

Security systems

Protecting people and property



The correct specification of security products and systems is critical in protecting people and property from losses associated with crime and terrorism.

Overview

BRE Global has been setting standards for loss prevention since the 1800's, and its standards and approvals for security products are recognised across the world. That recognition is testimony to the extremely thorough technical evaluation work and rigorous quality audit processes undertaken by BRE Global to ensure the security products it tests and approves deliver proven levels of protection.

BRE Global works closely with government, police, insurers, risk consultants and architects to develop standards and approval schemes which ensure security equipment and services deliver the levels of performance required to protect against criminal and terrorist threats.

Approval to BRE Global's Loss Prevention Standards (LPSs) is specified across multiple sectors, including: education, finance, healthcare, manufacturing, the public sector, residential, retail and utilities. The standards are also specified for the protection of critical infrastructure where delivery of specified levels of security performance is critical. LPCB is the certification brand owned by BRE Global for fire and security related certification so you will often see 'LPCB approved' and 'LPCB's standards'.



Setting high standards of security

The Loss Prevention Standards developed by BRE Global address risks not otherwise covered by existing national and international standards and codes. They are drafted by teams of experts, and are reviewed and endorsed by independent stakeholders representing major interest groups.

BRE Global's broad range of standards are designed to simulate a variety of circumstances. This could be the likely length of attack, the tools or methods used, or even the likelihood of a stealth attack. Whatever the situation, an effective physical security solution should deter or delay an attacker and should be complemented by a suitable means of detection and an appropriate response.

Loss Prevention Standards are available free from www.redbooklive.com



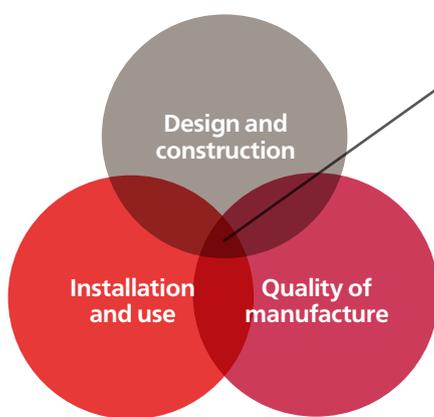


Independent testing

BRE Global uses fully equipped laboratories that are independently accredited by UKAS. BRE Global can also arrange for testing to be conducted at manufacturers' premises, whether in the UK or abroad. This has many advantages to manufacturers including reduced costs and timescales.

Approval of effective security

In order to ensure the LPCB certification mark is, and continues to be, a mark of excellence in loss prevention; the products that bear the LPCB certification mark and the companies that deliver those products onto the market have to complete a thorough evaluation process. That process focuses on the critical factors that combine to deliver the product's performance: design, use and quality control. It also involves thorough processes to ensure the quality of testing conducted in support of the product's certification, whether conducted by our own expert team of test engineers or by other independent laboratories recognised by BRE Global.



Product performance

A product's design, the quality of how it is constructed, and the manner in which it is installed and used contribute to its performance in use. These factors therefore form an integral part of the evaluation and approval process.

The evaluation activities we undertake, not only before approval is issued but while that approval remains in force, ensure the factors that affect product performance are suitably robust and managed effectively. These activities ensure the products we approve meet, and continue to meet, the exacting standards to which they are approved by BRE Global.

Why get approval?

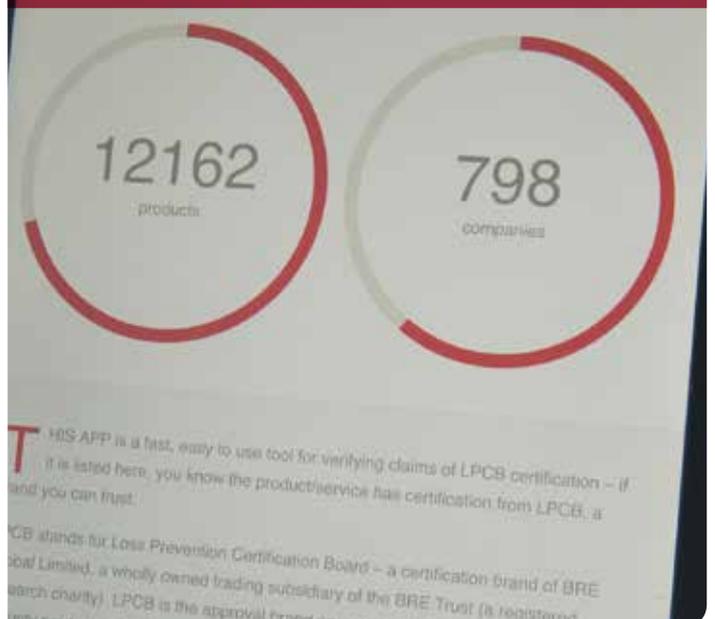
Manufacturers benefit from approval by being able to positively distinguish their products from the competition in a way that purchasers will recognise, accept, and increasingly insist upon. When a product is approved by BRE Global it is immediately listed in the Red Book, a source used by specifiers and purchasers in selecting security components.

