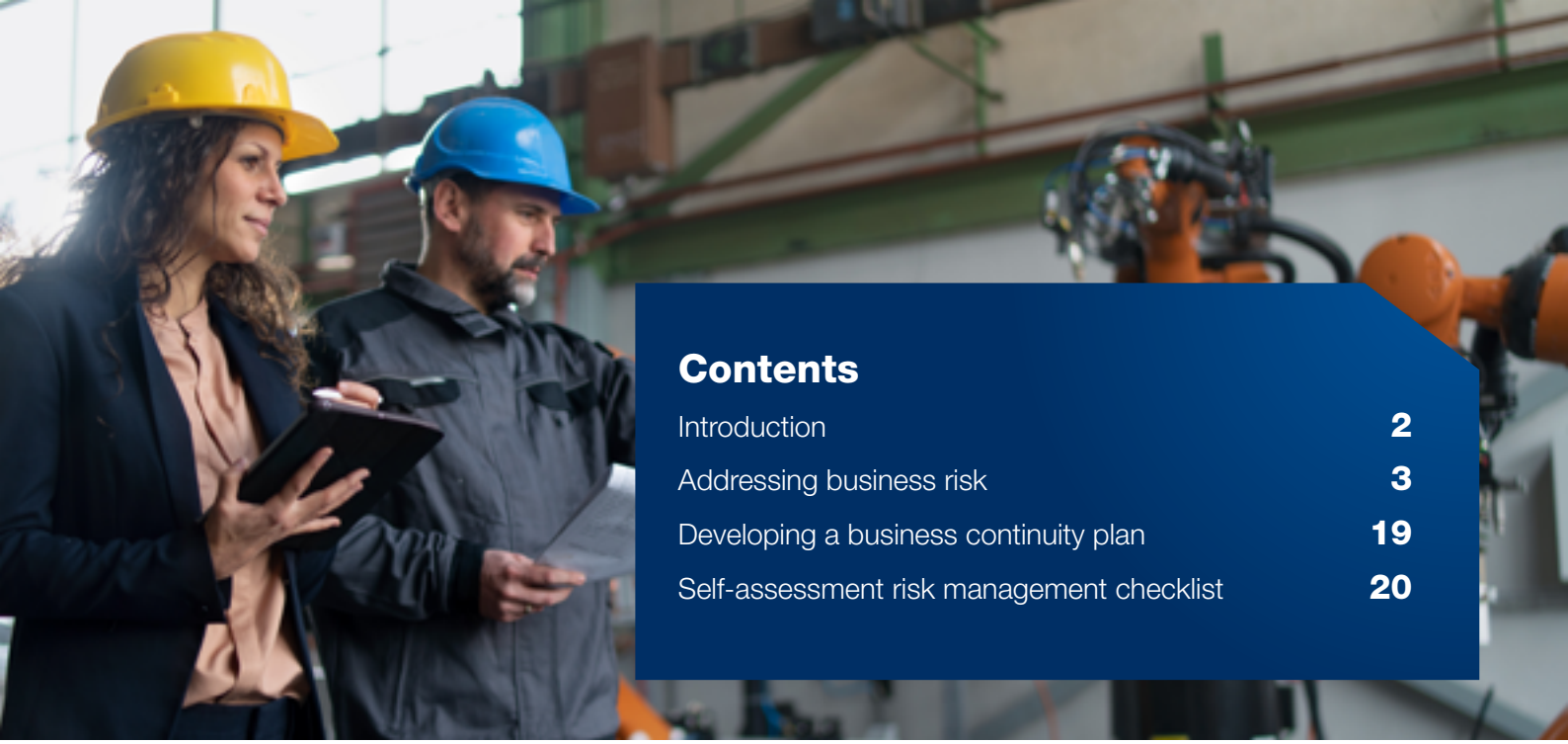
# Warehousing **risk management guide**

NZI Risk Solutions™

'Helping our customers stay in business by reducing risk'

# About NZI Risk Solutions

NZI has extensive experience in providing expert risk management advice to help our commercial customers remain in business. We have used this industry knowledge and developed a suite of fact sheets, and this guide, covering risk management issues that will help you to take control of your business risks.



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# Your business **risk management guide**

Many business owners are unaware of the numerous risks within their business and the effect these could have on their ability to continue trading. The real cost of a major loss incident is not only the direct loss or damage, but also the time spent dealing with the aftermath – including disruption to work and production schedules. Customer loyalty and business reputation can also be adversely impacted.

## Risk management is critical to business survival

Risk management is critical to business survival. At NZI we want to share our risk management expertise with our business customers and, in particular, help them to address those risks associated with their buildings and assets.

### As the owner of a warehousing business, what are some of the risks I need to be aware of?

The key risks for warehousing are fire, flooding and security. In terms of fire, it's not only the product that's at risk, but also the packaging materials, storage systems and building materials that add to the fire load. Hot work (e.g. welding or angle grinding) undertaken in a warehouse situation is also a fire risk. Other important risk areas include: worker safety, material storage, the use of equipment like forklifts, electrical safety, and the storage of flammable and environmentally hazardous substances. It's also important to have good risk management programmes in place to control risk related to general housekeeping, waste management and health and safety.

### First things first – check your insurance policy and endorsements

When starting on your risk management journey, it's important to check your insurance policy and any endorsements that are applicable to it. Your policy and endorsements set out exactly what your insurer will pay for as a result of accidental loss, and what you are not insured for. It is particularly important that you understand any exclusions that may apply to your insurance policy. Having the right cover and adequate sum(s) insured is critical to your business surviving a significant loss.

If you have any questions it's important that you discuss these with your Insurance Advisor.

# Addressing business risk – what to be aware of

The following section includes information about the most common areas of risk associated with warehousing as well as more general risks all businesses should be aware of.

# Fire safety

Fire represents a significant risk for any business, but particularly warehouses, which are usually large spaces packed high with goods making them conducive to fire spread. The reality is that the only proven method of controlling a warehouse fire is with a properly designed and maintained automatic sprinkler system. However, it's important to have hand-operated fire extinguishers available as well.

