

# Loss Prevention Standards

## External and Internal Third Party Exposures – Property Protection

### Introduction

Understanding external and internal third party exposures is an important element of the risk assessment process. Many serious losses originate from outside the perimeter of a premises, or from those within shared premises that you have no control over. For example, consider the Great Fire of London, where hundreds of timber and thatched properties in close proximity to each other were lost or damaged due to a spreading fire. Fortunately, such extreme examples should not occur in the modern age. However, every day there are many losses where fire, heat and smoke, etc., which emanate from sources outside of an individual's direct control, cause serious damage and disruption to both their own and other nearby premises.



When assessing external and internal third party exposures, the following issues should be considered for all elevations which surround your building(s):

- Building height of your facility versus the building heights of exposing buildings
- Proximity/clear distance to other premises
- Construction of all buildings exposing each other;
  - Combustibility and fire resistance of external walls and roofs
- Fire and smoke compartmentation of any internal exposures or those parties who share occupancy or adjoin your building
- Nature of the activities within the exposing buildings
- Proximity to yard activities and external storage arrangements including such things as waste bins, trees, idle timber pallets, car parking, etc.
- Automatic detection and protection systems
- Atmospheric conditions and wind direction
- Location of air intakes/ventilation system openings and their internal networks
- Nature of windows on your building and whether they are kept open
- Nature of your building construction and eaves
- Fire, heat and smoke resilience of your operations/occupancy
- Time of day and year

**Note:** With many of the variables involved in understanding this exposure, having a good working relationship with your neighbours helps to assemble an accurate overall picture.

### Building Height and Proximity to Other Premises

The distance, height and construction of nearby buildings will have an impact on the external exposure risk to your site. A single storey building located 20m away poses a very different exposure risk to a multi-storey building a similar distance away, or to one directly adjacent to you.

The first thing to understand is the separation distance to nearby buildings and their height in relation to your building. As the spatial distance between buildings decreases, so the risk of fire, heat and smoke damage occurring increases. This is further exacerbated if ignited materials fall or are released from the affected building. If the affected building collapses close to your building, the effects of fire, heat and smoke damage presents a severe risk to nearby and surrounding properties. Smoke and ash can be particularly problematical.

Similarly, if the space between your building and the nearby building is clear and sterile, the exposure to your property is different to one with yard storage, car parking, trees, etc.

You will also need to consider issues such as canopies, extensions, yard storage or externally located equipment, etc.

## Building Construction

The construction of your building and that of exposing buildings will have a significant impact on your exposure, and this needs to be considered carefully and clearly understood. Take into consideration the wall construction, including glazed elements, and the roof construction of both your building and the exposing buildings. Combustibility, fire resistance, conductivity and the ability to radiate heat through the construction should all be considered.

Many modern buildings are built using lightweight composite insulated cladding materials or have combustible elements of construction. These may have little fire resistance and may even be combustible. In addition, metal panels radiate and conduct heat readily. Traditional brick and concrete built properties will have increased resilience to fire as a source or target building. Finally, glazing allows an internal fire to be radiated out and an external fire to be radiated into a building. Radiation from an external fire impinging on combustible materials within a building is likely to ignite these materials.

Finally, consider older buildings which may have asbestos-containing materials in their construction or the internal finishes. This material may well be properly managed from a life safety perspective, but in an open fire situation the asbestos could become entrained into the fire/smoke and may distribute asbestos particles over a wide area. This will have a direct impact as an exposure.

## Adjoining Buildings and Buildings in Multiple Occupancy

Third party exposures also relate to those activities within the same building as you or in directly adjoining properties (that may share the same construction). These are activities that you cannot directly control, e.g. another tenant in the same building; the adjacent unit adjoined by a common wall, etc.

In this instance you need to consider shared elements of construction such as the building frame, roof, interior finishes, dividing walls and floors, shared services/ventilation systems, etc., ensuring there is appropriate fire/smoke compartmentation. If this is not appropriate, a fire anywhere in the exposure's space may have a direct and immediate impact on your operations, and there have been many incidences of this occurring. Even if structural damage does not occur, a small fire can lead to a substantial impact from smoke contamination, etc.

In modern buildings compartmentation between occupants is provided to meet the minimum requirements of the Building Regulations, which focus primarily on life safety and means of escape. However, it is important to recognise that this will probably be inadequate for property and business loss prevention practices.

