

# Wineries risk management guide



NZI Risk Solutions™

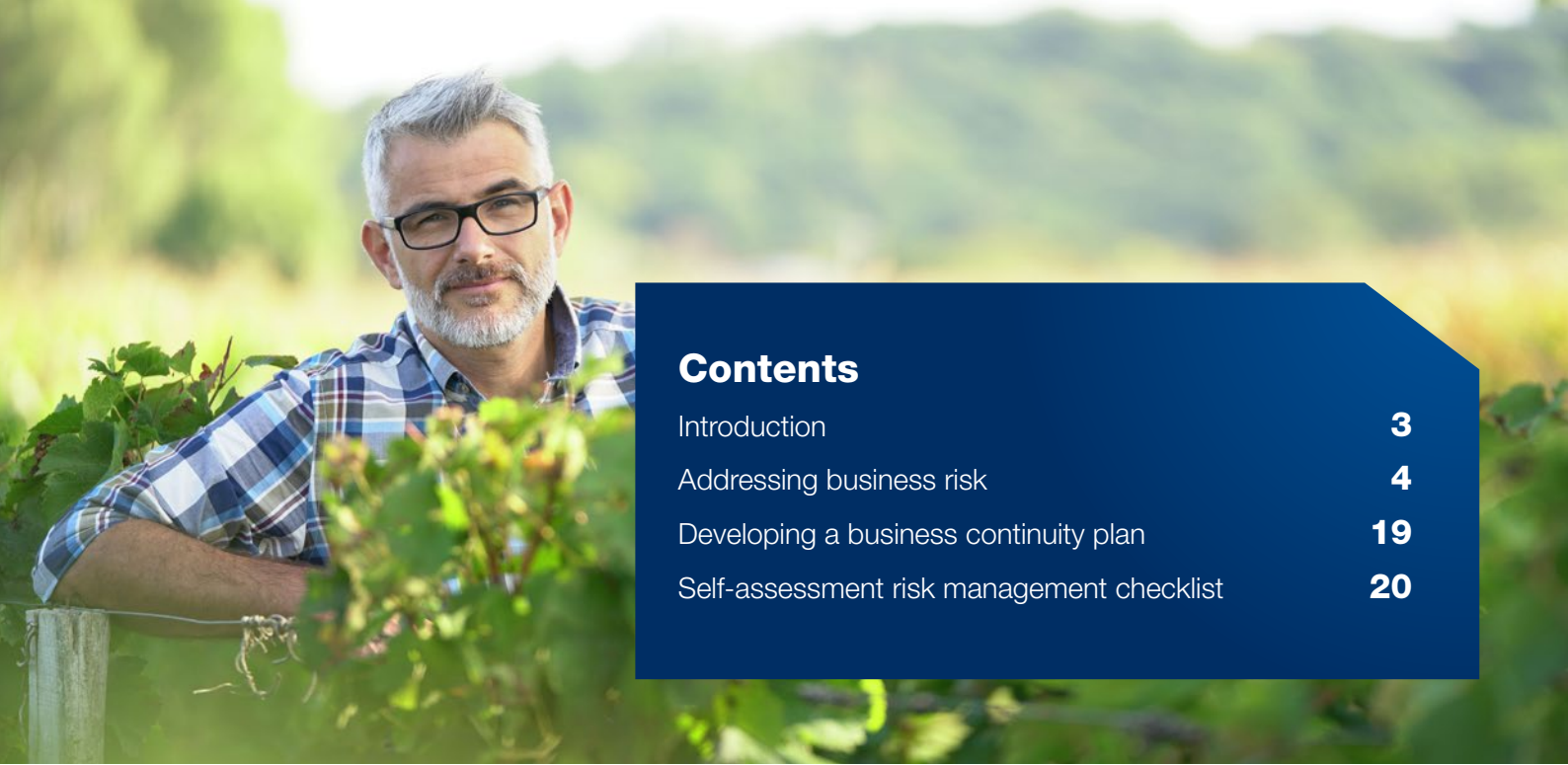
'Helping our customers stay  
in business by reducing risk'



# 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 assets.

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

The key risks for wineries are likely to be business disruption due to fire, flood or earthquakes, particularly in regard to restraining wine tanks in seismic events. 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. NZI have a suite of best practice guides we would be happy to share with you.

