Mine Surveyor	0	1	13
Site Specific	0	0	4
Winding Engine Driver	0	0	1
Total	**9**	**19**	**1,203**

TABLE 2: Certificates of Competence issued and in circulation

2.0 Health and safety performance

IN THIS SECTION:

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 Act, and under Schedule 5 of the Regulations. Notifiable events include any notifiable incidents, notifiable injuries or illnesses, or fatalities.

The tables below show the number of notifiable events and the number of operations that notified events for the previous four years and for Q1, Q2, Q3 and Q4 of 2024/25 for mines and tunnels (Table 3) and quarries and alluvial mines (Table 4).

MINES AND TUNNELS	2020/21 QUARTERLY AVERAGE	2021/22 QUARTERLY AVERAGE	2022/23 QUARTERLY AVERAGE	2023/24 QUARTERLY AVERAGE	2024/25 Q1	2024/25 Q2	2024/25 Q3	2024/25 Q4
Number of notifiable events	18	20	21	22	11	24	29	23
Number of operations that notified events	9	11	10	11	7	9	11	9

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

QUARRIES AND ALLUVIAL MINES	2020/21 QUARTERLY AVERAGE	2021/22 QUARTERLY AVERAGE	2022/23 QUARTERLY AVERAGE	2023/24 QUARTERLY AVERAGE	2024/25 Q1	2024/25 Q2	2024/25 Q3	2024/25 Q4
Number of notifiable events	16	14	17	18	24	18	17	26
Number of operations that notified events	12	13	15	21	21	16	17	20

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 sector from July 2023 to June 2025.

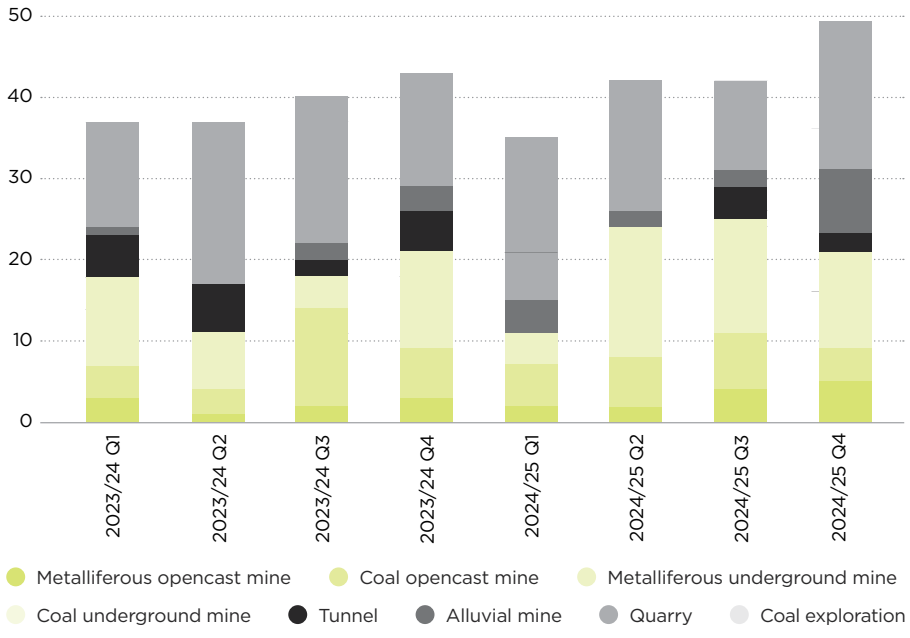


FIGURE 3: Notifiable events by sector

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 April 2022 to June 2025. 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 1.6. Rates have fluctuated over past two years without any clear trend.

While TRIFR is not the only measure indicating the health 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.

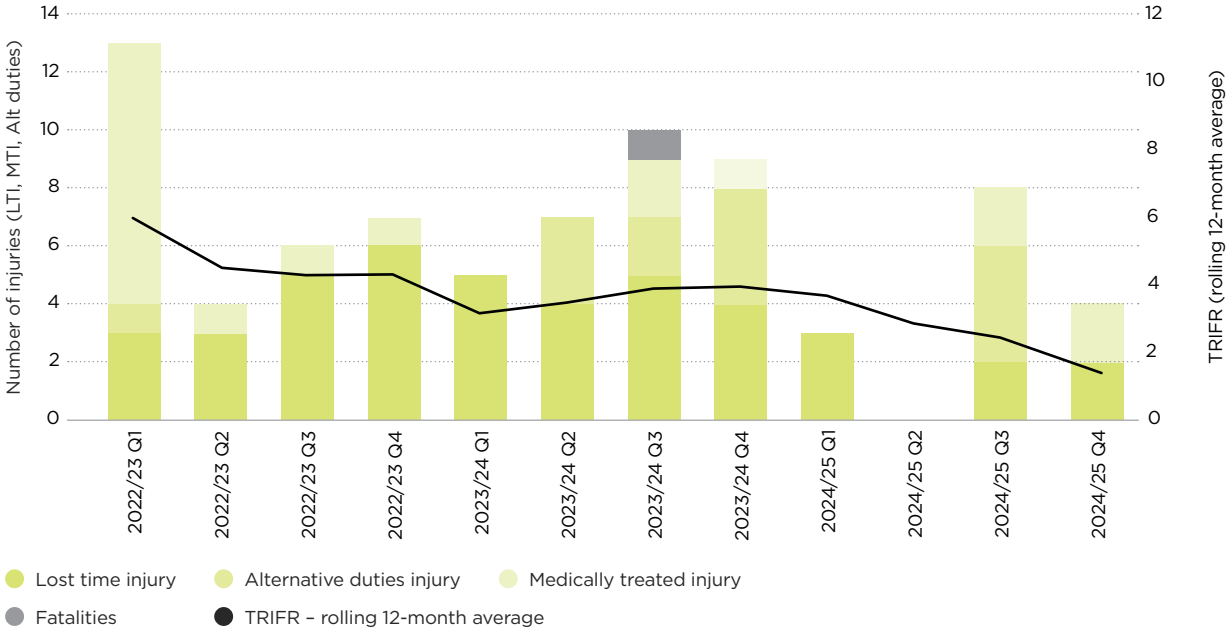


FIGURE 4: TRIFR

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 51 percent of notifiable events in the past 12 months have occurred in relation to vehicles and plant (33%), and fire, ignition, explosion or smoke (19%). These two categories are broken down in more detail in the following section. A further 12% of notifiable events in the past 12 months occurred in relation to ground, geotechnical and other structural failures.

