Secured by Design

HOMES 2023

Secured by Design

SBD

Official Police Security Initiative

Preface

The changes to the English Planning and Building Control regulations following in-depth reviews by the Department for Levelling Up, Housing and Communities (previously: Ministry for Housing, Communities and Local Government) have underlined the importance of the police advice delivered over the past 30 years; specifically in the form of the Secured by Design (SBD) initiative. The references within the National Planning Policy Framework (NPPF) and the accompanying National Planning Practice Guidance (NPPG) along with those in Scotland (Scottish Planning Policy – PAN 77) and Wales (Planning Policy Wales – TAN 12) have sought to reinforce the need and importance of a safe and secure external environment and to this end there are specific references to police service advice and the Police.uk website in particular.

Indeed, the government's Chief Planning Officer Steve Quartermain, wrote to all planning authorities reminding them of the important role the planning system plays in ensuring appropriate measures are in place in relation to crime prevention and security. Further information is available at www.securedbydesign.com

The Department for Levelling Up, Housing and Communities (DLUHC) has also followed Scotland's lead and introduced physical security standards for new homes within Building Regulations for the first time. The Welsh Government has also decided to include a new Building Regulation to address the security of new homes.

This edition of the Secured by Design (SBD) guidance for domestic properties has been designed to cater for the security of all new and refurbished homes including those for disabled and older people. The guide incorporates the latest security standards, developed to address emerging criminal methods of attack, and includes references to the Building Regulations and other statutory requirements across the United Kingdom.

Constructing well designed places, buildings and communities that promote both sustainable communities and health and wellbeing is an objective that Secured by Design widely supports; however, it is imperative that they must also be safe, secure, and accessible. Mitigating the opportunities for crime is not only about reducing and preventing injury and crime, but it is also about building strong, cohesive, vibrant and participatory communities.

SBD is aware that due consideration should be given to not creating additional barriers for disabled and/or older residents. Taking an inclusive design approach which aims to remove barriers that create undue effort and separation will ensure that buildings, places and surrounding spaces can be easily and comfortably accessed and used by everyone. References in this document to the National Planning Policy Framework (NPPF), Building Regulations, Approved Documents and design guidance provide detail on how to deliver an inclusively designed environment.

The National Design Guide sets out the characteristics of well-designed places and demonstrates what good design means in practice. Detailed guidance is provided by the National Model Design Codes Parts 1 and 2. The purpose of National Model Design Code is to provide detailed guidance on the production of design codes, guides and policies to promote successful design. It expands on the ten characteristics of good design set out in the National Design Guide, which reflects the government's priorities and provides a common overarching framework for design.[1]

Secured by Design has become increasingly aware of the need to consider these aspects and we see this being achieved through SBD's partnership work with housing occupational therapists and DOCOs working with local or regional occupational therapists, who advise on the design of accessible and inclusive housing and neighbourhoods, as well as home adaptations.

Accessible and inclusive design is not a mandatory SBD Award requirement for all developments; it should be seen however as a material consideration when designing homes specifically for occupation by disabled and/or older residents so as to ensure that these members of our community are not subsequently made less secure. For example, if door locking systems are complex and difficult to operate, some people may leave their door insecure because of their inability to operate such locking systems.

1 The National Model Design Code: Part 1

It is recommended that when introducing new security measures the procurement process involves consultation with local authority access professionals such as housing occupational therapists (Royal College of Occupational Therapists: Specialist Section in Housing) to ensure the following important issues are considered:

- Locking systems that are easy to understand, use, and can be operated with one hand.
- Doors which comply with the opening pressure requirements of the relevant categories of Approved Document M(4): Volume 1: Access to and use of dwellings.
- Door thresholds that comply with the minimum requirements as defined in Appendix A of Approved Document M(4): Volume 1: Access to and use of dwellings.
- Compartmentation systems that ensure residents are able to respond and admit callers without the need for 'meet and greet'.

In terms of usability of products, the Research Institute for Disabled Consumers (RiDC) www.ridc.org.uk can provide specialist evidence based advice.

The requirements and recommendations within this guide are based upon academically sound research findings that have proven SBD to deliver significant crime reductions and cost efficiency savings for a wide range of stakeholders including local authorities, housing associations, landlords, residents and the police service. The police service continually re-evaluates the effectiveness of Secured by Design and responds to emerging crime trends and independent research findings, in conjunction with industry partners, as and when it is considered necessary and to protect the public from crime.

The standards contained within this document are based upon those developed by SBD with various standards owners and trade associations.

The police service places great importance upon the need to build sustainable and inclusive communities and to raise awareness of the significant impact that low crime makes to the ongoing and long-term sustainability of a development. Should you wish to contribute to this or any of the SBD guides please contact Secured by Design by email at sbdconsultations@police-cpi.co.uk

Readers of this new Secured by Design Homes guide should be aware that there have been some major changes from the Secured by Design Homes 2019 guide. Some of the significant areas that have been changed include bicycle parking, doorsets and windows and their fitness for purpose (BS 6375), lift security (BS EN 81) and the introduction of PAS 24:2022. This iteration of Secured by Design Homes is applicable to all SBD applications made after 1st March 2023.

Contents

1 Introduction

1.1 Secured by Design is a police initiative to guide and encourage those engaged within the specification, design and build of new homes, and those undertaking major or minor property refurbishment, to adopt crime prevention measures. The advice given in this guide has been proven to reduce the opportunity for crime and the fear of crime, creating safer, more secure and sustainable environments. Secured by Design is owned by the UK Police Service and is supported by the Home Office. Building Control Departments in England (Part Q Security – Dwellings), Scotland (Building Standard 4.13) and Wales (Part Q Security – Dwellings) all reference SBD as a means of compliance.

NB. It should be noted that compliance with either Part Q or Building Standard 4.13 is insufficient to meet the full requirements of SBD. Therefore, the requirements of SBD in Part 2 of this document must be met with in full. For simplicity, from now on, the SBD Homes Guide will refer to the English, Scottish and Welsh building regulations collectively as UK Building Regulations. At this time, Northern Ireland does not have a Building Regulation for the physical security of dwellings.

1.2 The advice given by the police Designing Out Crime Officer (DOCO), Crime Prevention Design Advisor (CPDA) or Architectural Liaison Officer (ALO) will be provided directly from the content of this guide and will be dependent upon a crime risk analysis and an understanding of local crime occurrences. Where justified by the results of a crime risk analysis, some sections of this guide allow for commensurate enhanced measures to be specified by the DOCO, the details of which are contained within each relevant part.

NB. For the purposes of this document, all contact with the police specialist will refer to the generic term ‘DOCO’.

1.3 Applicants should be aware that in circumstances where security products or crime prevention interventions have been removed from a development site after the issuing of any SBD Award, all parties involved will be informed including Local Authority Planning Departments, clients and end-users. In cases where the security products or crime prevention interventions are not reinstated, the award may be withdrawn.

1.4 The environmental benefits of SBD are supported by independent academic research consistently proving that SBD housing developments experience up to 87% less burglary, 25% less vehicle crime and 25% less criminal damage (*Note 1.4*). It also has a significant impact on anti-social behaviour. Therefore, there are substantial carbon cost savings associated with building new homes and refurbishing existing homes to the SBD standard i.e. less replacement of poor quality doors, windows and the stolen property from within the home as a result of criminal acts. This has been achieved through adherence to well researched and effective design solutions, innovative and creative product design coupled with robust manufacturing standards.

Note 1.4: Research documentation can be found on the SBD website.

1.5 Research conservatively estimates the carbon cost of crime within the UK to be in the region of 6,000,000 tonnes of CO2 per annum. This is roughly equivalent to the total CO2 output of 6 million UK homes.

1.6 If you would like to apply for the Secured by Design award, please use the ‘SBD Homes’ application form found on our website www.securedbydesign.com

2 Scope

2.1 This edition of ‘SBD Homes’ addresses the community safety and security requirements for all types of dwellings including individual houses, housing estates, low and high rise apartment blocks.

2.2 The design, layout and physical security parts of this edition can be applied to both new and refurbished homes.

3 SBD Homes explained

Who should read this document?

3.1 Secured by Design Homes can now fulfil the requirements of:

- Planning Authorities – Part 1 of this document provides guidance on proven crime reduction methodologies for the external environment. Following the withdrawal of the 'Safer Places' document, there is now additional information available to all UK planning officers at www.police.uk
- Building Control – Part 2 provides detailed information that may be utilised to measure and discharge developments against the security requirements of the relevant UK Building Regulations (see paragraph 1.1).
- Developers – Major and regional developers, small bespoke developers or individuals pursuing a self-build project can utilise SBD as a route to compliance with the security requirements of the relevant UK Building Regulations (see paragraph 1.1).
- Social Housing providers – Compliance with SBD Homes will continue to provide a 'police preferred specification' for all new developments (proving compliance with the security requirements of the UK Building Regulations – see paragraph 1.1) or refurbished developments. Reductions in dwelling maintenance, increased tenant retention and satisfaction, reduced vacancy levels and sustainable low crime environments being some of the proven benefits.
- Private rented sector – This document may be used by the private rented sector to provide a safe and secure environment, increase tenant satisfaction and occupancy, reduce maintenance costs and to prevent crime and anti-social behaviour. The requirements within Part 2 provide guidance for landlords who wish to improve the level of security within new developments (proving compliance with the security requirements of the relevant UK Building Regulations – see paragraph 1.1) and the refurbishment or upgrading of existing properties.
- Homeowners or occupiers – Part 1 of this document provides guidance on the external environment around the dwelling, whilst Part 2 provides detailed information regarding the physical requirements which may be applied to existing homes that will radically improve the security of the home.
- Architects, builders, designers, police counter terrorism security advisors and all others with a professional responsibility for the shape and specification of the built environment.

SBD Homes format in detail

3.2 This document is presented in three parts:

Part 1: Development design and layout. This part provides guidance on all aspects of design and layout that impact on the creation of a safe and secure environment, including road layout, footpath design, communal areas, dwelling boundaries, car parking and lighting.

Part 2: Physical security of the home. This part provides the 'Police Preferred Specification' for all physical security requirements for new or refurbished homes. It is separated into two sections; Part 2A reflects the requirements of the UK Building Regulations and Part 2B addresses bespoke new homes and existing refurbished homes.

Part 3: Additional features for the SBD Gold award. The essential security dwelling detail requirements in Part 2 are further enhanced by the requirements set out in this part. Part 3 addresses the requirements for a range of additional or optional residential features, such as enhanced glazing, external garage doorsets, private external lighting and dwelling lighting, intruder alarms, etc. If a development contains any of the features within Part 3, the physical security requirements within this part should be adhered to in order to achieve full SBD Gold compliance.

3.3 Compliance with any of the following SBD Awards satisfies the UK Building Regulations (see paragraph 1.1).

SBD graded security levels

3.4 Secured by Design has three differing levels of security award:

- SBD Gold which incorporates the security of the external environment together with the physical security specification of the home.
- SBD Silver which offers those involved in new developments, major refurbishment and the individual the opportunity to gain an award for the level of physical security provided.
- SBD Bronze which offers a route to achieve a reasonable level of physical security for bespoke or refurbished properties where a traditional enhanced security product is not available, or cannot be utilised due to the listed building or other conservation status.

SBD Gold

3.5 The SBD Gold Award is awarded to new developments or refurbishment schemes that have achieved compliance with all the required security features particular to the development, contained within Part 1, Part 2A and Part 3 of this document.

SBD Silver

3.6 There are two routes to obtaining the SBD Silver Award:

i. SBD Silver can be awarded to new developments or refurbishment schemes that meet the required security features particular to the development contained within Part 2A.

The above is the minimum qualifying criteria for Secured by Design National Building Approval (see Section 4).

ii. SBD Silver can also be awarded to new bespoke developments or refurbishment schemes that meet the required security features particular to the development contained within Part 1, Part 2B and Part 3.

SBD Bronze

3.7 SBD Bronze can be awarded to new bespoke developments or refurbished properties that meet the required security features particular to the development contained within Part 2B.

3.8 Fig.1 depicts a flowchart of the award structure.

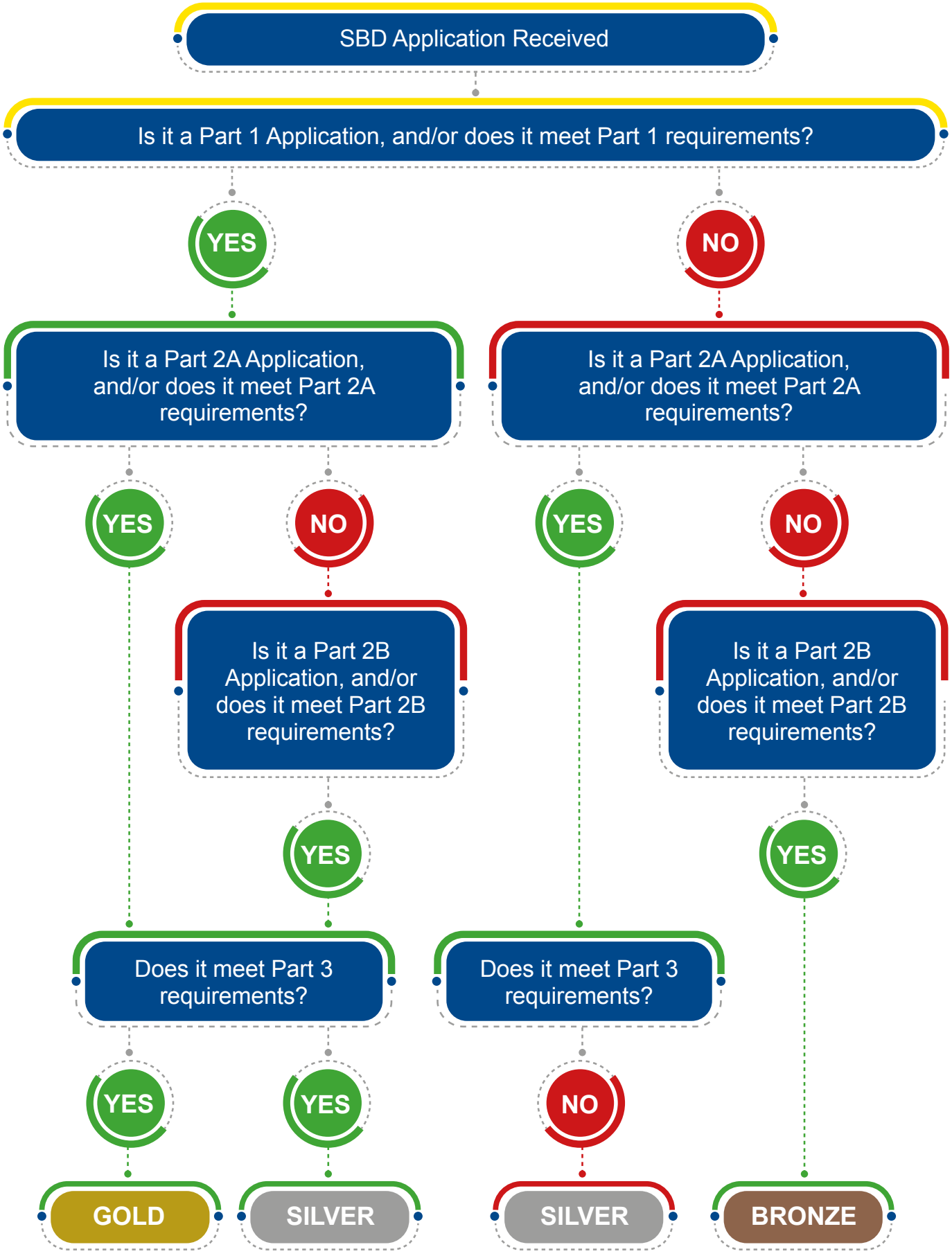
4 Secured by Design National Building Approval

4.1 Secured by Design has developed the *Secured by Design National Building Approval (SBD NBA)* which provides a structured approach to discharging the UK Building Regulations (see paragraph 1.1).

