



The Health + Safety Company



RISK MANAGER
CONSULTING
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TALENTBANK
SAFEWORX

A photograph of two workers, a man and a woman, wearing white hard hats and high-visibility yellow and blue safety jackets. They are looking towards the right, with the woman pointing upwards. The background is a blurred industrial setting.

WORKPLACE RISK ASSESSMENT

UNIT STANDARD 30265

+IMPAC The Health + Safety Company



**We're IMPAC – the Health + Safety Company,
proudly New Zealand owned and operated since 1999.**

As NZ's leading full-service H+S solutions provider, we have unrivalled experience and expertise at getting the best possible H+S outcomes for our clients. We work alongside them to become true partners, to fully diagnose their needs and deliver solutions to keep their teams safe.

We partner



We diagnose



We deliver



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TIPS

This handout is designed to go with an IMPAC training experience. You will need to refer to it during the training. It is yours to take away and also makes a great reference guide back in the workplace.

Please feel free to add your own notes to this handout.

As you go through this handout with your trainer use a  highlighter or underline important words as you are reading. This will make it easier to find key information later.

Use a different colour to highlight or underline words you do not understand or are unsure about, this will make it easier to find them later so that you can ask someone, or look them up.



IMPAC POLICIES

The following IMPAC's policies and process are available in IMPAC's Learner Handbook

- + Complaints process
- + NZQA Assessment process
- + Appeals process

The IMPAC Learner Handbook is available to download on IMPAC's website, Learning Management System and can be emailed on request.



WORKPLACE RISK ASSESSMENT

This course will give practical knowledge and skills to help better identify hazards and assess, control, monitor, and review risks.

This course provides the training required towards the achievement of:

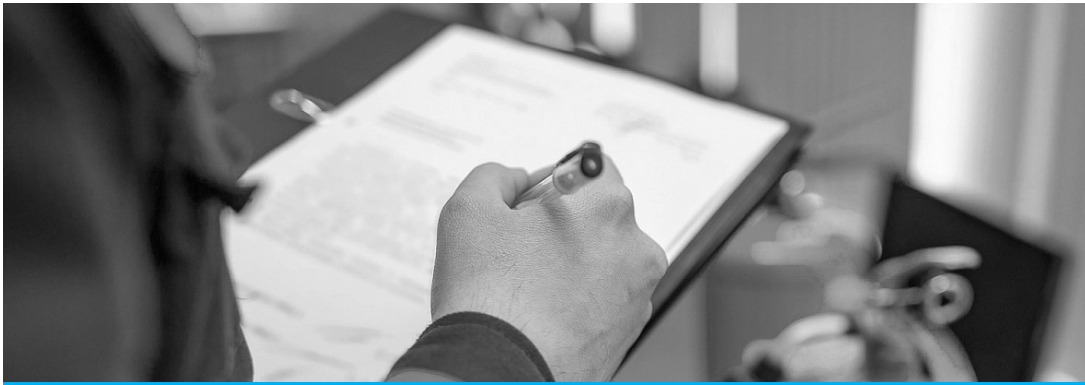
- + **NZQA Unit Standard 30265** — Apply health and safety risk assessment to a job role.

As an NZQA candidate, you are expected to:

- + Participate fully in the training session, discussions and activities
- + Share your knowledge and experience
- + Complete all assessment activities as notified by your trainer
- + Take responsibility for your own learning needs
- + Discuss with your trainer any assistance you may need.

If you are being disruptive, your trainer will advise you that your behaviour is disrupting learning for other trainees.

If the behaviour continues to disrupt or disturb others, your trainer will ask you to leave the course, and your employer will be notified immediately.



RISK ASSESSMENT PRINCIPLES AND PROCESS

What you need to know:

- + The principles of risk assessment
- + The five stages and the on-going processes involved in effective risk management.

THE PRINCIPLES OF RISK ASSESSMENT

Workplace health and safety risk assessment is the core of a health and safety management system. Effective risk assessment must be built on the following five principles:



IDENTIFY

A risk assessment should always start with identifying the context or situation, where we are, who is involved, what we are doing, how and why. It must also identify the hazards - the potential sources of harm, as well as who could be harmed and how.



ASSESS

There should always be an assessment of the potential severity of harm, and likelihood of that harm. This allows the focus to be on the biggest or most important risks. Risk assessment must also assess whether existing risk controls are adequate or whether more can or should be done.



CONTROL

Risk assessment must always show how the risk could be eliminated, or minimised so that harm is less likely and/or the consequences are less severe.



MONITOR

Things are always changing, so risk assessment must set out how the hazards and risks, the risk controls, and the effects of being exposed to risks will be monitored so that risk remains under control.

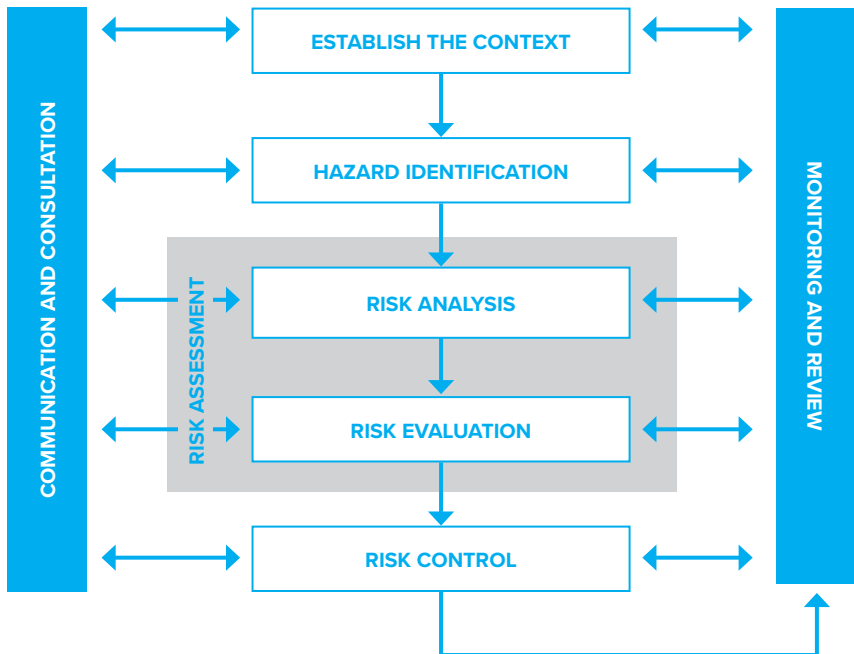


REVIEW

Risk assessment must always define who will check the risk assessment to make sure it is appropriate and effective, and what situations will trigger a review.






RISK MANAGEMENT PROCESS

Risk management is just a way of thinking carefully about something so that we have the best chance at success. Risk assessments can be done in many different ways but the main aim of risk management is to try to understand what we know and don't know about a situation, and work out what resources are needed to get the job done well.





The risk management process has **five key stages** and **on-going activities**. At each stage there are some important questions to answer:

- 1**  **Establish the context:** What is happening, who is involved, when is it happening, where, why and how is it being done?
- 2**  **Identify the hazards:** What are the situations or things that have the potential for harm?
- 3**  **Analyse the risk:** What is most likely to cause the most harm? What are the most important things to prioritise for attention?
- 4**  **Evaluate the risk:** Is the current state OK or can/should we do more to control the risk?
- 5**  **Control the risk:** What is needed to control the risk, and recover without serious consequences if something goes wrong?

ON-GOING ACTIVITIES THAT SUPPORT RISK ASSESSMENT:

COMMUNICATING AND CONSULTING

Communication is about sharing information and building knowledge.

Communication is important for health and safety for:

- + Making sure that the people exposed to risks to their health and safety know about and understand the risks
- + Making sure the risk control standards are clear and understood by those responsible for implementing them.



Consultation is about seeking the thoughts and opinions of others about something that may affect them. Consultation is important for health and safety to:

- + Get information about hazards, risks and the workplace
- + Get a view on whether improvement ideas are workable.

Communicating and consulting is important because workers know best about how work is done and without their input the risk assessment probably won't be useful and practical. People involved in the work and exposed to the risk also need to be kept in the loop with decisions about changes to their work and the resources they have available.

MONITORING AND REVIEWING

We monitor the controls and risks to ensure they continue to work as expected and are effective.

We review the risk assessment to make sure it is still accurate, relevant, and up-to-date.



IDENTIFYING HAZARDS

What you need to know:

- + The definitions for key terms including hazard, harm and risk
- + Why it's important to establish the work context when identifying hazards
- + A range of different tools for identifying hazards, and how they can be used.



KEY TERMS

To communicate clearly about workplace health and safety risks, we need to share a common understanding of key terms, ideas and concepts. We need to use the 'language of risk'.



HAZARDS

Hazards are situations or things that have the potential to cause harm to people, the environment or business. Hazards at work may include many things e.g. noisy machinery; a moving forklift; a toxic chemical; electricity; gravity; radiation; a repetitive job; an angry and abusive person, or an infectious disease.



HARM

Harm refers to the potential negative consequences or adverse effects that may result from a particular risk materialising. Useful words to use when talking about harm are:

- + **Acute** = harm that happens immediately
- + **Chronic** = harm that happens gradually
- + **Catastrophic** = harm (either acute or chronic) that results in death or permanent disability



EXAMPLE

A manager identified that the heavy traffic next to the work site could cause acute harm (injuries from being run over) and chronic harm (long-term illness from breathing the exhaust fumes).