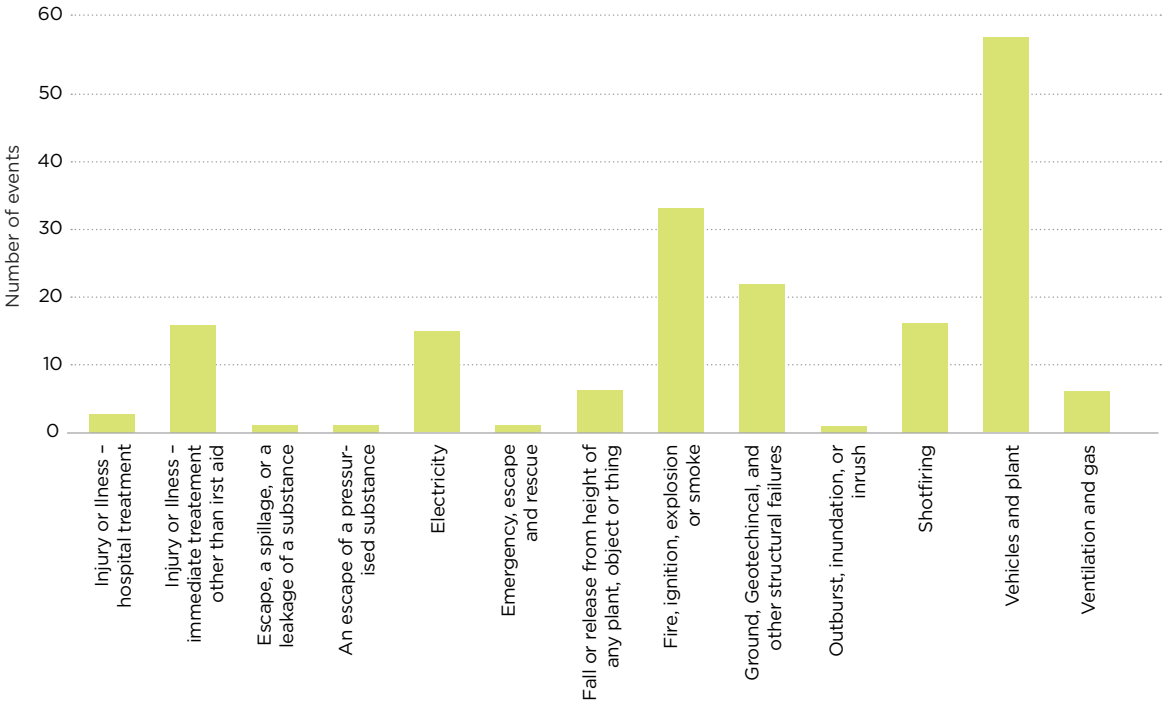


FIGURE 5: Notifiable event categories for the previous 12 months

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, 97% involve fires on plant, mobile plant or in buildings associated with mining or tunnelling activities, and 3% involves the outbreak of a fire on the surface or underground. The vehicle and plant-related notifiable events involve collision of mobile plant with other plant (32%), overturning of mobile plant (48%), breach of a safety berm or windrow (6%), and unintended movement or brake failure (14%).

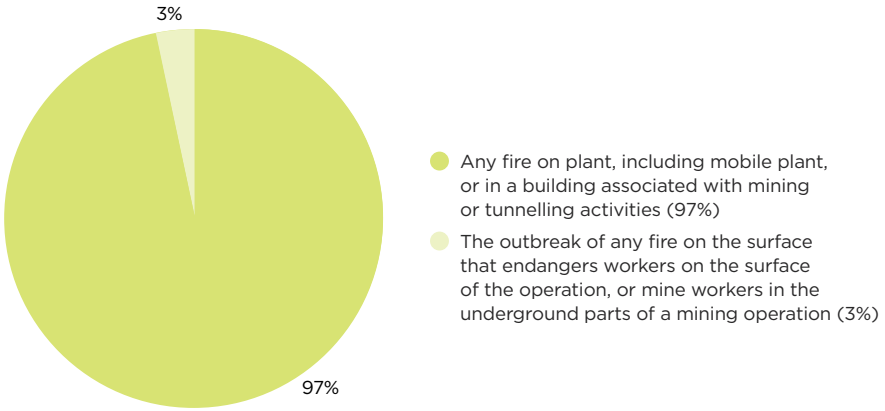


FIGURE 6: Fire, ignition, explosion or smoke-related notifiable event sub-categories

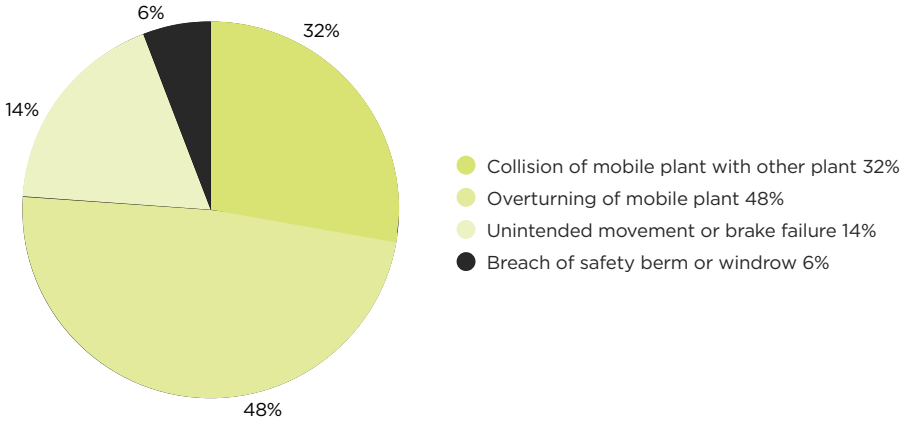


FIGURE 7: Vehicles and plant-related notifiable event sub-categories

Consistency of reporting

Mining and tunneling data are received from a high proportion of those operations and are considered to be accurate. Notifiable events were reported by 25% of operations in the past quarter, and quarterly reports were submitted by 84% of 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 1.8% of operations in the past quarter. Quarterly reports were provided by 16 active alluvial mining operations (21%) and 217 active quarries (21%).

2.5 Regulator comments

Change management is often referred to, but often not understood. Failure to effect change is regularly cited as a causal factor in investigation findings following a serious incident. Therefore, it is important operators ensure that the practices for introducing change at their operations are adequate. That the processes are well understood by workers, always used when required and updated as regularly as required.

Change is occurring all the time. Sometimes change is due to conscious decisions and on other occasions change occurs due to unplanned and often unforeseen circumstances or conditions. The causes of change can be internal or external to the organisation. The first important step in managing change is to recognise it is occurring.

