

Your health and safety guide to

# Quarries

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This guidance has been reviewed and updated for the sole purpose of amending year and regulation references relating to the Occupational Health and Safety Regulations, in line with amendments which came into effect on 18 June 2017.

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# Introduction

**Quarrying activities may involve significant risks to workers, as well as people living or working in the surrounding area.**

There are approximately 900 quarries in Victoria, but only about 550 of these quarries operate at any given time. The operating quarries range in size from small family-owned quarries in remote areas to large quarries near metropolitan centres with many employees.

Incidents involving the operation and maintenance of fixed and mobile plant, falls from height and explosions may place people's lives at risk.

These incidents can have catastrophic results. This guide will help you understand the risks of working in quarrying, and provide information about how you can make your workplace safer.

## **About the industry**

- What is a quarry?
- What are the risks?

## **Your legal duties**

- The law
- Employers
- Employees
- Compliance and enforcement

## **How to comply**

- Consult
- Find
- Assess
- Fix
- Review

## **Glossary**

# About the industry

## What is a quarry?

A quarry is a pit or excavation made in the land below the natural surface to extract or remove stone and other materials. Victoria's quarries supply a variety of materials, including:

- sandstone or freestone used for building and construction
- basalt, granite or limestone used for construction, manufacturing or building roads
- quartz
- slate or gravel
- clay
- peat
- sand, earth or soil.

## What are the risks?

The quarrying industry has inherent risks because of the varied nature of the work and the environment in which it is carried out.

Fatalities and serious injuries most often occur as a result of:

- being struck by moving plant
- becoming entangled in fixed plant, such as conveyors, crushers and screens
- falls from height and falls on the same level
- lifting, carrying or handling objects. Other risks include explosions, electrical hazards, noise, rocks and ground falling on workers, dust, silica, asbestos, vibration, UV radiation, heat, cold, dangerous goods and hazardous substances.

# Your legal duties

## The law

### **Occupational Health and Safety Act 2004 (OHS Act)**

The OHS Act came into effect on 1 July 2005. It sets out the key principles, duties and rights in relation to occupational health and safety. The duties imposed by the Act cover a wide variety of circumstances, recognising the need for a duty-holder to have flexibility in determining what needs to be done to comply.

The OHS Act is based upon the following key health and safety principles:

- All people – employees and the general public – should have the highest level of protection against risks to health and safety.
- Those who manage or control things that create health and safety risks in the workplace are responsible for eliminating or reducing the risks so far as is reasonably practicable.
- Employers should be proactive in promoting health and safety in the workplace.
- Information and ideas about risks and how to control them should be shared between employers and employees.
- Employees are entitled – and should be encouraged – to be represented in relation to health and safety issues.

### **Occupational Health and Safety Regulations 2017 (OHS Regulations 2017)**

New regulations for occupational health and safety came into effect on 18 June 2017. Part 5.3 of the OHS Regulations contains additional requirements for mines. These regulations do not apply to quarry sites.

A copy of *Working safely in the general construction industry: A handbook for the general construction industry* can be found at [worksafe.vic.gov.au](http://worksafe.vic.gov.au).

## Employers

By law, Employers must provide a safe working environment for their employees so far as is reasonably practicable. In addition to protecting the safety of your employees, you also must ensure that other people (such as drivers, visitors and the general public) are not exposed to risks as a result of your business.

Furthermore, if you manage or control a workplace, you are responsible for ensuring so far as is reasonably practicable that the area you control or manage is safe and without risks to health. This duty extends to entrances and exits, and it applies to your employees as well as the general public. This means:

- you must eliminate any risks to health and safety so far as is reasonably practicable
- if it's not reasonably practicable to eliminate the risks, you must reduce them so far as is reasonably practicable.

Under Victorian OHS laws, employers are also responsible for the health and safety of all employees, including labour hire personnel or contractors, at their workplace. If you are a host employer with labour hire employees, you must treat labour hire employees and other contractors the same as your own employees. That is you must – provide and maintain a safe working environment and conditions.

If you store dangerous goods (eg substances that are flammable, explosive or toxic), you must comply with a range of additional specific legal requirements (see the *Dangerous Goods Act 1985* and associated regulations for further information on these duties).

You also have specific duties under the OHS Regulations 2017 in relation to hazards such as:

- falls
- manual handling
- noise
- plant and machinery
- asbestos
- hazardous substances
- confined spaces
- licensing (including high risk work and explosives).

# Your legal duties

If an employee has a work-related injury or illness, you have duties under the *Workplace Injury Rehabilitation and Compensation Act 2013*, one of which is to ensure their safe return to work. The employer's return to work duties include:

- appoint a return to work coordinator
- develop and implement a return to work plan
- support and monitor your worker when they return to work.

## Employees

Your employer is required to protect you from risks in your workplace.

At the same time, you have a general duty to take reasonable care for your own health and safety and that of others who may be affected by your work, and to cooperate with your employer's efforts to make the workplace safe. This may include:

- following workplace policies and procedures
- attending health and safety training
- helping to identify hazards and risks.

## Compliance and enforcement

WorkSafe applies a strategy of 'constructive compliance' – a combination of incentives and deterrents – to improve workplace health and safety.

This strategy recognises that real and sustainable improvement in workplace health and safety requires active involvement from employers and employees in identifying hazards and controlling risks.