The key elements of a well-planned fire protection system are outlined below.

## Fire extinguishers and hose reels

Best practice for business premises is the installation of hand-operated fire extinguishers and/or hose reels. Accidental fires are more likely to occur during working hours due to the greater use of electrical equipment, heating and normal processes.

Fire extinguishers should be installed by approved contractors and mounted on brackets with clear signage indicating their positions so they can be easily located in an emergency. They require annual servicing by approved contractors to ensure they remain ready for use and they should also be checked regularly by staff on site.

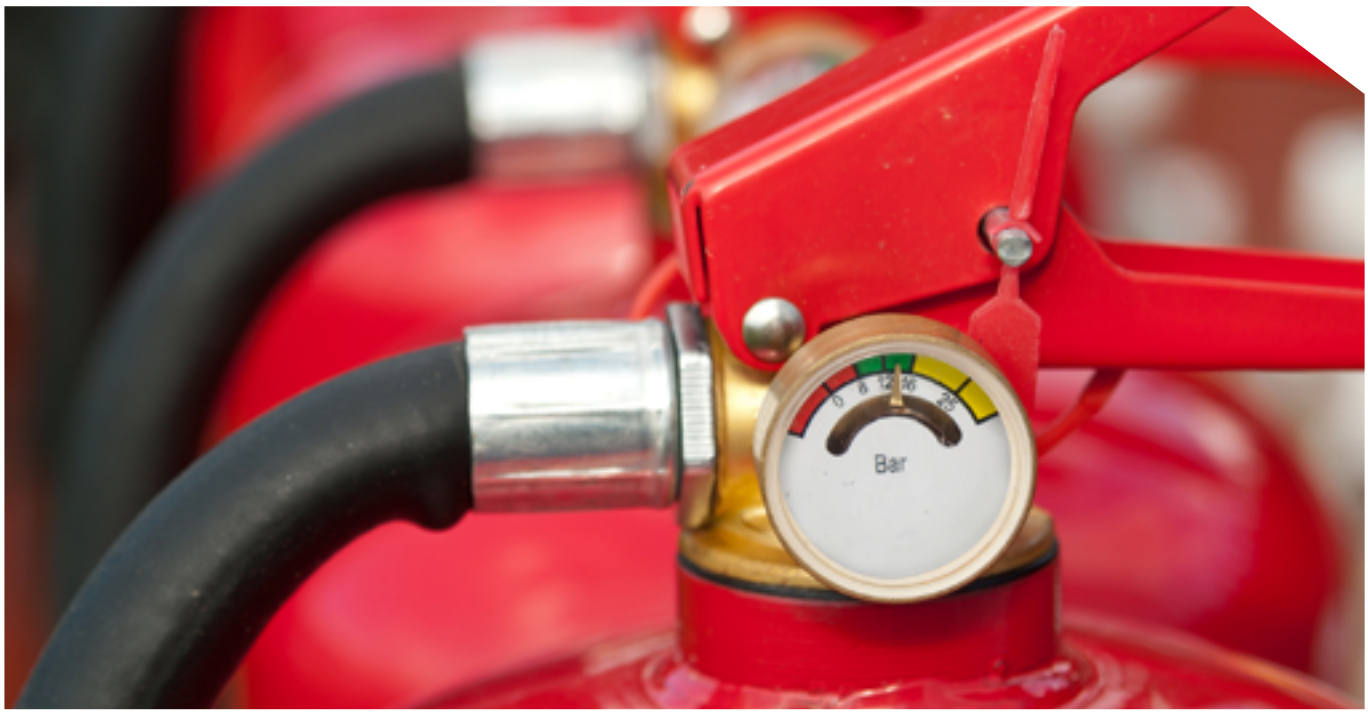
## New Zealand Standards

NZS 4503:2005 Hand operated fire-fighting equipment, is the minimum standard for hand-operated fire fighting equipment in New Zealand. The other relevant Standard is NZS 1850:2009 Portable fire extinguishers – Classification, rating and performance testing. It classifies and rates fire extinguishers to determine the appropriate type of extinguisher by fire type e.g. chemical fire or electrical fire etc.

You should ensure that your fire extinguishers are selected, installed and maintained in accordance with these standards.

## Using the correct fire extinguisher

Care should be taken to use the right type of fire extinguisher. Using the wrong fire extinguisher on certain fires can sometimes have disastrous results e.g. never use water extinguishers on burning liquids or oils or electrical fires.




## Fire sprinkler systems and automatic fire detection systems

Sprinkler systems have become the most widely used and most reliable automatic means of fire protection.

Fire sprinkler systems automatically detect a fire, transmit an alarm to the Fire Service as a result of water flow and control or extinguish the fire. Sprinklers provide 24/7 fire protection as needed in the immediate vicinity of the fire.

Automatic fire sprinklers provide significant protection for the occupants of a building, as well as the environment, by minimising the effects that a major structural fire could have. Only the sprinkler heads within the vicinity of a fire will activate i.e. all the sprinkler heads do not go off at once. If your building is fitted with either a fire sprinkler system or a fire detection system, these should be maintained regularly by an approved agent.

## Building warrant of fitness

The Building Act 2004 requires owners of buildings with specified systems (such as sprinklers, lifts and fire alarms) to provide the relevant council with an annual building warrant of fitness (WOF). The WOF confirms that the building's specified systems are being maintained and are operating effectively, and must be publicly displayed.

## Fire doors and smoke control doors

If your building has automatic self-closing fire doors or smoke control doors it is important that these are kept clear of any obstructions. We also suggest you arrange for regular monthly operating checks (possibly by the building owner) and annual inspection or maintenance to be undertaken and documented by a skilled fire protection contractor.

## Regular fire drills

An orderly and efficient response to an emergency can be vital to the protection of property and the safety of people. It is strongly recommended that regular fire drills are held so that employees, volunteers and other regular visitors are aware of the procedure should an evacuation become necessary.

Well-performed fire drills will also help determine problems or danger areas, equipment problems or failures, knowledge of likely evacuation times and external meeting areas. Evacuation plans should then be posted internally for each building and, wherever possible, drills should be conducted with the knowledge and support of your local fire service.