## 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 wineries and sets some guidelines around what NZI considers to be industry best practice.



## Fire safety

### Fire in rural areas

Fire continues to be one of the major types of insurance losses in New Zealand. Fires in rural areas present particular challenges for rural businesses, including wineries. The New Zealand Fire Service's Rural Living<sup>1</sup> brochure outlines safety tips for rural residents that are equally applicable to businesses.

There is a higher risk of losing more property from fire in rural areas because fires are often not noticed as quickly and response times can take longer, particularly if the area is serviced by volunteer brigades. These factors, coupled with challenging road conditions – especially during winter months – and an inadequate water supply, can delay quick intervention.

There are specific things rural dwellers and businesses need to consider in order to make their properties safer. These include:

- ▶ Signposting your property. Rural property numbers are invaluable for a quick response by emergency vehicles.
- ▶ Do emergency vehicles have easy access to the site?
- ▶ Is there an adequate water supply with fire and emergency hose connections for use by emergency services?
- ▶ Can portable pumps be positioned within seven metres of open water supplies?
- ▶ Is your firewood stacked away from your house and/or external buildings?

Source: 'Rural Living' – New Zealand Fire Service [www.fire.org.nz](http://www.fire.org.nz)

## General fire safety

### 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. It is important to use the right type of extinguisher for the right type of fire.

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



## Wine storage tanks and tank infrastructure in seismic events

### Background

New Zealand is seismically active, and in recent times, the wine industry has suffered devastating and disruptive interruption, including damage to wine making infrastructure, wine tanks, bulk stored wine and tank infrastructure.

Damage is typically more severe on larger tanks, those not on adequately strong legs, or where the gantry and service connections are not seismically isolated from the tanks.

Through its network of Risk Consultants and industry expertise, NZI can work with you to improve the resiliency of your tanks and infrastructure.

### Service infrastructure and gentries

After an earthquake, damage to supporting infrastructure including gantry walkways, electrical works, access platforms and pipes can cause business interruption to wineries. Wine can be lost due to pipework being damaged, and damage to both the accessway and tank can be caused if gantry accessways are unable to move independently of the tanks.

Auxiliary infrastructure should be retrofitted with flexible couplings and a seismic gap between gentries and tanks created to allow them to move independently of the tank. This will minimise the likelihood of damage and drastically reduce the potential damage to your infrastructure.

### Tanks on legs

Tanks on legs are at risk of damage during an earthquake, with common sources of damage being buckling of adjustable feet, failure of bracing or support frames, tearing of the tank wall at connections to the frame, and buckling of the tank walls. You can reduce the likelihood of this by bracing the legs from top to bottom in both directions, strengthening the connection between the tank and the leg, securing the tank to its foundation, and retrofitting existing feet with a large baseplate. These simple things can help to make the tanks more resilient and reduce the likelihood of damage during an earthquake.

For tanks larger than 20,000 litres or those that are critical to your wine making process, we ask that you engage the expertise of a structural engineer proficient in seismic design to assess the resiliency of the tanks, that the design is in line with NZS1170.5 and the New Zealand Society for Earthquake Engineering Guideline on Seismic Design of Storage Tanks. Following the assessment, tanks should be strengthened to a minimum R Factor (Return Period Factor) of 0.35 (Importance Level 1 with an expected design working life of 25 years) and common sources of damage addressed. All new tanks to be a minimum of  $R = 1.0$ .



### Tanks on plinths or skirts

Tanks on plinths or skirts are generally made of stainless steel and should be positioned on a concrete surface. Tanks on plinths or with skirts are prone to toppling over, and also suffer from 'elephant foot and diamond shape buckling' or guttering of the base, as the loads are transferred to the foundation. Strengthening the skirt and/or base to provide a clear load path for lateral loads can drastically improve the resiliency of the tanks and minimise the likelihood of an interruption to your business. A system to hold the tanks down to the foundation, that can yield or allow them to rock, helps dissipate energy generated during an earthquake protecting the tank. Suppliers such as ONGUARD, Crown and others can help to specify and install these systems.