EVENT

An event is where the situation or thing gets out of control and people or other things are exposed to harm.



RISK

Workplace health and safety risk is the possibility that harm might occur when exposed to a hazard. When talking about risk it's useful to describe a specific event in mind where a person, environment or business can be exposed to a hazard, potentially resulting in harm. To prioritise risks or choose between options, the level of risk can be estimated by analysing two things; the severity of consequence(s) and the likelihood of the consequences occurring.



RISK FACTORS

A risk factor is something that affects the likelihood of harm, and/or the severity of consequences. Examples can be distraction, fatigue, bad weather, poor visibility, inappropriate equipment, time pressure, lack of information, and how much energy (speed, mass, height and so on).



RISK CONTROLS

Risk controls are the resources put in place to manage a risk. They can be many things. For example: physical barriers, technology, work methods, information, and protective equipment and clothing.



ESTABLISHING THE CONTEXT

Hazard and risk management starts with an understanding of the work context. Hazards don't exist by themselves. The risks change depending on where the hazard is, what is happening and who is around. To understand the work context, you need to:

HAVE ACCESS TO INFORMATION FROM THE WORKPLACE

- + The work environment itself, and the job or task being done
- + Relevant policies, procedures, plans, rules and requirements
- + Relevant incident, injury and ill-health records.

HAVE ACCESS TO INFORMATION FROM OUTSIDE OF THE WORKPLACE

- + Regulations, Codes of Practice, Industry Guidelines
- + Information from designers, manufacturers and suppliers
- + Work plans, procedures and requirements from other PCBUs where there is cross-over work (e.g. sub-contractors, clients, landlords, local government).

TALK TO PEOPLE

- + Workers, supervisors and managers who have knowledge and experience of the workplace and the work being done
- + People with specialist or technical knowledge, such as H&S practitioners, occupational hygienists, engineers, maintenance personnel and others.



A TOOL FOR ESTABLISHING CONTEXT: 5W1H

W

Where are we working? (Physical location)

W

When are we working? (Time of day, time of year, season)

W

What are we doing? (Task steps or plan)

W

Why are we doing the work? (Normal work, part of a process, work for a client, an emergency situation, fixing a problem, etc.)

W

Who is involved? Who might be affected? (Our team, other PCBU's we are working with, people nearby, members of the public)

H

How are we doing the work? (Tools, equipment, methods)

**EXAMPLE**

The work site is outside a school, on a busy street. The job is planned for 7am till 12 noon. We will be excavating to find a gas leak in a pipeline. It's an emergency call-out and this is normal work for us. There will be us and two other sub-contractors working at the same time, one of which we've never worked with before. Other organisations involved are the City Council, NZTA, the school, and the dairy across the street. People who are not working on the job but may be affected are students and their carers, school staff, the dairy owner, and drivers on the road. We will use a hydro-excavator to locate the leak and various hand tools to do the repair.



TOOLS FOR IDENTIFYING HAZARDS

There are many different ways of identifying hazards. The methods used and the detail needed will depend on the scope, complexity and nature of the hazards and the workplace. For example, hazard identification for a large chemical manufacturing plant will be more in-depth than hazard identification for a small steel fabrication company.

Whatever the situation, hazard identification must be:

- + Systematic
- + Comprehensive
- + Appropriate to the situation.

Useful methods for hazard identification include:







- + Hazard categories
- + Area Analysis
- + Task Analysis
- + Process Analysis
- + Data Analysis
- + Official Publications
- + Expert Advice
- + Incident Investigation.



HAZARD CATEGORIES

Using hazard categories when identifying hazards has a number of clear benefits:

- + **Thorough** - it prompts you to think about a wide range of potential hazard types, some of which may not be immediately obvious in a work environment
- + **Consistent** - it can improve the quality of hazard identification, even when different people are involved
- + **Systematic** - it provides a concise and focused process to follow, which can be audited, and guards against a 'scattergun' approach to identifying hazards.

	Mechanical / stored energy – Vehicles, machinery, electricity, pressure, heat, height
	Chemical – Irritant, corrosive, toxic or carcinogenic substances
	Environmental – Light, noise, dust, extremes of temperature, radiation
	Biological – Bacteria, viruses, fungi, insects, mammals, fish, birds
	Ergonomic – Interface between human and the task; manual handling, repetitive movements
	Psychosocial – Bullying, harassment, violence and deadlines



MECHANICAL / STORED ENERGY

WORK EQUIPMENT HAZARDS

Work equipment includes any machinery, appliance, apparatus, tool or installation used at work.

WORK EQUIPMENT	EXAMPLES
Hand tools	Hammers, knives, handsaws, meat cleavers, stapler.
Power tools	Drills, sanders, jig saws, powered screwdrivers.
Machinery	Single machines, eg power presses, circular saws, photocopiers, dumper trucks, paper shredder.
	Several machines connected together, eg a food production line.
Apparatus	Laboratory apparatus such as Bunsen Burners.
Lifting equipment	Hoists, fork-lift trucks, Elevating Work Platforms (EWP), lifting slings.
Office equipment	Computers, printers, shredders, scanners, mobile phones.
Other	Ladders, pressure water cleaners, steam cleaner, water blaster.

Work equipment can be a source of harm when:

- + It is not suitable for the job, the working conditions or the operator
- + It has or produces inherent dangerous features— eg blades, moving parts, electricity, heat, hazardous substances, flying particles etc.



- + It is not maintained in good working order, inspected or examined
- + Information, training and supervision is not provided
- + It is operated in dangerous conditions—eg confined space, flammable atmosphere, low lighting, too hot/cold etc.

MECHANICAL HANDLING

Mechanical handling vehicles and equipment is used extensively in organisations, from supermarkets to quarries. They commonly include:

- 1 Conveyors
- 2 Cranes
- 3 Hoists
- 4 Fork lift trucks
- 5 Road haulage trucks.

These can cause injuries such as crushing, trapping, fractures and even fatalities, as well as damage to buildings and property. They occur when handling equipment fails because of problems with design, use, lack of maintenance or poor task planning.

WORK PROCESSES/TASKS

A process is a series of stages needed to convert raw materials into products. Many processes in the workplace may give rise to sources of harm. Most processes use energy sources (temperature, pressure, radiation, electricity) or equipment to 'process' a product. The possibility exists for fires, explosions, radiation, releases of flammable or toxic liquids, vapours, gases or dusts, or contact with dangerous moving parts.



CHEMICAL

HAZARDOUS SUBSTANCES

Various chemical substances can attack the body and its organs in different ways, causing both acute and chronic ill-health effects.

Some examples are:

- + **Carbon monoxide** - attacks the cardiovascular and respiratory system by blocking the uptake of oxygen into the blood in the lungs
- + **Heavy metals such as lead and mercury** - damage the nervous system
- + **Hydrochloric acid** - attacks the layers of the skin by removing fatty acids and reacting exothermically with the water in the skin
- + **Chlorine** - if inhaled can cause severe irritation of the lungs.



ENVIRONMENTAL

RADIATION

Radiation comes in many forms. Light from the sun is the most common source of radiation, but other heat and light sources such as welding arcs and furnaces also give off radiation. Less common but potentially more dangerous are radioactive substances such as radon gas and uranium. Radiation can cause skin burns, eye damage, and damage to cells resulting in cancer.

WORKPLACE CONDITIONS

Conditions in the workplace can be a source of harm. There are several key areas which can give rise to hazards.

- + **Welfare facilities** (toilets, washing, eating and changing facilities, clothing storage, seating, and rest areas) are a basic need for general physical and mental health and wellbeing.
- + **Environmental conditions** (temperature, ventilation, lighting including emergency lighting, room dimensions suitability of workstations and seating; and exposure to dust and outdoor weather conditions) can have an impact on physical and mental health.
- + **General design and condition of the workplace** (windows, doors, gates, escalators, stairs, obstructions and slipping and tripping hazards, falls from heights, dangerous substances storage, falling objects) can give rise to many sources of harm.
- + **Housekeeping** (maintenance of workplace, equipment and facilities, cleanliness, removal of waste materials) can cause slip and trips, electrical hazards, dusty air, etc.



BIOLOGICAL

BIOLOGICAL ORGANISMS

These are biological organisms and include bacteria, fungi/mold, and viruses. They are often present in the natural environment, in contaminated water, and in other animals (including humans).

Some examples are:

- + **Mold spores** - cause inflammation and damage inside the lungs
- + **Hepatitis virus** - damages the liver
- + **Leptospirosis** - caused by bacteria which attack the kidneys
- + **Legionella** - disease caused by bacteria which attack the lungs.



ERGONOMIC

MANUAL HANDLING

'Transporting or supporting of loads by hand or bodily force'. This includes lifting, lowering, pulling, pushing and carrying of:

- + Inanimate objects, eg bags, parcels, boxes
- + Live objects, eg people, animals.

Manual handling can be a source of several types of harm. Manual handling injuries can be classified as follows:

- + **External injuries:** Cuts, bruises, abrasions and crush injuries to fingers, hands, forearms, ankles and feet.
- + **Internal injuries:** Muscle and ligament strains and tears, hernias, knee, ankle and shoulder injuries.
- + **Cumulative chronic conditions:** Slipped disc (prolapsed inter-vertebral disc), tenosynovitis (inflammation of the tendon sheath).