4.2 SBD NBA ensures that all suppliers of door, window and roof light products consistently meet the requirements of the Building Regulations – this minimises the possibility of delays to the build process due to non-compliance issues. Secured by Design will conduct all relevant due diligence checks on behalf of the developer throughout the lifetime of the partnership and issue a certificate of conformity with the UK Building Regulations (see paragraph 1.1) and the Secured by Design Silver award. This police approval can be used for any future development built in accordance with the SBD NBA agreement to discharge the UK Building Regulations (see paragraph 1.1) and is acceptable to Building Control Officers and Approved Inspectors.

4.3 Housing Associations, social housing suppliers and client-based specifiers can be confident that developers with SBD NBA membership are approved for the design of their homes and the level of physical security provided is robust and consistent.

Fig. 1. Award structure



Notes:

1. No award for Parts 1 or 3 only. 2. No other award combinations are available.

4.4 The advantages for the developer are clear; increased Pre-Qualification Questionnaire (PQQ) scoring, reduced bureaucracy and a reduction in the financial burden associated with standards compliance, faster discharge of Building Regulation/Standards obligations through the use of a UK police certificate of compliance. For more information about SBD NBA please contact us at sbdnba@police-cpi.co.uk

5 How to apply for the SBD Award

5.1 Applicants should make themselves familiar with the relevant parts of the Secured by Design guidance contained within this document and are strongly advised to consult the Designing Out Crime Officer (DOCO) for site specific information at the earliest opportunity, ideally at the pre-planning stage, and follow the application process.

5.2 The application form must be read in conjunction with the full SBD Homes document to ensure that your application will comply.

5.3 If you are applying for Secured by Design Part 2 (SBD Silver or SBD Bronze Award) to demonstrate compliance with the UK Building regulations (see paragraph 1.1), please go to Part 2 of the application form.

5.4 The development will be measured against the requirements of the SBD award scheme current at the time the application was made. Developments that have not started on site within 3 years of the original SBD application shall be subject to a new application – which includes developments where only a phase of building begins more than 3 years from the original application date.

5.5 Developers wishing to apply for Secured by Design approval should contact their local Designing Out Crime Officer at: https://www.securedbydesign.com/contact-us

6 Construction phase security – advisory note

6.1 Unfortunately there are many crimes which occur during the construction phase of a development; the most significant include theft of plant equipment, materials, tools and diesel fuel.

6.2 Secured by Design recommend that security should be considered throughout the life cycle of the development and in place prior and during the construction phase. For example, this should include robust perimeter fencing of the site and (where appropriate) a monitored alarm system (by a company or individual who can provide a response) for site cabins and those structures facilitating the storage of materials and fuel.

6.3 The developer is advised that signage should be displayed across the development (i.e. on the perimeter fencing) and should contain the emergency contact details and point of contact. This will allow both the public and staff members to report suspicious behaviour and circumstances.

6.4 Mobile or part time CCTV systems can be used as an effective aid to the security of a site and can act as a deterrent to criminal activity.

6.5 The developer should consult the DOCO regarding the impact that any perimeter fencing or hoarding may have on public safety. Particular attention should be paid to the nature and surveillance of adjoining footpaths and/or roads bordering the site.

6.6 Further advice on construction site security can be obtained from the Secured by Design website: www.securedbydesign.com/images/CONSTRUCTION_SITE_SECURITY_GUIDE_A4_8pp.pdf

7 UK Planning and strategic policies in support of Secured by Design

7.1 It is important to note that crime is a material planning consideration and is a determining factor in gaining planning consent.

7.2 The police service has worked in partnership with the governments, assemblies and Local Authorities throughout the United Kingdom to incorporate designing out crime principles within strategic policy and planning guidance documents. The following sections describe the strategic guidance in support of Secured by Design in England, Wales, Scotland and Northern Ireland.

England (NPPF and NPPG)

7.3 The National Planning Policy Framework (NPPF) which defines three fundamental objectives to achieving a sustainable development: economic, social and environmental (NPPF, page 5, paragraph 8). Crime has a direct impact on all three objectives. This has been reinforced throughout the NPPF where the government makes clear its view of what sustainable development, in England, means in practice for the planning system. Specifically, Section 8 'Promoting healthy and safe communities', states that 'planning policies and decisions should aim to achieve healthy, inclusive and safe places which are safe and accessible so that crime and disorder, and the fear of crime, do not undermine the quality of life or community cohesion.'

7.4 Furthermore, Section 8, states 'Planning policies and decisions should promote public safety and take into account wider security and defence requirements by:

a) anticipating and addressing possible malicious threats and natural hazards, especially in locations where large numbers of people are expected to congregate. Policies for relevant areas (such as town centre and regeneration frameworks), and the design and layout of developments, should be informed by the most up-to-date information available from the police and other agencies about the nature of potential threats and their implications. This includes appropriate and proportionate steps that can be taken to reduce vulnerability, increase resilience and ensure public safety and security; and b) recognising and supporting development required for operational defence and security purposes, and ensuring that operational sites are not affected adversely by the impact of other development proposed in the area.'

7.5 With the publication of the accompanying National Planning Practice Guidance (NPPG) (*Note 7.5*) the government has reiterated that designing out crime and designing in community safety should be central to the planning and delivery of new development.

Specifically, the Planning Practice Guidance on Design reminds practitioners that local authorities are duty bound to adhere to Section 17 of the Crime and Disorder Act 1998 and exercise their functions with due regard to their likely effect on crime and disorder, and do all that they reasonably can to prevent crime and disorder. Furthermore, practitioners are also reminded that the prevention of crime and the enhancement of community safety are matters that a local authority should consider when exercising its planning functions under the Town and Country Planning legislation.

Note 7.5: The reference to Design within the NPPG can be found at: https://www.gov.uk/guidance/design#the-importance-of-good-design

7.6 The National Planning Policy Framework (NPPF) makes it clear that all local planning authorities should prepare design guides or codes consistent with the principles set out in the National Design Guide and National Model Design Code.

7.7 The National Design Guide sets out the characteristics of well-designed places and demonstrates what good design means in practice in the form of ten characteristics:

- Context – enhances the surroundings
- Identity – attractive and distinctive
- Built Form – a coherent pattern of development
- Movement – accessible and easy to move around
- Nature – enhanced and optimised
- Public Spaces – safe, social and inclusive
- Uses – mixed and integrated
- Homes and Buildings – functional, healthy and sustainable
- Resources – efficient and resilient

- Lifespan – made to last

7.8 The National Design Guide states on page 31, Paragraph 105 that ‘careful planning and design create the right conditions for people to feel safe and secure, without the need for additional security measures. These include:

- buildings around the edges of a space
- active frontages along its edges, provided by entrances onto the space and windows overlooking it, so that people come and go at different times
- natural surveillance from inside buildings provided by windows and balconies, so that users of the space feel they might be overlooked by people from inside
- reasons for people to enter into the space, for an activity or destination or because it is on a natural line of direction of travel
- risk assessment and mitigation at an early stage of the design process, so security measures can be integrated into positive design features’

7.9 Security is also referenced again on page 39, Paragraph 124 where the guide states: ‘Good design promotes quality of life for the occupants and users of buildings. This includes function – buildings should be easy to use. It also includes comfort, safety, security, amenity, privacy, accessibility and adaptability.’

7.10 The National Model Design Code Parts 1 and 2 provide detailed guidance on the production of design codes, guides and policies to promote successful design. It expands on the ten characteristics of good design set out in the National Design Guide, which reflects the government’s priorities and provides a common overarching framework for design. Design codes are important because they provide a framework for creating healthy, safe, green, environmentally responsive, sustainable and distinctive places, with a consistent and high-quality standard of design.

7.11 Part 1 of the National Model Design Code states on page 32, Paragraph 63 ‘Safety and Security: All schemes should aim to create a safe and secure environment and provide a sense of security for all users. Where development is for or has potential for a significant concentration of people, schemes should also consider appropriate and proportionate security measures.’ Page 33, Paragraph 65 ‘Homes and Buildings’ references security and the building regulations ‘Secured by design relating to the home: Codes may incorporate guidance on the security of the home in accordance with Part Q of the Building Regulations.’

7.12 Part 2 of the National Model Design Code states on page 61, Paragraph 143 that ‘Reducing crime has a significant impact on building strong communities and ensuring the long-term sustainability

of a development' and how 'The increasing threat of terrorism also needs to be considered in the design of public spaces.'

7.13 Secured by Design is specifically referenced on page 61, Paragraph 144: 'Neighbourhoods need to be designed to make all people feel safe and to reduce the incidence of crime in accordance with the recommendations of Secured by Design which includes guidance for housing, commercial space, schools, hospitals and sheltered accommodation.' This section also references the value of working with Designing Out Crime Officers (DOCOs) and lays out the Secured by Design principles for creating safe and secure developments.

7.14 Page 62, Paragraph 146 references the need to take account of Counter Terrorism measures when designing new developments.

Wales (PPW and TAN12)

7.15 Planning Policy Wales (PPW) sets out the Welsh Government's national planning policy on promoting sustainability through good design. It categorises five key aspects (Access, Character, Community Safety, Environmental Sustainability and Movement) and provides guidance on how to respond to them following an appraisal of the context.

7.16 In relation to designing out crime, PPW states that crime and prevention and fear of crime are social considerations to which regard must be given by local planning authorities in the preparation of development plans. They should be reflected in any supplementary planning guidance, and may be material considerations in the determination of planning applications. The aim should be to produce safe environments through good design.

7.17 Technical Advice Note (TAN) 12: Design, provides advice for all those involved in the design of development on how good sustainable design can be facilitated through the planning system. TAN 12 reminds practitioners that local authorities (including National Park Authorities) are required to have due regard to crime and disorder prevention in the exercise of their functions under Section 17 of the Crime and Disorder Act 1998. TAN 12 recognises the Secured by Design initiative as a standard that has been shown to reduce crime (particularly residential burglary) and the impact of crime upon neighbourhoods.

7.18 TAN 12, Paragraph 5.17.2 states that 'Local authorities are advised to consult Designing out Crime Officers on pre-applications and planning applications for those developments where there is potential to eliminate or reduce crime through the adoption of suitable measures at the design stage. This is especially important for major developments such as new housing estates, industrial estates, shopping centres, leisure complexes, schools and car parks. It is important to consult Designing out Crime Officers at as early stage as possible – by the time a formal application is submitted, the opportunity to take account of advice may already be limited.'

7.19 Paragraph 5.17.3 states 'The Safer Places and Secured by Design Initiative provide recognised standards that have been shown to reduce crime (particularly residential burglary) and the impact of crime upon neighbourhoods. It is desirable for the security of all housing developments, public buildings, and all buildings funded by public bodies, to achieve similar measurable standards. It is recognised, however, that security needs must be considered in conjunction with other objectives of good design and a balance will need to be struck between often competing desires for privacy, access for all and achieving security in the design of development.'

7.20 TAN 12 also states 'It is desirable for the security of all housing developments, public buildings, and all buildings funded by public bodies, to achieve similar measurable standards.'

7.21 In addition to the above, the Welsh Government has determined that all new social housing schemes that are grant funded by the Welsh Government, must be built to Secured by Design (Gold) standards.

Development Quality Requirements (DQR) for social housing

7.22 The Welsh Government has determined that all new social housing, that is grant funded by the

Welsh Government, must be built to the Secured by Design Gold standard.

Welsh Housing Quality Standards (WHQS)

7.23 Within the 'Safe and Secure' section of the WHQS there is a requirement for the physical security of dwellings to meet those within the Secured by Design scheme.

Scotland (SPP and PAN77)

7.24 Scottish Planning Policy's (SPP) Planning Policy Note 77 (PAN 77) highlights the positive role that planning can play in helping to create attractive well-managed environments which discourage antisocial and criminal behaviour. It comments that new development should be located and designed in such a way as to deter such behaviour and acknowledges that poorly designed surroundings can create feelings of hostility, anonymity and alienation which can have significant social, economic and environmental costs leading to environments that are desolate.

7.25 It identifies planning as an important mechanism to the creation of safer places that can make a significant contribution to reducing the fear and incidence of crime. It calls for a co-ordinated approach between local authorities, the police, the community, and any other relevant stakeholders, as being a vital factor in the successful delivery of safer places.

Northern Ireland (DOE, PPS 7 and QD1)

7.26 Planning Policy Statement 7 (PPS 7) from the Department of the Environment – Planning Service (DOE) makes it clear that the quality of a residential environment is crucial to the long-term sustainability of the development by helping it to reduce crime and anti-social behaviour.

7.27 It further comments that incorporating sensible security measures during the extension or refurbishment of buildings has been shown to reduce levels of crime and the fear of crime. By bringing the crime prevention experience of the police more fully into the planning and design process, a balance can be achieved between safety and security.

7.28 Policy QD1: Security from Crime, seeks to provide a feeling of security and a sense of vitality in all parts of the development. In particular it comments on the need to create private space to the rear of dwellings and the importance of natural surveillance of open spaces and pedestrian routes. It adopts a firm stand against any proposals that would introduce potentially unfrequented or unsupervised routes for pedestrians or cyclists.

7.29 It states that developers and their professional advisers should take account of the principles offered by SBD when preparing schemes.

PART 1

Development design and layout

8 Roads and footpaths

8.1 Vehicular and pedestrian routes should be designed to ensure that they are visually open, direct, well used and should not undermine the defensible space of neighbourhoods. Design features can help to identify the acceptable routes through a development, thereby encouraging their use, and in doing so enhance the feeling of safety. Where it is desirable to limit access/use to residents and their legitimate visitors, features such as rumble strips, change of road surface (by colour or texture), pillars, brick piers or narrowing of the carriageway may be used. This helps to define the defensible space, psychologically giving the impression that the area beyond is private.

8.2 Defensible space has the simple aim of designing the physical environment in a way which enables the resident to control the areas around their home. This is achieved by organising all space in such a way that residents may exercise a degree of control over the activities that take place there.

Through-roads and cul-de-sacs

8.3 There are advantages in some road layout patterns over others especially where the pattern frustrates the searching behaviour of the criminal and their need to escape. Whilst it is accepted that through routes will be included within development layouts, the designer must ensure that the security of the development is not compromised by excessive permeability, for instance by allowing the criminal legitimate access to the rear or side boundaries of dwellings, or by providing too many or unnecessary segregated footpaths (*Note 8.3*). Developments that promote intuitive wayfinding and enhance the passive surveillance of the street by residents within their homes and high levels of street activity are desirable as they have both been proven to deter criminal behaviour.

Note 8.3: The Design Council's/CABE's Case Study 6 of 2012 states that: "Permeability can be achieved in a scheme without creating separate movement paths" and notes that "paths and pavements run as part of the street to the front of dwellings reinforces movement in the right places to keep streets animated and does not open up rear access to properties."

8.4 A review of available research in this area concluded that: "Neighbourhood permeability… is one of the community level design features most reliably linked to crime rates, and the connections operate consistently in the same direction across studies: more permeability, more crime. Several studies across several decades link neighbourhood property crime rates with permeability versus inaccessibility of neighbourhood layout. Neighbourhoods with smaller streets or more one-way streets, or fewer entrance streets or with more turnings have lower property crime rates…"

Source: Taylor R B 2002 "Crime Prevention Through Environmental Design (CPTED): Yes, No, Maybe, Unknowable, and all of the above" in Bechtel RB (ed) "Handbook of Environmental Psychology", John Wiley, New York, Pages 413 – 426. Cited by Professor Ted Kitchen Sheffield Hallam University 2007.

8.5 Cul-de-sacs that are short in length and not linked by footpaths can be very safe environments in which residents benefit from lower crime.

8.6 However, research shows that the benefit of a cul-de-sac can be compromised if one or more of the following undesirable features exists:

- backing onto open land, railway lines, canal towpaths, etc.
- are very deep (long)
- linked to one another by footpaths (leaky cul-de-sacs)
- poorly lit

8.7 Cul-de-sacs that connect by footpaths to other parts of a development, often referred to as 'leaky cul-de-sacs', experience the highest levels of crime when compared to crime levels within a true cul-de-sac. Crime in this kind of design can be 110% higher than crime in a true cul-de-sac and therefore should be avoided.