In general, management processes should be designed to ensure that any changes do not have the potential to adversely affect workers, other people, environment, plant or property.

The change management process should be risk based.

The need to implement change management processes might be triggered by the following:

- introduction of new plant to a site
- modifications to plant or processes
- change in the site management and supervisory structure
- new or amended legislation
- changes to the site – expansion, new roading layout
- new shift patterns, or revised working hours
- climate change.

When the operator becomes aware of a potential change it is important that they implement a risk-based consideration of what risks may have been introduced or altered due to that change.

Good change management processes will first involve consultation with a good cross section of the workforce to ensure that all potential implications of the change are identified.

Often change management systems include very specific steps for different types of changes. For example when introducing new equipment to an existing site, many operators have a very detailed “Introduction to Site” process which includes considerations such as an engineering review, assessment of the suitability of the equipment to the planned task vs the OEM operating limits, identifying training requirements for operators and others, what related processes will need to be updated to take account of the new equipment, and often there is a list of testing requirements and sign offs required prior to the new equipment being able to be used operationally.

A summary of what a Change Management process should address includes:

- **Risk Management:** change management is fundamentally about identifying, assessing, and controlling risks associated with any proposed change.
- **Authorisation:** all changes should be formally authorised before implementation to ensure they are managed effectively and safely.
- **Communication:** clear and effective communication is vital throughout the change process, ensuring all stakeholders are informed and engaged.
- **Stakeholder Engagement:** should involve all relevant stakeholders in the change process.

- **Documentation:** Often requires detailed documentation of the change process, including risk assessments, control measures, and communication plans (important for future reference).
- **Monitoring and review:** regular monitoring of the change process, and effectiveness of any of the controls introduced is important. It may be that monitoring identifies adjustments to be made.

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.

High potential incidents – 2024/25 Q4

Table 5 provides a summary of high potential incidents notified to WorkSafe in Q4 2024/25. The summaries are an abridged version from the operator's notification report.

INCIDENT DATE	SUMMARY	CONSIDERATIONS
Apr-25	After tramming a haul truck from the go bay to head underground, it had only travelled 250-300m away from where it was parked in the go bay before it caught fire at the start of night shift. The operator saw flames from the engine bay, called emergency and activated the AFFF, isolated and stood guard with fire extinguisher until a fitter showed up to declare the fire was out.	– Fire or explosion – Mechanical – Emergency management – Supervision – Training
Apr-25	The Service Truck backed into a light vehicle that was parked stationary at the go row. One operator involved. No one was in the light vehicle.	– Roads and vehicle operating areas – Risk assessment – Supervision – Training
Apr-25	A PCBU contracted to demolish the old wet plant was working on removing the trommel by cutting the stands and pipework around the base with a plasma cutter before they were planning on pulling it over with an excavator. Worker 1 cut pipe with plasma gun; the pipe was lined with rubber. The worker continued to cut other sections of the structure then shortly after noticed it was smoldering. The worker got the plasma gun to try cut the pipe to allow a fire extinguisher in but was unsuccessful. They then tried to shut off valve at bottom to stop wind fuelling any fire, but valve was too hard to close. A worker employed by the mine operator across the road noticed and came over. They documented that nothing could be done. Water cart called to site, fire brigade called, and fire was extinguished.	– Job Planning – Risk assessment – Emergency management – Supervision – Training
Apr-25	A process operator was using a 4-inch electric grinder to clean a carbon safety screens when they felt an electric shock. The operator stopped the 4-inch electric grinder, got off the carbon safety screen and reported the incident to their supervisor. The operator was checked on site by an emergency responder and then he was transported to a medical centre for an ECG assessment. The medical centre conducted the ECG assessment and informed the operator that they were 'clear' and advised to go home for the day.	– Electricity – Risk assessment – Supervision – Training

INCIDENT DATE	SUMMARY	CONSIDERATIONS
Apr-25	Electricians switched an air break switch as per a mine site switching order. The supply line fed a ring main unit (RMU) that had been worked on and isolated. This RMU had been left with the earth switch closed, as per instruction. The livening caused the 11KV supply to be directly connected to earth causing a 3-phase symmetrical fault. As by design this caused a high fault current (to operate protection in a guaranteed time). The fault current has fed back to auto-reclosure and blown the weakest point at the crimp connectors. This has caused a small grass fire at the base of the pole. The emergency response team has extinguished the fire and site electricians have confirmed isolations. There are no injuries and no personal were in the area of the arcing at the time.	– Electricity – Risk assessment – Supervision – Training
Apr-25	While reversing to dump the load on the in pit dump the operator of a haul truck reversed in close proximity to the bulldozer and starting tipping the load. The operator of the dozer then reversed and made contact with the Pos 1 tire and mirror of the haul truck.	– Roads and vehicle operating areas – Tips, ponds and voids – Risk assessment – Supervision – Training
Apr-25	The Shift Manager was operating an excavator, ripping rock out of the face and side casting to the quarry floor. As they slewed around, they noticed that the bench behind them had slipped. The slip is a scallop shape approximately 1.0m x 2.5m (approx. 30m3 in volume).	– Ground or strata instability – Supervision – Training
May-25	Worker was changing blow bars on the crusher. The worker used a screwdriver to stop the bars lowering. The screwdriver was not enough and the bars have lowered. The worker had their skin open via pinching, about an inch. Worker needed 12 stitches and will be off for a week. Caller says it could have been quite a bit worse as the metal that cut their skin was razor sharp when it dropped and it could have cleaved to the bone.	– Job planning – Risk assessment – Supervision – Training
May 25	A contractor wanting to replace a motor that had already been disconnected and appeared to still be locked out, received an electric shock from the exposed wires to the back of their hand, as they started to move it. There was no marks or physical damage to the contractor, but as a precaution was taken to the A&E for review.	– Electricity – Isolation of energy – Risk assessment – Supervision – Training
May 25	Two workers were driving the light vehicle following park up of the ATV at the end of shift. They were driving towards the gate when the light vehicle veered off the corner of the track and the bank has given way from under the left side of the vehicle causing the vehicle to roll onto its roof above a creek. Both workers were wearing seat belts at the time of the incident. No injuries were sustained.	– Roads and vehicle operating areas – Risk assessment – Supervision – Training
May 25	Operator was driving a Rough Terrain forklift down the access road after refuelling behind the workshop. Machine was not carrying a load. Approximately 3/4 of the way down the access road they went to apply the brake pedal to reduce speed but mistakenly applied the d-clutch pedal instead which disengaged the hydrostatic drive and did not slow the machine. They were unable to keep the forklift steering completely on the road and the right hand wheels rode up the side of a 1m bund which was on his right. The machine ran for approximately 6m with its right hand wheels on the bund before tipping over onto to its left hand side. The operator was within the roll over frame when the machine came to rest and was not harmed.	– Roads and vehicle operating areas – Risk assessment – Supervision – Training