Undertaking a compartmentation audit and addressing any deficiencies could help prevent or mitigate a loss.

## Occupancy Activities

While other buildings or third party activities may be a certain physical distance from your operations and constructed in a certain way, to help understand the exposure you should try to establish what the third party does in their day to day operational activities?

A simple office should be much less of a fire load exposure than a warehouse. A warehouse of metal components is less of an exposure than a warehouse of plastic goods. A workshop should be much less of a fire load than a waste recycling site, etc.

Are things like oxy-acetylene gas bottles, aerosols, flammable liquids or combustible dusts present? These present an explosion risk which could escalate an incident much quicker than a fire. Additionally, with regards to flammable liquids stored in the open, what arrangements and controls are in place to prevent a potential flowing liquid fire? For oxy-acetylene as an example, fire fighters will often enforce an exclusion zone of >200m when fighting or damping down, following fires in buildings containing gas bottles. Projectiles and denial of access to your premises could be a consideration for your Business Continuity Plan.

Contractors working next door may cause fires due to hot work operations, or waste may be stored inappropriately within or outside the premises.

An unoccupied building may appear to present less of an exposure, is this a correct assumption? There could be issues with malicious damage, unauthorised entry and arson.

Maintaining good relations with your neighbours may help with a greater understanding of your exposures and assist in minimising your risk.



## What is in the Yard Areas?

An exposure from a third party doesn't necessarily have to be from their building. What's in the yard areas around your building? What's in the areas between the buildings? How close is this to your building? What's the height of this and the potential impact? Are any items combustible? Idle pallets, raw materials or finished goods, waste materials, trees, car parking; what do you have in the yard areas? These issues can all create or increase the exposure.

In addition, how are ignition sources in these yard areas managed? Consider management of smoking, arson, security, malicious damage, hot work activities, vehicle movements, etc. in relation to your exposures.

**Arson:** Over 40% of all fires involving damage or disruption to commercial premises are started deliberately. A significant number of these originate from outside the premises whereby arsonists ignite stored combustible items, which are located too, or moved close to buildings. Managing external storage by ensuring that combustible items are kept at least 10m away from the external perimeter of your buildings, will significantly reduce the exposure to fires caused by arson. If this clear distance cannot be maintained, ensure other mitigation features are in place.

## Automatic Detection and Protection

In considering the exposure to your activities, you need to consider items such as:

- Automatic fire detection
- Automatic sprinkler protection and other protection systems
- Availability of fire water systems
- Security and fencing systems
- Emergency response plans
- Expected fire brigade response and their activities
- Interlocks with detection and protection systems to minimise the impact of smoke ingress into your building
- Explosion relief systems and their discharge direction

This is for both the exposure(s) to your building and within your own building. An appropriately protected exposure is much less of a risk to your activities than an unprotected building.

This should also consider what systems afford protection for any yard exposures.

## Atmospheric Conditions and Wind Direction

In respect of a fire in a nearby exposure, one of the key aspects to understanding the exposure is the wind direction. This can have a direct impact on whether flame or smoke impingement is likely to impact your building and activities.

## Air Intakes, Ventilation Arrangements and Windows

Where fire and flame is not necessarily a direct exposure, smoke contamination of your building may be. Smoke can enter the building via your heating, ventilation and air condition systems, windows, roof eaves, etc. As a result, having appropriate automatic fire/smoke detection, shut down interlocks or fire/smoke dampers in the air intake systems, etc. may be appropriate.

Similarly, in buildings where windows are left open for ventilation etc., these may need to be closed and secured to help ensure smoke ingress is minimised.

## Fire, Heat and Smoke Resilience of Own Operations

Finally, after you have considered everything that can expose you, how resilient is your occupancy, your fixtures and fittings, etc. to possible smoke, heat and fire damage? What would the potential impact be and how would such damage be managed? How do the current fire/smoke compartmentation, fire detection, protection and ventilation arrangements, etc. help minimise your exposure? Can more be done to reduce this exposure?

## Summary

Understanding external and internal third party exposures is an important element of the risk assessment process. Many serious losses originate from outside the building or yard area. Understanding how your business could be affected by fires occurring outside your premises or outside of your control and implementing appropriate mitigation or contingency measures will help prevent or minimise the potential for loss due to the effects of fire, heat and smoke.



## Checklist

A generic External and Internal Third Party Exposures – Property Protection Checklist is presented in Appendix 1 which can be tailored to your own organisation.

