standard

4.13

mandatory

Every *building* must be designed and *constructed* in such a way that doors and windows vulnerable to unlawful entry can be secured to deter housebreaking and ensure the safety and welfare of occupants.

Limitation:
This standard applies only to *domestic buildings*.

4.13.0 Introduction

Whilst police statistics show signs of housebreaking decreasing since 1999, people's perception of their likelihood of falling victim to this type of crime continues to increase. The 2003 Scottish Crime Survey identified that one in ten people consider it 'very' or 'fairly' likely that their home would be broken into within the next twelve months. This is an increase on the same response in 2000 and is double the proportion of households who were actually victims of housebreaking in preceding years.

As almost half of the recorded incidents of housebreaking occur when a property is occupied, it is not surprising that housebreaking is rated amongst the crimes that cause people most concern and worry. However basic measures to improve the physical security of dwellings, including robust specification of doors, windows, glazing and locks, can act deter the opportunist thief.

Guidance to other standards is also relevant to promoting a more secure environment, as follows:

- lighting of common entrances and *dwelling* entrances (standard 4.1);
- lighting within the common areas of *domestic* buildings and access control systems to common entrances (standard 4.6);
- ensuring security measures do not adversely affect means of escape (standard 2.9).

Further advice

'Secured by Design' is the established police initiative to design out elements within development that may contribute to housebreaking and other crimes. 'Secured by Design' accreditation considers *site* design and layout as well as physical security measures and offers a more comprehensive solution than those physical provisions set out within this standard. As 'Secured by Design' is assessed on a *site*-specific basis, the police can also offer recommendations on appropriate additional measures in areas where the risk of crimes, such as housebreaking, are considered greater. Information on the scheme can be found online at www.securedbydesign.com

Conversions

In the case of conversions, as specified in regulation 4, the *building* as *converted* shall meet the requirement of this standard (regulation 12, schedule 6).

4.13.1 Physical security of doors and windows

The two most common means of unlawful entry into a *dwelling* are through doors or windows, where these are either left open or can be easily forced open. The level of security of any *dwelling* can be significantly enhanced by ensuring that all external doors and any windows or glazing in vulnerable locations are manufactured and installed to resist forced entry and also that unauthorised entry into common areas is prevented.

Doors should be designed and installed to resist forced entry at:

- an external door to a *dwelling* or common area of a *domestic building;* and
- an entrance or egress door to a *flat* or *maisonette;* and
- a door between a *dwelling* and a *conservatory* or garage.

Windows

Windows and glazing should be designed and installed to resist forced entry where:

- located at ground floor level and easily accessible; or
- where otherwise easily accessible from outside, such as by climbing on *building* projections.

There are a number of ways in which this can be achieved:

a. by meeting the recommendations for physical security in Section 2 of 'Secured by Design' (ACPO, 2009); or
b. by use of doorsets and windows which are tested and certified by a *notified body* as meeting a recognised standard for security; or
c. by use of doorsets and windows manufactured to meet recognised product standards and defined component performance.

The baseline recommendations in (c) are relevant to all such doors and windows.

4.13.2 Doors and windows – 'Secured by Design'

'Secured by Design' (ACPO, 2009) offers a comprehensive solution to the security of dwellings, addressing *site* design and layout as well as detailed physical security measures. It is particularly relevant to new build or building conversions involving multiple units.

A door or window in the locations described in clause 4.13.1 should meet the recommendations for physical security in Section 2 of 'Secured by Design'. Information on Secured by Design and its application can be found online at www.securedbydesign.com

4.13.3 Doors and windows – product accreditation

A door or window in the locations described in clause 4.13.1 should be tested and certified by a *notified body* as meeting a recognised standard for security such as BS PAS 24: 2007 for doorsets or BS 7950: 1997 for windows.

4.13.4 Doors and windows – product standards and component performance

To ensure a robust, basic standard of security, a doorset or window in the locations described in clause 4.13.1 should be designed and constructed in accordance with the general recommendations of the product standard appropriate for the material used, such as:

- BS 7412: 2007, for PVCu units;
- BS 644: 2009, for timber window units;
- BS 4873: 2009, for aluminium alloy units;
- BS 6510: 2005, for steel-framed units.

Vulnerable windows should be constructed to resist attempts to force frames and, if openable, ironmongery. Windows which can be opened should be fitted with either:

- a keyed locking system that uses a removable key; or
- a keyless locking system, together with glazing which incorporates laminated glass or a similarly robust glazing material.

Where a material standard for a doorset is not available, it should be designed and constructed in accordance with the recommendations in Annex A of BS 8220-1: 2000, together with the following recommendations, to ensure a robust basic standard of security.

Hinges

If single swing the doorset should be fitted with at least one and a half pairs of hinges meeting the recommendations of BS EN 1935: 2002 for hinge grade 11 or above. Hinges fitted to an outward-opening door should be of a type that does not permit the hinge pin to be removed unless the door is open. Otherwise, hinge bolts should be fitted to ensure the door leaf will remain secure when closed.

Locking

A doorset should include a single-point locking device to BS 3621: 2007 (for keyed egress) or to BS 8621: 2007 (for keyless egress) or a multipoint locking system. A deadlocking facility should be provided. Any lock cylinder should be in accordance with BS EN 1303: 2005, grade 5 key security and grade 2 attack resistance as a minimum.

To limit unauthorised access, a communal entrance door fitted with an access control system (see clause 4.63) should be self-closing and self-locking, with keyless operation of any lock from within the common area. To accommodate access control systems, a doorset may incorporate electronic or magnetic remote release and a means of access which includes keyless electronic solutions (keypad, proximity swipe, etc).

Glazing

Access to door locks from outside by breaking of glazing, in or adjacent to a door leaf should be prevented by use of laminated glass or a similarly robust glazing material.

Sliding doors

A sliding door should have a multi-point deadlocking system with 3 or more hook or similar bolts. To prevent removal of the door, an anti-lift device should be fitted. Shoot bolts, if used, should locate into the head of the frame.

Double doors

A doorset with more than one door leaf should include a means of securing

any secondary leaf at head and foot to allow the primary leaf to be securely locked.

4.13.5 Installation and fixing of doors and windows

Inadequate fixing into the surrounding structure will significantly affect the security performance of a doorset or window. In most cases, fixings designed to resist normal anticipated loads, such as from wind and accidental impact, will also ensure that a doorset or window is secure against the more common basic methods of forced entry.

To ensure a robust installation, fixing of a doorset or window should be in accordance with:

- the recommendations given in section 8 of BS 8213-4: 2007; or
- manufacturer's written instructions where these meet or exceed the recommendation within this British Standard.