WORKING TOGETHER TO MANAGE BUSINESS RISK

Tornados

Assessing the risks without going into a spin

A tornado is a narrow, violently rotating column of air that extends downwards to the ground from the base of a thunderstorm. Thankfully not all thunderstorms create tornados. When they do it's only when the rotating air comes close or touches the ground that it becomes a hazard to people and property. It's worth knowing the risks as these events can be serious.

What kind of tornados does New Zealand experience?

Thankfully, tornados here are relatively small and weak in comparison to those in other parts of the world. They are usually tens of metres wide, have tracks a few kilometres long and last only a few minutes. They should never be underestimated though as damage, while localised, can be significant – and sadly deaths have occurred.

Damage is usually caused by the suction effect of the moving air near the ground and projectile damage from flying debris.

Weather watch-outs

- Stay aware of thunderstorm warnings and watches, which are usually published by the MetService.
- Create an emergency plan for you and your staff to follow in the event of a tornado – and make sure everyone knows what to do.
- Identify safe places within the building to shelter.
- Think about putting a business continuity plan in place, including an up-to-date asset register.
- Avoid data loss by having an offsite data back-up plan outside of your local area or in the cloud.
- Keep important paper documents and records e.g. operating /lease records, financial information etc. in a waterproof/fireproof safe which is secured to the building floor or walls.
- Place computer servers and vital equipment in tornado-resistant areas of the building — somewhere that offers protection from flying debris and excessive wind. Any part of the building which is brick or concrete or areas that have been strengthened with additional bracing, framing or ties are ideal.

Building up resilience

In terms of building protections, the key is "keep it out." You might need professionals to help identify and address any building weaknesses, including:

- Identifying any building weak spots such as the roof, skylights, doors, windows, cladding, canopies etc. If you own the building use experts for guidance here. If you lease the premises have a chat with your building owner to work through any vulnerabilities and fix any weaknesses.
- Make sure the building itself is securely braced to the foundations.
- Reinforce and anchor doors, windows and shutters where possible. If these are damaged by the wind gusts or debris and the full force of the wind enters the building, it pressurises the walls and roof which can cause serious damage.
- Add stiffeners or additional bracing to garage or roller doors.
- Install impact resistant window glass wherever possible, and permanent shutters to cover windows.
- Ensure the roof is in good condition. An easy way to strengthen them is to install additional bracing, fitting additional fasteners and ties to reinforce the connection between roof and building walls.
- Add supports and additional bracing to canopies, awnings and carports to strengthen against wind load and uplift.

Infrastructure insights

Non-structural systems can also be damaged, these include things such as, mechanical systems, fuel tanks, electrical, communication and lightening protection systems, utility connections, antennas and other roof mounted equipment. So it pays to have a plan in place – think about:

- Making sure outside infrastructure such as signage, fences, flagpoles are secure and are designed to withstand the expected wind loads and uplift.
- Regularly checking that the building is kept in good condition and well maintained. Inspect and repair loose or damaged wall cladding, soffits and facias.
- Keep trees and shrubbery maintained. In particular make trees more wind resistant by removing diseased or damaged limbs, and strategically remove branches so that wind can blow through.
- Remove any debris or unsecured items from around the building. This might include woodpiles, idle pallets, containers and drums, outside furniture, stock, equipment etc. Loose items can become missiles in strong winds.
- Move vehicles under cover if severe weather threatens.

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