PSYCHOSOCIAL

PSYCHO-SOCIAL HAZARDS

When referring to work, psychosocial hazards refer to the design and management of work and its social organisational context that may have the potential for causing mental or physical harm.¹

Examples of psycho-social hazard are:

- + Bullying
- + Harassment
- + Violence
- + Deadlines.

Example of health outcomes from psycho-social hazards are:

- + Stress
- + Depression
- + Anxiety
- + Sleep disorder
- + Suicidal ideation.

¹ WorkSafe New Zealand



AREA ANALYSIS

An area analysis is a walk through each of the different areas or 'work environments' in your workplace. It is useful to have a checklist or inspection form to do this so you are prompted on what to look for. You can write down lists of identified hazards, or record the hazards directly onto a plan of the site and/or buildings.

In many workplaces the most common hazards and risks are well known. These 'generic' hazards are very important to identify and manage. They are likely to be classed as 'foreseeable' by any court of law, should they cause harm.

Checklists will also ensure that hazard identification exercises and inspections are comprehensive, consistent and repeatable. They give formal structure to the area analysis and guide the people involved to look for issues that may not be immediately obvious.

SUGGESTED APPROACH:

- 1 Locate up-to-date plans of the workplace
- 2 Find someone who has a good working knowledge of the workplace and what happens there
- 3 Divide into areas and go to each with a checklist
- 4 List potential hazards in each area using the hazard categories
- 5 Consider both acute and chronic effects
- 6 Consider not only safety impacts (injuries) but also health effects (illness)
- 7 Take into account not only physical but also psychological harm.



TASK ANALYSIS

Task analysis can be used to make improvements in reliability, efficiency, health and safety. To use task analysis effectively to identify hazards, you will need to:

- 1 Identify and separate individual tasks—it can become complicated if you try to analyse more than one task at once
- 2 Make sure the aim of the task analysis is clear to all (improve safety, efficiency, reliability, to develop a procedure, etc.)
- 3 Collect detailed information about the task (what is involved including all equipment, materials and substances) by talking to the workers themselves, through observation, from training manuals, and existing procedures, operating instructions, etc.
- 4 Break the task down into steps (between 7 and 10 is ideal); describe and record each step needed to achieve the task goal
- 5 Carefully analyse each step for exposure to hazards.

Be careful to only include steps needed to achieve the goal of the task, and not precautions or controls. Add these only after all hazards are identified. For example, task steps for making a cup of tea:

- | | |
|---|-------------------------------|
| 1 Put water in the kettle | 5 Pour boiling water into cup |
| 2 Boil the water | 6 Leave to steep/mash |
| 3 Put tea bag in cup | 7 Remove tea bag |
| 4 Be careful not to burn yourself with the hot water | 8 Add milk if desired. |

Step 4 is not a task step, it is a risk control measure - a precaution.



PROCESS ANALYSIS

There are a number of different tools that can be used to analyse processes, such as fault trees, event trees, Failure Modes and Effects Analysis (FMEA), or hazard and operability studies (HAZOP). These tools can be quite complex and are often done by a team of specialists.



DATA ANALYSIS

Data collected by your reporting system should include hazards, incidents, near misses, ill-health, self-reported discomfort and more. This can be a rich source of information and insight with the right analysis.

Some other examples of documents that may help identify hazards are:

- + Incident investigation reports
- + Minutes of meetings where production challenges are discussed
- + Permit-to-Work documents which may show problems or delays with work because of hazards
- + Quality control records which may show product damage
- + Maintenance records which may show frequent breakdowns and damage to plant and buildings.



OFFICIAL PUBLICATIONS, CODES OF PRACTICE

Many of the hazards in your organisation will be very similar to the hazards in countless similar companies across the country, and internationally. A very important way of identifying hazards in your workplace is to check published codes of practice, industry guidelines and standards. Examples of these include:

Regulations	<ul style="list-style-type: none"> + Health and Safety at Work (General Risk and Workplace Management) Regulations 2016 + Health and Safety at Work (Hazardous Substances) Regulations 2017
Approved Codes of Practices (ACOP)	<ul style="list-style-type: none"> + Codes of Practice for Manual Handling + ACOP: Load Lifting Rigging + ACOP: Photoengraving and Lithographic Process
Safe Work Instruments	<ul style="list-style-type: none"> + Health and Safety at Work (Hazardous Substances - Specifications of Design Standards for Refillable Cylinders) Safe Work Instrument 2018 + Specifications of standard relating to non-refillable gas containers
Good Practice Guides	<ul style="list-style-type: none"> + Preventing and responding to bullying at work + Mobile Elevating Work Platforms
Standards	<ul style="list-style-type: none"> + ISO 31000:2018: Risk Management Guidelines + AS/NZS ISO 45003: 2021 - Occupational health and safety management — Psychological health and safety at work — Guidelines for managing psychosocial risks



EXPERT ADVICE

In many cases, people with lots of knowledge and experience in a particular field will have an in-depth understanding of the hazards and risks involved and how best to manage them.

Examples of people who can provide expert advice include:

- + External specialists - e.g. Occupational Hygienists, Engineers etc.
- + Trades - e.g. Electricians, Plumbers, Welder etc.
- + Workers



INCIDENT INVESTIGATION

Investigations can be used to identify hazards. The fact that an incident has occurred indicates that either:

- + There is a hazard and risks that haven't been identified and controlled
- + A control measure is not working as it should.



ASSESSING RISKS

What you need to know:

- + How to analyse risk including taking into account the context and a range of factors affecting likelihood and consequences
- + Using the risk matrix as a tool for comparison and prioritisation
- + Risk evaluation and the concept of 'reasonably practicable'
- + The concept of initial and residual risk
- + How to identify critical risks and why this is important
- + The role of risk perception and bias.



COMMON SENSE AND RISK

Common sense can be seen as a collection of past experiences which allows good sense and sound judgement in practical matters. However common sense is very subjective, and is only common when people communicate well and build a shared understanding.



QUOTE

“Relying on ‘common sense’ is not an adequate approach to ensuring workplace safety”

Judge McIlraith

WorkSafe New Zealand Ltd vs Salters Cartage Ltd

It is important that trivial risks are not blown up out of proportion by the risk assessment process. But it’s equally important not to downplay a very significant risk with the excuse that it is highly unlikely to turn into a reality because it has “never happened to us”.

PRIORITISING FOR ACTION

Estimating the level of risk can be helpful when action and resources have to be prioritised. Organisations can compare risks using the same set of criteria to show their reasonable decision-making process.



RISK DESCRIPTION

It can be tricky to accurately describe a risk. Risk descriptions are a useful way of making sense of how a hazard may cause harm in a specific context. It is also a great way to communicate the idea of risk, from a board meeting to a toolbox talk and everything in-between.

Examples of when you would use a risk description include:

- + Throughout the risk assessment process
- + When you need to communicate about risks to others
- + When you need to accurately define a risk.

The risk description should include:

- + What is the hazard?
- + How is the hazard going to cause harm?
- + Who could be affected?
- + What types of harm (consequences)?

Example formats for the risk descriptions include:

- + “There is a risk of (a **target**) (a **loss of control event**) (a **hazard**) (**consequences**)”
- + “There is a risk of (a **hazard**) (a **loss of control event**) (**consequences**) (a **target**)”



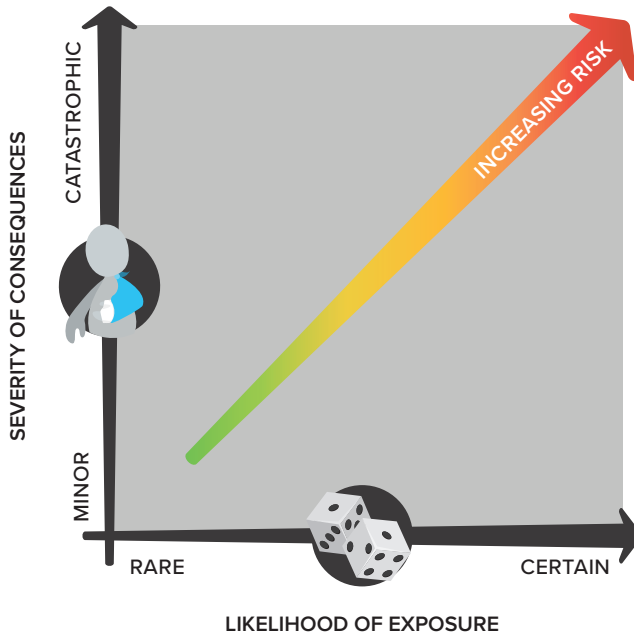
There is a risk of a **car skidding off the road**, **killing or seriously injuring** a **person**.



ANALYSING THE LEVEL OF RISK

The **level of risk** can be estimated by analysing two things:

- 1 The **severity of consequence(s)**
- 2 The **likelihood** of the consequences occurring.



EXAMPLE

The team analysed the level of risk of being hit by a vehicle as high, based on the fact that the traffic is moving fast, and the job involves crossing the road every few minutes. By comparison, the risk of being hit by the excavator was not as high, because it would only be on site for a few hours. Both vehicles and excavators can cause fatal injuries, but the team judged the level of risk from vehicles as higher in this case.