Source: Professor Rachel Armitage, "Crime Prevention Through Housing Design" 2013, Part 2, Chapter 6, "The Impact of Road Layout on Levels of Crime and Fear of Crime."

Footpath and bicycle route design

8.8 Routes for pedestrians, cyclists and vehicles should be integrated and assist easy, intuitive wayfinding through the application of inclusive design by increasing activity and therefore natural surveillance, proven deterrents for crime and anti-social behaviour.

8.9 As stated in the Department for Transport Local Transport Note 1/20 (July 2020) Cycle Infrastructure Design: "Cycle networks should be planned and designed to allow people to reach their day-to-day destinations easily, along routes that connect, are simple to navigate and are of a consistently high quality."

8.10 Public footpaths should not run to the rear of, and provide access to gardens, rear yards or dwellings as these have been proven to generate crime.

8.11 Where a segregated footpath is unavoidable, for example where there is a public right of way, an ancient field path or heritage route, designers should consider making the footpath a focus of the development and ensure that they are:

- as straight as possible
- wide
- well lit (see paragraphs 8.20 to 8.22)
- devoid of potential hiding places
- overlooked by surrounding buildings and activities
- well maintained so as to enable natural surveillance along the path and its borders

8.12 Physical barriers may also have to be put in place where 'desire' lines (unsanctioned direct routes) place users in danger, such as at busy road junctions. It is important that the user has good visibility along the route of the footpath. The footpath should be as much 'designed' as the buildings.

8.13 Where isolated footpaths are unavoidable, and where space permits, they should be at least 3 metres wide (to allow people to pass without infringing personal space and to accommodate passing wheelchairs, bicycles and mobility vehicles). If footpaths are designated as an emergency access route they must be wide enough to allow the passage of emergency and service vehicles and have lockable barriers.

8.14 The creation of new pedestrian subways should be avoided. However, if the subway is already in existence and it is necessary to retain it, it should be well-lit with vandal resistant lighting (see paragraph 8.20), be as wide and as short as possible, with a clear line of sight to the exit. The rounding off or the altering of approach walls or thresholds to footpaths can help reduce areas of concealment. Radius (convex) entrance/exit walls can reduce the length of the subway and the opportunity for inappropriate loitering. The designer should consider wall finishes that enable easy removal of graffiti.

Planting next to a footpath

8.15 In general, planting next to a footpath should be arranged with the lowest-growing specimens adjacent to the path, and larger shrubs and trees planted towards the rear. Planting immediately abutting the path should be avoided as shrubs and trees may grow over the path, creating pinch points, places of concealment and unnecessary maintenance.

8.16 Careful consideration is required when selecting tree species to be used adjacent to a footpath or verge and consider their whole-life growth characteristics. Many trees will grow tall, dense canopies as they reach maturity. If unmaintained, this broad canopy will spread many metres from the trunk of the tree, and over-hang paths and may create difficulties in maintaining a clear, accessible route, in addition to creating a sense of enclosure for path users. Routes with overhanging branches can also be a particular issue for people with sight loss. A large canopy may also block natural light and restrict the effectiveness of street lighting.

8.17 Trees with slender or fastigiate forms naturally grow a narrow, tall canopy, and are less likely to over-hang paths regardless of their maturity. Similarly, pleached trees have been trained to produce a narrow canopy above a very straight, clear stem. A variety of species are available with similar growth forms, which provide height and structure without the issue associated with large canopies.

8.18 Where footpaths run next to buildings or roads, the path should be open to view. This does not prevent planting but will influence the choice of species and the density of planting. Public footpaths should not run immediately next to doors and windows, therefore defensive space should be created to separate a path from a building elevation. This is particularly important in areas with a known graffiti or anti-social behaviour problem.

Seating next to a footpath

8.19 Seating can be a valuable amenity or a focus for anti-social behaviour. The following specific points should be considered:

- How long and wide is the footpath? Who is most likely to be using the footpath? For example, is it likely to be used by disabled and/or older people who may require resting places?
- Can it be made more/less attractive and inclusive to certain groups of users by the way it is designed?
- Is the footpath required simply as a means for travelling from one place to another without stopping?
- Is it the intention to encourage stopping and social interaction at particular points along the footpath, e.g. to encourage people with limited mobility who need to rest more frequently or to promote health and wellbeing through exercise and exposure to natural daylight?
- Would seating encourage or attract inappropriate loiterers such as drinkers or drug users?
- Has the seating design been carefully considered to ensure that opportunities to conceal drugs or weapons are minimised?
- Is vandal resistant seating necessary?
- Should seating be placed right next to the path or set at the back of the verge (care should be taken to avoid creating a climbing aid)?
- Consider the use of single seats or stools set several metres apart to deter loitering

Lighting of footpaths

8.20 Where it is expected that a footpath will be in constant use, it should have all the required attributes as listed at paragraph 8.11 and be lit in accordance with BS 5489-1:2020. However, if such attributes are absent along a footpath, it may be advisable to discourage it's use in some circumstances by not illuminating it during the hours of darkness.

8.21 It is important that the landscape architect and lighting designers co-ordinate their plans to avoid conflict between lighting and landscape provision, i.e. tree canopies. It is advisable that trees are planted at least 5m away from any light source. See paragraph 19.2 regarding the technical requirements for public lighting, 'dark sky' policies and light pollution.

8.22 Secured by Design encourages, wherever possible, the use of the most environmentally friendly light sources. Moreover, the Institute of Lighting Professionals (ILP) currently favours the use of good quality LED lighting and other energy effective light sources and advises against the use of fluorescent lighting which is environmentally unsustainable for a variety of reasons. Further information is available at: https://www.securedbydesign.com/initiatives/safer-streets

Footpaths on phased developments

8.23 Where the completion of a footpath will be delayed because of phased development or long-term planning policy, it may be best to safeguard the land required for the footpath link, but fence it off and not actually construct the path until such time as the full connection can be made. This will avoid in the short to medium term the creation of an underused and possibly isolated movement route.

9 Communal areas and play spaces

9.1 Poorly designed and specified communal areas, such as playgrounds, toddler play areas, seating facilities have the potential to generate crime, the fear of crime and anti-social behaviour. These may often be referred to as:

- Local Areas of Play (LAP) – primarily for the under 6 year olds
- Local Equipped Area for Play (LEAP) – primarily for children who are starting to play independently
- Neighbourhood Equipped Area of Play (NEAP) – primarily for older children
- Multi-Use Games Areas (MUGA) – primarily for older children

9.2 Facilities should be designed to allow natural surveillance from nearby dwellings with safe and accessible routes for users to come and go. Boundaries between public and private space should be clearly defined and open spaces must have features which prevent unauthorised vehicular access. Communal spaces as described above should not immediately abut residential buildings.

9.3 The provision of inclusively designed public open amenity space, as an integral part of residential developments, should make a valuable contribution towards the quality of the development and the character of the neighbourhood. In order to do this it must be carefully located to suit its intended

purpose – mere residual space unwanted by the developer is very unlikely to be acceptable.

- The open space must be inclusively designed with due regard for wayfinding, permeability and natural surveillance
- Adequate mechanisms and resources must be put in place to ensure its satisfactory future management and maintenance
- Care should be taken to ensure that a lone dwelling will not be adversely affected by the location of the amenity space
- It should be noted that positioning amenity/play space to the rear of dwellings can increase the potential for crime and complaints arising from increased noise and nuisance

9.4 Play areas should ideally be designed so that they can be secured at night. This is to reduce the amount of damage and graffiti that occurs after dark. The type of fencing and security measures will need to vary to suit the particular area. However, consideration should be given to a single dedicated entry and exit point to enable parental/guardian control and supervision. Fencing at a minimum height of 1.2m can often discourage casual entry, provide a safe clean play area and reduce damage to the equipment. The specific requirements such as child safeguarding, preventing dogs entering, etc. should be discussed with the DOCO.

9.5 Consideration should be given to the provision of informal association spaces for members of the community, particularly young people. These must be subject to surveillance but sited so that local residents will not suffer from possible noise pollution. In addition, they should be sited in such a way that those using adjacent foot and bicycle paths will not be subject to harassment or otherwise be put in fear.

9.6 External communal drying spaces should be enclosed and have secured access via a locked gate so that they are only accessible to residents. The DOCO will provide advice in respect to fencing, gate construction and locking mechanisms.

10 Dwelling boundaries

Front boundaries

10.1 It is important that the boundary between public and private areas is clearly indicated. For the majority of housing developments, it will be desirable for dwelling frontages to be open to view, so walls, fences and hedges will need to be kept low or alternatively feature a combination of wall (maximum height 1m) and railings or timber picket fence if a more substantial front boundary is required by the DOCO.

10.2 Front garden planting of feature shrubs and suitable trees (e.g. open branched or light foliage, etc.) will also be acceptable provided they are set back from paths and placed to avoid obstructing visibility of doors, windows and access gates to the rear of the property. Similarly, planting which allows a clear line of sight to the pavement and road is preferable.

10.3 Plant specimens may be used to discourage access to specific areas of the house frontage. Encourage judicious planning, making sure that the plant used is suitable for the environment that it is being used in. For example, defensive layered planting (such as agave or holly in a planter).

Access gates to rear gardens

10.4 Gates to the side of the dwelling that provide access to rear gardens or yards must be robustly constructed, be the same height as the fence (minimum height 1.8m) and be capable of being locked (operable by key from both sides of the gate). Such gates must be located on or as near to the front of the building line as possible.

Side and rear boundaries

10.5 Vulnerable areas, such as exposed side and rear gardens, need more robust defensive barriers by using walls or fencing to a minimum height of 1.8m. There may be circumstances where more open fencing is required to allow for greater surveillance. Trellis topped fencing can be useful in such circumstances.

10.6 Additional deterrent features such as increasing the height of fencing, layered planting schemes or defensive planting may be considered as an alternative. A wide range of specimens can be planted along the boundary of a property, which offer attractive planting characteristics of colour and form, whilst containing sharp thorns to dissuade intruders. Many species are available which may be trained to any shape, size or height.

10.7 From within a garden, specimens such as Hawthorn may be trained to provide an additional physical barrier above the height of the fence with minimal impact on the garden below. Alternatively, ornamental specimens such as rose may be attached to a fence to deter climbing.

10.8 To enhance the security and longevity of boundaries, it is important to make sure that fencing is specified to a high standard. A high quality fence manufactured with a longer life expectancy will not only provide security but will reduce overall maintenance costs for residents or landlords. In doing so, providing fencing of a greater specification will support government sustainability agendas. Due to the importance of secure boundary delineation, fencing should be constructed as follows:

- The method of fixing between panel/rails and posts should create a secure mechanical bond so that panels/slats cannot be easily removed
- The fixings employed in the panel/pale to rail construction should be of galvanized steel or stainless steel with a design life to match the timber components
- Posts should be of a non-brittle material
- Where the fence panel is of a slatted design, they should be oriented vertically to avoid step-up points for climbing. Panels should be no less than 15mm thick, fitted flush across the attack face to resist them being pried off and they should be securely affixed to the frame/rails
- Fencing panels or railings mounted on a wall should be located as close to the outer (external) face of the wall as possible to eliminate climbing opportunities or use as informal seating
- Fence heights should be of a minimum 1.8m overall and be capable of raking/stepping to maintain height over different terrain
- Pedestrian gates should be of a framed design and employ galvanised adjustable hinges and fixings mounted behind the attack face. On outward opening gates, where the hinges/ brace is mounted on the attack face, fixings should be of a galvanised coach bolt design. Hinge systems must not allow the gate to be ‘lifted off’ and therefore should employ a method to restrict the removal of the gate from the fence post or wall. Gates must be capable of being locked (operable by key from both sides of the gate). The gate construction should have the same design and construction attributes as the fence and ideally be self-closing in the interests of road safety
- Where entrance/driveway gates are required they should ideally be inward opening, of substantial framed construction and employ galvanised adjustable hinges and fixings mounted behind the attack face. Hinge systems must not allow the gate to be ‘lifted off’ and should employ a method to restrict the removal of the gate from the adjoining fence post or wall. Gates should be fitted with a galvanised drop bolts and facility for dedicated gate locking systems, padlocking (manual gates) or electro-mechanical locking (automated gates) and employ mechanical/electro-mechanical devices as applicable to hold gate leaves in the open position. The gate construction should have the same design and construction attributes as the abutting fence
- Automated gates supplied and installed must meet the relevant statutory safety standards and be CE marked accordingly. Specifiers may wish to satisfy themselves that installers of

powered gates are appropriately qualified, trained and follow recognised industry guidance that also allows for accessibility and ease of operation. The following organisations provide guidance and training for installers:

- Door Hardware Federation (DHF) – the DHF has a revised Code of Practice (DHF TS 011) designed to raise standards of powered gate safety. Gates installed to the new Code of Practice will be inspected by the National Security Inspectorate (NSI)
- Gate Safe – The Gate Safe organisation produces operational good practice guidance designed to raise standards for the installation and maintenance of automated gates and barriers

- The tops of fences should finish flush with their posts and a securely fixed capping rail run across the fence and posts to affect a continuous chain. The tops/top rail/capping of fencing and gates should be of a design able to accommodate a security topping to deter attempts to scale over the perimeter
- All timber employed in the manufacture of the fencing should be fit for purpose, from FSC certified sustainable sources and be treated to provide protection against all types of rot and insect infestation for a minimum of 25 years

Fencing in high crime/vulnerable areas

10.9 Where a development is to be located in an area of extremely high crime or, in a vulnerable location where the development's private gardens immediately adjoin open land, footpaths or other potentially vulnerability causing areas – for example railway property, tow paths, etc. – an area of defensible planting to protect boundary fencing may be required. The specifier should give due consideration to the time taken for such areas to become established and therefore additional temporary protection may be required. Alternatively, if fencing is required, it should be 1.8m minimum in height and certified to one of the following security standards:

- LPS 1175 Security Rating 1/A1, or
- SS323:2020

10.10 Following consultation with the DOCO and local planning authority these requirements may be changed with agreed alternative measures.

Sub-divisional boundaries

10.11 Sub-divisional fencing design should be agreed with the DOCO and the local planning authority and is dependent upon location and crime risks. All fencing should provide clear demarcation. If a crime risk assessment indicates a high level of domestic burglary, a more secure sub-divisional fence may be required.

10.12 A suitable means of achieving security, demarcation and privacy might include the following design features:

- A privacy screen: a section of solid fencing (1.8m minimum) starting from the building and projecting along the fence line for approximately 2m to provide a private amenity area adjacent to the home
- Sub divisional fencing from the privacy screen to the end of the garden: provision of a 1.8m minimum high fence, which can consist of a 1.5m minimum solid fence with 300mm of trellis topping
- Trellis: the addition of a trellis topping can help to deter climbing. This is of particular use on exposed rear boundaries. Close liaison with the DOCO from the outset will enable the developer to understand the need for this additional requirement if there is an increased security risk due to location or crime levels
- Defensive planting: fencing security can be enhanced by using it as a framework to

support deterrent planting which if required, can be planted by the developer or the occupier

11 Layout and orientation of dwellings

11.1 Dwellings should be positioned facing each other to allow neighbours to easily view their surroundings and thus making the potential offender feel vulnerable to detection.

11.2 Larger schemes should incorporate a mix of dwellings, enabling greater potential for homes to be occupied throughout the day. This gives increased opportunity for natural surveillance, community interaction, engagement, participation and environmental control.

12 Gable end walls

12.1 It is important to avoid the creation of windowless elevations and blank walls immediately adjacent to public spaces; this type of elevation, commonly at the end of a terrace, tends to attract graffiti, inappropriate loitering and potential anti-social behaviour. The provision of at least one window above ground floor level, where possible, will offer additional surveillance over the public area.

12.2 Where blank gable walls are unavoidable, one of the following methods should be used to protect them:

- Provide a 1m buffer zone using either a 1.2 – 1.4m railing (with an access gate) or a 1m mature height hedge with high thorn content. Hedging will have to be protected with a fence until it becomes established. The hedge shall be contained within the boundary of the adjacent building to increase the likelihood that it will be maintained
- Where there is insufficient room to create defensible space between public and private space, an appropriate (non-destructive) climbing plant should be planted adjacent to the wall, or a finish applied to the wall that will allow easy removal of graffiti

13 Rear access footpaths

13.1 Research studying the distribution of burglary in terraced housing with open rear access footpaths has shown that up to 85% of entries occurred at the back of the house.

