



# ***Laundries risk management guide***

*Helping our customers stay in business by reducing risk*

**NZI Risk Solutions™**

## **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 to develop a series of guides covering a range of risk management issues to help you take control of your business.***





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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***

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 laundry business, what are some of the risks I need to be aware of?***

The key risk for laundry businesses is fire. Every year the New Zealand Fire Service is called out to help contain fires that occur in laundries and more often than not they are caused by spontaneous combustion of laundry items. Other important risk areas include security and electrical safety. 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 pages include information about the most common areas of risk associated with laundry businesses as well as more general risks all businesses should be aware of.

### ***Fire safety***

#### ***Spontaneous combustion***

Spontaneous combustion is a critical risk factor for commercial laundries. It's a by-product of spontaneous heating, which occurs when linens increase in temperature without drawing heat from the surroundings.

By the very nature of the laundry industry, linens (especially those with high cotton content) are combustible either as cloth or lint. Cotton, for example, begins to oxidise (or decay) at a surface temperature of 95°C, with oxidation creating its own heat. If linens are not allowed to cool down after the drying process and are placed in carts (or folded and stored tightly while they are hot and moist), oxidation continues to build on itself until the material reaches critical surface temperature and self-ignites.

Contaminates in fabric are another ignition source in laundries. They are present either before washing or after, with traces such as cleaning products, oils or fats left in the fabric. Even freshly washed linens can still hold enough traces of contaminants to add fuel to the oxidation process that causes spontaneous ignition.

#### ***Stamping out ignition sources***

The heat from the dryer alone is rarely the cause of spontaneous combustion. Modern dryers need to meet safety standards and these generally address issues such as a maximum operating temperature, which is well below the critical surface temperature for textiles. Our analysis of laundry fires has led to the conclusion that it's not dryer heat alone, but spontaneous ignition that can cause the majority of laundry fires.

Most dryers have high temperature limitation switches. Some have moisture sensors while others have heat detectors, pre-programmed cool down cycles and temperature settings for each type of fabric. What is common to all dryer fires is that the washing process is often insufficient to remove all of the contaminants. This, coupled with the human factor of rushing the cool down process to meet deadlines or leaving laundry in the dryer, can lead to spontaneous ignition.

Fires associated with laundry removed from the dryer are generally due to: insufficient cool down time, linens not being fully cleaned and/or containing residual moisture. When laundry is piled or stacked together it is not able to dissipate its heat. Because it is hot, moist and contains residual contaminants, the oxidizing process continues. If the mass of laundry is large enough to insulate the oxidizing reaction, it may ignite a fire.



### Spontaneous ignition may occur:

1. when laundry is waiting in carts or baskets for processing
2. during the dryer cool down process
3. when laundry is removed from the dryer awaiting processing or distribution.

### Heat sources in laundries that contribute to spontaneous ignition include:

1. Heat from oxidation before the laundering process when linen is piled in carts.
2. Heat from the dryer.
3. Ambient heat of linens after drying when piled in carts without sufficient cool down.
4. Heat generated by linens stored in a constantly warm place, such as a sunny area, which adds to retained heat from the drying process.
5. Stacks or piles of linen still warm and moist from folding.

***“If linens are not allowed to cool down after the drying process and are placed in carts (or folded and stored tightly while they are hot and moist), oxidation continues to build on itself until the material reaches critical surface temperature and self-ignites.”***

### Some measures to help prevent spontaneous ignition fires in laundries

No matter how obvious it may seem, the following steps should be taken to reduce the incidence of spontaneous ignition fires.

#### Eliminate fuel (contaminants)

1. Evaluate wash temperatures and detergent formulations to ensure optimum removal of contaminants.

#### Eliminate heat

1. Train staff about spontaneous ignition and those contaminants susceptible to oxidizing or self-heating.
2. Develop dryer maintenance schedules to include regular lint removal and keep records.

#### Eliminate oxidation

1. Train dryer operators about operating temperatures and cool down times for each type of fabric.



### **Clothes dryer safety tips**

Below are some safety tips to be aware of when using clothes dryers. While this advice is focused on commercial laundry operators, most of it can be applied to dryers used in a residential setting.