LIKELIHOOD OF CONSEQUENCES

Likelihood means the chances of harm occurring. There are many ways to do this, from complex 'quantitative' methods using calculations and data, to more 'qualitative' methods, based more on personal judgement.

Here are some examples of things to take into account when estimating likelihood of harm:

- + **Exposure** - the more interactions with a hazard, for longer periods of time, and involving greater numbers of people, the more opportunities there will be for harm.
- + **Advice** from people who are experienced and knowledgeable.
- + **Publications**, guides and statistics to give 'the bigger picture'.
- + **Data** from reporting of injuries, illness, near misses, maintenance requests, environmental incidents, damage reports and so on.

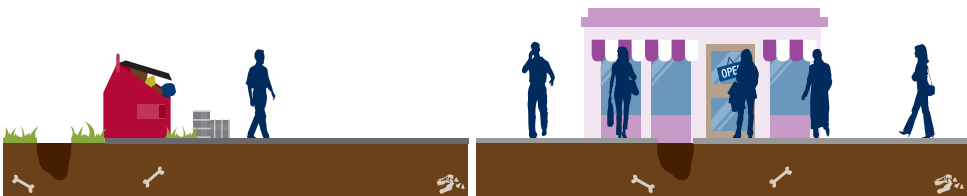


EXAMPLE

Think of the same size hole, but in two different locations:

- 1 Out the back of a vacant plot where few people ever go
- 2 In the middle of a busy street where lots of people walk often.

There is a greater likelihood of harm when the hole is in the middle of a busy street.





SEVERITY OF CONSEQUENCES

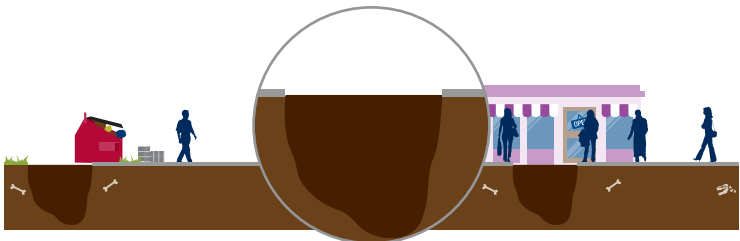
When estimating the potential severity of consequences, take into account:

- + **Energy or force:** Hazards which are bigger, heavier, higher, deeper, sharper, faster, more concentrated, hotter and so on are usually able to cause more severe harm, such as death or permanent disability.
- + **Numbers of people affected:** Consequences are worse when many people are likely to be harmed.
- + **Frequency of exposure:** Frequent exposure to some hazards can have cumulative effects which are more severe than each individual exposure.
- + **Duration of exposure:** Some hazards (eg chemicals, dust, noise) cause more harm the longer a person is exposed.
- + **Personal vulnerability:** Certain individuals or groups are more vulnerable to certain hazards—ie the effects have been shown to be worse, or the threshold where harm occurs is lower.



EXAMPLE

Regardless of where it is, a very deep hole has a greater potential (gravity) to cause more severe injuries if someone falls into it.





THE RISK MATRIX—A RISK ANALYSIS TOOL

A risk assessment matrix is one way of analysing the level of risk so different risks can be compared and prioritised. The risk matrix is a qualitative tool and is only as valuable as the quality of discussion and input of experience, expertise and judgement involved in using it. This is IMPAC’s version.

		LIKELIHOOD				
		1 Highly Unlikely	2 Unlikely	3 Possible	4 Likely	5 Almost Certain
CONSEQUENCE SEVERITY	5 Major	5	10	15	20	25
	4 Significant	4	8	12	16	20
	3 Moderate	3	6	9	12	15
	2 Minor	2	4	6	8	10
	1 Insignificant	1	2	3	4	5



KEY POINT

In IMPAC’s view consequences cannot be reduced in the same circumstances/risk via controls other than elimination (or substitution).

Changing the circumstance/situation might change the subsequent consequences but not in a like for like situation.



NATURE AND SEVERITY OF CONSEQUENCES

LEVEL	H&S	FINANCIAL	REPUTATION	ENVIRONMENT
Insignificant	Discomfort	< \$1,000	Negligible	Limited
Minor	Medical treatment	< \$10,000	Minimal	Minor
Moderate	Lost time	< \$100,000	Limited	Moderate
Significant	Debilitating	< \$1 million	Significant	Serious
Major	Fatality	> \$1 million	Un-recoverable	Very serious

LIKELIHOOD OF CONSEQUENCES

LEVEL	DESCRIPTION
Highly Unlikely	May occur only in exceptional circumstances, chances less than 0.1% per year.
Unlikely	May occur in the industry, local chances more than 0.1% but less than 1% per year.
Possible	Has occurred in the industry, local chances more than 1% but less than 10% per year.
Likely	Has occurred locally, chances more than 10% but less than 50% per year.
Almost Certain	Known issue, is expected to occur more than 50% of the time.



RISK EVALUATION

This means making a judgement about whether the level of risk is OK or not OK, why, and what must happen next. The risk analysis helps us to make this judgement, and also to prioritise risks for action.

LEVEL OF RISK WHAT IT MEANS

E (Extreme risk)	Stop activity or process immediately, and don't continue until the risk has been reduced.
H (High risk)	Manage risk immediately.
M (Medium risk)	Action required but not immediate.
L (Low risk)	Manage through continuous improvement.



SO FAR AS IS REASONABLY PRACTICABLE

The HSW Act 2015 requires that risks to health and safety are:

- + **Eliminated**, so far as is reasonably practicable; and
- + If it is not reasonably practicable to eliminate risks to health and safety, to **minimise** those risks so far as is reasonably practicable.

Under the Act, 'so far as is reasonably practicable' means action which is, or was, at a particular time, reasonably able to be done in relation to ensuring health and safety, taking into account and weighing up all relevant matters, including:

- 1 Likelihood of the risk occurring
- 2 Degree of harm that might result
- 3 Knowledge about the hazard or risk, and risk control measures
- 4 Availability and suitability of risk control measures
- 5 Cost of risk control measures, including whether the cost is grossly disproportionate to the risk.

If something is possible to do, but the time, cost, effort and trouble to do it is a lot more (a gross disproportion) than the benefits to be gained, then it is probably not 'reasonably practicable' to do it, and so not legally required.



KEY POINT

To test 'SFAIRP' the Court of Law will ask in hindsight - "Could more have been done to control the risk?" The Court will compare actions taken against best practice and the current state of knowledge. Furthermore, SFAIRP in NZ includes governance practices in relation to health and safety risks.



INITIAL AND RESIDUAL LEVEL OF RISK

As discussed earlier, it is useful to think of 'risk' as a description of something that might happen. When we talk about 'level of risk', we are trying to put a number or value on the 'amount of risk'.

Initial level of risk is:

- + Sometimes seen as 'raw' risk, not taking into account any control measures.

OR

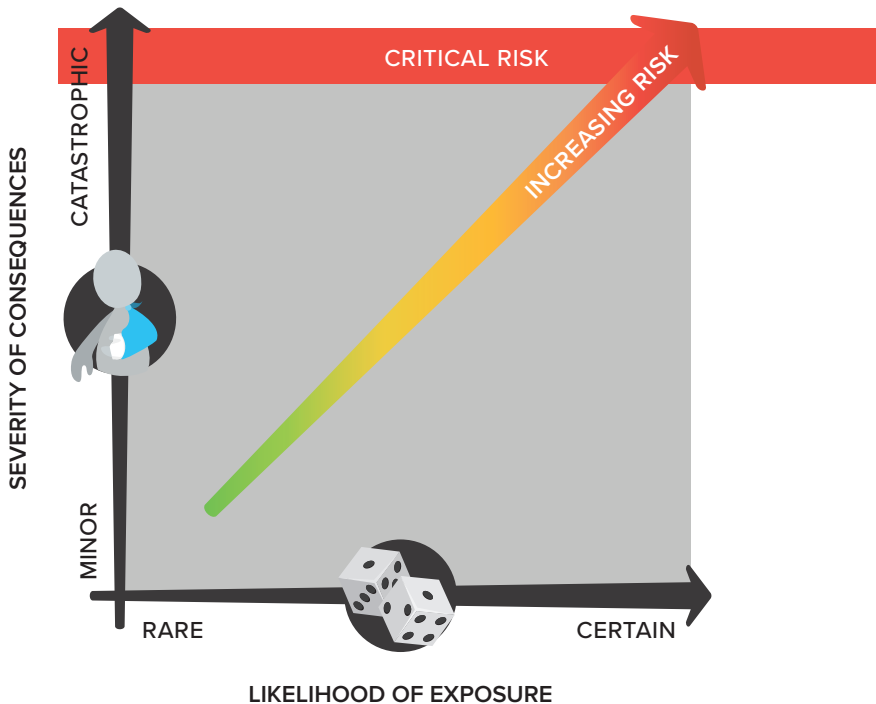
- + In most cases is best seen as 'risk as things are right now' - at the start of the risk assessment activity.

Residual level of risk refers to the expected level of risk once the planned risk control measures have been properly implemented.



