

Security - Doors, Windows and Other Barriers

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External openings in buildings, such as doors, windows and other barriers can be vulnerable to attack by thieves.

This Loss Prevention Standard provides general guidance on securing such openings.



Security – Doors, Windows and Other Barriers



Introduction

Business premises and residential homes can be vulnerable to theft. Whilst there are many factors that impact the likelihood of theft attack, including the property location; the resilience of the construction materials; and the nature of the occupancy and type and value of goods kept, stored, or used, the first line of defence are the physical security protections e.g. locks, hasps, hinges etc., to doors, windows, and other barriers e.g. security gates, security shutters etc.

There are many different forms of locks and manufacturing and installation standards, and further guidance is provided in Aviva Loss Prevention Standard **Security - Locks**.



This Loss Prevention Standard provides general advice on securing doors, windows, and other barriers in commercial and residential premises.

Risk Assessment

Thieves and other intruders will usually look for the easiest way to gain entry into a property, and this is typically via the buildings openings. It is therefore essential that accessible doors, windows, and other barriers are well secured.

Note: Accessible doors and windows should be regarded as those that could be reached by an intruder standing on adjacent ground or an external staircase, or that could readily be reached by climbing, e.g. via adjacent single storey roof areas, bay windows, porches, drainage pipes, walls, or trees, etc.

Any upgrades to security protections should be considered as part of a wider security risk assessment, with variations and modifications being made to take into account any enhanced risk factors.

Risk factors include but are not limited to:

- Local history of security related events.
- What is within the building, i.e. what theft-attractive goods are present and where are they kept?
- Nature of any fencing and the location of the building in relation to the public highway. Is it readily accessible?
 - ✓ This should also include nearby trees, etc.
- The nature of the yard and any external lighting.
 - ✓ The degree of accessibility and possible concealment for thieves/intruders.
- Remoteness of the premises i.e. are there other well occupied properties or premises in proximity.
- Equipment, goods, or ladders that may provide opportunity to access other entrances to the building.
- Resilience of the building construction in comparison to any doors and/or windows.
- The nature of any physical guarding or other human presence on site such as 24-hour site occupancy.
- The nature of any additional electronic security provided, e.g. intruder alarm or CCTV systems.

Door, Window and Other Barriers - General

A number of factors contribute to the overall resilience of doors, windows etc., including but not limited to:

Construction

- Timber doors and windows should be of an external grade.
- Timber doors should be a minimum thickness of 44mm (1¾"), noting that hardwood is generally stronger than softwood.
- For uPVC or metal doors, especially if glazed, the manufacturer's intended use should be understood and observed.
- Weaker doors/windows, or specific areas of them can be improved such as by adding secondary steel sheet linings, or steel bars, grilles, or mesh.

Door Hanging

Due to the arrangement of the door, inward opening doors are less resistant to being forced open than outward opening doors. Inward opening doors can be further secured by fitting a second lock, internal bolts or drop-in braces.

Outward opening doors are more resistant to being forced, as the attack force is dissipated into the frame. Such doors (and windows) can however be vulnerable to attacks on their hinges as they are exposed. These can be made more resistant to attack by fitting hinge bolts.

Glazing

Any glazing needs to be well secured and should have no loose or perished putty, seals, or beading. Be aware that if any glazing is stated as being toughened glass, this relates to the safety and not the security of the glass. The security of glazed elements can be improved and still meet safety requirements by replacing with laminated glass.

Condition

For a door or window to perform as expected, and for it to be able to provide the best security performance, all doors/windows; their associated hardware and frames should be in good condition; of good fit; well-secured to the building structure; inspected and maintained regularly. Any degradation, warping or damage should be repaired and any gaps around the frame filled with mortar or an appropriate frame sealant (to conceal the frame fixings).

Procedural Security

The effectiveness of any security measure is always dependent upon its intended and proper use, so:

- All doors and windows should be adequately secured whenever the premises are left unattended.
- After locking up, keys should not be left in the locks, within sight or reach of external glazing.
 - ✓ Residential property occupants should ensure keys are readily accessible/available overnight should an emergency arise requiring prompt exit.
- Spare keys should not be left externally e.g. concealed under stones, planters, mats, etc.
- Keys should not be labelled with the property address.
- Where premises are open to the public or there is public access, unlocked combination padlocks or keys to doors/windows should not be left in their locks, or otherwise unattended.
 - ✓ Keys or combinations may be stolen and possibly used at a later date to gain entry.
- Keys to premises should be removed from persons leaving employment.
 - ✓ Locks or lock cylinders may also need to be changed when keyholders leave employment.

Insurer's Minimum Security Standards

When insurance is sought against theft, its provision may be conditional upon the premises having a certain level of physical security, often termed Minimum Security Standard or Minimum Security Condition.