## Evacuation procedure

In the event of an emergency, the speed with which people can safely exit the building can mean the difference between life and death and therefore the internal layout of your building(s) should allow for adequate means of escape.

It is recommended that fire exits, doors relating to fire exits and paths of travel to fire exits, be routinely checked to ensure they are not obstructed or impeded in anyway. The final exit doors should be suitably signed and checking of fire exits should form part of your regular hazard inspection regime. To assist with safe evacuation, notices providing clear instruction on how to evacuate and raise the alarm should be displayed at the main exit doors.

# Hot work fire safety

There are a number of risk factors associated with hot work, including a high risk of fire.

Hot work includes: welding, flame cutting, disc cutting, grinding, blow lamps, brazing, burning off, soldering and the use of hot air guns. We've outlined a few key steps you can take to help prevent this type of fire on your premises.

## Hot work permit

Before carrying out any hot work on site, a 'Hot Work Permit' should be issued. The person authorised to issue a permit (e.g. warehouse manager) should inspect the work area prior to releasing the permit and confirm all precautions have been taken in accordance with the New Zealand Standard 4781:1973 – Code of Practice for Safety in Welding and Cutting.

We recommend using the 'NZI Hot Work Permit Card', which is freely available from our Surveyors. This will help to easily identify fire hazards and take the necessary precautions.

## Identifying hot work hazards

Here are a few key steps you can take to ensure you manage hot work fire safety effectively on your premises.

- Where possible, move the hot work object to a designated safe location, such as a welding bay.
- If the hot work object cannot be moved, relocate all movable fire hazards to a safe place.
- If the hot work object cannot be moved and if all fire hazards cannot be relocated, provide guards to confine the heat, sparks and slag, and protect the immovable fire hazards.
- Establish a 'Fire Watch Duty' and assign people key responsibilities for overseeing the hot work. Where possible, a fire hose should be available to use, if required.
- To eliminate the risk of fire, conduct a final check for hot spots 60 minutes after hot work is completed.
- For more detailed fire safety guidelines refer to the NZS 4781:1973 – Code of Practice for Safety in Welding and Cutting, Part 6.

## Hot work precautions

The following factors must be considered before a hot work permit can be issued:

- Ensure hand-operated fire extinguishers or hose reels are readily available.
- Ensure manual fire alarm system, if installed, is operational.
- Ensure sprinkler system, if installed, is operational.
- Isolate automatic fire alarm detection system, if installed. Contact your fire alarm maintenance contractor to isolate the alarm.
- Train hot work operators to perform the work safely.
- Identify, isolate, remove, protect or disconnect all hazards, as appropriate.
- Restrain compressed gas cylinders.
- Maintain all equipment so it's in good working order.

## Within 10 metres of hot work

These factors should also be considered to ensure the area within 10 metres of any hot work is managed appropriately:

- Sweep floors so they're clean and free from combustibles.
- Wet down combustible floors and cover with damp sand, metal or other shields.
- Remove any combustible material or liquids.
- Protect immovable combustibles with covers, guards or metal shields.
- Cover all wall and floor openings.

## Hot work in confined spaces (tanks, containers, ducts, dust collectors etc.)

Be familiar with the hot work safety procedures in confined spaces. Ensure that anyone who welds, brazes, solders or gas cuts any container or pipe that has contained a combustible substance carries out the safety measures below.

- Hot work equipment is cleaned and all combustibles removed.
- Containers are flushed out and all flammable vapours extracted.

## Hot work on foamed plastic panels (insulating panels)

Be familiar with these important safety steps when working on or near foamed plastic panels:

- Do not use heat producing cutting or drilling equipment directly on the panels.
- Where panels need to be cut, only use cold cutting methods such as shearing with hand operated tools at low speed or cooled/lubricated drills or hand saws.
- Do not use heated rods or similar to make small holes through the panel core.
- Equipment cannot be retro-mounted on panels unless it is bolted and supported properly.
- The panel core cannot be exposed. For example, all penetrations must be sealed and joint covers replaced as the job progresses.
- Remove all job waste and any combustibles immediately.

## Hot work fire watch

Be aware of the post-hot work fire risks and apply these fire watch safety measures:

- Check for hot spots during and 60 minutes after any hot work is completed.
- Supply appropriate fire extinguisher(s) in the hot work area and, if possible, a fire hose should also be available.
- Provide fire fighting equipment training for personnel carrying out the hot work and those responsible for the fire watch. Ensure they know how to raise the alarm.
- Provide a mobile phone or other suitable means for personnel to raise the alarm.

# Flooding

## Reducing potential flood damage

Planning ahead can dramatically reduce the impact of flooding on your business. For example, storing valuable items higher up reduces the likely loss at little or no cost.

In high-risk premises, consider investing in flood-protection products. There are many different types of flood protection products and your choice will depend on your level of flood risk and the potential costs of a flood to your business.

## Preventing flood and water damage to stock

It's important to know whether your business is in an area prone to flooding. If it is, it's especially important to stack key items on higher racks and protect electrical equipment, which is particularly vulnerable.

Flash flooding can cause substantial damage which may be avoided by carrying out some simple steps:

- Keep stock off the floor.
- Clean external drains of leaves, vegetation and other waste regularly.
- Ensure that all internal drains are also cleaned regularly.
- Check external guttering regularly – a few leaves blocking downpipes can cause a lot of flooding.

"Planning ahead can dramatically reduce the impact of flooding on your business. For example, storing valuable items higher up reduces the likely loss at little or no cost."

Some other actions to reduce the likelihood of flood damage to stock and electrical supply include:

- Prevent water entering the building by installing permanent or removable barriers to seal doors, windows and other openings.
- Fit non-return valves on drains and pipes.
- Raise electrical sockets to keep them clear of possible flood water.
- Use flood-resistant materials in the construction of new buildings or extensions to reduce the damage if a flood does occur.

Taking steps to delay or prevent flood water from getting in limits the damage and makes cleaning up easier and faster.

# Security

Warehouses and distribution centres are frequent targets of burglary, theft and pilferage. These facilities often contain lots of new merchandise in its original packaging – something that is highly desirable to both professional and amateur thieves.

