

CITY AND COUNTY OF CARDIFF

CODE OF GUIDANCE

BOMBS - PROTECTION OF PEOPLE AND PROPERTY

This Code of Guidance offers advice to all personnel involved in the protection of people and property from the effects of a bomb.

This Guidance Notes give advice on:-

- 1.0 Building Protection
- 2.0 Physical Security Measures

1.0 Building Protection

High explosive devices and incendiary devices have the effect of:-

- causing major structural damage.
- cause damage and injury as a result of flying glass and from other fragments travelling at high speed.
- injuries arising from the blast.
- fire.

Although it is impossible to completely protect against these effects several methods exist to reduce the associated risks.

Protection against flying glass

There are three main methods of reducing the risk of injury from flying glass.

- A. Applying transparent polyester film to the glass surface (to prevent it shattering) and providing bomb blast curtains.
- B. Glazing or re-glazing with blast resistant laminated glass.
- C. Installing blast resistant secondary glazing inside exterior glazing.

These main methods of expanded below:-

Transparent anti-shatter film

Polyester of a suitable specification should be at least 100 microns (0.004 inch) thick with a pressure sensitive adhesive applied to the inside of the glazed area. For windows over 3m² area, or where the glass is over 6mm in thickness, 175 micron film should be used. This quality film should also be used in areas where bomb blast curtains are not installed. 300 micron film should be used for panes over 10m² and for ground windows over 3m² where bomb blast curtains are not installed.

1.CM.014	Date: 11/00	Issue 1	Process Owner: Christina Lloyd	Authorisation: Phillip Higgins	Page 1 of 6
----------	-------------	---------	-----------------------------------	-----------------------------------	-------------

New windows or those being re-glazed should be treated before fixing the frames. Film should be applied to the extreme edge. On existing windows the film should be applied as close as possible to the putty of the glazing bar (bead or retainer) with an edge gap of less than 3mm or a maximum of 5mm on irregular and old putty edged areas.

Film should be fixed to clean dust free glass. The film cannot be applied to patterned or frosted sides of the glass.

Where film width is insufficient to cover the glass, a butt joint is acceptable.

Windows which are double glazed or consist of two independently opening frames should be treated with film on the room side of the glass.

Peel adhesion strength should be tested on a regular basis to ensure film integrity and anti-degradation performance.

Bomb Blast Curtains

Curtains should be of 90 or 100 denier polyester terylene material and be made twice the width and 1 ½ times the length of the window to be protected. The bottom edge should be hemmed and incorporate flexible weights at the rate of 400 grams per metre. The excess length should be folded concertina wise in shallow troughs at the window sill level. Curtains should be installed nominally 50 to 100mm from the glass. This closeness to the glass surface is preferred as it reduces the ability of the glass shards to twist and cut through the net.

Toughened Glass

Toughened glass provides safety but not security and is not recommended for external window or door use.

Toughened glass is approximately 5 times stronger than plain (float, sheet or annealed) glass. It can resist high blast pressures but when it does break it forms many cuboid fragments which are less injurious than plain glass shards.

Where possible, anti-bandit laminated glass should be used in preference to toughened glass. Toughened glass used on its own should be protected by anti shatter film.

Laminated Glass

This material provides excellent resistance to both blast and thrown missiles, provided it is supported in robust frames with wide rebates.

The minimum thickness of laminated glass which should be used is 7.5mm including a minimum polyvinylbutryol (PVB) interlayer thickness of 1.5mm. Where this glass is used to protect from blast, the glass should be fixed in a frame designed to withstand a static force of 7KN/SQ.M, over the complete glazed area and frame.

1.CM.014	Date: 11/00	Issue 1	Process Owner: Christina Lloyd	Authorisation: Phillip Higgins	Page 2 of 6
----------	-------------	---------	-----------------------------------	-----------------------------------	-------------

Panels with an edge dimension of 1 metre or more should be provided with a frame rebate of at least 35mm giving a minimum bearing of 30mm.

If deep rebate frames cannot be provided, a level of protection equivalent to that given by anti shatter film on 4mm plain glass with bomb blast net curtains can be achieved using thinner laminated glass, for example 6.8mm thick.

In double glazed windows 6.4mm laminated glass can be used for the inner pane although it is preferable to use this material for both panes.

2.0 Physical Security Measures

Doors

All external doors should be fitted with locks conforming to BS3621. Those not in regular use should also be protected by fitting strong internal bolts. Check locks and bolts regularly to ensure they are in good working order.

Note: Fire precautions may prohibit certain types of locking device being fitted to fire exit doors. Check if you are unsure of the requirements.

Windows

As a minimum good quality key operated locks should be fitted to all ground floor windows and to windows above the ground floor to which access may be gained.

Note: If a window has been designated as a fire exit route, be careful not to infringe fire regulations.

Access Control

The most effective access control is an efficient reception area, which can not be by-passed by other routes, through which all visitors must pass.

Ideally visitors should not be permitted to proceed beyond reception unaccompanied and should be collected by the person they are visiting who should assume responsibility for them until they leave. This level of security should be further enhanced by recording details for the visitor, including arrival and departure and the issue of a visitors badge. All passes must be returned at the end of the day or business.