Whatever type of clothes dryer you have, always remember to:

- ▶ read the manufacturer's instructions before first use and keep them for future reference.
- ▶ clean the lint filter before you use it and never allow lint to accumulate. Lint build-up can cause a fire by increasing the temperature in the drum.
- ▶ avoid placing items that have been spotted or soaked with cooking oil in a clothes dryer because they can ignite spontaneously when exposed to heat. If you cannot avoid drying fabrics that contain oil, ensure they are first washed in hot water with extra detergent. The same goes for items that have been cleaned, washed, soaked or spotted with petrol, dry-cleaning fluids or other flammable substances. These should not be placed in a dryer.
- ▶ complete the cool-down cycle to reduce the temperature of laundry items. Never pile or stack items while they are hot, and always remember to spread them out after you've removed them from the dryer to dissipate the heat.

- ▶ avoid drying items containing foam rubber or rubber-like materials because they can ignite spontaneously when heated. This means rubber-backed items, clothes fitted with rubber pads, pillows and rubber-coated shoes should not be placed in a dryer. Plastic items like shower caps are also not suitable for a dryer.

Source: Energy Safety website: [www.energysafety.govt.nz/consumer/safe-living-with-electricity/electrical-equipment-and-appliances/clothes-dryers](http://www.energysafety.govt.nz/consumer/safe-living-with-electricity/electrical-equipment-and-appliances/clothes-dryers)

### **Keeping your dryer clean is essential**

#### **Keep dryers as lint-free as possible**

Keeping the dryer lint-free will not only significantly reduce the fire hazard, but also help save money as the dryer will run more efficiently and last longer. Some tips include:

1. Clean the lint trap after each load and before starting the dryer. Even if there is just a small amount of lint in the trap, clean it anyway. This is a good habit to get into.
2. Use a lint brush or vacuum attachment to remove lint from under the lint trap and other accessible places on a regular basis.
3. Every one to three years, depending on usage, have the dryer taken apart and thoroughly cleaned by a qualified service technician.





### Keep dryer ducts in good condition

Disconnect, clean and inspect the dryer exhaust duct on a regular basis, or hire a professional company to clean the dryer duct. This will reduce the fire hazard and increase the dryer's efficiency and lifespan.

### Warning signs that a dryer may need servicing

If a dryer is displaying any of the following signs, it should be assessed by a qualified technician:

- ▶ The dryer is producing heat, but the time it takes to dry clothes takes long and longer.
- ▶ When a cycle is finished the clothes are still damp.
- ▶ After a cycle is complete the clothes are noticeably hotter than usual.
- ▶ The outdoor flapper on the vent hood remains closed when the dryer is running.

***“Clean the lint trap after each load and before starting the dryer. Even if there is just a small amount of lint in the trap, clean it anyway. This is a good habit to get into.”***



## **General fire safety**

Fire represents a significant risk for any business, but particularly laundries with their constant use of dryers and the risk of spontaneous combustion. The reality is that the only proven method of controlling a laundry fire is with a properly designed and maintained automatic sprinkler system. However, it's important to have hand-operated fire extinguishers available as well.

### ***Prepare for possible fires***

1. Best practice fire safety for laundry buildings includes sprinkler systems and monitored fire detection alarms.
2. Regularly maintain fire extinguishers and train staff in their use annually.
3. Have a plan to react to a possible fire and train staff regularly in its implementation.
4. Keep records of your plan.

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***

The New Zealand Standard 4503:2005 – Hand Operated Installation and Maintenance of 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 fire 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.



### **Health and safety tips for commercial laundry workers**

Working in a commercial laundry can include hazards such as handling laundry soiled with biological material and possible contact with potentially dangerous chemicals. Recognising the risks involved, we have compiled the following tips to help protect laundry workers in all types of commercial environments:

- ▶ If provided, read and ensure you understand the material safety data sheets accompanying commercial laundry products.
- ▶ Always keep laundry products in their original containers and keep them closed after use.
- ▶ Wear personal protective equipment, including protective clothing, gloves and safety glasses.
- ▶ Know what to do in case of an accident. Keep the New Zealand National Poisons Centre phone number (0800 764 766) handy, along with the product manufacturer's emergency phone number.