Minimum Security Standards tend to concentrate on the fitting and use of common locks on typical doors and windows and may vary according to the insurer, type of property, e.g. domestic or commercial, or the type of insurance contract.

RISCAuthority, the UK Insurers technical advice body, has published a useful guide on the subject of minimum security standards for homes – [S24 - Physical Security for Homes: Guidance for Occupiers](#), which is available as a free download from the RISCAuthority website.

Note: The detailed advice on locks and related standards provided in RISCAuthority S24 provides guidance that can in part be considered for commercial applications/business premises as well as residential properties.

Door Security – Locking

Locks typically used on doors vary according to the door type and use.

Hinged Single Leaf Doors

These are usually locked as follows:

- Timber doors - a 5 lever mortice deadlock with a boxed striking plate; or a rim cylinder deadlock.
 - ✓ Either type should be certified as meeting one of the Standards in the BS x621 series.**Note:** 'Stable type' doors should be treated as two separate doors and secured independently.
- Metal frame doors - a 5 pin cylinder operated mortice swing lock.
 - ✓ It should ideally be certified as meeting [BS EN 12209](#), with the cylinder meeting [BS EN 1303](#) or,
 - ✓ TS 007 at the 3 Star level.**Note:** Security can be further improved by fitting a reinforced striking plate in the hollow frame and a cylinder 'rose'. This will help prevent a tool being used to grip, twist and snap the (usually protruding) lock cylinder.
- uPVC doors - a 5 pin cylinder securing a system of moving bolt work having at least 3 locking points.
 - ✓ The lock should be certified as meeting one of the Standards in the PAS x621 series, or otherwise at least having a cylinder that meets BS EN 1303 or TS 007 at the 3 Star level.
- All types – by means of a padlock.
 - ✓ A padlock with a closed shackle in conjunction with a heavy-duty padbar/hasp and staple and be fitted in a manner that reduces the potential for forced removal.
 - ✓ The padlock should be certified to a recognised standard, e.g. [BS EN 12320](#) at Grade 4 or above, or in the United Kingdom, a [Sold Secure](#) tested equivalent.

Note: Sold Secure are a United Kingdom based, non-profit, security testing organisation, owned and administered by the Master Locksmiths Association.

Hinged Double Doors

These are usually adequately secured by:

- The 1st leaf being secured at top and bottom by rebate bolts, key operated mortice security bolts or surface mounted key lockable bolts.
- The 2nd leaf being locked as per a hinged single leaf door, or both doors being secured together by a padlock, as per the information provided above.

Sliding Doors

These are usually locked by either a mortice or cylinder 'hook' or 'claw' lock, cylinder lock and moving bolts or a padlock. Ideally these should all meet a relevant standard, as outlined above.

Patio-style doors should have an anti-lift device in the top rail and may benefit from a key operated patio door lock at the base of the centre rail.

Roller Shutter/Panel Doors

These are usually locked by padlocking the internal operating chain in place or fitting cylinder lock pin bolts through the side runners. Any integral wicket gate should be treated as a hinged single leaf door.

Doors not used for Entry/Exit Purposes

Unless used as emergency exit doors (see below), these doors should be locked as above, or by lesser locks supplemented by the provision of internal bolts (which should be key lockable if adjacent to any glazing), by padlocks or by drop-in braces, etc.

Emergency Exit Doors

These doors are often relatively weak and subject to strict controls to ensure they are unlocked at all times when a building is in use. As a result, extra visible security devices, e.g. bolts, or other secondary protection may be appropriate.

If in any doubt about the security of an emergency exit door, advice should be sought from the local Fire Authority or your insurers, and any such measures should always be recorded in the premises' fire risk assessment.

Note: Detailed advice on this topic is available in the document [S11 - Security of Emergency Exit Doors in Non-Residential Buildings](#), which is available as a free download from the RISC Authority website.

Window Security – Locking

All accessible opening windows should be fitted with key lockable handles or separate good quality window locks. Larger windows, i.e. those with an opening edge greater than 1.2 metres length, can be improved by fitting a second lock. Windows not required to open may be screwed shut.



Secondary Door/Window Protection

Where existing doors or windows cannot be readily improved or replaced, the fitting of a secondary barrier may be appropriate, for example:

- Doors - internal or external lockable steel bar/mesh gates, roller shutters, or internal collapsible (folding) steel grilles can be considered
- Windows - internal or external steel bars, fixed or removable steel mesh grilles, roller shutters, or internal collapsible (folding) grilles may be considered
- Secondary Barriers - should be certified as meeting a recognised security standard, such as **LPS 1175 - Requirements and testing procedures for the LPCB certification and listing of intruder resistant building components, strongpoints, security enclosures and free-standing barriers** in the United Kingdom.