13.2 It is preferable that footpaths are not located at the rear of properties. If they are essential to give access to the rear of properties they must be gated. The gates must be placed at the entrance to

the footpath, as near to the front building line as possible, so that attempts to climb them will be in full view of the street. Where possible the street lighting scheme should be designed to ensure that the gates are well illuminated.

13.3 Gates must be capable of being locked (operable by key from both sides of the gate). The gates must not be easy to climb over, crawl under or removed from their hinges and they should serve the least number of homes as possible, usually no more than four.

13.4 Gates will generally be constructed of timber when allowing access to the rear of a small number of dwellings. However, in larger developments where the rear footpath provides access to a large number of properties then a gate constructed of steel may be required by the DOCO. Substantial purpose made gates meeting LPS 1175 Security Rating 1 (A1) or Sold Secure Silver (minimum) standard are available and may be required by the DOCO. Any gate providing access to the rear of dwellings should be designed so as to resist being easily climbed over, crawled under or being forced open and they must allow high levels of surveillance of the footpath from the street.

14 Dwelling identification

14.1 Clear signage (naming and/or numbering) of properties is essential to assist residents, postal workers and the attendance of emergency services. Such signage should be present before an award is granted.

15 Climbing aids

15.1 Boundary walls, bins, fuel stores, meter boxes, street furniture, trees, low flat roofs, car ports or balconies should be designed and located so that they do not provide climbing aids into the property.

16 Vehicle parking

16.1 Vehicles should either be parked in locked garages or on a hard standing within the dwelling boundary. In high crime areas the DOCO may require the addition of a gate or bollard to protect the hard standing parking area, however caution should be taken to ensure that this is not the fire service emergency access route.

16.2 Where communal parking areas are necessary, bays should be sited in small groups, close and adjacent to homes, be within view of active rooms (*Note 16.2*), and allocated to individual properties.

Note 16.2: The word 'active' in this sense means rooms in building elevations from which there is direct and regular visual connection between the room and the street or parking court. Such visual connection can be expected from rooms such as kitchens and living rooms, but not from more private rooms, such as bedrooms and bathrooms.

16.3 Rear parking courtyards are discouraged for the following reasons:

- They introduce access to the vulnerable rear elevations of dwellings where the majority of burglary is perpetrated
- In private developments such areas are often left unlit and therefore increase the fear of crime
- Ungated courtyards provide areas of concealment which can encourage anti-social behaviour

16.4 Where rear parking courtyards are considered absolutely necessary, they must be protected by a gate, the design of which shall be discussed with the DOCO at the earliest possible opportunity. Where gardens abut the parking area an appropriate boundary treatment (e.g. a 1.5m fence supplemented by trellis to a height of 1.8m) must be discussed and agreed by the DOCO.

16.5 Where dedicated garages are provided within the curtilage of the dwelling the entrance should be easily observed from the street and neighbouring dwellings. Locating garages forward of the building

line can obscure views to and from the dwelling. The security standards for vehicular garage doorsets can be found in Section 23.11.

16.6 Where parking is designed to be adjacent to or between units, a gable end window should be considered to allow residents an unrestricted view over their vehicles; opaque or otherwise obscured glass in window sets in gable ends do not constitute an unrestricted view in these circumstances.

16.7 Communal parking facilities must be lit to the relevant levels as recommended by BS 5489-1:2020 (design of road lighting and public amenity areas) and a certificate of compliance provided. See Section 19 for adopted parking areas and Paragraphs 49.8 and 49.9 for private lighting in communal areas.

16.8 Parking bays should ideally benefit from good 'natural surveillance', for example being overlooked by the clear windows of public buildings and private dwellings. A location with good footfall is also desirable, to ensure there are sufficient people nearby who may notice suspicious activity and contact police. A bay in a secluded area or even one situated on its own within a traffic island site can be targeted heavily as there are no passing pedestrians who may notice a theft taking place. Surrounding buildings with opaque or transfer covered windows will also provide little benefit.

16.9 Lighting is required to meet the details contained within Section 19 of this document. Luminaires should be vandal resistant and not mounted below 2.5m from the ground and out of reach for those wishing to cause interference.

16.10 A parking bay surrounded by vegetation or other obstructions (such as utility boxes) may provide cover for suspects to interfere with vehicles. Encroaching or uncontrolled undergrowth can hinder natural surveillance, restrict access for the car user, impact on the fall of light from nearby columns and can also hinder any CCTV coverage. Shrubs should be selected to have a mature growth height no higher than 1 metre; trees should have no foliage, shoots or lower branches below 2m thereby allowing a 1 metre clear field of vision.

16.11 Where the bay is monitored by CCTV, an identifiable facial image is a basic necessity. CCTV systems and signage should be General Data Protection Compliant (GDPR) compliant. Further advice can be obtained at: www.ico.org.uk

Electric vehicle charging in secure communal parking areas for residents only

16.12 To avoid the potential for conflict, electric vehicle charging points (EVCPs), provided for communal residential use, should be located in parking bays that are subject to natural surveillance and not allocated to individual dwellings.

16.13 A management process should ensure that charging bays are only used for their intended purpose and that steps are taken to prevent vehicles overstaying after a charge has been completed.

16.14 Security could be compromised in circumstances where non-residents are allowed to use pay-as-you-go EVCPs within secured car parks and is therefore not advised.

Electric vehicle charging in residential developments

16.15 Residents who install EVCPs in their allocated parking bays/driveways and who allow such charging points to be used by non-residents for payment, may cause levels of natural surveillance to be enhanced. This effect is viewed as a positive by-product of electric vehicle charging provision.

Electric vehicle charging in covered car parks

16.16 It is important that when considering the location of EVCPs, consultation is undertaken with the relevant Fire Strategy authority, be this a local authority appointment or a Fire and Rescue Service officer, to ensure that appropriate advice is incorporated into designs and specifications; this is particularly the case when locating EVCPs in 'covered car parks' (*Note 16.16*).

Note 16.16: Any car park which is enclosed by a roof, except garages or car ports that are intended to be used solely by the occupant of, or a visitor to, a dwelling or, car ports that cover otherwise open parking spaces: The Building Regulations 2010: Infrastructure for the charging of electric vehicles approved document S 2021 edition – for use in England. For clarity, it is noted that covered car parks also include areas where vehicles are parked in either sub-terranean sites beneath buildings or, when the car park is at ground level and buildings are constructed above this level on a raised platform.

Motorcycle, scooter and moped parking

16.17 The theft of motorcycles, scooters and mopeds (the term motorcycle will refer to all powered two wheelers) is a major problem in many parts of the country, especially in urban areas. When stolen, the vehicles are either broken up for the value of their parts or alternatively are used in further crimes, such as snatch theft of personal property or robbery. This secondary use is causing a rise in crime.

Dedicated motorcycle parking facilities

16.18 Parking for motorcycles is often provided in small on street bays, delineated by a simple painted line. These bays often attract high rates of theft owing to the opportunities they offer criminals. Ground anchors and/or metal support stands provide a primary point for securing motorcycles, around which other secondary measures can be added by the rider, such as disc locks, D-locks, chains and flexible locks to one of the following security standards:

- Sold Secure SS101 Gold or Diamond – Specification for Mechanical Security Systems for Motorbikes, or
- Element (Wednesbury) – STS 501 Theft resistance of mechanical immobilisers Security Rating TR2 or above

16.19 Bike covers are also part of the nationally agreed advice document which can be found at the following link: https://www.securedbydesign.com/guidance/crime-prevention-advice/vehicle-crime/motorcycles-scooter-security

16.20 Motorcycle parking bays can be made more secure by the installation of ground anchors, or robust metal support stands running at the side of adjacent paving. They provide a firm and immovable object to affix the rear wheel of a motorcycle. Ground anchors should be installed at the rear of motorcycle parking bays near to the kerb line and relatively flush to the road surface to prevent them being a trip hazard and meet one of the following security standards:

- Sold Secure SS101 Gold or Diamond – Specification for Mechanical Security Systems for Motorbikes, or

- Element (Wednesbury) – STS 501 Theft resistance of mechanical immobilisers Security Rating TR2 or above

16.21 Signage should be used to alert riders and advise them to use the ground anchors or support stands provided along with their own security hardware. All of the above issues could also be considered at dedicated parking facilities if a motorcycle bay is installed into an existing site.

British Parking Association – Park Mark Safer Parking Award Scheme

16.22 The British Parking Association operates the Park Mark Safer Parking Award Scheme, working in partnership with public and private sector parking facility managers and DOCOs to reduce the opportunity for crime. A site that successfully meets the required standards can apply to join, and if successful, receive a Park Mark award. This will be reassessed over time to ensure standards are maintained after consideration of crime rates. Membership of the scheme is not a requirement but should be considered for larger parking facilities. For more information contact: www.britishparking.co.uk

Underground car parking

16.23 Many blocks of flats have underground (basement or undercroft) car parking. Early consultation with the DOCO is essential to ensure that criminal opportunity is minimised and that the day-to-day access and emergency egress do not undermine the security of the residential building above. The standards required for underground car parks can be found in Section 38 and Section 63.

17 Bicycle parking

Visitor bicycle parking – short term

17.1 Short term visitor bicycle parking, for instance delivery riders, shall be located adjacent to the primary building entrance and in view of occupants of the development. Current video surveillance systems should be extended to ensure that this parking facility is within view of the cameras.

Bicycle parking stands in public areas of a development must be certified to one of the following standards:

- SS104 Security Rating Silver, or
- STS 501 Security Rating TR2, or
- STS 503 Security Rating TR2, or
- STS 205 Issue 6:2021 Security Rating BR2, or
- STS 225 Issue 1:2021 Security Rating BR2 (S), or
- LPS 1175 Issue 8:2018 Security Rating B (B3), or
- LPS 2081 Issue 1.1:2016 Security Rating B

17.2 DOCOs may require extra security measures to be put in place at bicycle parking facilities should an analysis of local crime rates indicate that they are necessary to ensure that security remains commensurate to the risk.

18 Planting in new developments

18.1 Landscape provision such as the planting of trees and shrubs in new developments can enhance the health and wellbeing of residents and create attractive residential environments. Careful consideration is required for the design of the landscaping as to ensure that it does not encourage crime and ASB as a by-product of its design. Designs will be supported provided that:

- The layout provides sufficient space to accommodate specimens once they have reached maturity, clear of access routes and required circulation areas
- Future maintenance requirements and budgets are considered at the planting design stage and management programmes are put in place to ensure the landscape fulfils the aims of the original design
- The planting design takes full account of all other opportunities for crime that may generate as a result of the scheme (or future maintenance)

18.2 When designed and planted appropriately, certain species of plants such as spiny or thorny shrubs can help prevent crime, anti-social behaviour, graffiti and loitering, and create or enhance perimeter security. Defensive planting is not just about prickly shrubs, it is about selecting the right type of plant for the right aspect and environment, for example, open branched and columnar fastigiated trees can be used in a landscape scheme where natural and formal surveillance is required. Climbing plants can be used to cover walls to deter graffiti. Carefully selected trees and shrubs can be used to 'green up' the most hostile of environments providing both horizontal and vertical interest without adding to crime risks.

18.3 Planting should not impede the opportunity for natural surveillance and wayfinding, and must avoid the creation of potential hiding places. As a general recommendation, where good visibility is needed, shrubs should be selected to have a mature growth height no higher than 1m, and trees should have no foliage, epicormic growth or lower branches below 2m, thereby allowing a 1 metre clear field of vision. Trees on appropriate root stock can provide a more reliable means of reducing the likelihood of impeding natural surveillance. As a general rule, building frontages should be open to view except, for example, houses standing in their own private grounds. Attention should be given to the location of walls and hedges so that they do not obscure doors or windows, and the position of trees that may become climbing aids into property or obscure lights or CCTV cameras.

19 Street lighting

19.1 All street lighting for adopted highways and footpaths, private estate roads, unadopted roads and car parks must comply with BS 5489-1:2020. Where conflict with other statutory provisions occurs, such as developments within conservation areas, requirements should be discussed with the DOCO and the local authority lighting designers.

19.2 It is recognised that some local authorities have 'dark sky' policies and deliberately light some of their rural, low crime areas to very low levels of illumination. Some are currently experimenting with switching off street lamps in low crime areas between certain hours of the night in order to save energy costs and reduce CO2 emissions. If such policies exist then these must be brought to the attention of the DOCO at the time of application. Secured by Design supports the Institution of Lighting Professionals (ILP) in discouraging 'switch off' unless a full risk assessment has been carried out, and the ILP also recommends that 'switch off' never be implemented purely for cost saving. A variable controlled lighting level is always the preferred option in addition to one which does not disadvantage disabled and older people who may have a sensory impairment and require well-lit routes to enable easy wayfinding and to make other users more easily visible. Attention to position and location of lighting to improve illuminance at ground level can avoid user casting shadows onto the surface whilst minimising light pollution.

19.3 Bollard lighting is purely for wayfinding and can be easily obscured or damaged. It does not project sufficient light at the right height making it difficult to recognise facial features and as a result causes an increase in the fear of crime. It should be avoided.

19.4 Trees may restrict the performance of street lighting by blocking light or causing damage through collision with branches and should not be located within 5 metres of a lighting source. Account must be taken of the effects of seasonal variations on planting when designing such schemes.

19.5 To demonstrate compliance with this section the DOCO shall be provided with a declaration of conformity to BS 5489-1:2020 by a 'competent' designer. Competency shall be demonstrated

by achievement to at least ILP competency level 3 or 4, i.e. the designer will be a Member of the ILP (MILP) and either IEng or CEng qualified to be deemed competent to be able to design under Construction, Design and Management (CDM) regulations. Additionally, a risk and environmental assessment (EMS) for the CDM designer compliance requirements must be included. Manufacturer designed schemes without risk or environmental assessments should not be accepted as they do not cover the CDM designer risk elements that are required.

19.6 Secured by Design encourages, wherever possible, the use of the most environmentally friendly light sources. Moreover, the Institute of Lighting Professionals (ILP) currently favours the use of good quality LED lighting and other energy effective light sources and advises against the use of fluorescent lighting which is environmentally unsustainable for a variety of reasons. Further information is available at: https://www.securedbydesign.com/initiatives/safer-streets

PART 2

Physical Security

20 Introduction

20.1 Recognition under planning policy that security forms part of a sustainable and vibrant development has been demonstrated by the inclusion of a Building Regulation in England and Wales. Approved Document Q of Schedule 1 to the Building Regulations in both countries specifically states that 'Reasonable provision must be made to resist unauthorised access...' The importance of security within new housing developments has also been recognised by the Scottish Government since 2010 within the Scottish Building Standard 4.13 – Security, which at clauses 4.13.1 and 4.13.2 outline the requirement for door and window security. This part of SBD Homes should therefore be read in conjunction with the above documents.

20.2 The physical security standards outlined within this part of Secured by Design guidance, together with those of Parts 1 and 3 of this document, also indicate the requirements needed in order for a development to achieve the SBD Gold Award.

20.3 The experience gained by the UK police service over the past 30 years in the subject area of designing out crime, has led to the provision of a physical security requirement considered to be more consistent than that set out within UK Building Regulations; specifically the recognition of products that have been tested to the relevant security standards but crucially are also fully certificated by an independent third party, accredited by a United Kingdom Accreditation Service (UKAS) Notified Body. This provides assurance that products have been produced under a controlled manufacturing environment in accordance with the specifier's aims and minimises misrepresentation of the products by unscrupulous manufacturers/suppliers and leads to the delivery, on site, of a more secure product.

20.4 All standards quoted within Part 2 of this document are assumed to be the latest version, revision or amendment. Earlier standards/versions will not be valid or acceptable 12 months from the publication date of the succeeding amendment, revision or standard unless otherwise stated within this document.