CRITICAL RISK

A critical risk is any risk of catastrophic harm. Catastrophic harm means death(s) or permanently disabling injury or illness. Regardless of the likelihood of harm, these hazards should be taken very seriously. The risk controls required should be evaluated and planned in a more detailed way, for example using Bow Tie diagrams.



KEY POINT

Critical Risks: An organisation must always do everything it can to control risks where the consequences are catastrophic. Always ask the question “What have we done so far, and can we do more to eliminate or minimise the risk?”



RISK PERCEPTION AND BIAS



QUOTE

"We do not see reality; rather, we interpret what we see and call it reality"

Daniel Kahneman, *Thinking: Fast and Slow*

Perception is the process by which we select, organise and interpret stimuli from our senses into a meaningful and coherent picture of the world. But perception is subjective. Two people can see or hear the same thing and have very different perceptions. This is because perception is shaped by our life experiences, knowledge, memories, emotions and expectations.

There are two strong biases that are especially relevant to the way we perceive risk:

- + Optimism bias
- + Availability/recency bias.

OPTIMISM BIAS

This is the assumption that 'it will never happen to me'. It leads us to downplay risks that are well-known such as using a mobile phone while driving, because we believe that we have special abilities and bad things only happen to 'other people'.



AVAILABILITY/RECENCY BIAS

Something easily called to mind or in our recent memory will loom large. People who have never seen XYZ will downplay the risk. People recently affected by XYZ will overestimate the risk.

HINDSIGHT BIAS

Hindsight bias is the tendency to see things that have already happened as much more foreseeable than they were before they happened. It is a psychological phenomenon that allows people to convince themselves after an event that they could have accurately predicted it before it happened. This can lead people to conclude that they can accurately predict other events.

The dangers of hindsight bias for risk assessment are that it can:

- + Create overconfidence
- + Lead to blame
- + Stifle learning and improvement.



KEY POINT

Our perceptions of risk (what is dangerous and uncertain, or safe and secure) are strongly influenced by our past experiences and the conclusions we have made from them about how the world is. These conclusions become assumptions or 'biases' and can lead to people having very different views of the same thing.



CONTROLLING RISKS

What you need to know:

- + How to apply the hierarchy of control to build a risk control plan
- + The importance of recovery and emergency response to risk control plans
- + The concept of defence in depth and how to use it to test your risk control plans.



RISK CONTROLS

Organisations should use the most effective risk controls that are reasonably practicable in the circumstances. Risk controls should either get rid of the risk or reduce it to a level where everyone is comfortable, including the regulator (WorkSafe New Zealand).

Risk controls can:

- + **Prevent** hazards from causing harm, limit severity of consequences and help **recovery** if harm does occur
- + Provide **collective** protection (eg nets on scaffolding protects everyone from falling objects) or **individual** protection (eg a hard hat only protects the wearer)
- + Provide **high reliability** (eg automatic safety devices such as a light curtain or RCD) or **low reliability** (eg a warning sign or rule to keep clear).

The concept of the hierarchy of control requires organisations to first consider risk control measures that are **preventative, provide collective protection** and are **most reliable**.



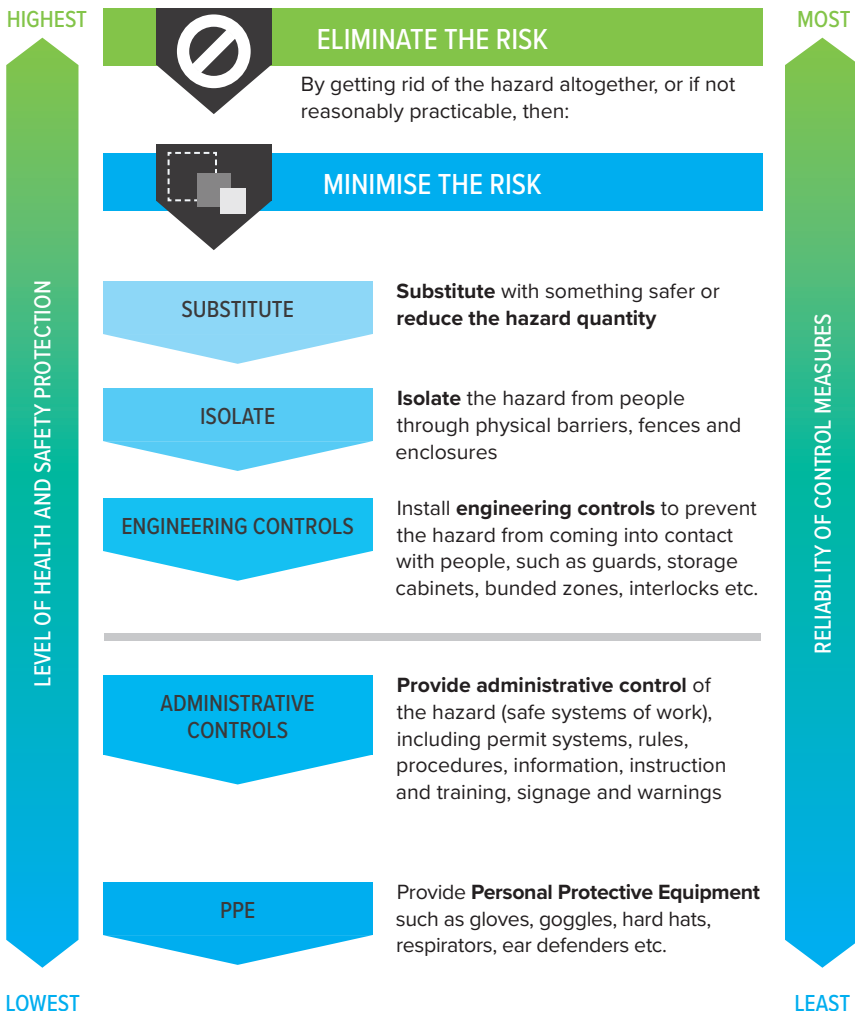
EXAMPLE

The team decided to use an impact barrier vehicle because it is a more reliable risk control. The usual cones, warning signs, speed limits are only reliable to a point - and the risk of a high speed collision on the motorway was high enough to justify the cost.



THE HIERARCHY OF CONTROL

The Health and Safety at Work (General Risk and Workplace Management) Regulations 2016 sets out a preferred order or hierarchy of risk control that duty holders must use.



It is important to look at the highest levels of control measures first. However, each method of hazard control has its advantages and disadvantages, and in practice, multiple methods are likely to be applied simultaneously to reduce risk.

ELIMINATE

The most effective control involves eliminating the risk. The best way to do this is by not introducing the hazard into the workplace in the first place. For example, you can eliminate the risk of a fall from height by doing the work at ground level.

Eliminating hazards is often cheaper and more practical to achieve at the design or planning stage of a product, process or place used for work. In these early phases, there is greater scope to design out hazards or incorporate risk control measures that are compatible with the original design and functional requirements. For example, a noisy machine could be designed and built to produce as little noise as possible, which is more effective than providing workers with personal hearing protectors.

You can also eliminate risks by removing the hazard completely, for example, by removing trip hazards on the floor or disposing of unwanted chemicals.

It may not be possible to eliminate a hazard if doing so means that you cannot make the end product or deliver the service. If you cannot eliminate the hazard, then eliminate as many of the risks associated with the hazard as possible.



MINIMISE

If it is not reasonably practicable to eliminate the hazards and associated risks, you should minimise the risks using one or more of the following approaches:



SUBSTITUTE

Substitute the hazard with something safer, or a smaller amount, so that less harm is possible if the hazard becomes uncontrolled.

For instance, replace solvent-based paints with water-based ones. Store 5 litres of fuel instead of 50 litres.



ISOLATE

This involves physically separating the hazard (source of harm) from people by distance or using barriers, fences and enclosures.

For instance, install guard rails around exposed edges and holes in floors; use remote control systems to operate machinery; store chemicals in a fume cabinet.



ENGINEERING CONTROLS

An engineering control is a control measure that is physical in nature, including a mechanical device or process.

For instance, use mechanical devices such as trolleys or hoists to move heavy loads; place guards around moving parts of machinery; install residual current devices (electrical safety switches); set work rates on a production line to reduce fatigue.



ADMINISTRATIVE CONTROLS

Administrative controls are work methods or procedures that are designed to minimise exposure to a hazard.

For instance, develop procedures on how to operate machinery safely, limit exposure time to a hazardous task, use signs to warn people of a hazard.



PERSONAL PROTECTIVE EQUIPMENT (PPE)

Examples of PPE include ear muffs, respirators, face masks, hard hats, gloves, aprons and protective eyewear. PPE limits exposure to the harmful effects of a hazard but only if workers wear and use the PPE correctly.

Administrative controls and PPE should only be used:

- + When there are no other practical control measures available (as a last resort)
- + As an interim measure until a more effective way of controlling the risk can be used
- + To supplement higher level control measures (as a back-up).



KEY POINT

Administrative controls and PPE do not control the hazard at the source. They rely on human behaviour and supervision, and used on their own, tend to be least effective in minimising risks.



RECOVERY/EMERGENCY RESPONSE

Despite our best attempts, there is a risk that controls may fail.

Emergency response aims to minimise the harmful effects of a hazard which has become uncontrolled.

Emergency response procedures are not a hazard control measure, but they are important to help reduce the severity of harm to people, the environment and the business.