INCIDENT DATE	SUMMARY	CONSIDERATIONS
May 25	After returning from a rest break, a worker proceeded to track a dozer into the working area for a shift change. With the blade raised visibility was limited, and they did not see the tractor operating within the area. As they tracked towards the back of the area, the dozer made contact with the tractor. The tractor remained upright for 1 to 2 seconds before tipping onto its side. The dozer operator only became aware of the incident when they saw the tractor's wheels. They immediately stopped the dozer, exited the cab, and checked on the tractor operator, who was fortunately uninjured but shaken. Tractor operator was working at the back of the area, using the tractor to level the tip head and haul road. As they were attempting to free the levelling bar from a sand buildup, they noticed the dozer approaching. They tried to radio the dozer operator and simultaneously attempted to get the tractor moving. Before they could make contact, the dozer struck the tractor, pushing it sideways and eventually tipping it onto its side.	– Roads and vehicle operating areas – Risk assessment – Supervision – Training
May 25	An excavator was tracking away from an area when it came in contact with the overhead line which they thought at the time was a 220V line. It was later confirmed however that this was an earthing cable. The power had however tripped in the distribution board, and was locked out until it could be rectified by an electrician.	– Roads and vehicle operating areas – Electricity – Risk assessment – Supervision – Training
May 25	Light vehicle (LV) operator parked in close proximity to integrated tool carrier (IT). LV operator exited the vehicle and vehicle remained parked and unoccupied. IT operator reversed and made contact with front left headlight of LV.	– Roads and vehicle operating areas – Risk assessment – Supervision – Training
May 25	Light vehicle being driven back to office area after firing end of day shift. Driving down the ramp at the back of workshop when diff assembly has snapped on ute. Wheel and hub have become jammed under light vehicle. Light vehicle has slid into windrow. Driver sustained very minor strain to wrist. Passenger uninjured.	– Roads and vehicle operating areas – Mechanical – Risk assessment – Supervision – Training
Jun 25	Loaded truck was in process of reversing back into stockpile to allow bogger to pass down decline when one of the wheels mounted a windrow which resulted in the tub tipping over and coming to rest on drivers side of truck on the ground. No injury to the operator, cab remained upright.	– Roads and vehicle operating areas – Mechanical – Risk assessment – Supervision – Training
Jun 25	Sometime over the preceding 18 hours, stope material has moved into the footwall access drive from the draw point of the stope.	– Inundation and inrush – Tips, ponds and voids – Risk assessment
Jun 25	The team noticed some rockfalls from level 2 to the ground floor in the quarry. Upon inspection they found that the bench had slumped and cracking was visible.	– Ground or strata instability – Workplace inspections – Risk assessment – Supervision – Training
Jun-25	Worker was called at 3am to assist on the pump that did not want to start. Removed the pump and started to move another pump back into position. As the excavator swang the pump around the operator moved back, and heard the bang crack and the pump came down crushing the 300 mm flex under the left side skid. The lifting eye failed.	– Lifting – Job Planning – Risk assessment – Supervision – Training
Jun 25	When firing a blast in a lime quarry, a pocket of clay has been thrown outside the exclusion zone hitting 2 x light vehicles, a road truck, a building onsite at the quarry and a neighbouring commercial building, causing minor damage.	– Shotfiring – Job Planning – Risk assessment – Supervision – Training

INCIDENT DATE	SUMMARY	CONSIDERATIONS
Jun 25	A truck and trailer unit reversed on the Cleanfill Tip Head, proceeded to lift the deck and dump a load of wet and heavy cleanfill soils. The trailer bin got to approx ¾ raised and the soils only dumped from the left-hand side of the bin. The truck driver attempted to bring the bin down; however, the load was unbalanced as the right-hand side of the load remained stuck in the bin. The trailer unit slowly tipped onto the right-hand side – twisting the coupling.	– Tips, ponds and voids – Risk assessment – Supervision – Training
Jun 25	A dump truck reversed towards service vehicle that transports fuel and grease. Service vehicle was unoccupied and parked in truck service area. Truck nudged the service vehicle. No damage to either vehicle.	– Roads and vehicle operating areas – Risk assessment – Supervision – Training
Jun 25	Turned drill off at the end of day shift, it started to bring up faults and would not turn off in cab. Went to back of drill and isolated, saw and smelled smoke coming from the A cabinet area. Got fire extinguishers ready at back of drill, a small flame was noticed coming from the A cabinet, the AFFF was set off and fire extinguishers were used and the fire was extinguished within seconds.	– Fire or explosion – Emergency response – Supervision – Training
Jun 25	During lifting an industrial vacuum unit from the base of a shaft using a rope secured through the handles of the unit, the unit caught on the scaffold handrail at the top of the shaft causing clips securing the unit together to release. The base of the unit fell to the bottom of the shaft, and the main body remained on the rope. The item falling is estimated to weigh 5.5kg. There was one person in the bottom of the shaft at the time - they had positioned themselves in what they considered the safest location to the side of the scaffold access tower underneath the ventilation duct (which extended halfway down the shaft). The falling unit impacted the ground, and did not strike the person or cause any injury. The shaft is 8m deep and has a diameter of 3m. The Incident was not immediately reported to Management of the Contractor nor subsequently was not reported to the Mine Operator. This has led to delayed reporting and the inability to direct the preservation of the scene following the incident.	– Lifting – Job planning – Risk assessment – Reporting – Supervision – Training
Jun 25	During the night, a slip occurred in an area that is not being excavated, but near an area where mobile plant could drive. The slip was largely contained by the controls in place and did not pose a threat to anyone at the time.	– Ground or strata instability – Workplace inspections – Risk assessment – Supervision – Training
Jun 25	Operator tried to start drill rig. Smelt smoke and small flame. Put out with extinguisher.	– Fire or explosion – Emergency response – Supervision – Training
Jun 25	Operator was in the process of filling the agi at the batch plant and has seen flames in the center hitch area. Extinguished with a fire extinguisher.	– Fire or explosion – Emergency response – Supervision – Training

TABLE 5: High potential incidents – 2024/25 Q4

Table 6 and Figure 8 shows the number of high potential incidents per quarter during the last two years for all extractives operations.