### **Safety tips for using commercial washing machines**

- ▶ Always read the manufacturer's operating instructions before using the washing machine and ensure the machine is set up in accordance with the instructions.

- ▶ Equally, always follow the instructions and warnings on the fabric and washing products. Do not add petrol, dry-cleaning solvents or other flammable or explosive substances to the wash water; these substances give off vapours that could ignite or explode.
- ▶ To minimise the risk of fire, electrical shock and injury, the machine must be properly earthed or grounded. Remember that although the machine may be in the 'off' position, there is still electrical power to the switch supply terminals.
- ▶ Don't get rid of safety labels. Failure to maintain legible safety labels could result in injury to the operator or service technician.
- ▶ If the machine operates with coins or tokens, the owner or installer must provide a remote-located emergency stop device that is easily accessible for users.
- ▶ Make sure water connections have a shut-off valve and that hose connections are tight. Close the shut-off valves at the end of each day and ensure any water leaks are repaired by a qualified technician immediately.
- ▶ Keep all cleaning chemicals out of the reach of children, preferably in a locked cabinet.
- ▶ Keep the washing machine surface and the area around the machine clean and clear of combustible or flammable products.
- ▶ All tests and repairs should be performed by a qualified service technician.



## 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.

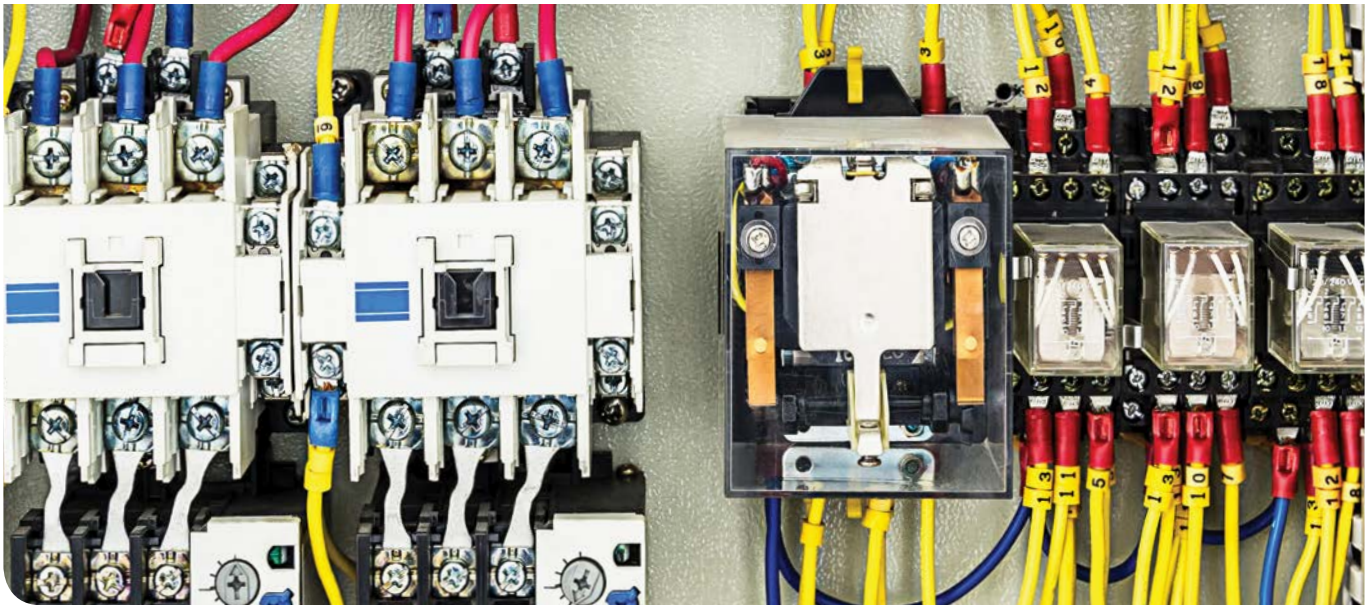
## Safes

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.