Specifiers and designers also benefit by being able to cut through the confusion of claims of compliance, as the LPCB mark of approval evidences that a product has met a given standard.

Red Book

Once BRE Global is satisfied that a product or service meets the required standard, it is listed in the 'Red Book'. Red book listings can be downloaded free of charge from www.redbooklive.com or via the app for Apple, Android and Windows smart phones and tablets.

Reliable listings such as the Red Book are important tools in combating false or misleading claims of approval. Where such claims refer to LPCB schemes or services, BRE Global actively investigates them and takes action as necessary.



Security Systems

LPCB approval ensures that security products provide the reliable delay and means of detection required to protect against intrusion.



Standards, approvals and Red Book listings cover a broad range of potential solutions. These include:

- Access control systems
- Access covers and hatches
- Alarm receiving centres
- Alarm transmission systems
- Asset marking systems
- Bicycle storage
- Biometrics
- Cabinets and cages
- Cladding and roof systems
- Curtain walling systems
- Cylinders
- Doors
- Electronic locks
- Enclosures and kiosks
- Fences and walls
- Gates and turnstiles
- Glazing
- Grilles and barsets
- Intruder detection systems & components
- Locks and padlocks
- RFID
- Safes and strongrooms
- Secure asset registers
- Sheds and tool stores
- Shutters
- Specialist security devices
- Supervised premises transceivers
- Theft resistant assets
- Vehicle barriers
- Windows and roof lights

An effective security strategy concentrates not only on one particular element, but addresses each and every 'layer' applicable to the scenario. LPCB approves security equipment to various British and European standards, as well as its own world-renowned Loss Prevention Standards (LPS). These allow specifiers to select appropriate products for each security layer, from the perimeter right through to the asset itself.

Intruder-resistant products

LPS 1175 LPS 2081
PAS 24 EN 1627

Glazing

LPS 1270 EN 356

Safes and strongrooms

LPS 1183 EN 1143
EN 14450

Padlocks

LPS 1654

Lock cylinders

LPS 1242

Intruder & hold-up alarm systems

EN 50131

Alarm receiving and alarm transmission

LPS 1020 LPS 1277
EN 50136

Asset marking

LPS 1224 LPS 1225

Information technology

LPS 1214

Vehicle barriers

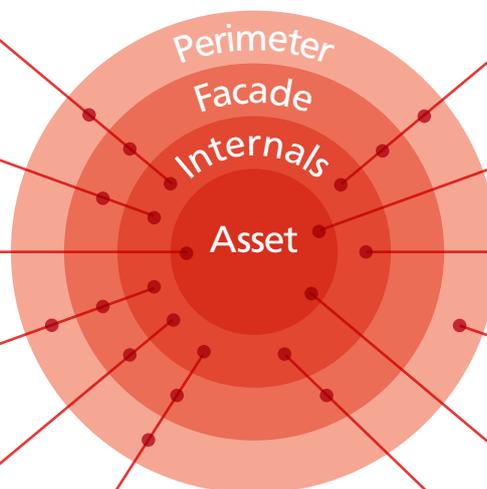
PAS 68 LPS 1175
IWA14

Theft resistant consumer electronics

LPS 1650

Ballistic protection/bullet resistance

EN 1063 EN 1522
EN 1523 ISO 16935





Building and perimeter

LPS 1175

Requirements and testing procedures for the LPCB approval and listing of intruder resistant building components, strongpoints, security enclosures and free-standing barriers.