QUARTER	Q1 JUL-SEP 2023	Q2 OCT-DEC 2023	Q3 JAN-MAR 2024	Q4 APR-JUN 2024	Q1 JUL-SEP 2024	Q2 OCT-DEC 2024	Q3 JAN-MAR 2025	Q4 APR-JUN 2025	TOTAL PREVIOUS 12 MONTHS
Number of high potential incidents	24	22	25	29	27	35	32	32	**126**

TABLE 6: High potential incidents per quarter

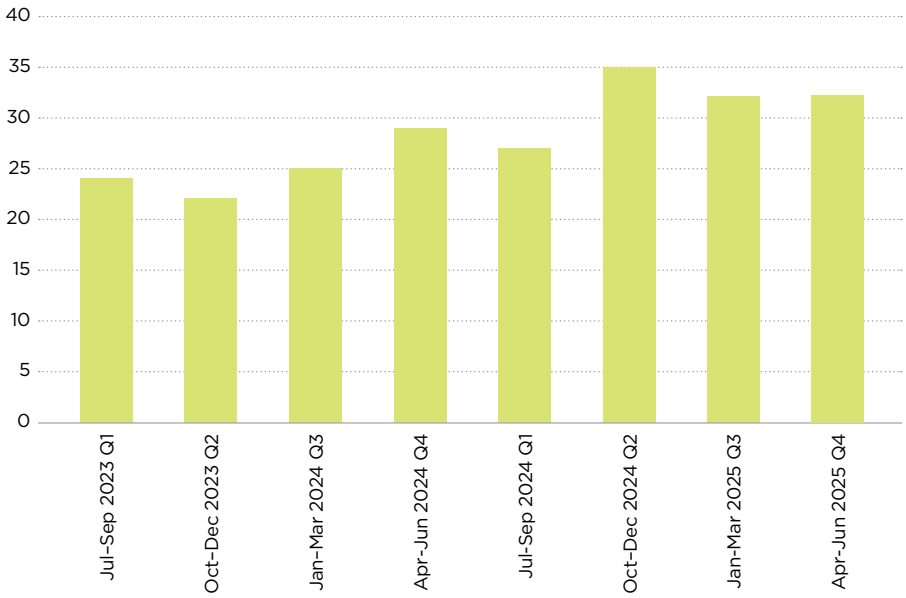


FIGURE 8: High potential incidents per quarter

High potential incidents – investigation outcomes

2.7.1 High Potential Incident Case Study – Shotfiring

Jun-10	When firing a blast in a lime quarry, a pocket of clay has been thrown outside the exclusion zone hitting 2 x light vehicles, a road truck, a building onsite at the quarry and a neighboring commercial building, causing minor damage.

TABLE 7: High potential incident – investigation outcomes case study

THE INCIDENT

A flyrock incident occurred during a scheduled blast at a limestone quarry. No injuries were reported. However, the flyrock caused damage, to light vehicles and both on-site and off-site buildings.

The flyrock occurred at the toe, forward of the free face. The flyrock was blown upward from the floor, indicating where the energy was projected from and travelled 692m.

The neighbouring property was a commercial business and had 29 staff spread across the site at the time of the incident. One of the buildings on the neighbouring property closest to the quarry (~480m) had four holes in the roof from flyrock damage.

Flyrock went over a main road and a railway line.

There were 6 workers in the quarry at the time of the blast.

The firing location was outside of the exclusion zone but still in line with the blast.

BACKGROUND

- Blast design was based on a drone survey, with hole design within standard parameters.
- Drill logs for the blast were completed.
- All blast documentation was properly completed.
- The blast was recorded on camera.

FINDINGS AND LEARNINGS FROM THE PCBU INVESTIGATION

1. Inadequate risk reassessment processes

No documented reassessment of exclusion zones or blast-related risks was conducted in response to changes in land use or the proximity of new assets.

2. Assumptions based on historical consistency

Site personnel perceived the geological variation as typical, based on long-term geological uniformity historically observed at the location.

3. Absence of formal geological review

No formal geological assessment or updated face mapping was conducted prior to the blast. Evaluation was based solely on visual inspection.

4. Reliance on informal knowledge and practices

Confidence in the site's consistent geological history, particularly among long-term personnel, contributed to continued reliance on informal evaluation methods.

5. Cultural embedding of informal blasting practices

The site's blasting approach had become culturally embedded and was not supported by formal documentation or procedures.

6. Lack of formalised pre-blast procedures

There was no formal safe operating procedure requiring geological scanning or mapping in areas exhibiting potential geological variation.

7. Absence of risk assessment triggers

There were no formal triggers in place to initiate updates to risk assessments or adjustments to exclusion zones in response to environmental or structural changes.

8. Geological variation misidentified

The variation in limestone geology observed on the face was not recognised as a potential clay pocket, leading to a misinterpretation of geological conditions.

FIGURE 9:
Examples of fly rock damage

FIGURE 10:
Clay pocket within limestone geology

REGULATOR COMMENTS AND RECOMMENDATIONS:

Individual blast risk assessment

A formal risk assessment should be completed for each blast, to identify the hazards and control measures at each stage, including the extent of the blast exclusion zone during the firing sequence.

Before blasting, any risk assessment and control measures should be agreed to and approved by all the relevant parties involved in the blasting process.

FACTORS TO CONSIDER IN A BLAST RISK ASSESSMENT

Shot considerations

- the type of shot (cast, stand-up, river protection rock and so on)
- intended outcome of the shot (such as maximum fragmentation or maximum heave).

Geology of the area

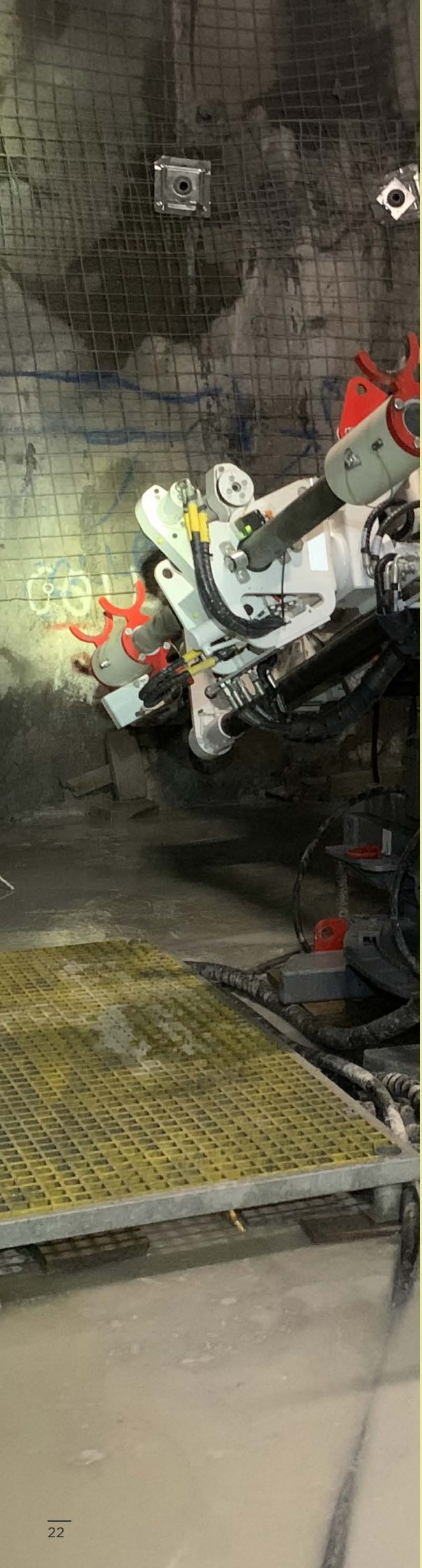
- the ground type (hardness of bedding planes)
- known geological abnormalities in the blast design area (including the face and any potential cavities and/or caves encountered during loading of explosives).