Some examples of emergency response controls are:

- + Alarms eg Duress alarms, Fire alarms etc.
- + Call emergency services
- + Call on-site emergency response team
- + Fall protection
- + Fire extinguishers
- + Fog cannons
- + Physical and mental first aid
- + Psychological input from specialists
- + Safety Harness
- + Spill kits.

DEFENCE IN DEPTH

The concept of defence in depth originated in the Nuclear Power Industry. Put simply, it is a means to gain a high level of assurance that a critical risk will be managed effectively.

Defence in depth is achieved through:

- + **Redundancy:** Many layers of protection and control
- + **Diversity:** Many different varieties of protection
- + **Independence:** Layers of protection are able to work by themselves.

Although the defences are independent from each other, they are also integrated in that they have been designed, planned and put into practice in a purposeful way, including worker engagement and participation, and taking into account operational experience.





MONITORING AND REVIEW

What you need to know:

- + How to effectively monitor the inputs, processes and outputs of workplace health and safety risk assessment
- + The differences between proactive and reactive monitoring
- + The purpose of reviewing, and how and when to review a risk assessment.



MONITORING

Monitoring involves planned activities designed to get and regularly update information about hazards, risk controls, and the people who could be affected by the hazards.

Effective monitoring should be aimed at three areas of a work system:

- 1 Inputs:** Monitoring changes to hazards and the work context to ensure we identify new or different risks
- 2 Processes:** Monitoring and maintaining risk controls to make sure they are being implemented and are working as intended
- 3 Outputs:** Monitoring for the effects of hazards on people.



1

HAZARDS AND RISK FACTORS

How well are the hazards and risks understood? How well are changes anticipated? Are work plans appropriate?

2

RISK CONTROL MEASURES

Are the risk control resources suitable for the work and the team? Are they enough to control the risk? Are they implemented?

3

THE EFFECTS OR IMPACTS OF HAZARDS

How many and what types of injuries and illnesses, damage, near misses, and dangerous occurrences were experienced? Were work areas and teams safe and healthy?



PROACTIVE AND REACTIVE MONITORING

Measuring health and safety performance involves two types of monitoring:



Proactive monitoring involves checking the actions taken to manage risks. This includes monitoring hazards and risk factors, assessing risk controls, and evaluating the effectiveness of these controls.

Examples of proactive monitoring are:

CHECKING TRAINING AND COMPETENCE

Speak up when things feel unsafe, unhealthy, or when under-resourced.

PLANNED INSPECTIONS

To identify any new hazards, and to check that control methods are in place for existing hazards and meet the required standards.

PRE-EMPTIVE MAINTENANCE

Pre-emptive maintenance of plant and equipment to check, adjust, replace, sharpen, clean, lubricate etc. To find and fix problems before they cause safety or quality problems.

SUPERVISION

To check that behavioural control measures, training and instruction (eg following procedures, wearing PPE) are being followed.

TESTING

Testing engineering controls, warning alarms, sensors etc. to make sure they are working and to pick up faults as quickly as possible.



ENVIRONMENTAL MONITORING

Environmental monitoring like noise, air quality, chemical sampling etc. to monitor hazards and check that the control measures are actually keeping hazards at safe levels. Where hazards are minimised, the PCBU must measure worker exposure levels to certain hazards in the environment to make sure that the levels are safe.

For example, if there is noise in the work environment, the noise levels should be measured to help assess the significance of the hazard, and to make sure that levels do not exceed workplace exposure standards set by the government.

HEALTH/ BIOLOGICAL MONITORING

Health / biological monitoring like hearing tests, lung function tests and x-rays, blood/urine/saliva tests, and health questionnaires.

Health monitoring is needed where there is ongoing exposure to hazards which have been isolated or minimised. The idea is to diagnose the early signs of ill-health in workers caused by exposure to a hazard. Any problems can be investigated and fixed.

An example is the early signs of hearing damage — which may indicate that noise control measures are not working as they should.



Reactive monitoring relies on the PCBU waiting to be notified of a problem and then stepping in to take action. It is only a small part of an effective monitoring strategy.

Examples of reactive monitoring are:

**INVESTIGATE
REPORTED
INCIDENTS**

Investigate property damage, environmental harm, injuries and ill health, and near miss events to identify uncontrolled hazards, new risks, absent or failed risk controls, organisational factors and take action to make improvements.

**RESPOND TO
HAZARD AND
NEAR MISS
REPORTS**

Make changes so they don't cause further danger.

ANALYSE DATA

Incident and ill-health records can be used to spot any trends or incident hotspots (eg times, locations, people and tasks) which indicate problems with the hazard management system.



MONITORING CRITICAL RISKS

You can't afford to wait for something to go wrong with a critical risk - the consequences are too serious. So you must rely on proactive monitoring of the key risk controls.

It is important to understand:

- 1 What the critical risks are that threatens you and others in your workplace, and to remind others of them regularly
- 2 What the key control measures are for the critical risks and to make sure they are in place and effective.



EXAMPLE

Your team is working on the road side, excavating to lay new water mains. You know the critical hazards are underground and overhead services, public vehicles, and mobile plant. You only have one hour to check up on their progress, so you focus on the actions and engineered controls designed to minimise the risk of service strike, and pedestrian vs vehicle or plant incidents.



DUTY TO MAINTAIN EFFECTIVE CONTROL MEASURES

The Health and Safety at Work (General Risk and Workplace Management) Regulations 2016 regulation 7 requires the following:

A PCBU who implements a control measure to eliminate or minimise risks to health and safety must ensure that the control measure is effective, and is maintained so that it remains effective, including by ensuring that the control measure is and continues to be:

- + Fit for purpose
- + Suitable for the nature and duration of the work
- + Installed, set up, and used correctly.



DUTY TO MONITOR HEALTH AND EXPOSURE



The Health and Safety at Work (General Risk and Workplace Management) Regulations 2016 regulations 32-42 set out duties relating to monitoring exposure to health hazards. This includes:

- + Duties relating to exposure monitoring (health hazards in the work environment)
- + Duties relating to health monitoring, including:
 - Duty to inform worker of health monitoring
 - Duty to ensure appropriate health monitoring is provided
 - Duty to ensure health monitoring is supervised and pay costs
 - Information that must be provided to the occupational health practitioner
 - Duty to obtain health monitoring report, and give to worker
 - Duty to give health monitoring report to relevant PCBUs
 - Duty to give health monitoring report to regulator on request
 - Keeping health monitoring records.



REVIEW

Reviewing involves evaluation of performance data and discussion with key people to identify positives and areas for improvement. It recognises the importance of learning from all relevant experiences and applying what is learned for continual improvement.

Reviewing involves:

- + Evaluating progress towards objectives
- + Considering key performance indicators
- + Benchmarking against best practice, national and international statistics, and the performance of other similar organisations.

THE ROLE OF AUDITING

Auditing is the tool that is used to measure the entire health and safety management system to see how well it is performing at a particular point in time. Audits examine documentation such as permits to work, incident reports, minutes of meetings, the hazard register and policies. Audits then look at the workplace and interview workers and managers to see how well the management system is working at a practical level.



REVIEW TIMESCALES

A risk assessment or other work interventions designed to manage work health and safety risks should be reviewed after:



A designated time (high risk = shorter review period)



An incident



Any significant change to people, equipment, environment, procedures, and organisation.



APPENDICES

This section includes:

- + Appendix 1: Scenarios
- + Appendix 2: Legal Drivers



Worker
engagement
and
participation is
key to managing
workplace
health and
safety risks



APPENDIX 1: SCENARIOS

MANUKA ACCOUNTING AND ADMINISTRATION SERVICES (MAAS)

You have been asked to conduct a risk assessment of Manuka Accounting and Administration Services (MAAS). MAAS provides accounting and administrative support for multiple small companies and trusts around the country. Their official office hours are Monday to Friday 8:00am to 5:30pm.

The MAAS office is a modern open concept design with a partition separating the reception area from the main administrative area. The office has large windows which an external contractor cleans monthly using a scaffold. Staff have reported that near the aircon the temperature is freezing but other staff further away and near the windows reported being very hot. There is one printer in the main administrative area used by all staff members at MAAS. The printer is very noisy and frequently jams. Due to limited space in the main administrative area, staff are placing boxes of files they are working with in walkways and on desks.

There has been an increase in the last year of requests of early payment of invoices from their client's suppliers. Due to the agreements in place with their clients, early payment must go through a specific approval processes. MAAS staff have been receiving repetitive and at times abusive calls and emails from suppliers pressuring them to make the early payments. Adding to the tension is that some clients are blaming delays for payments on MAAS staff. The staff are reporting this to leadership but there is a culture of *“get over it and do whatever it takes to keep the client happy”*.

In the last 6 months there has been a high turnover of staff, and several staff members are away on stress leave. The remaining staff have been working longer hours and at times weekend to stay on top of their growing workload.



Staff often receive emails from leaderships and clients outside of work hours and for comments to be made about their generation not wanting to work. HR has offered to all staff EAP services and resiliency and wellbeing training.

There has been an increase in reports to HR and leadership of:

- + Conflict and bullying between staff, client suppliers, client and leadership
- + Staff being publicly blamed and berated by leadership for upset clients, mistakes and delays
- + Abuse from clients and their suppliers
- + Fatigue and stress of staff
- + Pain and discomfort from repetitive movements
- + The work environment temperature being too hot and too cold.