LPS 1175 covers the broadest scope of physical security products and services of any publicly available standard in the world. LPS 1175 is the result of many years of work by LPCB, Government, Insurers and Police, and has rapidly become a core element of physical security specification across many sectors. The standard comprises a number of security ratings with test requirements of ascending intensity. These are measured in terms of attack tools and time available to the attacker, and enables specifiers to select products according to the risks that they and their property face. LPS 1175 can be used in a range of applications, from residential right through to critical infrastructure projects.

| Level of risk | Security rating to LPS 1175 | Resistance provided |
|---------------|-----------------------------|--|
| High risk | SR8 | Products provide resistance to extreme means of attempted forced entry into higher value areas. |
| | SR6 & 7 | Products provide high levels of resistance to professional means of attempted forced entry into higher value storage areas using a wide range of tools including mains powered tools. |
| | SR4 & 5 | Products resist experienced attempts at forced entry using a wide range of tools including battery powered tools lasting up to 10 minutes depending on the security rating sought. |
| | SR3 | Products provide moderate resistance to determined attempts of force entry using a range of techniques including those that involve creation of noise. |
| | SR1 & 2 | Products provide the minimum levels of recognised resistance to opportunist attempts at forced entry using a range of techniques including those that create noise such as those involving breaking glass. |
| Low risk | | |

LPS 2081

Requirements and testing procedures for the LPCB approval and listing of building components, strongpoints, security enclosures and free standing barriers offering resistance to intruders attempting to use stealth to gain entry.

While LPS 2081 covers the same scope of products as LPS 1175, it focuses on prevention of a very different threat, i.e. intruders using stealth. Products approved to the standard therefore suit environments where intruders will avoid making noise when attempting to gain access.



EN 1627

Pedestrian doorsets, windows, curtain walling, grilles and shutters. Burglar resistance. Requirements and classification.

This standard classifies a product's resistance to tiered levels (resistance classes). The lower classes of EN 1627 are aimed at attacks by criminals using stealth to gain access, rather than the higher levels of attack covered by LPS 1175. Approval to EN 1627 can be used to demonstrate part-compliance with the requirements of PAS 24.

Domestic Security

PAS 24

Enhanced security performance requirements for doorsets and windows in the UK.

This domestic security standard includes doors (hinged, sliding, bi-folding) and windows (casement, tilt-turn, sliding sash). PAS 24 is a mix of mechanical loading and manual intervention tests. Doors and windows certificated by LPCB to PAS 24, LPS 1175 or LPS 2081 are accepted by the police for use in Secured by Design projects.

Glazing

LPS 1270

Requirements and testing procedures for the LPCB approval and listing of intruder resistant security glazing units.

LPS 1270 classifies glazing's resistance to forced entry to the same levels as specified in LPS 1175. The classification is represented by 3 digits; these signify the glazing's resistance to local penetration, hand hole access, and complete access.

| Digit | Type | Description |
|-------|-------------------|--|
| 1st | Local penetration | Represents glazing's likely resistance to creation of a hole through which a piece of wire, screwdriver, lever or other such device can be passed. Such attacks may be attempted by intruders wishing to operate a panic bar, emergency lever handle or other. |
| 2nd | Hand hole access | Represents glazing's likely resistance to creation of a hand hole. Such attacks may be attempted by intruders wishing to: <ul style="list-style-type: none"> Operate a thumbturn to release a lock fitted to an approved product. Retrieve an item from the protected side of the glass. |
| 3rd | Complete access | Confirms the glazing's resistance to creation of a hole through which an elliptical test block measuring 400 mm by 225 mm may be passed. This replicates the size of a hole a person may be able to pass through and reflects the test block defined in LPS 1175. |



Hostile vehicle mitigation

PAS 68 and IWA14

Impact test specifications for vehicle security barriers.

LPCB offers independent third-party approval of vehicle mitigation equipment. This ensures the products supplied by manufacturers deliver the levels of performance claimed and that the performance demonstrated during testing is replicated by the products delivered to site. LPCB can also undertake testing of vehicle barriers together with ancillary equipment, such as hydraulic motor housing, to LPS 1175. This demonstrates their resistance to manual attacks aimed at compromising the barrier's ability to prevent the passage of hostile vehicles.

Safes, strongrooms & ATMs

EN 1143

Secure storage units. Requirements, classification and methods of test for resistance to burglary. Safes, ATM safes, strongroom doors and strongrooms.

LPCB provides testing and approvals to the widely-specified EN 1143 standard, which can be applied to safes, strongrooms and ATMs. The standard comprises a series of 'grades', with the designated grade indicating the value of contents acceptable to insurers.