## Additional Information

- [Approved Document B: Fire Safety \(Volume 2 - Buildings other than dwelling houses\) Incorporating Insurer's Requirements for Property Protection](#)
- [FPA Design Guide for the Fire Protection of Buildings – Core Document Compartmentation](#)
- [FPA Design Guide The Fire Protection of Buildings – Core Document – Protection of Openings and Service Penetrations from Fire](#)
- [FPA Design Guide for the Fire Protection of Buildings – Protected Zone](#)
- [FPA Passive Fire Protection Handbook](#)
- [NFPA 80A – Recommended Practice for Protection of Buildings from Exterior Fire Exposures](#)
- [Aviva Loss Prevention Standard: Smoke Contamination](#)
- [Aviva Loss Prevention Standard: Fire Doors, Fire Shutters and Fire Dampers](#)
- [Aviva Loss Prevention Standard: Fire Compartmentation](#)
- [Aviva Loss Prevention Standard: Arson Prevention](#)
- [Aviva Loss Prevention Standard: Control and Management of Combustible Waste Materials](#)
- [Aviva Loss Prevention Standard: External Wall Insulation Systems](#)
- [Aviva Loss Prevention Standard: Smoking and the Workplace](#)
- [LPCB Approved Installers and Products](#)

Further risk management information can be obtained from [Aviva Risk Management Solutions](#)

### Please Note

This document contains general information and guidance and is not and should not be relied on as specific advice. The document may not cover every risk, exposure or hazard that may arise and Aviva recommend that you obtain specific advice relevant to the circumstances. AVIVA accepts no responsibility or liability towards any person who may rely upon this document.



## Appendix 1 – External and Internal Third Party Exposures – Property Protection Checklist

Location	
Date	
Completed by (name and signature)	

	External and Internal Third Party Exposures – Property Protection	Y/N	Comments
1.	Has a formal fire risk assessment been completed that considers property damage and business impact to your activities?		
2.	<p>Do you know the construction of your building and its internal finishes?</p> <ul style="list-style-type: none"> <li>• What are the materials of construction, walls and roof?</li> <li>• Is there any fire resistance?</li> <li>• Is there any resistance to structural collapse?</li> <li>• Is there any ability to resist the passage of fire, hot gases and smoke?</li> <li>• Is there any ability to resist conduction of heat?</li> <li>• Are there openings, roller shutters, doors, windows, etc.?</li> <li>• Are there roof lights, roof vents, etc.?</li> <li>• Are there ventilation and extraction systems?</li> <li>• Are there other externally mounted equipment/services?</li> <li>• Are there overhangs, canopies, etc.?</li> <li>• Are there annexes, temporary buildings, etc.?</li> <li>• Is the roof eave sealed?</li> </ul> <p>Do you have accurate building drawings?</p>		



	External and Internal Third Party Exposures – Property Protection Contd.	Y/N	Comments
3.	<p>In all directions are there any buildings that expose your site?</p> <ul style="list-style-type: none"> <li>• North including separation distance and building height?</li> <li>• East including separation distance and building height?</li> <li>• South including separation distance and building height?</li> <li>• West including separation distance and building height?</li> </ul> <p>(A simple sketch plan may assist)</p> <p><b>Note:</b> This includes those directly adjoining your building.</p>		
4.	<p>Based on what you can see, your knowledge of the site and your relationship with your neighbours, do you know what the exposing buildings are constructed from?</p> <p>State including areas where you think the construction may be combustible. Consider: walls, roofs (roof lights), canopies, etc.</p> <ul style="list-style-type: none"> <li>• North</li> <li>• East</li> <li>• South</li> <li>• West</li> </ul>		
5.	<p>Based on what you can see, your knowledge of the site and your relationship with your neighbours, do you know/think their construction or internal finishes may include elements of asbestos-containing materials?</p> <p><b>Note:</b> Consider the age of the buildings.</p>		
6.	<p>Based on the height and separation distance of the exposing building(s), if it collapsed could this impact your buildings or business?</p> <p>If so how: spread of fire, heat or smoke damage, denial of access, etc.</p>		