KŌWHAI WAREHOUSE AND DISTRIBUTION (KWD)

You have been asked to complete a risk assessment for a Kōwhai Warehouse and Distribution (KWD), they are a busy 24-hour warehouse and distribution centre located in an industrial estate. They supply multiple products to their retail stores and customers.

The warehouse, built in the 1970s, is outdated and not suited to the demands of the current market. KWD has a hiring freeze in place and is hesitant to purchase additional stock due to a significant financial loss the previous year from expired inventory.

Due to the low stock levels, and hiring freeze there is increased pressure on staff as prices rise and conflicts with suppliers grow. Staff are working long hours and extra shifts to meet demand. Some staff have nearly fallen asleep while driving home, though no serious incidents have occurred yet.

To make up for the financial loss, KWD have been accepting last-minute orders from large customers. The KWD staff are required to make space for the stock at short notice leading to a cluttered warehouse with narrow pathways, poor lighting, and uneven flooring. There is damage to the floor in the loading area and the only control is “you know where it is, just avoid it”.

Due to the rushed nature of operations, products are often not labelled well, stacked haphazardly on pallets and not properly wrapped, leading to frequent spillages, including unknown liquid substances. The warehouse stores products of varying weights, and forklift drivers frequently unload pallets from curtain sider trucks without knowing the weights due to a lack of weight labels. This has led to multiple incidents where forklifts have tipped forward. There is also no exclusion zone for trucks outside or within the warehouse, increasing the risk of accidents.



Additionally, administrative workers and sales representatives frequently enter the warehouse to pass on paperwork, and grab stock from the shelves increasing the risk of incidents in an already hazardous environment.

There has been an increase this year of reports of:

- + Fatigue and stress of staff
- + Slips, trips and falls injuries
- + Forklift incidents including tipping and near misses
- + Conflict and bullying between staff, different teams at KWD and suppliers
- + Damaged and missing stock.





TUI PARK

You have been asked to conduct a risk assessment by the local council on a busy public park. It's a sunny summer afternoon and the temperature have frequently been reaching 30°C. Tui Park is used for various activities, including exercise, dog walking, and day trips for residential care residents.

Local council workers maintain the park including mowing the grounds and conducting maintenance of existing trees and gardens. There has been an increase in unsociable behaviour at the park including gardens being damaged, tagging and littering. The council workers have been working longer hours to fix the damage but are growing increasingly frustrated and stressed. The culture for the team has shifted to “What is the point, they will just do it again next week.”

A narrow cul-de-sac going into the park is often used for U-turns by motorists adding to traffic congestion. Joggers frequently cross the cul-de-sac by weaving around both parked and moving vehicles.

Conflicts frequently arise between dog walkers, council workers and other members of the public, as many dog walkers allow their dogs to run off-lead despite posted warnings. This leads to incidents of dogs chasing people, other dogs and the lawn mowers.

Each week there are day trips for local residential care residents. Often there is a residential care worker, working alone, struggling with managing multiple residents with mental and physical disabilities. There has previously been reports from council workers of residents having wandered off during unloading. Although typically found quickly, it causes delays and stress, with other residents left unsupervised during searches.

Today a Powerline Technician is at the edge of the park and cul-de-sac repairing weather-damaged lines. Despite setting up an exclusion zone with cones, pedestrians are frequently walking through the area.

The council has had several reports of:

- + Unsociable and aggressive behaviour from members of the public
- + Incidents involving dogs of leash
- + Near misses between pedestrians and vehicles
- + Damaged plants and grounds
- + The work environment being too hot for staff
- + Fatigue and stress of staff.





POHUTUKAWA MEDICAL CENTRE

You have been asked to complete a risk assessment for Pohutukawa Medical Centre, they are a busy doctors practice in the city. The medical centre during the week is open from 7:00am to 9:00pm and on the weekend from 7:00am to 5:00pm.

As it is becoming more difficult for members of the public to register with a GP due to clinic patient numbers being full there are more members of the public are utilising their “walk in” service. The medical centre staff are also treating more emergencies than normal, increasing wait times even longer.

The practice is noting an increase in aggressive behaviours due to long wait times and mental health issues. The only current control in place is a sign that states there will be zero tolerance of abuse. Parents and children are often in the waiting room with the people acting aggressively.

While the medical centre is open contractors have been updating the walk in reception area including installing three polycarbonate (clear, durable) panels and painting.

There is currently no barrier separating the treatment, reception and waiting areas and there are many items that can be moved including furniture, emergency supplies such as sharps, scissors etc.

Due to under-resourcing, staff are working longer hours, including double shifts. There is only one person at reception of the walk in service trying to juggle triaging, appointments and de-escalation. There is has been an increase in conflict between more experienced medical centre staff who have a culture of “this is just the job, it’s how it is” and new staff members.

There has been an increase in reports from staff of:

- + Aggressive behaviour from patients and other members of the public
- + Medication errors averaging at 5 per week
- + Needle stick injuries
- + Staff feeling unsafe walking to the staff car park in the dark
- + Stress (patient and staff)
- + The work environment being too hot and the air conditioner breaking.





APPENDIX 2: LEGAL DRIVERS

THE HEALTH AND SAFETY AT WORK ACT 2015

The Health and Safety at Work Act (HSW Act) 2015 is the key work health and safety law in New Zealand and covers nearly all work and workplaces. The HSW Act came into effect from the 4 April 2016.

PURPOSE OF THE HSW ACT s3

The main purpose of this Act is to provide for a balanced framework to secure the health and safety of workers and workplaces by:

- 1 Protecting workers and other persons against harm
- 2 Providing for fair and effective workplace representation, consultation, and co-operation
- 3 Encouraging unions and organisations to take a constructive role in making work safer and healthier
- 4 Promoting the provision of advice, information, education, and training
- 5 Securing compliance with this Act through effective and appropriate compliance and enforcement measures
- 6 Ensuring appropriate scrutiny and review of actions taken by persons performing functions or exercising powers under this Act
- 7 Providing a framework for continuous improvement and progressively higher standards of work health and safety.



KEY POINT

The HSW Act is underpinned by the principle that workers and other persons should be given the highest level of protection against harm to their health, safety, and welfare from hazards and risks arising from work.



THE STANDARD OF 'REASONABLY PRACTICABLE'



Most duties in the HSW Act must be carried out by the duty holder 'so far as is reasonably practicable':

- + Something is 'practicable' if it is possible or capable of being done
- + 'Reasonably' means that it should also make sense - it should 'stand to reason'.

Under the HSW Act, 'so far as is reasonably practicable' means action which is, or was, at a particular time, reasonably able to be done in relation to ensuring health and safety, taking into account and weighing up all relevant matters, including:

- 1 Likelihood of the risk occurring
- 2 Degree of harm that might result
- 3 Knowledge about the hazard or risk, and risk control measures
- 4 Availability and suitability of risk control measures
- 5 Cost of risk control measures, including whether the cost is grossly disproportionate to the risk.

If something is possible to do, but the time, cost, effort and trouble to do it is a lot more (a gross disproportion) than the benefits to be gained, then it is probably not 'reasonably practicable' to do it, and so not legally required.

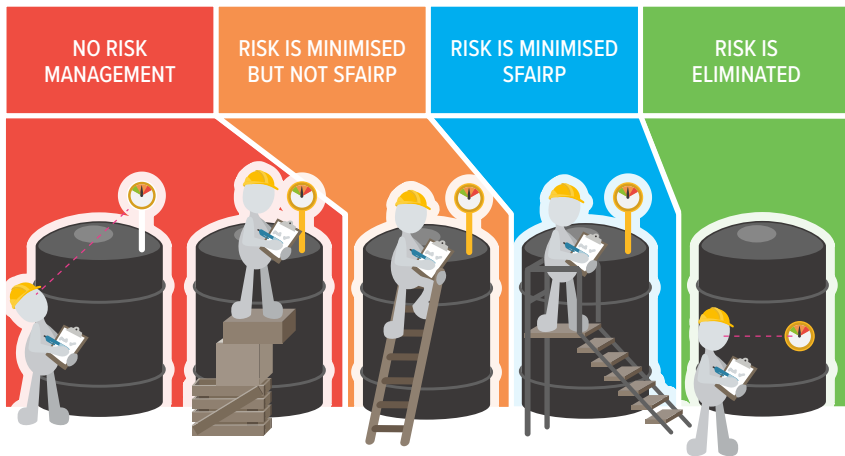


HSW ACT DUTY TO MANAGE RISKS s30

Where risk management duties are set out, the duty holder (PCBU) is required:

- 1 To eliminate risks to health and safety, so far as is reasonably practicable; and
- 2 If it is not reasonably practicable to eliminate risks to health and safety, to minimise those risks so far as is reasonably practicable.

A duty holder is expected to manage risks to the extent to which they have, or would reasonably be expected to have, the ability to influence and control the matter to which the risks relate.

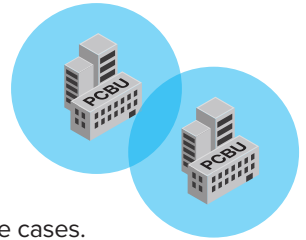


EXAMPLE

In the diagram above, there is a risk to the worker of a fall. A short-term solution could be to provide a ladder and a rule that the ladder must be used. But to minimise the risk so far as is reasonably practicable (SFAIRP) will require an engineered control, and in the future, risk elimination through design.