Warehouses can be subject to both internal and external theft. Internal thefts can be committed by company employees, contractors and other visitors who have a legitimate reason to be in the warehouse at certain times. External thefts are committed by people outside of the company who have no legitimate reason to be in the warehouse and some may only come to the premises specifically to steal.

Delivery drivers can also pose specific security risks. Drivers who are allowed to wander freely while their vehicle is being loaded or unloaded can use this opportunity to gather up items.

Some suggestions for providing good security at warehouses and distribution centres are outlined below.

### Clearly establish facility boundaries

- Use separate areas for dispatching and receiving goods. Where possible, provide physical barriers between these two areas.
- Where possible, provide a separately fenced yard area that encloses the warehouse dispatching and receiving doors.
- Establish a policy that prohibits personal vehicles from being driven into the shipping and receiving yard area.
- Keep the gate to the exterior yard area locked at all times when the warehouse is closed.
- Do not allow employee or visitor parking near warehouse shipping and receiving doors.
- Strictly limit the number of exterior doors that can be used for employee entrance and exit. Avoid having entrance doors where they cannot be observed by staff.
- Provide audible exit alarms on all doors designated as emergency exit only doors.

### Establish visitor sign-in registers

- Set up a visitor register and do not allow visitors or delivery drivers to wander throughout the warehouse.

### Install electronic security and surveillance systems

- Provide separate areas for the storage of valuable or highly desirable items, such as computer and electronic equipment, cigarettes, liquor, etc. If possible, create separately lockable ‘high-value’ cages or rooms for the storage of these items.
- If possible, consider instituting policy where at least two employees must be present in order to enter a high-value cage or room (‘two-person rule’).
- Install electronic access control systems to control access into high-value rooms or cages. The access control system should be capable of providing an audit trail of who entered the cage and when.
- Install video surveillance systems to record activity in high-value cages and rooms. Cameras should be placed to view entrance points as well as interior areas.

## Intruder alarms

Intruder alarms are designed to both protect the physical assets within unoccupied premises and provide a safer environment for staff. Intruder alarms deter theft and vandalism and enable a coordinated and rapid response when an alarm is activated.

Early detection of an intruder is best achieved by installing a combination of detection devices throughout your premises.

These could include:

- movement sensors
- break glass sensors
- vibration sensors
- duress and hold-up alarms
- door and window devices.

The key to a successful intruder alarm system is the careful selection and configuration of the control panel and detection devices to suit the level of risk and the physical environment. This maximises the ability to detect intruders and minimises unwanted false alarms.

## Safes

"Early detection of an intruder is best achieved by installing a combination of detection devices throughout your premises."

If you have valuable items or cash that require storage in a safe, it is important to have a quality, leading-brand safe that meets CEN European standards and has UL Rated locks. Your safe should also be permanently and securely attached to the structure of the building, such as bolting it to the floor, solid walls or wall studs, or encasing it in concrete.

All quality safes are allocated an amount called a ‘cash rating’ which is the maximum amount of cash that should be stored in the safe at any given time. If you are holding more cash than the cash rating of your current safe then you should consider upgrading it.

# Worker safety

While this guide is specifically focused on the buildings and assets of a business, it is impossible to ignore the fact that the modern warehouse can be a dangerous work environment. Common injuries for many warehouse workers include those that are caused by slips, trips and falls. However, forklifts alone pose the biggest danger. New Zealand's health and safety law requires business owners to provide specialised training for forklift drivers as well as material handling safety to decrease the likelihood of warehouse-related worker accidents.

While New Zealand warehouse-related worker injuries are difficult to segregate given the way injury statistics are recorded, data from the USA illustrates the injury issue for warehouse workers in stark reality.

Every year in the USA, Occupation Safety & Health Administration statistics show that 100 employees are killed and 20,000 seriously injured in warehouse forklift-related incidents. Twenty five percent of the deaths are caused by forklifts overturning.

## Worker safety risk management procedures

Creating a safety culture within a warehouse is important. Warehouse workers are independent people, often working without direct supervision as they go about their daily work activities. Holding regular safety committee meetings and reviewing accidents or 'near miss' incidents are important activities to help embed safety as a business as usual activity.

Some risk management procedures that warehouse owners and operators can use to help prevent worker injuries (and at the same time help build a safety culture) are listed on the following pages.

### Loading docks

- Drive forklifts slowly on docks and dock plates.
- Secure dock plates and check if the plate can safely support the load.
- Keep clear of dock edges and never back up forklifts to the dock's edge.
- Provide visual warnings near dock edges.
- Prohibit 'loading dock jumping' by employees (jumping down off the loading dock).
- Ensure that dock ladders and stairs meet Building Code safety specifications.

### Forklifts

- Train, evaluate and certify all operators to ensure they can operate forklifts safely.
- Regularly maintain forklifts, including tyres.
- Before using a forklift, examine it for hazardous conditions which would make it unsafe to operate.
- Follow safe procedures for picking up, putting down and stacking loads.
- Drive safely, never exceed speed limits and slow down in congested areas or those with slippery surfaces.

### Materials storage

When thinking about safety issues associated with warehouses, it's the hazards involved in using equipment like forklifts or the dangers of lifting heavy materials that usually come to mind. While these issues pose significant threats, the way materials are stored can also impact safety.

If stacked incorrectly, products, raw materials and other supplies can fall and cause minor injuries like cuts and bruises, and even more serious injuries related to crushing or pinning. Employers need to make sure warehouse workers follow a set of best practice methods for the storage of materials to avoid these accidents, including:

- stacking loads evenly and straight
- placing heavier loads on lower or middle shelves
- removing one object at a time from shelves
- keeping aisles and passageways clear and in good repair.

### Manual lifting/handling

Employers should ensure they:

- provide general ergonomics training and task-specific training
- minimise the need for lifting by using good design and engineering techniques
- encourage staff to lift properly and get a co-worker to help if a product is too heavy.

## Good housekeeping

To help prevent slips and trips it is wise to eliminate loose material such as sawdust, spilt liquids, unnecessary steps or ridges, and boxes from the floor and dark areas with poor lighting. In addition, it's important to use anti-slip floor tape – a safety essential.