20.5 At several points within this document a requirement is made for products to be 'Certificated' to relevant standards. It is advisable that specifiers confirm with the DOCO that their preferred product(s) meets the required SBD standards before purchasing. It should be understood that any documentation submitted for SBD accreditation should clearly show the certification body name, scope of certification and the manufacturer/fabricator of the product to be installed within the development. Documentation that is provided bearing the name of a component or system manufacturer may be acceptable within Part 2B (bespoke new homes and existing refurbished homes) of this guidance document.

20.6 Should additional door furniture be fitted to an SBD approved doorset such as door chains, bolts, etc. specifiers must ensure that this does not compromise the original security or fire certification compliance.

20.7 Part 2 is divided into two parts (Part 2A and Part 2B). Part 2A provides the 'Police Preferred Specification' for new build homes and major refurbishments and Part 2B provides a specification for new bespoke homes and the upgrading of existing homes.

PART 2A Physical security for new homes

21 Introduction

21.1 This part provides technical guidance on the 'Police Preferred Specification' for new dwellings including those dwellings formed by a material change of use and extensions to existing homes. If adhered to, this will ensure compliance with the UK Building Regulations (see paragraph 1.1). Please note: the Building Regulations (England and Wales) do not address the security of extensions to existing buildings or replacement doors or windows, however the standards contained within this document can be utilised by builders or individuals who wish to ensure that good security is incorporated within the home.

21.2 Compliance with the Scottish Building Standard 4.13 is applicable to all dwellings and includes extensions to existing dwellings and can be demonstrated through the application of the standards contained within this Part.

21.3 Whilst this guidance document primarily concentrates on security (UK Building Regulations – see paragraph 1.1), it should be noted that the design and specification may impact on other Building Regulations. It is imperative that products utilised within a Secured by Design development comply with all relevant Building Regulations in full. It should be noted that the Building Regulations in all four UK nations are considered equal to one another, i.e. no one Building Regulation takes precedence over another, for example fire rated doorsets (Part B) in England must also meet all other relevant Building Regulations e.g. Parts E, L, M and Q in one product.

21.4 Whilst Designing Out Crime Officers (DOCO) will not require evidence that a product meets all of the specified Building Regulations, specifiers are reminded that they have an obligation to ensure compliance.

21.5 Where there is a client led requirement for SBD accreditation, compliance with this Part alone will result in a Secured by Design Silver Award, however when combined with compliance to Part 1, and where applicable the relevant parts of Part 3, a Secured by Design Gold Award can be achieved.

21.6 Part 2 may also be used by organisations or individuals that are undertaking both major and minor refurbishment of one or more dwellings.

21.7 Part 2B of this guidance document is further separated into two areas:

- Houses, bungalows and flats or maisonettes accessed via a private dedicated entrance doorset
- Buildings containing multiple dwellings or bedrooms accessed from a semi-private area and served by a shared or communal entrance doorset

22 Doorsets and windows and their fitness for purpose

22.1 The guiding principle to employ when specifying a doorset is that it is fit for purpose in respect of its performance against the elements, that it is appropriate for its physical location and that it has a relevant security certification rating.

22.2 In the interests of clarity, when this guide refers to doorsets, what is meant is fenestration through which occupiers and visitors gain access to the building.

22.3 When this guide refers to windows, what is meant is fenestration most commonly used for ventilation vision and to bring light into the building.

22.4 BS 6375 (performance of doors and windows) defines the resilience and operational characteristics of both doorsets and windows which, in simple terms, means testing a doorset or a window to ensure that it will withstand the demands of being opened and closed repeatedly over a significant period of time.

22.5 BS 6375 covers performance criteria from snow loading to weather tightness but, from the Secured by Design perspective, the focus has necessarily been on the security aspects of primary doorsets and windows but importantly, whether the specification calls for a:

i. PAS 24 (enhanced security performance requirements for doorsets and windows), or

ii. LPS 1175 (intruder resistant building components), or

iii. STS 202, STS 204 and STS 222 (enhanced security performance requirements for doorsets and windows)

doorset or window to be fitted, the equipment must be able to survive many cycles of repeated use. The table at 22.13 sets out the testing parameters in terms of repetitious use, from relatively low to higher volumes of cyclical events.

22.6 Specifiers are to supply proof to the DOCO that doorsets and windows meet the duty of rating that is commensurate with their intended location and use.

22.7 For instance, Class 4 (moderate use) of BS 6375 means that a doorset has been through in excess of 50,000 cycles of closing and opening without failure.

22.8 As an approximate guide, in many SBD applications the BS 6375 ‘moderate’ level of qualification will suffice for approval. It should be borne in mind that communal doorsets can often have a high volume of use and this is especially true when they service primary entrances to, for instance, large apartment blocks. It is important that SBD approved developments have the correct level of security specification for the doorsets and windows but equally important is the durability of these units as tested against the requirements of BS 6375.

22.9 Doorsets and windows shall be classified according to their intended use, for example, if an opening in a building is intended to be walked through, a doorset will be required. It follows that a doorset will have more use than a window and a door is therefore subject to 5 times more testing at the moderate classification level under BS 6375 than a window is.

22.10 The minimum requirements of ‘moderate’ use for classification under BS 6375 for both doorsets and windows are:

- Doorsets – 50,000 cycles (Classification extracted from BS EN 12400)
- Windows – 10,000 cycles (Classification extracted from BS EN 12400)

22.11 Door and window specifications can always flex between the classifications of ‘normal’ and ‘frequent’ dependent on the projected volume of foot traffic through doors or how many times a window might be opened and closed; in circumstances where projected use for primary doorsets is going to be ‘severe’ for doors (in excess of 1 million cycles) or ‘heavy’ for windows (in excess of 20,000 cycles) then it would be reasonable to expect the specifier to choose a Class 8 door or a Class 3 window respectively. Specifiers are to supply proof to the DOCO that doorsets and windows meet the duty of rating that is commensurate with their intended location and use.

22.12 For example, in an apartment block of 100 flats it can be reasonably assumed that residents’ families will use the primary entrance doorset a minimum of twice a day, as they leave and re-enter the block. However, in practice, family life, deliveries and visitors dictate that this communal doorset will be used many more times per day than this, and in these circumstances, a doorset with the correct BS 6375 classification matching the projected use cycles will be appropriate.

22.13 In respect of secondary doorsets, a level of site specificity will be employed with regards to their projected use and where significantly lower cycles of use can be expected, a lower BS 6375 classification is applicable.

Table 1. Classification

Class	Number of Cycles	
0	–	pedestrian door and windows
1	5,000	
2	10,000	
3	20,000	
4	50,000	Pedestrian doors only
5	100,000	
6	200,000	
7	500,000	
8	1,000,000	

Table A1. Window Classes

Class	Duty
1	light
2	moderate
3	heavy

Table A2. Door Classes

Class	Duty
1	occasional
2	light
3	infrequent
4	moderate
5	normal
6	frequent
7	heavy
8	severe

23 Dwelling entrance doorsets

23.1 The term ‘doorset’ refers to a door, frame, locks, fittings and glazing as one combined unit.

23.2 In the interests of clarity, when this guide uses the term ‘doorset’ it refers to examples of fenestration through which people would walk to access or egress a building rather than openings that are traditionally identified as windows.

23.3 Door frames must be securely fixed to the building fabric in accordance with the manufacturer’s instructions and specifications. These should be made available to the DOCO upon request if the need for visual confirmation is felt necessary.

23.4 All doorsets allowing direct access into to the home, e.g. front and rear doors, interconnecting garage doorsets, French doors, bi-fold or sliding patio doorsets, dedicated private flat or apartment entrance doorsets, communal doorsets, easily accessible balcony doorsets (*Note 23.4a*), etc., shall be certificated to one of the following standards:

- PAS 24:2022 *(Note 23.4b)*, or
- PAS 24:2016* (*Note 23.4b*), or
- STS 201 Issue 14:2021 (*Note 23.4c*), or
- LPS 1175 Issue 7.2:2014 Security Rating 2+ (*Note 23.4d*), or
- LPS 1175 Issue 8:2018 Security Rating A3+, or
- STS 202 Issue 10:2021 Burglary Rating 2 (*Note 23.4d*), or
- LPS 2081 Issue 1.1:2016 Security Rating B (*Notes 23.4d and 23.4e*), or
- STS 222 Issue 1:2021

* PAS 24:2016 has been withdrawn by the British Standards Institute and replaced by PAS 24:2022, however PAS 24:2016 will continue to be an acceptable route to compliance until 31st December 2024.

There have been examples of communal doorsets failing due to inappropriately specified performance levels. It is to be emphasised that the provisions of paragraph 22 should be adhered to (noting that some of the required standards already incorporate BS 6375).

Note 23.4a: Easily accessible is defined within Approved Document Q Appendix A:

- *A window or doorset, any part of which is within 2 metres vertically of an accessible level surface such as a ground or basement level, or an access balcony, or*
- *A window within 2 metres vertically of a flat roof or sloping roof (with a pitch of less than 30˚) that is within 3.5 metres of ground level.*

Note 23.4b: PAS 24:2022 and PAS 24:2016 both embody two routes to compliance:*

- *The traditional UK PAS 24 test methodology, or*
- *Via BS EN 1627:2011 Resistance Class 3 (which references BS EN 1628, 1629 & 1630), with additional test criteria to address known criminal methods of entry within the UK (which are not sufficiently catered for within the European Standards)*

NB: If manufacturers wish to use the European Standards as a route to compliance to PAS 24:2022 or PAS 24:2016, then all testing must be conducted in accordance with the latest published version of the 'UK Police Service Secured by Design (SBD) Interpretation Document for BS EN 1627:2011, BS EN 1628:2011, BS EN 1629:2011 and BS EN 1630:2011.' This document can be found on the Secured by Design website within the SBD Standards Explained section.*

Note 23.4c: STS 201 is the unique reference number published by Warringtonfire Testing and Certification Limited which replicates the requirements of PAS 24:2022 or PAS 24:2016.*

Note 23.4d: LPS 1175, LPS 2081 and STS 222 are unique to the respective certification bodies and incorporate a physical attack on the glazed areas within doors and windows. Specifiers should satisfy themselves that the glazing incorporated within products certified to these standards meets the required thermal performance and durability requirements for the specified application.

Note 23.4e: LPS 2081 and STS 222 is a standard that utilises a similar methodology to that used in LPS 1175, but the attacks are designed to use stealth (low noise levels). It may therefore be more applicable to residential applications.

* PAS 24:2016 has been withdrawn by the British Standards Institute and replaced by PAS 24:2022, however PAS 24:2016 will continue to be an acceptable route to compliance until 31st December 2024.

23.5 The benefits of third-party certification are recognised within the UK Building Regulations (see paragraph 1.1). Any test evidence used to confirm the security of a construction should be carefully checked to ensure that it demonstrates compliance that is adequate and that applies to the intended use. Evidence passed from one organisation to another can become unreliable if important details are lost. Small differences in construction can significantly affect the performance of a doorset or window.

Fire and smoke rated doorsets including those with adjacent glazing

23.6 Where there is a requirement for a doorset to be fire, smoke and security rated, e.g. flat or apartment entrance doorsets, interconnecting garage doorsets, some doorsets aiding security compartmentation and/or meet a building regulation requirement, the manufacturer or fabricator

supplying the finished product to site is required to present independent third party certification from a single UKAS accredited certification body satisfying all the performance elements. This is in order to minimise the likelihood of a doorset being presented in varying configurations for separate fire, smoke and security tests and then later being misrepresented as one product meeting all requirements. It is recognised that there are occasions where a doorset may only be required to be fire and security rated (not smoke). Again, in such circumstances the manufacturer or fabricator supplying the finished product to site is required to present independent third party certification from a single UKAS accredited certification body satisfying both performance elements. All door styles and components will need to be adequately described within the scope of certification and accompanying Technical Schedule *(Note 23.6)*.

Note 23.6: Any component part of the doorset that is changed for any reason must be assessed by the certification body to ensure compliance that the certified performance requirements are maintained.

23.7 Any adjacent side panel (glazed or non-glazed) to a fire rated doorset must be included within the same scope of certification for that doorset.

23.8 The responsibility for the specification and location of fire and smoke rated security doorsets lies with the developer or the developer's agent (responsible person).

23.9 The role of the flat or apartment entrance doorset (the final doorset providing access to the dwelling) should not be underestimated in the event of a fire. It is therefore imperative that fire resistance is professionally assessed/measured. It is recommended that the doorset is installed by a competent person who possesses the appropriate qualifications as in *Note 23.9*. Part B of the current Building Regulations and the associated guidance in Approved Document B state such doorsets should achieve at least 30 minutes of fire resistance. Additional requirements are also specified for smoke leakage.

Note 23.9: It is important that doorsets are installed by a UKAS third party certificated installer. There is a requirement for manufacturers to demonstrate that their fire doors, and associated products such as fixings, side and over panels, etc. are able to resist the passage and spread of fire and smoke for a specified time, depending on the certification requirements. Doorsets that are not properly installed may fail to achieve their required performance characteristics under fire resistance certification. Appropriate doorsets, correctly installed, will assist building management and the requirements of: https://www.gov.uk/government/publications/fire-safety-england-regulations-2022

Garage doorsets, vehicular and pedestrian

23.10 Approved Document Q, Section 1 (General), clause 1.1, states that where access to the dwelling can be gained via an interconnecting doorset from the garage, then either the garage doorset/s

(vehicular and pedestrian) or the interconnecting doorset can be designated as the secure doorset. Pedestrian doorsets (interconnecting or garage access doorsets) shall meet the requirements in paragraph 23.4.

23.11 Where a vehicular garage doorset provides the primary security in this area of the building it should be certificated to:

- LPS 1175 Issue 7.2:2014 Security Rating 1+ (or above), or
- LPS 1175 Issue 8:2018 Security Rating 1+/A1+ (or above), or
- STS 202 Burglary Rating 1+ (or above), or
- LPS 2081 Issue 1:2015 Security Rating A, or
- STS 222 Issue 1:2021

See Section 22 in respect of BS 6375 classifications.

23.12 It is recommended that if the primary security is provided by the vehicular doorset, together with any external pedestrian doorsets, that the interconnecting doorset is fitted with a Kitemarked or alternatively certificated lock to BS 3621/BS 8621 (single point locking) or PAS 3621/PAS 8621 (multipoint locking).

Further requirements for all pedestrian doorsets

23.13 Doorsets shall also be certificated to the following relevant material specific standards:

- BS 7412:2007 (PVCu)
- BS 4873:2016 (Aluminium)
- BS 6510:2010 (Steel)
- BS 644:2012 (Timber)
- BS 8529:2017 (Composite)

23.14 Suitably qualified and recognised third party Certification Authorities (*Note 23.14a*) for all the standards in this guidance document can be found within the SBD website: www.securedbydesign.com

Alternative compliance may be possible in certain circumstances (*Note 23.14b*).

Note 23.14a: Certificated products undergo continuous assessment, including factory production controls and audits and regular audit testing, to ensure product standards and product consistencies are maintained.

Note 23.14b: Alternative compliance can either be demonstrated by SBD licence holders that have reached an advanced stage of the certification process with one or more of the bodies listed within the Secured by Design website. All such cases must be verified by Secured by Design staff. Alternatively, third party accreditation via a suitably qualified and accredited certification body that has signed the EA MLA (European co-operation for Accreditation Multi-lateral Agreement) may be acceptable. The DOCO may refer such cases to SBD management for verification.

23.15 Unless the developer has been awarded Secured by Design National Building Approval (see Section 4) the DOCO shall be supplied with proof of certification by the developer or the developer's agent, this must also include the 'Scope of Certification' (a technical schedule listing all of component parts of the certificated doorset range), unless the supplier is a member of the Secured by Design Licensing Scheme and the doorset can be identified on the SBD website. Specifiers are reminded that this information must be supplied to the DOCO prior to the SBD certificate being awarded and must be in the name of the manufacturer or fabricator supplying the finished product to site.