OVERLAPPING DUTIES



The idea of overlapping duties is a key part of the design of the HSW Act 2015. PCBUs will have a duty to all workers affected by their work (their sphere of influence), including the workers of other PCBUs in some cases.

PCBUs will need to work together to meet their overlapping duties.

Two or more PCBUs shouldn't have to duplicate what they are doing. They need to consult, co-operate and co-ordinate activities to meet their shared responsibilities. The duty to consult, co-operate and co-ordinate activities sits only with the PCBU, not with all duty holders.

Once the PCBUs agree on reasonable activities to manage their overlapping duties, they will have to monitor each other to make sure everyone is doing what they agreed to do.

There are four main points to remember about overlapping duties:

- 1 You have **a duty to consult, cooperate with and coordinate activities** with all other PCBUs you share overlapping duties with, so far as is reasonably practicable.
- 2 You **can't contract out of your health and safety duties**, or push risk onto others in a contracting chain.
- 3 You can enter into **reasonable agreements with other PCBUs** to make sure that everyone's health and safety duties are met.
- 4 The **more influence and control** your business has over a workplace or a health and safety matter, the **more responsibility** you are likely to have.



CONTROL AND INFLUENCE

The more influence and control a PCBU has over a health and safety matter, the more responsibility it is likely to have. There are three ways a PCBU can have influence and control over health and safety matters:

CONTROL OVER WORK ACTIVITY

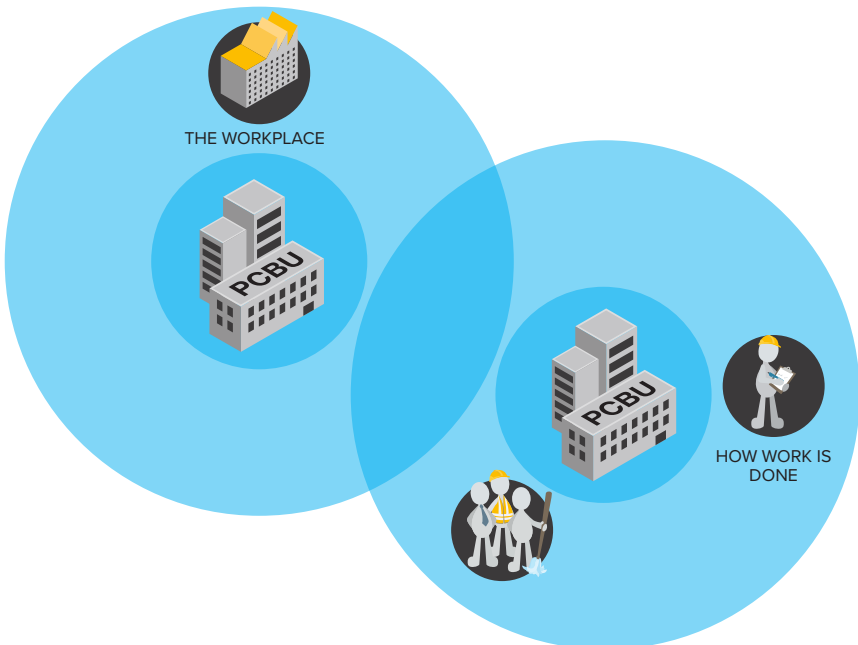
A PCBU in control of the work activity may be in the best position to control health and safety risks.

CONTROL OF THE WORKPLACE

A PCBU in control over the workplace, including plant and structures, has some influence and control over health and safety matters.

CONTROL OVER WORKERS

A PCBU has more influence and control over its own workers and contractors than those of another PCBU.





HEALTH AND SAFETY AT WORK (GENERAL RISK AND WORKPLACE MANAGEMENT) REGULATIONS 2016

	DESCRIPTION	REGULATION
IDENTIFY, CONTROL, MAINTAIN AND REVIEW	Identify hazards and risks	Part 1, r 5
	Apply the hierarchy of control measures	Part 1, r 6
	Maintain control measures	Part 1, r 7
	Review control measures	Part 1, r 8
INFORMATION, SUPERVISION, TRAINING AND INSTRUCTION	Provide health and safety information, supervision, training, and instruction to workers	Part 1, r 9
FACILITIES	Provide general workplace facilities	Part 1, r 10
FIRST AID	First aid equipment and facilities	Part 1, r 13
	Provide trained first aiders	
EMERGENCY PLANS	Develop emergency response plans relevant to business hazards and risks	Part 1, r 14



PERSONAL PROTECTIVE EQUIPMENT (PPE)

Provide personal protective equipment fit for work activities and hazards and risks

Part 1,

Maintain and service PPE, and ensure it is used

r 15, 16, 17

EXPOSURE MONITORING AND HEALTH MONITORING OF WORKERS

Carry out health hazard exposure monitoring at suitable intervals, by or under the supervision of a competent person

Keep confidential exposure monitoring records for up to 40 years, and make them available to those potentially exposed

Inform workers of health monitoring and ensure appropriate health monitoring is provided, supervised and paid for

Part 3,

Provide appropriate information about the workplace to occupational health practitioners

r 32-42

Get health monitoring reports where appropriate from occupational health practitioners, and share them with the relevant worker, other relevant PCBUs, and the regulator

Keep confidential health monitoring records for up to 40 years

YOUNG PERSONS

Ensure workers under 15 years do not do certain types of hazardous work, tasks, or work in certain areas, with certain types of machinery, or carry out night work (under 16s)

Part 4,

r 43-48



USEFUL WEBSITES

NEW ZEALAND GOVERNMENT

www.worksafe.govt.nz	WorkSafe New Zealand
www.aviation.govt.nz	Civil Aviation Authority
www.maritimenz.govt.nz	Maritime New Zealand
www.police.govt.nz	New Zealand Police
www.standards.govt.nz	Standards New Zealand
www.legislation.govt.nz	New Zealand Legislation
www.acc.co.nz	Accident Compensation Corporation
www.fireandemergency.nz	Fire and Emergency New Zealand
www.civildefence.govt.nz	National Emergency Management Agency

OTHER ORGANISATIONS

www.impac.co.nz	IMPAC
www.safeguard.co.nz	Safeguard
www.chasnz.org	CHASNZ



KEY POINT

For more useful websites and resources we recommend you login to IMPAC's student portal.

OTHER IMPAC COURSES YOU MAY BE INTERESTED IN ARE:

HSR STAGE 3: WORKPLACE H&S CULTURE AND COMMUNICATION

This course is designed for students to understand workplace health and safety culture and practices, and how to communicate effectively about workplace health and safety.

INTRODUCTION TO BOW TIE (PRE-RECORDED WEBINAR)

This pre-recorded webinar introduces the principles and concepts of the bow tie risk management approach, to manage the critical risks in a business.

One of the most well-regarded approaches to risk management, bow tie increases capability and confidence in managing an organisation's critical risks.

ENERGY ISOLATION (LOCK OUT TAG OUT)

This course is designed for students to learn about machinery lockout and reinstatement.

JOB SAFETY ANALYSIS

Job Safety Analysis (JSA) involves looking at a task and considering what is the safest way to complete it. This course explains key processes, identifying hazards and controls and how to undertake a JSA for a specified job.

PERMIT ISSUER

This course provides comprehensive training of Permit Issuer protocols and procedures.

+IMPAC

We trust you enjoyed your training with +IMPAC, New Zealand's leading full service Health + Safety solutions provider.

Health + Safety is our life – it's what we do and we do it all:

RISK MANAGER :MEXPRESS

Our cloud-based software solutions are designed to provide risk management processes to meet health and safety requirements and keep people safe. Choose between our cost effective, **set-up-and-go solution RM Express** - ideal for small to medium organisations; and **Risk Manager, with its fully customisable range of modules** which can be tailored to the needs of larger organisations.

CONSULTING

We work alongside businesses and organisations to understand their challenges and opportunities. Our hugely experienced consulting team assess, advise, investigate and **deliver relevant and practical solutions**, applying a sensible risk management approach to health and safety.

PREQUAL

Our **pan-industry solution to contractor prequalification** and ongoing management. We cater for both individuals needing contractor prequalification and companies wanting to manage all their contractors in one easy to navigate platform.

VRCOMPETENCY

Our innovative virtual reality programme to quickly and effectively upskill operators of motorised vehicles and machinery in a safe and risk free environment. Our courses accelerate training times, improve and certify skills and offer continuous learning.

TALENTBANK

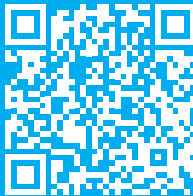
With our unrivalled industry experience and wide network of talent, our **specialist recruitment service** helps to connect the right H+S people to an organisation's contract or permanent roles. We fully understand our clients' resourcing needs and know the best way to help H+S professionals build a better career.

SAFEWORX

We supply a comprehensive range of quality standards appraised **workwear, personal protection and safety equipment**, online and at retail branches nationwide. Our expert team partner closely with customers to develop innovative safety products to address gaps in high risk industries.



To discuss any of IMPAC's H+S services
contact 0800 246 722



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