## High-visibility floor and wall tape

Using high-visibility visual clues to remind employees where to put stacks and how high stacks should be piled are simple ways to prevent mishaps.

Permanent visual reminders help warehouse workers maintain safety zones.

The general rules are listed below:

- Place floor tape around the corners or edges of stacks to remind workers where a stack should be placed.
- Use floor tape to mark aisles to help prevent workers from placing pallets or boxes in the way of people or vehicles.
- Use wall tape to mark the maximum height of a pile on the wall.

Signs marking pedestrian traffic and loading areas, for example, can help keep a warehouse working smoothly. Signs and labels that may be appropriate include: directional signs, emergency exit signs, keep clear signs, forklift signs, no smoking signs, and flammable and hazardous warning signs.

# Material storage

## Stacking and shelving hazards

The Canterbury earthquakes demonstrated the importance of ensuring that storage racking systems and shelves are designed and maintained to withstand seismic activity. Because many regions of New Zealand are susceptible to earthquakes, bulk storage facilities and retail stores should consider the restraint of contents as part of their hazard identification and maintenance programmes.

### Restraint of building contents

The standard for Seismic Restraint of Building Contents, NZS 4104:1994, requires the restraint of building contents in certain conditions. The standard provides considerable detail and building owners and employers should make themselves aware of its requirements.

### Shelving and racking systems

Shelving and racking systems should be designed and maintained so they can withstand the effects of an earthquake. Items stored above 1.2 metres high and weighing more than 5kg must be restrained in order to prevent them from falling onto the ground or personnel working beneath.

The Department of Labour recommends that employers should engage a consulting engineer to review the verification and certification of their shelving systems to ensure they meet the requirements of NZS 4219:2009 – Seismic Performance of Engineering Systems in Buildings, which contains the current state of knowledge on the topic.

The relevant design standards for shelving/racking systems are:

- NZS 1170.5:2004 – Structural Design Actions – Earthquake Actions – New Zealand
- NZS 3404.1:1997 – Steel Structures
- The BRANZ Design Guide – Seismic Design of High Level Storage Racking Systems with Public Access.

Regular checks of shelving systems should be undertaken to look for damage from forklifts or trolleys, missing bolts and bent steel supports or shelves.

### Palletised goods

In frequently occupied areas (defined by the Seismic Restraint of Building Contents standard), palletised goods should be restrained to prevent them from creeping and/or falling from the racking system.

In order to reduce any toppling effect, the height of shrink-wrapped pallets should not exceed two times their base. Shrink wrapping should extend around the base of the pallet so the goods and the pallet form one unit. Pallets should be in good condition – broken pallets should be removed from service.

### Hazardous substances

Extra care needs to be taken when shelving hazardous substances. If incompatible hazardous substances fall from shelving in an earthquake and their packaging is breached, chain reactions such as the release of hazardous gases or sparks leading to a fire could occur.

In addition:

- Keep extra supplies of hazardous substances in segregated areas
- Keep filled gas cylinders stored as close to the ground as possible, or securely enclosed in a cage or similar that allows air to circulate through.

**Heavy items stored below two metres in open shelving**

Certain supplies of stock, such as shrink-wrapped, canned or bottled goods, are heavy enough to cause serious injuries or death if they fall off shelves onto workers or shoppers. Heavy or solid items should not be stacked more than 1.2m high without restraint to prevent causing injury during an earthquake. Heavy items must not be stored near frequently occupied areas or near doors/exits to prevent blockage during an earthquake.

*Source: Disaster Recovery, 'Stacking and Shelving Hazards' Fact Sheet, Department of Labour*

## Pallet racking storage safety

Damage to pallet racking is often underestimated and can put workers in danger when not properly maintained. It can be difficult to detect damaged pallet racks at a glance so it's important to schedule regular inspections of this type of storage equipment by a professional company. An overlooked dent in a pallet rack, which may appear as a cosmetic flaw, can easily result in a costly rack collapse.

"An overlooked dent in a pallet rack, which may appear as a cosmetic flaw, can easily result in a costly rack collapse."

**Pallet rack failure**

The six most common causes of pallet rack failure are:

1. Damage from forklifts
2. Overloaded racks
3. Altered rack configuration
4. Change in operation (rack layout re-arrangement)
5. Incorrect equipment use
6. Faulty equipment.

Tips for preventing injuries to workers and product damage in pallet racking include:

- stack loads evenly and straight on shelves
- place heavier loads on lower or middle shelves
- remove one object at a time from shelves
- keep aisles and passageways clear and clean.

**Caution:** Do not try to change or repair pallet racking yourself, including cutting, welding, modifying, rearranging or adding other components. Replace damaged racks immediately using professional, experienced contractors.

# Battery safety

## For electric forklifts and lift vehicles

Battery safety is important. Although batteries are designed to be extremely safe, trained staff must always be observant and cautious as battery acid is both toxic and corrosive. It is important that safety precautions are taken when handling batteries, these include:

- always have a 'Battery Charging Safety Checklist' displayed in the charging area
- wear protective eye/face visors and acid-resistant PVC clothing – note that acid will eat through cotton
- wear protective gloves
- make sure that people charging batteries have been properly trained.