23.16 Specifiers are reminded that products tested to PAS 24:2022 or PAS 24:2016* (Clause 5) and subsequently claiming compliance with this standard shall be permanently marked in a position that is visible and readily accessible when the product is open and not visible when the product is closed, with the following information:

- Number and date of the standard
- The date of manufacture of the product (at least the year and quarter)
- The name or trademark of the manufacturer or other means of identifying the manufacturer
- The classification of the doorset

Important: If a doorset claiming to meet these standards is not marked in accordance with PAS 24 (Clause 5), it does not meet the standard.

* PAS 24:2016 has been withdrawn by the British Standards Institute and replaced by PAS 24:2022, however PAS 24:2016 will continue to be an acceptable route to compliance until 31st December 2024.

23.17 Secured by Design recommends doorsets are marked on the head (top) of the door to avoid any identifying labels/data being removed during the final site cleaning process. Please note that this is a requirement within PAS 24 (Clause 5) and STS 201 and is an additional requirement to CE marking.

Locking systems

23.18 To ensure that the end user of the door understands how to operate the locking system, clear operating instructions must be attached to the inner face of the door (*Note 23.18*). The instructions should be easily removable by the end user.

Note 23.18: The purpose of providing the end user with operating instructions is to reduce the number of burglaries through otherwise secure doorsets, because the full locking system has not been engaged. This is particularly problematic with split spindle multi-point locking systems, where, for example, the occupier goes to bed at night without engaging the locks in the mistaken belief that leaving the door closed only on the latch (live bolt) is sufficient. The instructions should point out that the doorset is not totally secure unless the locking system is fully engaged. The method of attachment of these operating instructions and the medium used to carry them is for the door manufacturer to decide but are not intended to be permanent.

Apartment entrance doorsets that are designated emergency exit routes

23.19 In circumstances where an individual entrance doorset to an apartment is designated as an emergency exit route and, there is no alternative means of escape, a locking mechanism with solid spindles will be considered compliant with SBD standards.

Glazing in and adjacent to doorsets

23.20 Any glazing within PAS 24:2022, PAS 24:2016* or STS 201 Issue 14:2021 certificated doorsets, including glazed panels/side lights adjacent to doors installed within an integral door frame and windows adjacent to doorsets (within 400mm), must incorporate one pane of laminated glass meeting, or exceeding, the requirements of BS EN 356:2000 class P1A (*Note 23.20*). NB. This is a specific requirement within PAS 24:2022 and PAS 24:2016*, which is referenced within the UK Building Regulations (see paragraph 1.1).

Note 23.20: There is no specific requirement to install laminated glazing on the inner or outer face of a double glazed unit. However, specifiers may wish to take into consideration the fact that toughened glass is usually more resistant to accidental damage by blunt objects such as a football and therefore may be best placed on the external face of the double glazed unit. It is recognised however that there are many other factors that may also need to be considered such as thermal efficiency, aesthetics and the requirement for privacy or obscured glazing, which will influence the specifier's decision.

23.21 The above requirement is not necessary for doorsets certificated to LPS 2081, LPS 1175 or STS 202 as glazing security requirements are significantly more stringent within these standards, even at the lowest levels. However, if there is an adjacent window then the glazing must meet the requirements of BS EN 356:2000 class P1A.

23.22 If glazed panels/windows adjacent to doors are installed as an integral part of the door frame then they must be shown to be part of the manufacturer's certificated range of doorsets and be specifically referenced within the Scope of Certification. Alternatively, where they are manufactured separately from the door frame, they must meet the requirements of a 'window,' see Section 24. In such cases the window shall be securely fixed to the doorset (in accordance with the manufacturer's specifications).

Outward opening doorsets

23.23 Outward opening doorsets installed within SBD developments must specifically form part of the certificated product range.

Door limitation and caller identification

23.24 A door chain or opening limiter meeting the requirements of the Door and Hardware Federation Technical Specification 003 (TS 003) must be installed on the doorset to which a caller can be expected, normally the front door (see Approved Document Q, Section 1: Doors, paragraph 1.4). All such devices should be suitable for the door material to which they are fitted and be installed in accordance with the manufacturer's recommendations.

23.25 A door viewer meeting the requirements with the Door & Hardware Federation Technical Specification 002 (TS 002) standard must be fitted between 1200mm and 1500mm (in addition to 1050mm for wheelchair accessible dwellings) from the bottom of the door, this is not required if the doorset is installed with clear glazing or if there is a side panel with clear glazing (see Approved Document Q, Section 1: Doors, paragraph 1.4).

Doorset installation

23.26 Door frames must be securely fixed to the building fabric in accordance with the manufacturer's instructions and specifications. These should made available to the DOCO upon request if the need for a visual confirmation is felt necessary.

23.27 Doorsets that are hidden from public view, typically side or back doors, should not be recessed more than 600mm. This requirement is not applicable to doorsets located in wide recesses that are located within public view (*Note 23.27*). However, no doorset should be recessed by more than 1000mm.

Note 23.27: For the purposes of this guidance document a doorset is considered to be within 'public view' when it can be seen from the street.

Secure mail delivery to houses, bungalows, flats, apartments or maisonettes accessed via a private dedicated entrance doorset

23.28 There are increasing crime problems associated with letter plate apertures, such as identity theft, arson, hate crime, lock manipulation and 'fishing' for personal items (which may include post, vehicle and house keys, credit cards, etc). In order to address such problems SBD strongly recommends, where possible, mail delivery via a secure external letter box meeting the requirements of the Door and Hardware Federation standard Technical Standard 009 (TS 009) or delivery 'through the wall' into a secure area of the dwelling. These should be easily accessible i.e. at a suitable height for a range of users.

Letter plate apertures in doorsets

23.29 Where a letter plate aperture is required to be installed within a doorset it must form part of the certificated doorset range.

23.30 Specifiers and doorset manufacturers are advised that if a letter plate was not present in the doorset when it was tested to any of the standards in Section 23 or has not been independently assessed by a certification authority and included within the Scope of Certification of the doorset, then the subsequent installation of a letter plate will invalidate the certificated doorset.

23.31 Doorsets certificated to LPS 2081, LPS 1175, STS 202 and STS 222, with a letter plate tested to the requirements of the Door Hardware Federation's Technical Standard 008 (TS 008) will be acceptable when included within the Scope of Certification for the doorset.

23.32 Where there is a concern for arson attacks, or repeat arson attacks, SBD recommends either the omission of a letter plate within a door, which is then replaced by an external letter box mounted on a wall or similar, or the installation of an 'anti-arson' container. It is important that such products are installed strictly in accordance with the manufacturer's instructions.

23.33 Specifiers attention is drawn to the Door Hardware Federation's Technical Standard 008 (TS 008) which is also referenced within Approved Document Q (Section 1, paragraph 1.3). Additionally, BS EN 13724 (Postal services: Apertures of private letter boxes and letter plates) which is referenced within TS 008, provides details regarding the test methods and requirements for private letter boxes and letter plates. One of its stipulated criteria is that the lowest mailbox aperture should be no lower 700mm from delivery floor level and the height of the highest mailbox aperture shall be no higher than 1700mm from delivery floor level.

23.34 Doorsets with non-key operated lockable internal hardware that have letter plates installed should meet the requirements of Section 39.

External surface mounted letter boxes

23.35 Where a surface mounted letter box is to be used it must be robust in construction. TS 009 letter boxes offer reassurance that all of the above attributes have been met. In high crime areas TS 009 provides the safest means by which mail can be delivered whilst eliminating the risks associated with letter plate apertures. The letter box must be securely fixed to the face of the building in accordance with the manufacturers specifications and be located in a position that benefits from natural surveillance.

Through-the-wall mail delivery

23.36 Where there are design constraints that prevent a letter plate with a security cowl being installed within a door e.g. narrow hallway, or where it is undesirable to install a surface mounted secure mail box e.g. in a corridor, it may be preferable to provide 'through-the-wall' mail delivery into a secure internal letter box. Such a box must incorporate the same design features as described above for a surface mounted box. Anti-arson design features may also be advised if such crime risks are present.

23.37 Products meeting the requirements of the Door & Hardware Federation Technical Specification 008 (TS 008) provide reassurance that 'through the wall' letter boxes offer similar security attributes as secure letter plates and many of the attributes that an external letter box conforming with TS 009 would provide (also see Section 39).

* PAS 24:2016 has been withdrawn by the British Standards Institute and replaced by PAS 24:2022, however PAS 24:2016 will continue to be an acceptable route to compliance until 31st December 2024.

24 Windows, roof windows and roof lights

24.1 Window frames must be securely fixed to the building fabric in accordance with the manufacturer's instructions and specifications. These should be made available to the DOCO upon request if the need for a visual confirmation is felt necessary.

24.2 All easily accessible (*Note 24.2a*) windows (including easily accessible roof lights and roof windows) shall be certificated to one of the following standards:

- PAS 24:2022 *(Note 24.2b)*, or
- PAS 24:2016* *(Note 24.2b)*, or
- STS 204 Issue 6:2016 *(Note 24.2c)*, or
- LPS 1175 Issue 7.2:2014 Security Rating 1 *(Note 24.2d)*, or
- LPS 1175 Issue 8:2018 Security Rating 1/A1, or
- STS 202 Issue 10:2021 Burglary Rating 1, or
- LPS 2081 Issue 1.1:2016 Security Rating A, or
- STS 222 Issue 1:2021

* PAS 24:2016 has been withdrawn by the British Standards Institute and replaced by PAS 24:2022, however PAS 24:2016 will continue to be an acceptable route to compliance until 31st December 2024.

Note 24.2a: Easily accessible is defined within Approved Document Q Appendix A as:

- *A window or doorset, any part of which is within 2 metres vertically of an accessible level surface such as a ground or basement level, or an access balcony, or*
- *A window within 2 metres vertically of a flat roof or sloping roof (with a pitch of less than 30˚) that is within 3.5 metres of ground level.*

Note 24.2b: Both PAS 24:2022 and PAS 24:2016 embody two routes to compliance:*

The traditional UK PAS 24 test methodology, or

- *Via BS EN 1627:2011 Resistance Class 2N (which references BS EN 1628, 1629 & 1630), with additional test criteria to address known criminal methods of entry within the UK (which are not sufficiently catered for within the European Standards). Please note: whilst the UK have selected Class 2N (and hence there is no performance requirements required under the European standard), there is still a requirement for all emergency egress windows without locking hardware to be installed with laminated glass conforming to BS EN 356 Class P1A (min).*

Note 24.2c: STS 204 is the unique reference number for Element's published standard replicating the requirements of PAS 24.

Note 24.2d: Specifiers and DOCOs are reminded that a requirement for windows to meet LPS 1175/2081 or STS 202/222 in a residential situation will be exceptionally rare and can only be justified by a detailed crime risk analysis indicating that the resident is at extreme risk. Please also note that some products may be acceptable when tested to an earlier version of the standard.

24.3 All easily accessible windows should incorporate key lockable hardware unless designated as emergency egress routes within the Building Regulations.

24.4 Windows that form part of a designated fire escape route, as determined by the Fire Safety Officer, may require non-key locking hardware. In these circumstances laminated glass to BS EN 356:2000 class P1A will be required.

24.5 If however the Fire Safety Officer accepts locking hardware as part of the designated fire escape route, then fire resistant glass may be required.

24.6 Windows that are not easily accessible will require either lockable hardware or an opening restrictor in the interests of child safety.

24.7 Windows must also be fit for purpose and shall be certificated to the relevant material standard i.e.:

- BS 7412:2007 (PVCu)
- BS 4873:2016 (Aluminium)
- BS 6510:2010 (Steel)
- BS 644:2012 (Timber)
- BS 8529:2017 (Composite)

24.8 Suitably qualified and recognised third party Certification Authorities (*Note 24.8a*) for all the standards in this guidance document can be found within the Secured by Design website: www.securedbydesign.com

Note: 24.8a: Certified products undergo continuous assessment, including factory production controls and audits and regular audit testing, to ensure product standards and production consistencies are maintained.

Note: 24.8b: Alternative compliance can either be demonstrated by SBD licence holders that have reached an advanced stage of the certification process with one of the above bodies. All such cases must be verified with Police CPI. Alternatively third party accreditation via a Notified Certification Body that has signed the EA MLA (European co-operation for Accreditation Multilateral Agreement) may be acceptable if such a body is also accredited to conduct such activities. The DOCO may refer such cases to Police Crime Prevention Initiatives for verification.

24.9 Unless the developer has been awarded Secured by Design National Building Approval (see Section 4), the DOCO shall be supplied with proof of certification by the developer or the developer's agent (from one of the bodies listed within the Secured by Design website, www.securedbydesign.com), this must also include the 'Scope of Certification' (a technical schedule listing all of component parts of the certificated window range), unless the supplier is a member of the Secured by Design Licensing Scheme and the window can be identified on the SBD website. Specifiers are reminded that this information must be supplied to the DOCO prior to the SBD certificate being awarded.

24.10 Windows falling outside the scope of the British Standard or STS Standard must be assessed by a UKAS accredited organisation accredited to perform such an assessment against the principles of PAS 24:2022, PAS 24:2016* or STS 204 Issue 6:2016. Any such assessment shall include the appropriate fitness for purpose standard (Section 22). The DOCO shall be supplied with proof of certification by one of the UKAS Accredited Certification Bodies, including the technical schedule, prior to the SBD certificate being awarded; unless the supplier is a member of the Secured by Design Licensing Scheme and the window can be identified on the SBD website.

24.11 Laminated glass meeting the requirements of BS EN 356:2000 class P1A is required in the following areas:

- any window located within 400mm of a doorset (to ensure the integrity of the locking system)
- easily accessible emergency egress windows with non-lockable hardware (a requirement of PAS 24:2022 and PAS 24:2016*)
- easily accessible roof lights with non-lockable hardware

Alternatively, if the window is tested and accredited to LPS 1175, then laminated glass meeting the requirements of LPS 1270 Issue 1.1 Security Rating 001 (minimum) may be used

24.12 Recent new requirements to the Building Regulations (Part F: Ventilation) have reiterated the need for trickle vents in windows. Specifiers are reminded that the type and location of the trickle vent should be included within the certification scope of the windows.

24.13 Where automatic opening window and venting systems, controlled by sensors and computers are used, for example in some eco homes or flat developments, these opening windows or vents should be independently certificated the standards at paragraph 24.12 above. In situations where these automatic opening window and venting systems are not certificated to these security standards, additional measures will be required to prevent the security of the building being compromised in the event of a system failure. In these circumstances, a Smoke Control Contractor or Fire Safety Professional should be consulted to ensure that any additional security measures do not compromise the smoke ventilation requirements expected under Approved Document B.

Windows, roof windows and roof lights in buildings containing multiple dwellings or bedrooms

24.14 All easily accessible windows, roof windows and roof lights in building containing multiple dwellings or bedrooms shall meet the requirements of Section 24.

Glazed curtain walling and window walls

24.15 Specifiers should be aware that due to their size and configuration, it is common for glazed curtain walling and window walls to fall outside the scope of traditional testing or certification procedures. Consequently, in some circumstances, an alternative method may be required to demonstrate that their security is commensurate with the risk.

24.16 SBD recognises four distinct types of glazed wall systems. These are:

i Large glazed units connected by a ‘spider clamp’ system

ii Glazed units directly retained within a framing system (usually aluminium)

iii Framed windows installed within a separate framing system

iv Framed windows connected to other framed windows to create a ‘window wall’

24.17 Glazed curtain walling (i & ii above) must be installed using a secure glazing retention system. The method of retaining the glass must include one or more of the following:

- Security glazing tape
- Dedicated security sealant or gasket
- A secure mechanical fixing system (Evidence will be required to prove the system is secure. This may be achieved by utilising the specific glazing retention test within PAS 24:2022 or PAS 24:2016* or by an indicative test on the retention system to LPS 1175 Security Rating 1 or STS 202 Burglary Resistance 1)

24.18 Attack resistant glazing as defined in the ‘Security glazing’ section 27, is required where the glazing is easily accessible.

24.19 For information only, the following British Standard ‘Codes of Practice’ are relevant:

- BS 5516-1:2004 Patent glazing and sloping glazing for buildings. Code of practice for design and installation of sloping and vertical patent glazing
- BS 5516-2:2004 Patent glazing and sloping glazing for buildings. Code of practice for sloping glazing

* PAS 24:2016 has been withdrawn by the British Standards Institute and replaced by PAS 24:2022, however PAS 24:2016 will continue to be an acceptable route to compliance until 31st December 2024.