LPCB also provide approvals to LPS 1183 and EN 14450, both of which are recognised by Insurers and Police.

Locking hardware

LPCB offers approval schemes for hardware including locksets, exit devices, padlocks and cylinders.

LPS 1654

Requirements and testing procedures for the LPCB approval and listing of padlocks.

LPS 1654 specifies the requirements for resistance to manual attack for padlocks. The standard shares the same security ratings as LPS 1175, allowing specifiers to determine the suitability of padlocks for use on other LPS-approved products.

LPS 1242

Requirements and testing procedures for the LPCB approval and listing of cylinders for locks.

LPS 1242 describes the requirements for manual attack of mechanically operated cylinders and their original keys, and applies to cylinders that may be employed in locksets used on the doors of buildings, or in padlocks.

Ballistic protection/bullet-resistance

LPCB offers independent third-party approval of a range of products offering ballistic protection to:-

- EN 1063 - Glass in building - Security glazing - Testing and classification of resistance against bullet attack
- EN 1522 - Windows, doors, shutters and blinds - Bullet resistance - Requirements and classification
- EN 1523 - Windows, doors, shutters and blinds - Bullet resistance - Test method
- ISO 16935 - Glass in building - Bullet-resistant security glazing - Test and classification

This ensures that products supported by manufacturers deliver the levels of performance claimed and that the performance demonstrated during testing is replicated by the products delivered to site.



Installation, Service and Maintenance

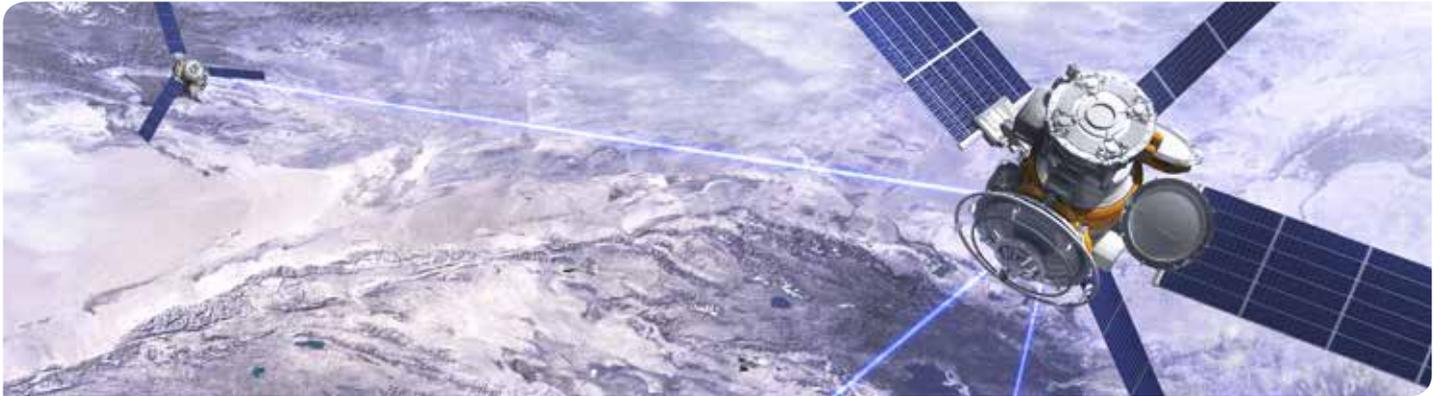
It is critical that doors and shutters are appropriately installed and maintained, as poor installation can undermine a product's security performance. LPCB offers the following schemes relating to installation, inspection, service and maintenance:

LPS 1197:

Requirements for companies inspecting, repairing and maintaining security doors, doorsets and shutters.

LPS 1271:

Requirements for LPCB approval and listing of companies installing fire and security doors, doorsets and shutters.



Asset marking and databases

LPS 1225

Requirements for the LPCB approval and listing of asset marking systems.

LPS 1225 specifies the requirements for the composition and performance of an asset marking system such that, when used according to the manufacturer's instructions, the asset marking device may both:

- Enable the marked asset to be traced back to the legal owner via a secure database register (see below), and
- Act as a theft deterrent in the first instance by virtue of known existence.

LPS 1224

Requirements for secure database registers.

LPS 1224 sets out the requirements for secure databases on which information may be stored pertaining to asset marked products.

Intrusion alarm systems

EN 50131 series

Intrusion and hold-up systems. System requirements.