Blast design

- burden and spacing (including blast design)
- bench height
- maximum instantaneous charge (MIC) weights to control environmental impact
- vertical location of the bench
- the designed blast powder factor
- timing and effects
- equipment and personnel safety
- access to and from the proposed blast exclusion zone
- location of equipment and safety of workers during the blast (flyrock)
- location of protected works or associated works
- location of external infrastructure potentially affected by the blasting activities (buildings, roads, rail, underground services and power)
- initiation timing
- declared exclusion zone.

Environmental considerations

- historical records of fly rock events
- understanding of minimum burden to be blasted to reduce risk of flyrock and overpressure
- presence of water
- historical or current underground workings
- the formation and management of any blast fume
- radio communication ‘black spots’
- the expected weather conditions.



3.0 Regulatory insights

IN THIS SECTION:

3.1 Regulation implementation temperature check

I recently accompanied a specialist quarries inspector to a corporately owned quarry operated by a company with global connections. The focus of the visit was to take a detailed look at how the business had incorporated the requirements of the Health and Safety at Work (Mining Operations and Quarrying Operations) Regulations 2016 (the regulations).

Remember that for quarries, it's been two years since they have been required to develop systems that align with the regulations. Plenty of time, right? WorkSafe and MinEx have been touring the country during this period, providing information and presenting to industry at workshops about the requirements of the regulations.

So, back to the visit, there appeared to be confusion about the regulations where they specify that an operation "must" include a particular requirement into systems or "must" provide WorkSafe with reports. This was not an isolated case.

WorkSafe specialist quarries inspectors have been undertaking a series of such visits that focus on the adoption of the regulations and have mostly found gaps and misunderstanding by operators. For example, Regulation 56. Content of health and safety management system. The first sentence of the regulation states: (1) The health and safety management system for a mining operation, a quarrying operation, or an alluvial mining operation "must" contain at least the following: The regulation then lists 12 minimum requirements.

The confusion over the word "must" appears to stem from decades where the quarrying industry have not been required to work under prescriptive regulation; they have applied performance-based law. It will take time for the industry to adapt to a more directive regulatory approach. The term "must" simply means that it is a legal requirement that has to be complied with.

The following chart shows how the industry is doing with one requirement where they "must" provide WorkSafe with a quarterly report. Only around 20% of quarries currently provide WorkSafe with the mandatory report.

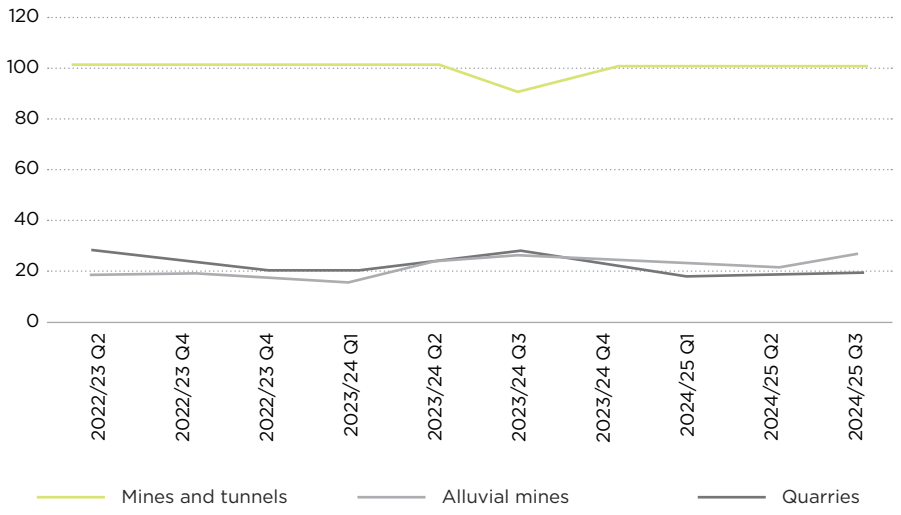
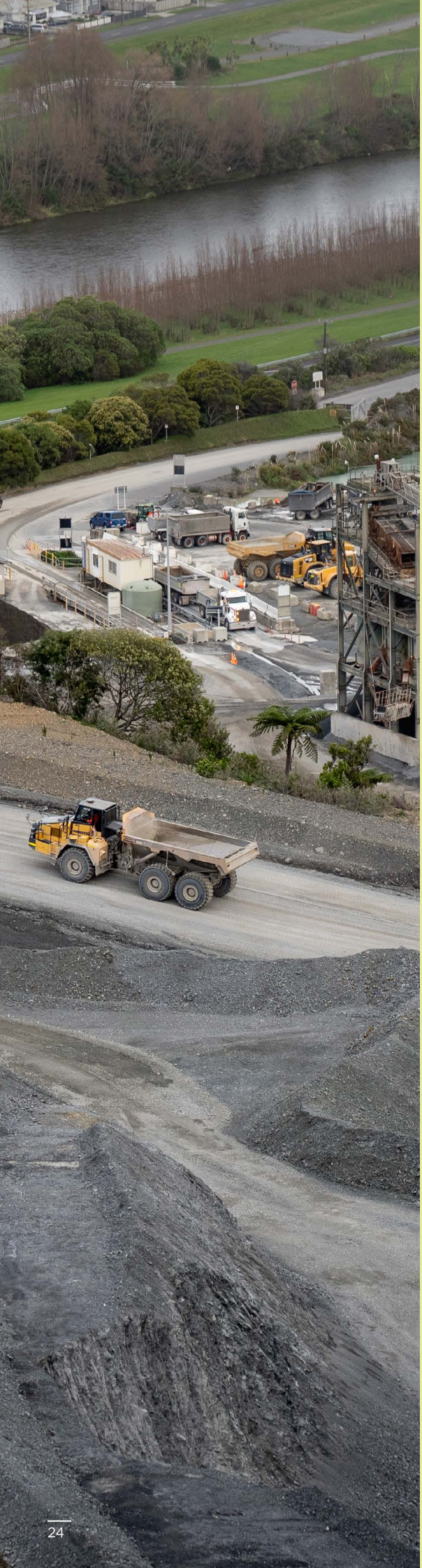


FIGURE 11 - % of Active Operations Submitting Quarterly Reports

At the moment, Inspectors are taking an educative approach to encourage operators to include the mandatory requirements of the regulations within their systems. There will come a point where they will need to move toward a more enforcement-oriented approach.