Fire, smoke and security rated windows

24.20 Where there is a requirement for a window to be fire, smoke and security rated, the manufacturer

or fabricator supplying the finished product to site is required to present independent third party certification from a single UKAS accredited certification body for all elements. This is in order to minimise the likelihood of a window being presented in varying configurations for separate fire, smoke and security tests and then later being misrepresented as one product meeting all requirements. All window styles and components, will need to be adequately described within the scope of certification and accompanying Technical Schedule. (*Note 24.15*)

Note 24.15: Any component part of the window that is changed for any reason must be assessed by the certification body to ensure compliance for fire, smoke and security.

24.21 The responsibility for the specification and location of fire rated security windows lies with the developer or the developer's agent (responsible person).

25 Conservatories and sunrooms

25.1 Where a conservatory or sunroom is installed then the doors and windows must meet the same physical security standards as Section 23 (doors), and Section 24 (windows). If a conservatory is installed with polycarbonate glazing system then a doorset shall be installed separating the conservatory from the rest of the dwelling, unless the roofing system has been certificated to one of the standards referenced within Section 24. The doorset shall comply with the requirements within Section 23.

26 Lightweight framed walls in houses and buildings containing multiple dwellings or bedrooms

26.1 The security of a development can be severely compromised if lightweight framed walls do not offer sufficient resilience to withstand a criminal attack; this is recognised within Approved Document Q (*Note 26.1*). The SBD requirements are primarily based upon products that have been tested and proven to provide additional security.

Note: 26.1: See – The Building Regulations 2010, Security-Dwellings, Q1: Unauthorised access, Section 1: Doors, paragraph 1.6.

26.2 Lightweight framed walls installed either side of a secure doorset (600mm for the full height of the doorset to restrict access to door hardware) or walls providing a partition between two dwellings, or a dwelling and shared communal space, shall meet the requirements below:

- Wall systems proven to meet the requirements of the following standards are preferred:
  - LPS 1175 Issue 7.2:2014 Security Rating 1, or
  - LPS 1175 Issue 8:2018 Security Rating 1/A1, or
  - STS 202 Issue 7:2016 Burglary Rating 1
  - Specifiers and DOCOs are advised that the correct installation of lightweight framed walling systems is crucial to the level of security ultimately provided, it is therefore recommended that they are installed by approved installers who have received appropriate training
- As an alternative, although not originally intended to enhance security, the following 'Robust Details' have shown to offer some resistance to intrusion:
  - E-WT-2 (timber wall construction)
  - E-WS-3 (light steel construction)
  - E-WM-20 (masonary wall construction)
- A further alternative to either one of the requirements above is the installation of expanded metal or 9mm (minimum) timber sheathing in the areas concerned

27 Private external lighting

27.1 Where possible the lighting requirements within BS 5489-1:2020 should be applied (see Section 19) (*Note 27.1*).

Note 27.1: Developers are advised that there is further guidance available from the Chartered Institute of Building Services Engineers (CIBSE) and the Society of Light and Lighting (SLL).

27.2 Lighting is required to illuminate all elevations containing a doorset, car parking and garage areas and footpaths leading to dwellings and blocks of flats. Bollard lighting is not appropriate as it does not project sufficient light at the right height making it difficult to recognise facial features and as a result causes an increase in the fear of crime.

27.3 SBD requires that only luminaires with suitable photometry serving to reduce light spill and light pollution may be used. Reducing light spill from inefficient luminaires into areas where lighting is not required is extremely important (*Note 27.3*).

Note 27.3: Developers are reminded that intrusive lighting from the private lighting schemes into public areas may constitute a statutory nuisance and is wasteful and costly.

27.4 Using lamps with high colour rendering qualities (60 or above on the Colour Rendering Index for instance) often improves visual performance and people's personal experience of an area. Colour rendering qualities of lamps refers to their ability to represent the colour of objects under illumination. To help with lamp selection, a measure is given from 100 – the colour rendering qualities of daylight – all the way down to 0 – where no colour rendering quality is available. It is argued that if we can see the true colours of objects under night time lighting conditions, our surroundings will appear to us as more familiar and comfortable with the attendant benefits of higher levels of public reassurance and satisfaction.

27.5 Overall Lighting uniformity (Uo) – levels of 0.4 or 40% – are recommended where possible to ensure that lighting installations do not create dark patches next to lighter patches where the human eye has difficulty in adjusting quickly enough to see that it is safe to proceed along any route. If high levels of uniformity are neither achievable nor appropriate for technical or locally applying environmental reasons, the highest levels of uniformity possible should be achieved

27.6 External public lighting must be switched using a photo electric cell (dusk to dawn) with a manual override or via a Central Management System (CMS) for large scale developments. If LED light sources are used, then shorter burning hours can be programmed as no warm up time is required for the lamp.

27.7 Secured by Design encourages, wherever possible, the use of the most environmentally friendly light sources. Moreover the Institute of Lighting Professionals (ILP) currently favours the use of good quality LED lighting and other energy effective light sources and advises against the use of fluorescent lighting which is environmentally unsustainable for a variety of reasons (*Note 27.7*). Further information is available at: www.securedbydesign.com

Note 27.7: Secured by Design has not specified PIR activated security lighting for a number of years following advice from the ILP and police concern regarding the increase in the fear of crime (particularly amongst the elderly) due to repeated PIR lamp activations. Research has proven that a constant level of illumination is more effective at controlling the night environment.

27.8 The use of light-emitting diode (LED) light sources is recommended with a colour temperature of no more than 4000 Kelvin and ideally below. This reduces blue light content and therefore the effects on human and ecology receptors.

Lighting in communal areas within flats/apartments

27.9 24-hour lighting (switched using a daylight sensor formally called photoelectric cells) to communal parts of blocks of flats will be required. It is acceptable if this is dimmed during hours of low occupation to save energy. This will normally include the communal entrance hall, lobbies, landings, corridors and stairwells and underground garaging facilities and all entrance/exit points. Technology exists in respect of energy efficient light dimming systems and other means of ensuring that security lighting is intelligently provided in the right quantities and only at the right time.

27.10 Secured by Design encourages, wherever possible, the use of the most environmentally friendly light sources. Moreover, the ILP currently favours the use of good quality LED lighting and other energy effective light sources and advises against the use of fluorescent lighting which is environmentally unsustainable for a variety of reasons. Further information is available at: https://www.securedbydesign.com/initiatives/safer-streets

28 Utility meters

28.1 There is no requirement for the location of the utility meters if 'smart meters' are utilised (remote signalling). Otherwise, utility meters should be located outside the dwelling at the front or as close to the front of the building line as possible (to ensure they are visible in order to deter vandalism). If located to the side of the dwelling they must be as near to the front of the building line as possible and to the front on any fencing or gates (care should be taken not to provide a climbing aid). When installed in a building containing a number of residencies such as flats, apartments or maisonettes, the meters should be installed in a location that access does not introduce security risks to residential areas.

29 Access control and additional security requirements for buildings containing multiple dwellings or bedrooms

29.1 It should be noted that regardless of the size of any development, where dwellings are inclusively designed to provide accessible housing, consideration must be given to disabled and older residents. Such residents may require additional access features such as full automation via remote key fob to enable independent entry through all doors to the building, car parks, communal areas, lifts, etc. Consideration must be given to a disabled persons ability to operate heavy doors and/or reach controls or wall mounted fobs.

Multiple dwellings

Definition

29.2 A building containing multiple dwellings, for the purposes of this document, may include flats, apartments, bedsits or individual bedrooms accessed from a semi-private area and served by a shared or communal entrance doorset including Houses in Multiple Occupation (HMO) and student accommodation.

Visitor door entry systems

Definition

29.3 A door entry system is a visitor system that is able to call a dwelling, whether individual or served from a communal entrance. It shall allow a visitor to contact the requested dwelling within the particular system and/or building, and hold a two-way simultaneous conversation between the visitor and occupant of the dwelling. It will allow the occupant to see and identify the visitor and their location, and will enable the occupant of the dwelling to remotely operate the electric locking device from their room terminal, thereby unlocking the communal entrance door(s) associated with the action and allowing the visitor access.

29.4 Visitor door entry systems shall be easy to operate and understand and have the ability to display the image of the caller before the call is answered, so the resident can choose whether to answer the call or not.

29.5 Wherever a door entry system includes a dedicated camera which is separate from the door entry panel, the lens specified should be of a fish-eye type in order to produce a wide panoramic or hemispherical image. The images from this camera system should be recorded 24 hours a day, 7 days a week and stored for a minimum period of 30 days. This should be repeated at any subsequent communal entrance and landing if compartmentation of the building is required.

Access control systems

Definition

29.6 A proximity access control system provides electronic access through communal entrance doorsets. This is generally by use of a card or key fob issued to an occupant or person such as staff member, contractor or postal delivery service. It grants access to required areas via locked doors when the valid card or key fob is presented to a proximity reader fitted to the communal entrance doorset. Authorised access can be restricted to certain times of the day for some users.

29.7 The access control system will have the facility to record and identify the location, user, type, time and date of every system event. Sufficient memory storage must be available for a period of not less than 30 days. The system will be fully programmable enabling control over permitted access with restrictions to nominated system controllers, who will be able to manage the system via remote access in order to expeditiously delete lost or stolen proximity cards or key fobs and any enrolled radio transmitters. Radio transmitters must have individual codes, such as those used by access cards or key fobs. Common code radio transmitters shall not be acceptable as they cannot be managed.

29.8 Electronic keys must be security encrypted to protect against unauthorised copying and be sufficiently robust to avoid constant replacement during everyday use by the residents.

Physical security standards for communal and shared entrance doorsets

(see Fig.2. Communal and shared entrance doorsets)

Definition

29.9 A communal or shared entrance doorset, including integral adjacent panels and side screens, can be defined as an external doorset leading from the street or otherwise public area to an internal semi-private communal area providing access to segregated flats, bedsit or individual bedrooms. They can be further categorised by use as follows:

Physical security requirements for communal entrance doorsets that serve 4 dwellings or less in buildings that are **no more than two storeys** in height

29.10 Communal entrance doorsets that serve 4 dwellings or less in buildings that are no more than two storeys in height are not required to be connected to a visitor door entry system and access control system, and can be controlled by non-electronic keys only i.e. requiring residents to meet and greet visitors at the communal door.

29.11 Meet and greet as a means of entry will only be considered SBD compliant where the development consists of 4 dwellings or less in buildings that are no more than two storeys in height unless disabled and older residents require additional access features such as full automation via remote key fob. In all other scenarios it is unacceptable. Doorsets shall comply with the physical security requirements of Section 23.

29.12 Tradesperson or timed-release mechanisms are not permitted as they have been proven to be the cause of anti-social behaviour and unlawful access to communal developments.

Physical security requirements for communal entrance doorsets that serve 4 dwellings or less in buildings that are **more than two storeys** in height

29.13 Communal entrance doorsets that serve 4 dwellings or less in buildings that are more than two storeys in height are required to have a visitor door entry system and access control system (regardless of the number of flats/apartments, bedsits or bedrooms) and therefore specifiers are again referred to the content of Section 23 for the requisite physical security standards.

29.14 Meet and greet is not SBD compliant in these circumstances. Occupants of dwellings should be able to allow visitors access remotely at all restricted communal entrance points along the designed route to their dwelling thereby meeting the requirements of Section 29. This includes lift controls that form part of the security compartmentation.

29.15 Tradesperson or timed-release mechanisms are not permitted as they have been proven to be the cause of anti-social behaviour and unlawful access to communal developments.

Physical security requirements for communal entrance doorsets with an electronic visitor door entry system serving 5 to 10 dwellings (inclusive)

29.16 Communal entrance doorsets that serve 5 to 10 dwellings (inclusive), shall meet one of the following standards (in accordance with Section 23):

- PAS 24:2022, or
- PAS 24:2016*, or
- STS 201 Issue 14:2021, or
- LPS 1175 Issue 7.2:2014 Security Rating 2+, or
- LPS 1175 Issue 8:2018 Security Rating A3+, or
- STS 202 Issue 10:2021 Burglary Rating 2, or
- LPS 2081 Issue 1.1:2016 Security Rating B, or
- STS 222 Issue 2:2021

* PAS 24:2016 has been withdrawn by the British Standards Institute and replaced by PAS 24:2022, however PAS 24:2016 will continue to be an acceptable route to compliance until 31st December 2024.

29.17 A communal entrance doorset that serves 5 to 10 dwellings (inclusive), is required to have a visitor door entry system and an access control system to enable management oversight of the security of the building.

29.18 Meet and greet is not SBD compliant in these circumstances. Occupants of dwellings should be able to allow visitors access remotely at all restricted communal points on the designed route to their dwelling thereby meeting the requirements of Section 29. This includes lift controls that form part of the security compartmentation.

29.19 Tradesperson or timed-release mechanisms are not permitted as they have been proven to be the cause of anti-social behaviour and unlawful access to communal developments.

Physical security requirements for communal entrance doorsets with an electronic visitor door entry system serving 11 dwellings or more

29.20 Communal entrance doorsets that serve 11 dwellings or more, controlled by visitor door entry systems, can enable residents to gain access without the use of a key and grant entry to visitors by means of an electronic door release system. An increased number of dwellings results in doorsets being used more frequently. Likewise, the proximity of the development to a high crime area can subject doorsets to more abuse. As an approximate guide, in many SBD applications the BS 6375 'moderate' level of qualification will suffice for approval. It should be borne in mind that communal doorsets can often have a high volume of use and this is especially true when they service primary entrances to, for instance, large apartment blocks. It is important that SBD approved developments have the correct level of security specification for the doorsets and windows but equally important is the durability of these units as tested against the requirements of BS 6375. Therefore, specifiers should satisfy the DOCO that the doorset is fit for its intended purpose and environment as in Section 22. Communal entrance doorsets that serve 11 dwellings or more, shall meet one of the following standards (in accordance with Section 23):

- PAS 24:2022 *(Note 29.20)*, or
- PAS 24:2016* *(Note 29.20)*, or
- STS 201 Issue 14:2021, or
- LPS 1175 Issue 7.2:2014 Security Rating 2+, or
- LPS 1175 Issue 8:2018 Security Rating A3+, or
- STS 202 Issue 10:2021 Burglary Rating 2, or
- LPS 2081 Issue 1.1:2016 Security Rating B, or
- STS 222 Issue 1:2021

* PAS 24:2016 has been withdrawn by the British Standards Institute and replaced by PAS 24:2022, however PAS 24:2016 will continue to be an acceptable route to compliance until 31st December 2024.

Note 29.20: Specifiers are reminded that doorsets utilising non-mechanical magnetic locks fall within the scope of PAS 24:2022 or PAS 24:2016 but outside the scope of EN 1627. All testing to this standard utilising a mechanical lock shall be conducted in accordance with the 'UK Police Service (Secured by Design) Interpretation document for BS EN 1627, BS EN 1628, BS EN 1629 & BS EN 1630'. This document can be found on the Secured by Design website within the SBD Standards Explained section and is a requirement within the UK national forward of BS EN 1627.*

29.21 There have been numerous examples of sub-standard doorsets failing, due to poor general performance, leading to insecure properties. In some cases, particularly heavy communal entrance/exit doors have become detached from the frame, which could have resulted in serious injury or worse. Certification to BS 6375 (Parts 1, 2 and 3) provides reassurance that the doorset is fit for purpose and safe in use. Specifiers should be satisfied that the following attributes are addressed:

- Duty level – this is the number of door operations (opening and closing actions) that it has been tested to. In simple terms the more dwellings that are served the higher the duty level should be (BS 6375 Part 2 provides further guidance).
- Weather performance – which may be influenced by the geographical location, temperature and climate (BS 6375 Part 1 provides further guidance).
- Wind resistance – also influenced by the location of the building (BS 6375 Part 1 provides further guidance).
- And relevant sections of BS 6375 Part 3 (applicable to the installation).