## Lift vehicle battery charging fire risks

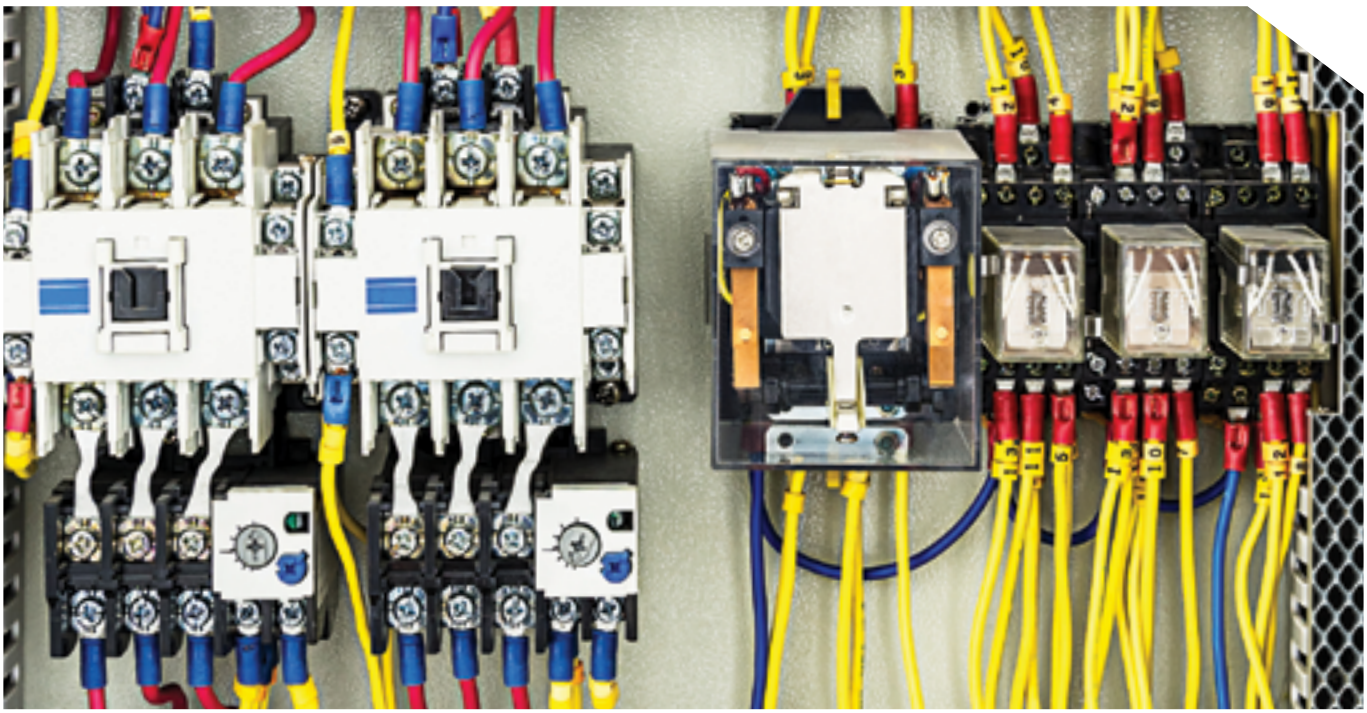
There are fire risks associated with charging or recharging of batteries. The predominant causes of these fires are:

- evolution of hydrogen, a highly flammable gas
- overloading of electrical circuits
- overheating of electrical components
- earth leakage faults
- corrosion from spilt acid causing deterioration of electrical apparatus.

## Minimising the potential for fires during battery charging

Below are some simple steps to minimise the potential for fires to occur during battery charging:

- Always have a 'Hazard Warning Notice' displayed in the charging area.
- Preferably, carry out charging in a dedicated room of fire resistant construction. This room should not be a basement.
- Maintain a clear one metre space between the battery charger and the lift vehicle.
- Provide good high-level and low-level ventilation in the room. Ventilate directly to the outside of the building.
- Provide serviced hand-held fire extinguishers within the charging area – minimum 2kg dry powder.
- Provide lime or soda ash close by to enable prompt neutralising of any spilt acid.
- Keep all switch contacts and connecting blocks clean, especially where exposed to the atmosphere.
- Regularly inspect and maintain all electrical equipment. Pay particular attention to flexible cables and current limiting resistors.
- Because of the risk of electrical arcing, keep the quantities of combustible materials in the proximity of the charger to a minimum. Remove any waste such as rags, paper and packaging materials daily.
- Where recharging of lift vehicle batteries takes place, provide a three metre 'no go' area (or fire break) where the storage of combustible materials is prohibited.
- Use yellow hatch markings around the battery charging area to make it clear nothing should be stored there.



# Electrical safety

Electrical fires make up a high percentage of fire insurance losses and are often the result of a large scale fire incident. Fires are commonly caused by loose electrical connections, weakening of insulation and poor maintenance of electrical equipment. Legislation requires specific preventative action such as disconnecting, isolating and making safe any defect which constitutes an electrical hazard to persons, livestock or property.

## The need for electrical installation inspection and maintenance

All electrical installations need regular maintenance. Switchboards wear and need replacement as time progresses and demands on the installation change. Equally, network system upgrades can affect fault-trip levels.

Related electrical shortcomings continue to account for a high number of fire losses in New Zealand. To minimise the potential for such losses, it is necessary to complete regular and ongoing inspection and maintenance,which can include thermographic image testing.

Electrical safety inspection items classified as ‘requiring urgent attention’ means the safety of those using the installation may be at risk and arrangements should be made for a suitably qualified person to undertake the necessary remedial work without delay.

## Electrical test and tag regime

Testing and tagging of plug-in electrical appliances is a requirement of the Electrical (Safety) Regulations 2010. The New Zealand Standard AS/NZS 3760 outlines the requirements for electrical appliance testing. Best practice requires that an asset register is set up that contains test results, failed items, repaired and out of service items, and lists of items that are exempt from testing. The register is important proof that your business is compliant with current health and safety regulations and keeps you up-to-date with the condition of your equipment. For more information visit **www.energysafety.govt.nz**

> "Electrical fires make up a high percentage of fire insurance losses and are often the result of a large scale fire incident."

## Electrical regulatory safety obligations

Under health and safety legislation, business owners and operators have a responsibility to ensure a safe work environment for all employees and visitors. The Electricity (Safety) Regulations 2010 specify a range of documentation that should be kept on site to record electrical work on electrical systems (including electrical system maintenance). Take a look at your record management practices to ensure they’re up-to-date and compliant.

# Storage and handling of environmentally hazardous substances

All companies have a responsibility to make sure that any environmentally hazardous substances are handled and stored correctly.

## The Environmental Protection Authority

The Environmental Protection Authority (EPA) administers, monitors and reports on the effectiveness of the Hazardous Substances and New Organisms (HSNO) Act. They also compile and report data on incidents involving hazardous substances and new organisms. The HSNO Act allows the Authority to conduct inquiries into any incident.