Dave Bellett
Manager Extractives



4.0
The regulator

IN THIS SECTION:

4.1 Our activities

The extractives ppecialist 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 xxtractives 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 agreed and the appropriate inspection tool is selected. Targeted assessments and regulatory compliance assessments can take several days on site with a team of inspectors attending. These multi-day inspections may be 'targeted' to assess the controls in place for a particular principal hazard (for example, WorkSafe has been targeting 'roads and other vehicle operating areas' as a result of the high number of notifiable events in this area), or they may involve a more general assessment of 'regulatory compliance'. Site inspections and targeted inspections are generally completed in a one day site visit but can also focus on specific topics.

As well as site-based assessments, the Inspectors spend considerable time undertaking desk-based assessments. Proactive desk-based assessments include the review of Principal Hazard Management Plans (PHMPs), Principal Control Plans (PCPs), mine plans, and high risk activity notifications. Responding to notifiable events and safety concerns may involve a site-based or desk-based assessment, or both.

Table 8 shows the range of assessments undertaken in Q4 2024/25 by sector.

		ASSESSMENTS	MINE	TUNNEL	ALLUVIAL MINE	QUARRY
	Site-based	Regulatory compliance assessments			1	5
		Site inspections	5	3	8	11
		Targeted inspections	3	1		
	Desk-based	PHMP/PCP review	4	2		
		Mine plan review	7	8		
		High risk activity	3			
Reactive	**Site-based**	Concerns – inspection				2
		Notifiable events – inspection	9	1	5	4
	Desk-based	Concerns – desk-based	1		2	
		Notifiable event – desk-based	25	3	5	14

TABLE 8: Proactive and reactive site and desk based assessments conducted in Q4 2024/25

Figure 12 shows the number of proactive and reactive site- and desk-based assessments undertaken by the regulator in Q4 2024/25. This quarter 44% of our activities were site-based, and 46% of activities were proactive.

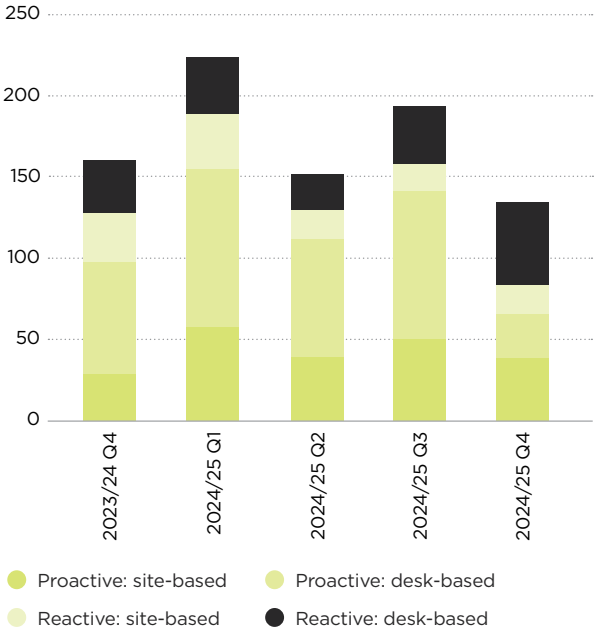


FIGURE 12:
Proactive and reactive site and desk-based assessments

Figure 13 shows the number of assessments undertaken by the regulator in Q4 2024/25 by sector. This quarter, 27% of our assessments were for quarries, 43% for mines, 14% for tunnels and 16% for alluvial mines.

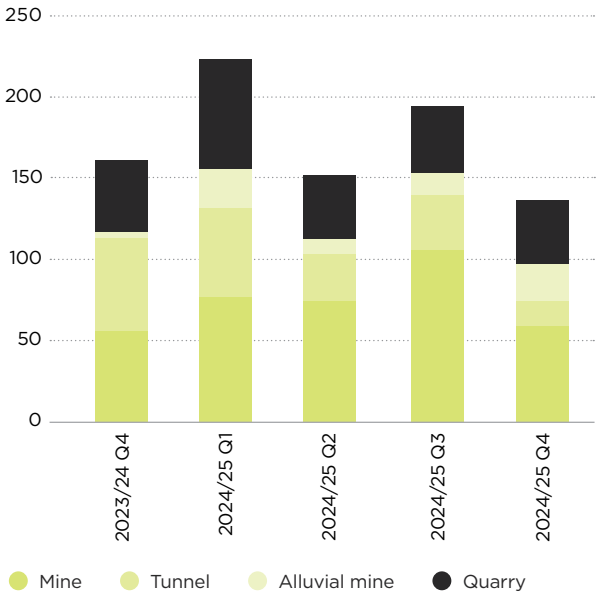


FIGURE 12:
Assessements by sector

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 13 and 14 show the number of enforcement actions issued in Q4 2024/25 by notice type and by sector. This quarter, a total of 95 enforcement actions were issued. Of those, 3% of were prohibition notices, 42% were improvement notices, 55% were directives and 0% were sustained compliance letters. The majority of the enforcement actions were issued to the alluvial mining (29%), and quarrying (49%) sectors.