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





## **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](http://www.energysafety.govt.nz)

### ***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.

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



### **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](http://www.business.govt.nz/worksafe) for further information.**



## 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 and self-assessment risk management checklist 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?	<input type="checkbox"/>	<input type="checkbox"/>
Is the annual servicing up-to-date? (Check the inspection tag on the extinguisher/hose reel)	<input type="checkbox"/>	<input type="checkbox"/>
Have you and your staff been trained to use fire extinguishers?	<input type="checkbox"/>	<input type="checkbox"/>
If you have a fire sprinkler system, is it serviced regularly?	<input type="checkbox"/>	<input type="checkbox"/>
If you have a fire alarm system, is it serviced regularly?	<input type="checkbox"/>	<input type="checkbox"/>

### Dryer safety

	Yes	No
Are the dryer lint filters cleaned before use?	<input type="checkbox"/>	<input type="checkbox"/>
Do you check that linen and clothing items have not been spotted or soaked in oil or other flammable substances before drying?	<input type="checkbox"/>	<input type="checkbox"/>
Do you check that no rubber-like materials are placed in the dryer?	<input type="checkbox"/>	<input type="checkbox"/>
Do you ensure the cool down cycle has been completed?	<input type="checkbox"/>	<input type="checkbox"/>
Do you have a regular maintenance programme for dryers and exhaust ducts?	<input type="checkbox"/>	<input type="checkbox"/>

### Laundry worker safety

	Yes	No
Do your laundry workers wear personal protective equipment at all times?	<input type="checkbox"/>	<input type="checkbox"/>
Do you have procedures for the safe use of laundry products?	<input type="checkbox"/>	<input type="checkbox"/>
Is the National Poisons Centre phone number prominently displayed?	<input type="checkbox"/>	<input type="checkbox"/>
Do you train staff about emergency procedures in case of an accident?	<input type="checkbox"/>	<input type="checkbox"/>

### Security

	Yes	No
Do you have a visitor sign-in register?	<input type="checkbox"/>	<input type="checkbox"/>
Do you have CCTV surveillance?	<input type="checkbox"/>	<input type="checkbox"/>
Do you have an intruder alarm?	<input type="checkbox"/>	<input type="checkbox"/>
Has the intruder alarm been serviced recently?	<input type="checkbox"/>	<input type="checkbox"/>
Is the intruder alarm monitored by an external monitoring company?	<input type="checkbox"/>	<input type="checkbox"/>
Do you have security patrols?	<input type="checkbox"/>	<input type="checkbox"/>
Do you have security locks on doors?	<input type="checkbox"/>	<input type="checkbox"/>
Do you have security locks on windows?	<input type="checkbox"/>	<input type="checkbox"/>
Are your valuable items and cash stored in a safe?	<input type="checkbox"/>	<input type="checkbox"/>

### Electrical safety

	Yes	No
Have you had an electrical safety check by a registered electrician in the last 12 months?	<input type="checkbox"/>	<input type="checkbox"/>
Do you have an electrical installation Certificate of Periodic Verification?	<input type="checkbox"/>	<input type="checkbox"/>

### Risk management programmes

	Yes	No
Do you have a housekeeping programme?	<input type="checkbox"/>	<input type="checkbox"/>
Do you have a building maintenance programme?	<input type="checkbox"/>	<input type="checkbox"/>
Do you have a smoking control programme?	<input type="checkbox"/>	<input type="checkbox"/>
Do you have a waste management programme?	<input type="checkbox"/>	<input type="checkbox"/>
Do you have a health and safety programme?	<input type="checkbox"/>	<input type="checkbox"/>
Do you have a business continuity plan?	<input type="checkbox"/>	<input type="checkbox"/>

***NZI Risk Solutions™***



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