	External and Internal Third Party Exposures – Property Protection Contd.	Y/N	Comments
7.	<p>Is your building directly attached to any other buildings, or does it form part of a multiple occupancy building?</p> <ul style="list-style-type: none"> <li>• Are any elements of the construction combustible so that a fire in the exposing area can spread on the fabric of the building into your area or building?</li> <li>• Is there an appropriate fire and smoke compartmentation strategy between you and these exposures?</li> <li>• Are there accurate fire compartmentation wall/floor drawings for the site, including: <ul style="list-style-type: none"> <li>○ Materials of construction?</li> <li>○ Fire resistance in minutes?</li> <li>○ Structural resistance: ability of the material to resist structural collapse?</li> <li>○ Integrity: ability to resist the passage of fire, hot gases and smoke?</li> <li>○ Insulation: ability to resist conduction of heat?</li> </ul> </li> <li>• Are there any shared services, service risers, ventilation systems, cable risers, utilities, drainage, etc.? If so, are these appropriately fire-compartmented?</li> <li>• Are there any heat and smoke vents that could open and expose your activities?</li> </ul>		
8.	<p>Are there any tenants, sub-tenants or other occupants in your building that are not under your direct control (i.e. are they an 'internal' third party)?</p> <p>If so, what do they do?</p> <p>Are they fire-compartmented from your activities?</p>		
9.	<p>Based on what you can see, your knowledge of the site and your relationship with your neighbours, do you know what the business activities are within any exposing buildings?</p> <ul style="list-style-type: none"> <li>• North</li> <li>• East</li> <li>• South</li> <li>• West</li> </ul> <p>Are there any high hazard activities or materials involved?</p> <p>Are there any unoccupied, vacant or derelict buildings?</p>		



	External and Internal Third Party Exposures – Property Protection Contd.	Y/N	Comments
10.	Outside of your control are there any combustible materials or activities in the yard areas within 10m of your building(s), structures or your own yard storage or yard based equipment (e.g. skips, wheelie bins, combustible waste, storage, trees and vegetation, pallets, gas bottles, gas or oil storage, smoking facilities, parked vehicles, etc.)?		
11.	Have you considered the risk of arson affecting combustible items kept in the open or affecting neighbouring buildings?		
12.	Do any of the exposures facing your assets change, throughout the: <ul style="list-style-type: none"> <li>• Day?</li> <li>• Year?</li> </ul> <p>Is the exposure cyclical or seasonal?</p>		
13.	Based on what you can see, your knowledge of the site and your relationship with your neighbours, do you know if your exposures have appropriate automatic fire detection or fire suppression systems? <ul style="list-style-type: none"> <li>• North</li> <li>• East</li> <li>• South</li> <li>• West</li> </ul>		
14.	Are your automatic fire detection or fire suppression systems appropriate for the risks created by third parties or yard exposures?		
15.	Are your activities resilient against fire, heat and smoke? <ul style="list-style-type: none"> <li>• Would any machinery, plant, contents and stock be readily ignited by fire?</li> <li>• Is machinery, plant, contents and stock resilient to conducted heat?</li> <li>• Is machinery, plant, contents and stock susceptible to smoke contamination?</li> </ul>		
16.	Are there appropriate interlocks, automated building management controls, etc. to shut down systems where air can be drawn into your building (e.g. roof vents, heating ventilation and air conditioning systems etc.)?		

	External and Internal Third Party Exposures – Property Protection Contd.	Y/N	Comments
17.	<p>Do you have an emergency plan in the event of fire occurring outside your building or in a neighbouring building, and does it include the following:</p> <ul style="list-style-type: none"> <li>• Shutdown or closing of air handling (intake) services?</li> <li>• Closing of doors, windows, roof vents and other openings?</li> <li>• Removing or moving combustible items and waste in the open?</li> <li>• Wetting down of combustible items and waste in the open?</li> <li>• Safe shut down of equipment and services in the event of fire brigade request for premises evacuation?</li> <li>• Other actions?</li> </ul>		
18.	Do you have a working relationship with your neighbours whereby you can raise any issues of their exposure with them?		
19.	Are you aware of the prevailing wind conditions and how this could impact the exposure (especially regarding air intakes, windows, doors, eaves, etc.) into your building?		
20.	<p>Aside from fire risks, are there any other third party exposures that could threaten your activities, e.g.:</p> <ul style="list-style-type: none"> <li>• Sites with an explosion potential?</li> <li>• Railway lines where a derailment could expose you?</li> <li>• Aircraft/airfield, etc.?</li> </ul>		
21.	Considering all your exposures, could an off-site incident cause you a denial of access issue?		
22.	Additional comments:		