If possible, provided all members of staff with personal identity cards. Any person within the building who is not displaying the form of identification will immediately become suspect and can be challenged to explain themselves.

Buildings in multiple occupancy often have a common reception area often left unattended. This permits free access to common stairways, corridors, lifts etc. and makes the building vulnerable to attack. In these circumstances it is recommended to introduce some form of access control at street level with additional security measures at each tenant's reception area.

1.CM.014	Date: 11/00	Issue 1	Process Owner: Christina Lloyd	Authorisation: Phillip Higgins	Page 3 of 6
----------	-------------	---------	-----------------------------------	-----------------------------------	-------------

Access to aide or rear entrances must be restricted to authorised personnel by the use of digital swipecard or proximity locks if these entrances are not monitored by security staff. Beware however, of persons slipping in behind security staff as they use these exits.

Stop and Search

Periodically and particularly at times when terrorist threat is high, consideration should be given to the searching of handbags and luggage brought into the premises.

Obviously, it will be easier to carry out effective searches if unnecessary access points are closed.

Security staff or staff used to search should be properly trained to search systematically, recognise items which may be bombs and remain continually vigilant.

Search aids can make searching easier. The Local Crime Prevention Officer can provide details of appropriate aids.

It is also possible to hire on a temporary basis personnel from professional security companies, who will carry out the task of searching on your behalf.

Powers of Stop and Search

You have the right to refuse entry to any person who will not permit a search of their hand baggage.

Housekeeping

Good housekeeping both inside and outside of the premises reduces the risk of a explosive device being planted undetected.

Reduce the number of places in which articles could be hidden. Rooms, stairways, corridors etc. should be kept clean and tidy. Unoccupied rooms and storerooms should be locked. Attention should be paid to communal areas such as toilets and reception areas.

In public areas furniture should be kept to a minimum. Furniture both inside and outside the building should be designed to ensure it does not have voids within its construction which could present a location to hide a device.

Any such void should be locked, permanently sealed or sealed with tamper evident seals. Regular inspection of these areas is vital.

Staff must be encouraged to report suspicious items or things out of place.

1.CM.014	Date: 11/00	Issue 1	Process Owner: Christina Lloyd	Authorisation: Phillip Higgins	Page 4 of 6
----------	-------------	---------	-----------------------------------	-----------------------------------	-------------

Outside areas should be kept as clean and tidy as possible. Shrubbery should not be allowed to become overgrown as this provides ideal cover for an explosive device. This is particularly important when the shrubbery is close to buildings.

Removing litter bins can reduce the risk from terrorist bombs in public places, however, rubbish must not be allowed to accumulate as devices can be concealed within it.

If litter bins are required they should be of the unsealed type and ideally be situated away from exits.

Cleaning staff should be trained on the identification of devices and the careful removal of letter bin contents.

In the event of a specific threat to the locality it is advisable to deal or remove the litter bins for the period of the threat.

Vigilance

Encourage staff to challenge persons who are in an area in which they should not be.

Encourage staff to report anything suspicious and let them know the actions taken as a result of their vigilance.

Ensure packages and parcels are delivered under observation.

Pay close attention to suspect vehicles.

Keep vigilant at all times even when there does not appear to be a threat of terrorism.

CCTV

Closed circuit television can provide an important contribution to security. The presence of cameras may help to deter the terrorist.

If systems are installed:-

- ensure lines of vision are not obstructed
- provide adequate lighting
- co-operate with other CCTV users nearby to achieve interlocking and complementary coverage to each others premises
- enhance the deterrent value of the system by using posters as appropriate
- ensure the system is well maintained and that recording heads are cleaned regularly
- maintain a library of tapes and store each tape for 31 days if possible
- replace tapes if damaged and on an annual basis
- erase and test tapes before use

1.CM.014	Date: 11/00	Issue 1	Process Owner: Christina Lloyd	Authorisation: Phillip Higgins	Page 5 of 6
----------	-------------	---------	-----------------------------------	-----------------------------------	-------------

- keep new and recorded tapes in a locked cabinet in the control room and record the times and dates of change
- control rooms should be regarded as secure installations and admittance restricted as required
- a monitor and video should be available to viewing recording

Incidents which are monitored but ignored will reduce the value of the CCTV system. Responding effectively to the incident will add to the deterrent benefit of the system, especially if a terrorist is testing your defences. You should ensure that:-

- sufficient number of people are available to respond to an alert
- incidents requiring investigation should be brought to the attention of patrol staff or management
- incidents of criminal or terrorist activity must be brought to the attention of the Police
- suspicious events must be fully noted in a log
- taped records of suspicious incidents should be carefully reviewed by designated staff, and the Police where appropriate

General

Intruder alarms, camera surveillance and security guard patrols should be considered according to individual circumstances.

Good security lighting provides an effective deterrent. Where possible illuminate security fences, external doors and windows.

From time to time walk around the premises and check all of the entry and exit points.

1.CM.014	Date: 11/00	Issue 1	Process Owner: Christina Lloyd	Authorisation: Phillip Higgins	Page 6 of 6
----------	-------------	---------	-----------------------------------	-----------------------------------	-------------