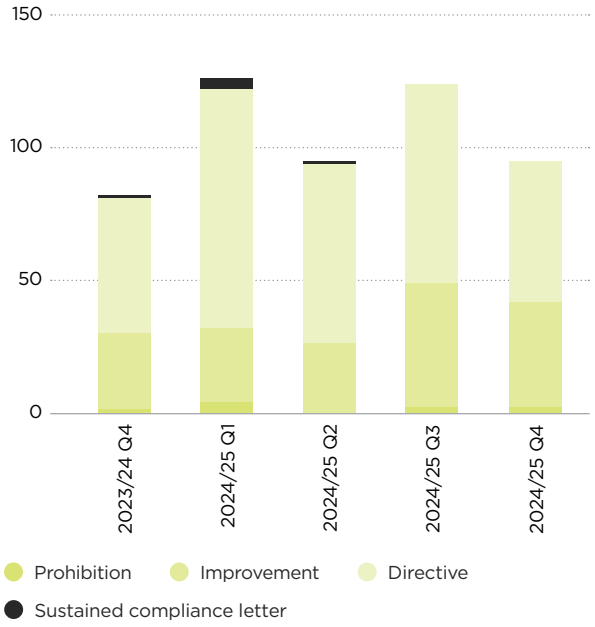


FIGURE 14: Enforcement actions issued by type

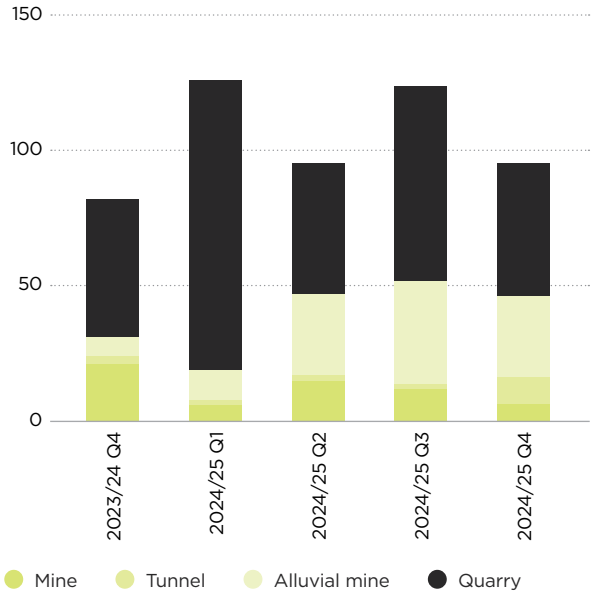


FIGURE 15: Enforcement actions issued by sector

Figure 16 shows the number of enforcement actions issued in Q4 2024/25 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 (15%), guarding (15%), and health and safety management systems (20%).

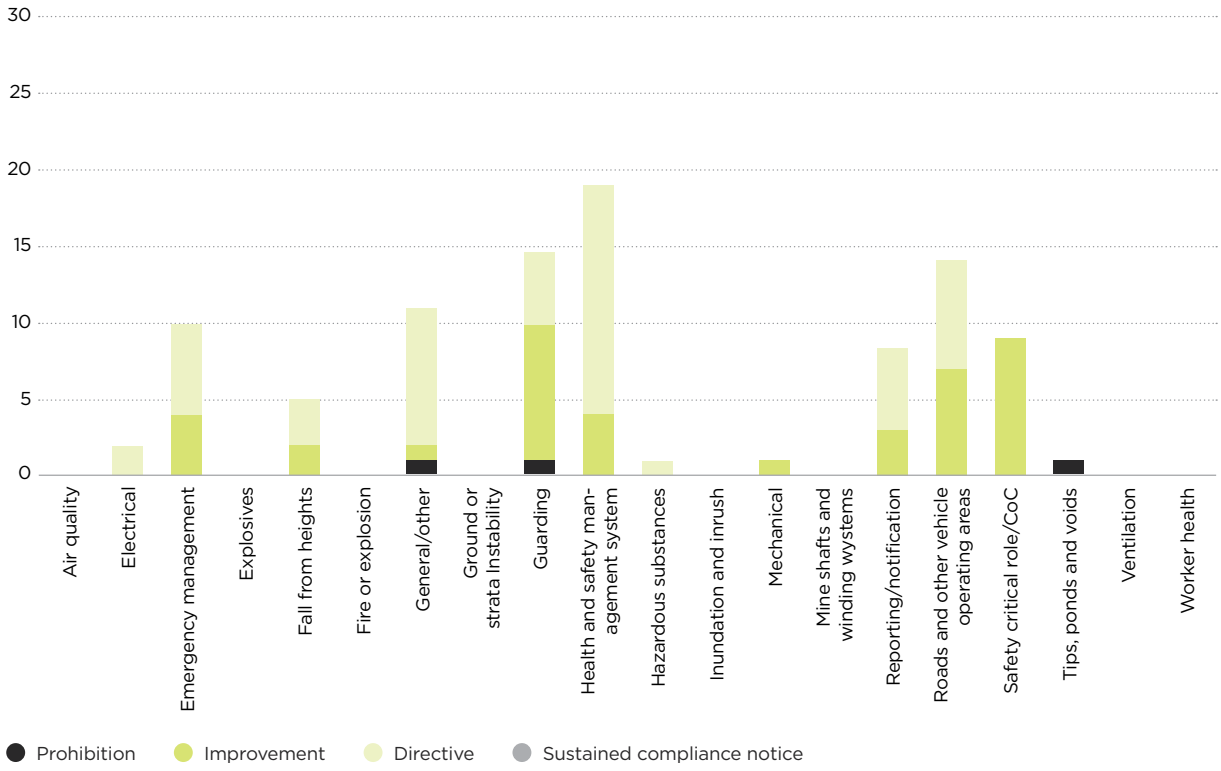


FIGURE 16: Enforcement actions issued by category 2024/25 Q4

Regulator activity comment

The number of proactive and reactive assessments undertaken during Q4 was in line with the 2024/25 operating plan. The number of Inspections completed for the year exceeded the annual plan (249 planned, 274 actual).

Enforcement was proportionate to the number of inspections. Due to the increasing activity in the alluvial mine sector and more inspections being undertaken there is higher than historical enforcement in that sector.

What can be determined by the ratio of enforcement actions per inspection that the different sectors have higher proportions of non-compliance.

SECTOR	SITE BASED INSPECTIONS	ENFORCEMENT ACTIONS ISSUED	ENFORCEMENT ACTIONS TAKEN PER SITE INSPECTION
Mines	79	41	0.5
Tunnels	14	18	1.3
Alluvial Mines	45	107	2.4
Quarries	136	273	2.0

TABLE 9: Enforcement actions per sector June 2024 to July 2025

Notes

Disclaimer

WorkSafe New Zealand has made every effort to ensure the information contained in this publication is reliable, but makes no guarantee of its completeness.

It should not be used as a substitute for legislation or legal advice. WorkSafe is not responsible for the results of any action taken on the basis of information in this document, or for any errors or omissions.

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WORKSAFE
Mahi Haumaru Aotearoa

PO Box 165, Wellington 6140
0800 030 040 **worksafe.govt.nz**