Important: Discuss the installation of additional security barriers with your Property Insurer and Broker to ensure the specification of the barriers and fittings are suitable for the intended application.

Checklist

A generic **Doors, Windows and Other Barriers Checklist** is presented in Appendix 1 which can be tailored to your own organisation.

Specialist Partner Solutions

Aviva Risk Management Solutions can offer access to a wide range of risk management products and services via our network of Specialist Partners who are reputable companies offering agreed discounted rates for Aviva customers.

For more information please visit:

[Aviva Risk Management Solutions – Specialist Partners](#)

Sources and Useful Links

- [The Fire Protection Association and RISCAuthority](#)
- [Master Locksmiths Association](#)
- [Sold Secure](#)
- [British Security Industry Association \(BSIA\)](#)
- [Door and Hardware Federation](#)
- [Glass and Glazing Federation](#)
- [LPS 1175 - Requirements and testing procedures for the LPCB certification and listing of intruder resistant building components, strongpoints, security enclosures and free-standing barriers](#)

Additional Information

Relevant Loss Prevention Standards include:

- **Security: Intruder Alarms – European Standards**
- **Security: Intruder Alarms – Guidance for Customers**
- **Security: An introduction to CCTV Systems**
- **Security: Locks**

To find out more, please visit [Aviva Risk Management Solutions](#) or speak to one of our advisors.

Email us at riskadvice@aviva.com or call 0345 366 6666.*

*The cost of calls to 03 prefixed numbers are charged at national call rates (charges may vary dependent on your network provider) and are usually included in inclusive minute plans from landlines and mobiles. For our joint protection telephone calls may be recorded and/or monitored.

Appendix 1 – Doors, Windows and Other Barriers Checklist



Location	
Date	
Completed by (name and signature)	

	Doors, Windows and Other Barriers	Y/N	Comments
1.	<p>Has a risk assessment been undertaken of the current physical security at your premises, including the following?</p> <ul style="list-style-type: none"> • Local history of security related events? • Nature of contents/occupancy, especially close to each opening and its attractiveness to theft? • Accessibility of the area for criminals? • Provision of anything that could improve access to upper levels of the building/roof? • Strength and nature of the building construction in comparison to any doors/windows and securing mechanisms? • The nature or any other electronic security measures or human presence on site? 		
2.	<p>Has independent crime prevention advice been sought from:</p> <ul style="list-style-type: none"> • The police? • A security consultant? • Your insurer? 		

	Doors, Windows and Other Barriers Contd.	Y/N	Comments
3.	<p>Has the construction and condition of all perimeter doors and windows been considered?</p> <p>Does this include the following:</p> <ul style="list-style-type: none"> • Construction materials? • Glazed elements? <ul style="list-style-type: none"> ✓ Safety glazing? ✓ Laminated glazing? • Beading and seals? • Lock types? • Hinge types? • Secondary protection devices? • Orientation of the door? • Whether the door is an emergency exit or not? • What standards the above are constructed and installed to? 		
4.	<p>Have existing security procedures been considered to ensure that:</p> <ul style="list-style-type: none"> • Doors and windows are adequately secured whenever premises are left unattended? <ul style="list-style-type: none"> ✓ When the occupants have retired for the night? • Spare keys to the property are not left in easily accessible locations? • Keys are not left in the door or window, even when locked? • Keys are not labelled with the address/location? • Is there a formal key management system? • Are the number of duplicate keys known? • Is the location of the keys known? 		
5.	<p>Are any insurer Minimum Security Standard/Condition applicable?</p> <p>If so, do you:</p> <ul style="list-style-type: none"> • Comply with it? • Have a formal agreement for any alternative arrangements? 		
6.	<p>Have you sourced security devices meeting a recognised standard from competent suppliers/locksmiths, e.g. a member of the Glass and Glazing Federation (GGF) or Master Locksmiths Association (MLA)?</p>		

	Doors, Windows and Other Barriers Contd.	Y/N	Comments
7.	<ul style="list-style-type: none"> • Are all your windows and doors on an inspection and maintenance schedule? • If any issues are raised are remedial measures expedited and treated as a priority? 		
8.	<p>Are security arrangements and the basis for the risk assessment reviewed following any security issues, local incidents, intrusions or losses?</p> <p>Note: If not, you likely to be at more risk of a repeat incident.</p>		
9.	<p>Where additional security barriers, such as security grilles, shutters etc., are planned or installed, have these been approved by your Property Insurer and Broker as suitable for the application?</p>		
10.	<p>Additional comments:</p>		

Please Note

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