For tanks larger than 20,000 litres or critical to your wine making process, we ask that you engage the expertise of a structural engineer proficient in seismic design to assess the resiliency of the tanks and that the design is in line with NZS1170.5 and the New Zealand Society for Earthquake Engineering Guideline on Seismic Design of Storage Tanks. Following the assessment, tanks should be strengthened to a minimum R Factor (Return Period Factor) of 0.35, increasing to 0.5 for tanks over 90,000 litres (Importance Level 2 and working life of 50 years respectively). All new tanks to be a minimum of R = 1.0.

"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."



## 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 Risk Consultants. This will help you 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.

Your NZI Risk Consultant can supply you with more detail if required, or ask your insurance broker.



## Product 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.

### 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.

### Bulk storage security

Losses have occurred where suspected vandalism has resulted in a loss of product from unsecured tank farms. We ask that you ensure all valves have adequate locking arrangements including an employee key register.

### 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.



## 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.

For more information, ask your NZI Risk Consultant or Insurance broker for a copy of "Electrical Safety Inspections."



## 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.

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).

### Rubbish skips and wheelie bins

Every year Fire and Emergency New Zealand 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.

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

- ▶ Locate bins away from your building.
- ▶ Store flammable waste in metal rubbish containers with self-closing lids.
- ▶ Some products and materials need to be stored outside. Limit the pile size and keep them well away from buildings both inside and outside any boundary fences.
- ▶ Define safe designated smoking areas for staff or tenants.
- ▶ Lock bin lids when you're not using them.
- ▶ Arrange to have waste collected weekly to reduce rubbish on site at weekends.
- ▶ Limit public access to your building and yards.
- ▶ Install and maintain adequate perimeter fencing so you can lock and secure the property at night.
- ▶ Install and maintain security lighting and surveillance equipment.

*Source: 'Preventing rubbish fires. Fire and Emergency New Zealand*

### 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 as we often see fires 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.



## 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.

Your NZI Risk Consultant can help you put together an outline Business Continuity Plan.

"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

<b>Fire safety equipment</b>	<b>Yes</b>	<b>No</b>
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"/>
<b>Rural fire safety</b>	<b>Yes</b>	<b>No</b>
Is your rural property numbered and well signposted?	<input type="checkbox"/>	<input type="checkbox"/>
Do emergency vehicles have easy access to your site?	<input type="checkbox"/>	<input type="checkbox"/>
Is there adequate water supply on your site for emergency fire services?	<input type="checkbox"/>	<input type="checkbox"/>
Can portable pumps be positioned within seven metres of open water supply?	<input type="checkbox"/>	<input type="checkbox"/>
Is your firewood stacked away from your home and/or external buildings?	<input type="checkbox"/>	<input type="checkbox"/>
<b>Hot work fire safety</b>	<b>Yes</b>	<b>No</b>
Do you have safety procedures for all hot work (e.g. welding, flame cutting, disc cutting)?	<input type="checkbox"/>	<input type="checkbox"/>
Do you have copies of NZI Hot Work Permit Cards?	<input type="checkbox"/>	<input type="checkbox"/>
<b>Flooding</b>	<b>Yes</b>	<b>No</b>
Do you have a regular maintenance plan for cleaning gutters and drains?	<input type="checkbox"/>	<input type="checkbox"/>
Is your stock kept off the floor?	<input type="checkbox"/>	<input type="checkbox"/>
Do you have a recovery plan in case of flooding?	<input type="checkbox"/>	<input type="checkbox"/>
<b>Product storage</b>	<b>Yes</b>	<b>No</b>
Are your shelving and racking systems designed and maintained to withstand the effects of an earthquake?	<input type="checkbox"/>	<input type="checkbox"/>
Are your heavy items stored below two metres in open shelving?	<input type="checkbox"/>	<input type="checkbox"/>
Have you checked your storage procedures and read the Department of Labour 'Stacking and Shelving Hazards' factsheet?	<input type="checkbox"/>	<input type="checkbox"/>
<b>Electrical safety</b>	<b>Yes</b>	<b>No</b>
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"/>

<b>Risk management programmes</b>	<b>Yes</b>	<b>No</b>
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"/>
<b>Security</b>	<b>Yes</b>	<b>No</b>
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"/>

If you answered 'no' to any of these, or want further information, talk to your broker or NZI Risk Consultant.

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