# How to comply

## Consult

Employees' expertise can make a significant contribution to improving workplace health and safety.

Regular proactive consultation can help identify issues in the workplace and build a strong commitment to health and safety by including all views in the decision-making process.

Under the OHS Act, employers must consult with employees when identifying and assessing hazards or risks and making decisions about risk control.

'Employees' includes independent contractors (and any employees of the independent contractor(s), including labour hire) who perform work which the employer has, or should have, control over.

If employees are represented by health and safety representatives, the consultation must involve those representatives – see *Your health and safety guide to Consultation* for further information.

## Find

There are many potential hazards you need to think about when identifying things that could go wrong.

Consider what risks the following hazards could pose:

- sloping, unstable ground
- rocks and ground falling on workers
- mobile plant, including collision, rollover and vibration
- fixed plant, including conveyors and crushers
- heavy transport equipment
- fires
- airborne dust, which may include silica
- UV radiation
- asbestos
- tailings dams
- electrical hazards
- noise
- dangerous goods, including explosives
- hazardous substances.

You also need to consider different operational situations, including shut-down, emergencies and maintenance, as well as any changes to throughput, materials or equipment, design and staffing levels.

For existing quarry sites, you should take into account hazards that may have been introduced during the exploration, design and development phases of the quarrying operation.

## Assess

Once all the hazards have been identified, you should assess the risks to health and safety. This includes considering:

- the nature of the hazard
- the likelihood of it causing any harm, and
- the possible severity of the harm that could be caused.

# How to comply

## Fix

Work through the following list to control quarrying risks. In many instances, a combination of approaches will result in the best solution.

### 1. Eliminate the cause source of the risk

The best option is to remove the hazard completely, so you should always try to do this first.

### 2. Substitute or isolate the hazard, or use engineering controls

If you can't remove the hazard, think about changing the work to involve a lesser hazard, separating the hazard from people or using engineering controls.

**Example:** *Install emergency stop equipment.*

### 3. Use administrative controls

If there is still a risk, reduce it by changing the way the work is done.

**Example:** *Develop performance standards for conveyors and the testing of components to ensure reliability of conveyor systems.*

### 4. Provide personal protective equipment (PPE)

If no other measures will totally solve the problem, use PPE to reduce the risk.

**Example:** *Provide respirators where necessary (ensuring that personnel are trained in their use and that the respirator is of a suitable type, fitted and maintained properly).*

## Review

It's important to review your risk controls regularly to ensure they are implemented correctly and to monitor their effectiveness.

You must review (and, if necessary, revise) your risk controls whenever any changes are made to the work or the workplace, such as changes to the way work is done or to the tools or equipment used.



# Glossary

Administrative control	Using methods such as policies, procedures, safety signs, training or supervision, or a combination of methods, to control risk.
Confined spaces	Spaces that have limited or restricted means of entry and exit and may contain harmful atmospheres or stored substances that pose a risk to employees working in them.
Employee	A person employed under a contract of employment or contract of training.
Employer	A person who employs one or more people under contracts of employment or contracts of training.
Hazard	A potential source of harm or injury. The potential to cause injury, illness or disease.
Hazardous substance	A substance that has the potential to harm people's health. The substance can be solid, liquid or gas, and when used in the workplace, is often in the form of fumes, dusts, mists and vapours.
Health and safety representative (HSR)	A member of a designated work group elected to represent employees on matters relating to occupational health and safety.
Health monitoring	Monitoring of an individual's health to identify changes in their physical wellbeing following exposure to a hazardous substance, including biological monitoring, but not including the monitoring of atmospheric contaminants.
Manual handling	Any activity requiring the use of force exerted by a person to lift, push, pull, carry or otherwise move, hold or restrain any object.
Plant	Any machinery, equipment, appliance, implement or tool; any component of any of these things; anything fitted, connected or related to any of these things.
Reasonably practicable	See section 20(2) of the OHS Act and the WorkSafe Position on <i>How WorkSafe applies the law in relation to reasonably practicable</i> .

# In this series

## Hazards

- Your health and safety guide to asbestos
- Your health and safety guide to confined spaces
- Your health and safety guide to dangerous goods
- Your health and safety guide to falls prevention
- Your health and safety guide to hazardous substances
- Your health and safety guide to lead
- Your health and safety guide to manual handling
- Your health and safety guide to noise
- Your health and safety guide to plant

## Industries

- Your health and safety guide to construction
- Your health and safety guide to forestry
- Your health and safety guide to foundries
- Your health and safety guide to major hazard facilities
- Your health and safety guide to mines
- Your health and safety guide to quarries

## Subjects

- Your health and safety guide to communicating across languages
- Your health and safety guide to consultation
- Your health and safety guide to controlling OHS hazards and risks
- Your health and safety guide to licensing and registrations
- Your health and safety guide to workplace amenities and first aid
- Your health and safety guide to managing young workers

Visit [www.worksafe.vic.gov.au](http://www.worksafe.vic.gov.au) for online guidance on all of these topics and more.

## WorkSafe Victoria

### WorkSafe Agents

Agent contact details are all available at [worksafe.vic.gov.au/agents](https://worksafe.vic.gov.au/agents)

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For information about WorkSafe in your own language, call our Talking your Language service

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