"Make sure that all hazardous substances are labelled correctly."

## Keys to best practice handling and storage of hazardous substances

- Store all hazardous substances correctly.
- Make sure that all hazardous substances are labelled correctly.
- Segregate substances when required.
- Use correct procedures when dispensing.
- Isolate exposures with ventilators at source.
- Make sure you use the right safety equipment.
- Have emergency plans in place.
- Always dispose of hazardous waste in accordance with the law.

Note that the HSNO Act requires personnel handling or using hazardous substances in quantities above set trigger limit levels, or regulated degrees of hazard, to be certified as ‘Approved Handlers’. You should also check with the EPA whether you require a HSNO Hazardous Substances Location Test Certificate.

# Risk management programmes

## Good housekeeping plans

Keeping premises tidy is vital to reducing risk. Having a good housekeeping plan (and regularly carrying it out) may save your business from a major loss. Regular housekeeping not only reduces risk in your business, but also helps to create an efficient workplace and a pleasant environment for staff and customers.

## General maintenance plan

Your maintenance plan will relate directly to your type of business and usually includes all of your machinery and equipment. Note that your equipment also includes all of your office equipment such as computers and communication devices.

Remember that your general maintenance plan should also include your building. Regardless of whether you are a tenant or building owner, it's important to have a plan that regularly checks all areas of your building e.g. gutter cleaning (to prevent flooding) and roof inspections (in case of losses due to high winds and/or heavy rain).

## Health and safety

New Zealand's health and safety system has been completely reformed. The Pike River Mine disaster was the catalyst for the programme of change that created the Health and Safety at Work Act 2015. The aim of the law is to reduce the number of New Zealanders killed or hurt at work.

One of the key aspects of the legislation is the allocation of duty and responsibility. The primary duty for ensuring workplace health and safety is allocated to a 'Person Conducting a Business or Undertaking', a PCBU. Business owners are considered to be a PCBU and will have immediate responsibilities to the health and safety of workers directly engaged by them and others who have contact with the business.

The law says a PCBU needs to take reasonably practical steps to manage health and safety risks. How this is done will depend on: how seriously someone could get hurt, the chance of an accident happening and how much control there is over preventing it.

See **www.business.govt.nz/worksafe** for further information.

## Rubbish skips and wheelie bins

Every year the New Zealand Fire Service attends hundreds of fires that have spread from nearby rubbish skips and bins. These fires are almost always deliberately lit and result in significant costs in property loss, injuries and loss of business. In dollar terms the indirect economic loss is about $100m annually. Rubbish stored in skips or bins near buildings is an easy target for opportunists seeking to start a fire. These fires can quickly spread to your building, plant and other equipment associated with your business, threatening your trade temporarily or permanently.

The New Zealand Fire Service has provided a nine point checklist to help reduce the risk of rubbish fires damaging your business as follows:

1. Locate bins well away from buildings.
2. Store combustible waste in metal rubbish containers with self closing lids.
3. Products and materials that need to be stored outside must be in limited pile sizes and well away from buildings, inside and outside the boundary fences.
4. Arrange to have waste collected weekly to minimise rubbish on site at weekends.
5. Ensure public access to your building and yards is limited.
6. Define safe designated smoking areas for staff.
7. Lock bin lids when not in use.
8. Install and maintain adequate perimeter fencing and lock and secure property at night.
9. Provide security lighting and surveillance equipment.

*Source: 'Preventing rubbish fires. Fire safety advice for businesses'. NZ Fire Service FS1522*

## Wooden pallet storage

It is extremely important that wooden pallets are not stored against a building. NZI recommends they are stored at least 10 metres away from any building. Fires are often deliberately lit in pallets by arsonists.

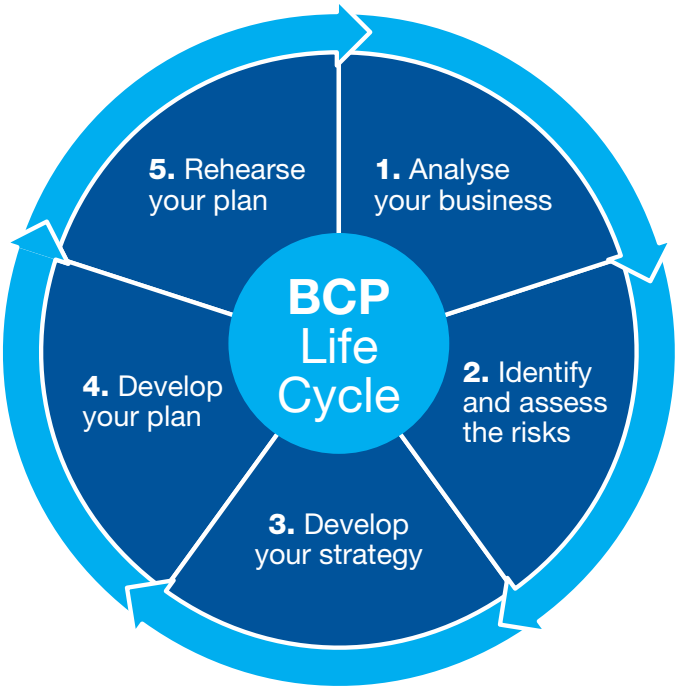
When pallets are stored too close to commercial premises they threaten the safety of the building should a fire start. If the 10 metre rule cannot be physically met you should store idle pallets as far away as practical from the building.

## Smoking policy and controls

We are constantly reminded that smoking is a health hazard. However, it's also important to remember that smoking can cause fires leading to loss of life and property damage.

Make it clear to staff and visitors what the smoking policy is and why it has been implemented. While signage can be instructive, it is not enough to ensure that smoking will be appropriately controlled. Make sure your smoking policy is included in your site induction training.

When visitors sign-in are they given instructions on your smoking policy? If you permit smoking at your facility it's important that you provide suitable controls to prevent fire. Designated smoking areas are a common means of providing such a control. Make sure that smoking areas are fitted with ash trays and are located well away from materials that can burn, including vegetation.