BRE Global provides a range of services related to intrusion alarm systems including the testing of:

- Control panels
- Door contacts
- Glass break detectors
- PIR, microwave and combined PIR/microwave detectors
- Seismic and shock detectors
- Power supplies
- Notification and warning devices
- Wireless alarm systems
- Free-standing perimeter detection systems

EN 50131 specifies the requirements for Intrusion and Hold-up Alarm Systems (I&HAS) and components installed in buildings using specific or non-specific wired interconnections or wire-free interconnections. These requirements also apply to the components of an I&HAS installed in a building which are normally mounted on the external structure of a building e.g. ancillary control equipment or warning devices.

Supervised premises transceivers

EN 50136-2

Requirements for Supervised Premises Transceiver (SPT)

BRE Global can provide testing and LPCB approval of supervised premises transceivers in accordance with EN 50136-2, validating SPT performance against the performance criteria for alarm transmission systems stated in EN 50136-1.

Alarm transmission systems

LPS 1277

Requirements for LPCB approval and listing of alarm transmission equipment.

LPS 1277 builds upon the core requirements of the EN 50136 standards and defines enhanced performance criteria appropriate to intruder alarm systems.

Enhanced performance criteria includes a 10 minute fault reporting time (identified as an essential requirement not provided by the EN 50136 standards) and greatly improved reporting of the simultaneous 'catastrophic' failure of multiple alarm transmission paths.

All 'performance' testing to LPS 1277 is carried out over 'real', 'live' networks in order to verify 'real world' performance.

Alarm receiving centres

LPCB approves alarm receiving centres to LPS 1020 'Requirements for Alarm Receiving Centres'. This standard specifies requirements for alarm receiving centres and incorporates additional clarification for centres receiving fire alarm calls.

CCTV security systems

CPNI Video Analytics Assessment Programme

BRE Global has been awarded an exclusive contract to be the authorised test house for the Centre for the Protection of National Infrastructure (CPNI) Video Analytics Assessment Programme for the Sterile Zone, Abandoned Baggage Detection, Parked Vehicle Detection and Doorway Surveillance scenarios. This testing has evolved from the previous assessment programme commonly known as 'i-LIDS', however both the video datasets and test process remain the same. Systems that demonstrate their ability to alert CCTV operators of suspicious alarm events in these key security areas will be permitted by CPNI to use their trademark.

BRE Group

BRE is a world leading building science centre that generates new knowledge through research. This is used to create products, tools and standards that drive positive change across the built environment. BRE helps government and private sector clients meet the significant environmental, social and economic challenges they faces in delivering homes, buildings and communities.

BRE is owned by the BRE Trust, a registered charity. The Trust uses the profits made by the BRE companies to fund research and education that advances knowledge of the built environment.

www.bre.co.uk

BRE Global

BRE Global is an independent, third-party approvals body offering testing, inspection and certification of fire, security, micro-generation (MCS), environmental profiles and sustainability of products and services to an international market.

BRE Global is owner of the internationally recognised LPCB and BREEAM and BRE Global certification schemes.

Under the LPCB brand, BRE Global is responsible for the approval of fire and security products and services listed in the Red Book. It also operates installation and service maintenance schemes.

www.redbooklive.com



BREEAM is an internationally recognised sustainability rating scheme for buildings. It is based on the latest scientific knowledge and is regularly updated in line with new development, evolving legislation and feedback from users. BREEAM is owned by BRE Group.

www.breeam.com

BRE Global can also provide testing in the following areas in support of CE Marking: acoustics, airtightness, fire resistance, impact, mechanical strength, operating forces, reaction to fire, substances, thermal transmittance, water tightness and wind loading.

BRE Global, in partnership with Fire Investigations LLP (FI UK) provide a comprehensive package of fire investigation services, capable of conducting a full and thorough investigation of any fire.

www.bre.co.uk/global

The BRE Academy is in the unique position to provide training support to individuals, employers, industry and training partners on an array of subjects within the built environment including Energy, Sustainability, Fire and Security, BIM, Health and Safety and Leadership and Management. It delivers leading edge training and development services to improve the performance and competence levels of individuals in the workplace.

www.breacademy.com

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BRE Trust

The BRE Trust uses profits made by BRE Group to fund new research and education programmes, that will help it meet its goal of 'building a better world together'.

The BRE Trust is a registered charity in
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