# Developing a business continuity plan

A business continuity plan (BCP) is one of the best investments any business can make and is one of the most critical components of any recovery strategy. A BCP details how to get your business back on track after a disruption in the most effective way possible. The main objective of a BCP is to recover all business critical processes and minimise the impact for employees, customers and your reputation.

From the Canterbury earthquakes to storms and flooding in Wellington and tornadoes in Auckland, companies that proactively consider how to respond to events are the first to get back to business, often at the expense of competitors. A predefined BCP, combined with the proper insurance coverage, maximises the chance of a successful recovery by eliminating hasty decision-making under stressful conditions.

## Withstanding a major loss event

Did you know that 25 percent of businesses do not reopen following a major loss event? This is because it doesn't take a major catastrophe to shut down a business. In fact, seemingly minor disruptions can often cause significant damage such as power failures, broken water pipes, or loss of computer data etc.

## What's in a business continuity plan?

A business continuity plan should contain all of the information you need to get your business up and running again after an incident or crisis. The size and complexity of the plan will depend on your business and good practice suggests it should form part of your overall business plan.

Generally a BCP will include a list of roles and responsibilities during an incident, an emergency response checklist and key contacts for all staff and for contractors and suppliers, including out-of-hours numbers.

## Develop, implement and maintain

Developing the plan is the obvious first step, but implementing it is essential. Appointing a person who will ensure that a BCP is created, developed, tested and maintained is your best approach to this business critical activity.

> "Given that twenty five percent of businesses do not reopen following a major loss event, a business continuity plan is one of the best investments you can make."

*These guidelines are of a general nature only. They are not intended to be a comprehensive list of all the risk management steps you should consider taking to reduce the risk of damage and financial loss, nor is it intended to be legal advice.

# Self-assessment risk management checklist

| Fire safety equipment | Yes | No |
|---|---|---|
| Do you have fire extinguishers or hose reels? | ☐ | ☐ |
| Is the annual servicing up-to-date? (Check the inspection tag on the extinguisher/hose reel) | ☐ | ☐ |
| Have you and your staff been trained to use fire extinguishers? | ☐ | ☐ |
| If you have a fire sprinkler system, is it serviced regularly? | ☐ | ☐ |
| If you have a fire alarm system, is it serviced regularly? | ☐ | ☐ |
| **Hot work fire safety** | **Yes** | **No** |
| Do you have safety procedures for all hot work (e.g. welding, flame cutting, disc cutting)? | ☐ | ☐ |
| Do you have copies of NZI Hot Work Permit Cards? | ☐ | ☐ |
| **Flooding** | **Yes** | **No** |
| Do you have a regular maintenance plan for cleaning gutters and drains? | ☐ | ☐ |
| Is your stock kept off the floor? | ☐ | ☐ |
| Do you have a recovery plan in case of flooding? | ☐ | ☐ |
| **Security** | **Yes** | **No** |
| Do you have a visitor sign-in register? | ☐ | ☐ |
| Do you have CCTV surveillance? | ☐ | ☐ |
| Do you have an intruder alarm? | ☐ | ☐ |
| Has the intruder alarm been serviced recently? | ☐ | ☐ |
| Is the intruder alarm monitored by an external monitoring company? | ☐ | ☐ |
| Do you have security patrols? | ☐ | ☐ |
| Do you have security locks on doors? | ☐ | ☐ |
| Do you have security locks on windows? | ☐ | ☐ |
| Are your valuable items and cash stored in a safe? | ☐ | ☐ |
| **Warehouse worker safety** | **Yes** | **No** |
| Do you have warehouse worker safety procedures for loading docks, forklifts, material storage, manual lifting and handling? | ☐ | ☐ |
| Do you have a regular training programme for all forklift operators? | ☐ | ☐ |
| Are your forklifts regularly inspected and maintained – including tyres? | ☐ | ☐ |
| Do you have a general ergonomics training programme for lifting and handling stored products? | ☐ | ☐ |
| Do you have a regular inspection and cleaning programme to eliminate loose or wet material on floors | ☐ | ☐ |

| Material storage | Yes | No |
|---|---|---|
| Are your shelving and racking systems designed and maintained to withstand the effects of an earthquake? | ☐ | ☐ |
| Are your heavy items stored below two metres in open shelving? | ☐ | ☐ |
| Have you checked your storage procedures and read the Department of Labour 'Stacking and Shelving Hazards' factsheet? | ☐ | ☐ |
| **Battery safety** | **Yes** | **No** |
| Do you have a designated area for safe battery charging with correct ventilation and safety checklist? | ☐ | ☐ |
| Do you have staff members trained in battery charging? | ☐ | ☐ |
| Has your electric forklift or lift vehicle been inspected and serviced within the past 12 months? | ☐ | ☐ |
| **Electrical safety** | **Yes** | **No** |
| Have you had an electrical safety check by a registered electrician in the last 12 months? | ☐ | ☐ |
| Do you conduct an annual visual inspection and thermographic testing of the electrical system?<br>Test to be in accordance with Section 4 and Section 5.8 of AS/NZS 3019:2007. The inspection needs to consider all electrical wiring, lighting, other fittings and large electrical machinery items and be verified by the contractor completing and returning Form 1 and Form 2 to NZI and your broker. | ☐ | ☐ |
| **Storage and handling of environmentally hazardous substances** | **Yes** | **No** |
| Do you have any hazardous substances on site? | ☐ | ☐ |
| Are the hazardous substances stored in a hazardous goods store? | ☐ | ☐ |
| Do you have HSNO-approved handlers for hazardous substances? | ☐ | ☐ |
| Do you require a HSNO hazardous substances Location Test Certificate? | ☐ | ☐ |
| **Risk management programmes** | **Yes** | **No** |
| Do you have a housekeeping programme? | ☐ | ☐ |
| Do you have a building maintenance programme? | ☐ | ☐ |
| Do you have a smoking control programme? | ☐ | ☐ |
| Do you have a waste management programme? | ☐ | ☐ |
| Do you have a health and safety programme? | ☐ | ☐ |
| Do you have a business continuity plan? | ☐ | ☐ |

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