29.22 Meet and greet is not SBD compliant in these circumstances. Occupants of dwellings should be able to allow visitors access remotely at all restricted communal points on the designed route to their dwelling thereby meeting the requirements of Section 29. This includes lift controls that form part of the security compartmentation.

29.23 Tradesperson or timed-release mechanisms are not permitted as they can facilitate unlawful access to developments.

29.24 Visitor door entry systems that utilise CCTV must comply with the requirements of Section 36.

Developments with 25 or less, flats, apartments, bedsits or bedrooms

29.25 Smaller developments containing 25 or less, apartments, bedsits or bedrooms shall have a visitor door entry system and access control system. The technology by which the visitor door entry system operates is a matter of consumer choice, however it should provide the following attributes:

- Access to the building via the use of a security encrypted electronic key (e.g. fob, card, mobile device, etc.).
- Vandal resistant external door entry panel with a linked camera.
- Ability to release the primary entrance doorset from the dwelling or bedroom (in the case of student accommodation or House in Multiple Occupation).
- Live audio and visual communication between the occupant and the visitor.
- Ability to recover from power failure instantaneously.
- Unrestricted egress from the building in the event of an emergency or power failure.
- Control equipment to be located in a secure area within the premises covered by the CCTV system and contained in a lockable steel cabinet to LPS 1175 Security Rating 1 or STS 202 Burglary Rating 1.

29.26 Developers and installers of visitor door entry systems and access control systems should be aware that UL 293 *(Note 29.26*) provides reassurance that a system has been assessed against a prescribed security test regime. Any product required to meet UL 293 should have a minimum requirement of level 2 for physical attack and endurance level 3 to demonstrate that it is fit for purpose.

Note 29.26: UL 293 is the first standard of its kind developed specifically for use in the United Kingdom (UK). This standard is the result of a close collaboration between UL, a global safety science organisation, and Secured by Design (SBD), the national police crime prevention initiative in the UK.

29.27 Meet and greet is not SBD compliant in these circumstances. Occupants of dwellings should be able to allow visitors access remotely at all restricted communal points on the designed route to their dwelling thereby meeting the requirements of Section 29. This includes lift controls that form part of the security compartmentation.

29.28 Tradesperson or timed-release mechanisms are not permitted as they have been proven to be the cause of anti-social behaviour and unlawful access to communal developments.

29.29 Specifiers are reminded that the installed electronic release hardware must form part of the certificated doorset range.

Developments with more than 26 flats, apartments, bedsits or bedrooms

29.30 Larger developments containing more than 26 flats, apartments, bedsits or bedrooms shall have a visitor door entry system and access control system. The technology by which the access control system operates is outlined within UL 293, however it must provide the following attributes:

- Access to the building via the use of a security encrypted electronic key (e.g. fob, card, mobile device, key etc.)
- Vandal resistant external door entry panel with a linked camera
- Ability to release the primary entrance doorset from the dwelling or bedroom (in the case of student accommodation or House in Multiple Occupation)
- Live audio/visual communication between the occupant and the visitor
- Ability to recover from power failure instantaneously
- Unrestricted egress from the building in the event of an emergency or power failure
- Capture (record) images in colour of people using the door entry panel and store for those for at least 30 days. If the visitor door entry system is not capable of capturing images, then it should be linked to a CCTV system or a dedicated CCTV camera should be installed for this purpose. This information should be made available to police within 3 days upon request
- All visitor and resident activity on the visitor door entry system should be recorded and stored for at least 30 days. This information should be made available to police within 3 days upon request
- Control equipment to be located in a secure area within the premises covered by the CCTV system and contained in a lockable steel cabinet to LPS 1175 Security Rating 1 or STS 202 Burglary Rating 1
- Systems must comply with General Data Protection Regulations (GDPR) and the Information Commissioner's Office

29.31 SBD recommends the use of colour monitors to enable the occupier of the dwelling or bedroom with the identification of visitors or to assist the occupier to accurately describe the colour of clothing to the police of the perpetrators of antisocial behaviour or those otherwise misusing the system.

29.32 Specifiers are reminded that the installed electronic release hardware must form part of the certificated doorset range.

29.33 In the event of a power failure door locks shall revert to a safe (unlocked) mode unless there is a fire evacuation policy in place that requires doors to remain locked, such as that operated within some care homes.

29.34 Meet and greet is not SBD compliant in these circumstances. Occupants of dwellings should be able to allow visitors access remotely at all restricted communal points on the designed route to their dwelling thereby meeting the requirements of Section 29. This includes lift controls that form part of the security compartmentation.

29.35 Tradesperson or timed-release mechanisms are not permitted as they have been proven to be the cause of anti-social behaviour and unlawful access to communal developments.

Security compartmentation of developments incorporating 26 or more flats, apartments, bedsits or bedrooms

29.36 Developments of 26 or more flats, apartments, bedsits or bedrooms can suffer adversely from anti-social behaviour due to unrestricted access to all areas and floors of the building. SBD therefore seeks to prevent unlawful free movement throughout the building through the use of an access control system. How this is achieved is a matter for the specifier, the following two methods are acceptable:

1. Lift and stairwell access controlled separately:

   - To prevent the lift and stairwell providing unrestricted access onto a residential landing, each resident should be assigned access to their floor only via the use of a security encrypted electronic key (e.g. fob, card, mobile device, key etc.) both on the stairwell/landing door and lift
   - Access to stairwells from the communal lobby should be restricted to residents to reduce the risk of anti-social behaviour or criminal activities
   - Unrestricted egress from a landing into the stairwell and from the stairwell to the communal lobby/emergency fire exit should be provided at all times

2. Lift and stairwell access jointly controlled via an additional secure doorset:

   - An additional secure doorset prevents access to each landing from both the lift and stairwell. Each resident should be assigned access to their floor only via the use of a security encrypted electronic key (e.g. fob, card, mobile device, key etc.) for this doorset
   - Access to stairwells from the communal lobby should be restricted to residents to reduce the risk of anti-social behaviour or criminal activities.
   - Unrestricted egress from a landing into the stairwell and from the stairwell to the communal lobby/emergency fire exit should be provided at all times

29.37 In the event that a lift opens directly into an apartment a security protocol must be agreed to ensure access cannot be gained without the proper authority.

29.38 Alternative methods of creating compartmentation within the building may be discussed with the DOCO.

29.39 Whether access at these locations is provided to legitimate visitors as well as residents via additional call points, is a matter for the overall access control strategy. It is not the intention of Secured by Design to restrict legitimate free flow of residents through the building, this will be at the discretion of the management company concerned.

29.40 Meet and greet is not SBD compliant in these circumstances. Occupants of dwellings should be able to allow visitors access remotely at all restricted communal points on the designed route to their dwelling thereby meeting the requirements of Section 29. This includes lift controls that form part of the security compartmentation.

29.41 Tradesperson or timed-release mechanisms are not permitted as they have been proven to be the cause of anti-social behaviour and unlawful access to communal developments.

29.42 It is imperative that the Fire and Rescue Service should have unrestricted access to all floors in the event of an emergency so the internal access control system utilised should incorporate the following features detailed in 29.43 to 29.46.

29.43 Where unlawful free internal movement is restricted via the lift then the fire service must be afforded access via a 'firefighter's mode' or an evacuation lift in 'evacuation mode'.

29.44 If unlawful free internal movement has been restricted via an access control system acting on dedicated external doorsets and any additional doorsets providing access to individual floors/ landings then an electronic release must be incorporated within the system to allow the fire service free access to all of the communal areas of the building. The electronic release system must be weatherproof, easily identifiable and located close to the entrance that Fire and Rescue Teams would use in the event of an emergency. It has been agreed between the police and fire and rescue services that the most practical means of achieving this aim is to install a switch within an Access Control Box (ACB). The key system for the ACB should be of a restricted type acceptable to the local Fire and Rescue Service *(Note 29.44)*. An ACB must be secure for obvious reasons and therefore shall be tested and certificated to one of the following standards:

- LPS 1175 Issue 7.2:2014 Security Rating 2+, or
- LPS 1175 Issue 8:2018 Security Rating A3+, or
- STS 205 Issue 5:2015 Resistance Class BR 2

Note 29.44: As ACB key security is important, only the Fire and Rescue Service and the ACB's manufacturer will hold keys. Should access to an ACB be necessary, for maintenance etc. box manufacturers will facilitate this.

29.45 The use of an ACB is in addition to the installation of a Secure Information Box (SIB), which are recommended by the fire and rescue service and are referenced within clauses of BS 9991:2015: Fire Safety (England) Regulations 2022. The ACB should be clearly marked with a photo-luminescent identification sign in the same way as the SIB. The exact location of an ACB should be specified following consultation with the local Fire and Rescue Service.

29.46 The bottom edge of the ACB/SIB enclosure should be located at least 1.4m above floor level to facilitate access by fire and rescue service crews wearing protective equipment. Where required due to risk of unauthorised access and vandalism it is permissible for the bottom edge of the SIB to be located at no more than 2.5m above floor level to facilitate fire and rescue service crew access by a short ladder.

29.47 Specifiers and designers should be aware that there is now a Fire Industry Association (FIA) and National Fire Chiefs' Council (NFCC) Code of Practice on the provision of Secure Information Boxes (SIBs) in residential buildings.

29.48 Where an SIB is required, SBD expects the Code of Practice to be adhered to.

29.49 It should be noted that the security of SIBs falls into two basic categories based on the level of public access, namely:

Category A: SIBs mounted externally on a building or those installed in the common parts of a block of flats i.e., accessible to the public.

Category B: SIBs mounted internally in a secure area where the fire and rescue service has established a rapid access protocol or other alternative arrangements (e.g. where there is a 24-hour concierge service in operation and where there is controlled/restricted access, either manual or electronic access control).

29.50 SIBs that fall into Category A should be one of the following standards, namely:

- LPS 1175 Issue 7.2:2014 Security Rating 2+, or
- LPS 1175 Issue 8:2018 Security Rating A3+, or
- STS 205 Issue 5:2015 Resistance Class BR 2

29.51 SIBs that fall into Category B are required to meet one of the following standards:

- LPS 1175 Issue 7.2:2014 Security Rating 1+, or
- LPS 1175 Issue 8:2018 Security Rating A1+ (SR1), or
- LPS 2081 Issue 1.1:2016 Security Rating A, or
- STS 205 Issue 5:2015 Resistance Class BR 1, or
- STS 225 Issue 1:2021 Resistance Class BR1(S)

29.52 For further information see: https://www.securedbydesign.com/guidance/design-guides

29.53 The security compartmentation strategy regarding controlling movement through stairwell doorsets has been developed in consultation with the London Fire Brigade and agreed with the national Fire and Rescue Service.

29.54 It is the responsibility of the Local Authority through Building Control to sign off the fire strategy for the building. Building Control Officers may express a preference for the fire door rating and type of locking system to be used. The developer must ensure the fire doors are compliant, but the DOCO should remind them of their responsibilities.

Locking mechanisms for security compartmented doorsets

29.55 Where security compartmentation is recommended, the locking mechanism must be capable of being overridden from the side approached by people escaping without the use of a key in the direction of escape and without requiring more than one mechanism to be manipulated.

29.56 If secure doorsets form part of the compartmentation strategy, such as those operated by key, code, combination keypad, swipe card, biometric or proximity card, it must be possible to manually override their security mechanisms from the side approached by people escaping without the use of a key in the direction of escape and without requiring more than one mechanism to be manipulated.

29.57 Security locking mechanisms which incorporate multi-point locking or solenoid door latches/bolts that are released electronically are not considered suitable for compartmentation because they can fail to open if they are not properly maintained.

29.58 Doors on escape routes must be:

- Easy to operate
- Operable without a key from the side approached by people escaping
- Operable without requiring the person escaping to manipulate more than one mechanism

29.59 Electrically powered locks should return to the unlocked position in all of the following situations:

- If the fire detection and alarm system operates
- If there is loss of power or system error
- If the security mechanism override is activated, such as the Access Control Box (ACB)

29.60 If the DOCO specifies PAS 24 doorsets in order to maintain the integrity of the security, these need to be dual certificated fire/security doorsets and, should have been tested and certificated with the intended locking mechanisms fitted. This testing must be conducted by a UKAS accredited third party certification body.

29.61 If PAS 24 doorsets are not specified, suitable fire doors will be required.

30 Fire and Rescue Service key systems

30.1 Restricted key systems for Access Control Box or, where they are fitted in respect of access doors, lifts, smoke ventilation or any other type of emergency override mechanism, must be the subject of agreement with the appropriate fire and rescue service.

30.2 Failure to comply with the provisions of paragraph 29.45 will result in the failure of the development to receive SBD certification.

Fig. 2. Communal and shared entrance doorsets

Doorset	4 or less	Over two floors	5- 10	11-25	26 and Above
1. Shall meet one of the following standards (in accordance with Section 23):					
■ PAS 24:2022, or	✓	✓	✓		
■ PAS 24:2016*, or	✓	✓	✓		
■ STS 201 IsIssue 14:2021, or	✓	✓	✓		
■ LPS 1175 Issue 7.2:2014 Security Rating 2+, or	✓	✓	✓		
■ LPS 1175 Issue 8:2018 Security Rating A3+, or	✓	✓	✓		
■ STS 202 Issue 10:2021 Burglary Rating 2, or	✓	✓	✓		
■ LPS 2081 Issue 1.1:2016 Security Rating B, or	✓	✓	✓		
■ STS 222 Issue 1:2021	✓	✓	✓		
Key operated only and no tradesperson button.	✓	✓	✓		
2. Shall meet one of the following standards (in accordance with Section 23):					
■ PAS 24:2022, or				✓	✓
■ PAS 24:2016*, or				✓	✓
■ STS 201 Issue 14:2021, or				✓	✓
■ LPS 1175 Issue 7.2:2014 Security Rating 2+, or				✓	✓
■ LPS 1175 Issue 8:2018 Security Rating A3+, or				✓	✓
■ STS 202 Issue 10:2021 Burglary Rating 2, or				✓	✓
■ LPS 2081 Issue 1.1:2016 Security Rating B, or				✓	✓
■ STS 222 Issue 1:2021				✓	✓
No Tradesperson button				✓	✓
Visitor Door Entry System	**4 or less**	**Over two floors**	**5- 10**	**11-25**	**26 and Above**
A visitor door entry system is able to:					
■ Allow a visitor to ring any selected dwelling within the particular system and/or building, and hold a two way conversation		✓	✓	✓	✓
■ Allow the occupant to see and identify the visitor and their location		✓	✓	✓	✓
■ Enable occupant of the dwelling to remotely operate the electric locking device from their room terminal, thereby allowing the visitor access		✓	✓	✓	✓
■ Ability to display the image of the caller before the call is answered so the resident can choose whether to answer the call or not		✓	✓	✓	✓
■ Visitor door entry systems that utilise CCTV must comply with the requirements of SBD		✓	✓	✓	✓
■ SBD recommends the use of colour monitors to assist the occupier with the identification of visitors		✓	✓	✓	✓

* PAS 24:2016 has been withdrawn by the British Standards Institute and replaced by PAS 24:2022, however PAS 24:2016 will continue to be an acceptable route to compliance until 31st December 2024.

Access control	4 or less	Over two floors	5- 10	11-25	26 and Above
A.					
Grants access to required areas via locked doors when the valid card or key fob is presented to a proximity reader fitted to the communal entrance doorset		✓	✓	✓	✓
Authorised access can be restricted to certain times of the day for some users		✓	✓	✓	✓
Access control system will have the facility to record and identify the location, user, type, time and date of every system event		✓	✓	✓	✓
Sufficient memory storage must be available for a period of not less than 30 days		✓	✓	✓	✓
The system will be fully programmable, able to expeditiously delete lost or stolen proximity cards or key fobs		✓	✓	✓	✓
Electronic keys must be security encrypted to protect against unauthorised copying		✓	✓	✓	✓
Be sufficiently robust to avoid constant replacement during everyday use by the residents		✓	✓	✓	✓
B.					
Access to the building via the use of a security encrypted electronic key (e.g. fob, card, mobile device, key, etc.)				✓	✓
Vandal resistant external door entry panel with a linked camera				✓	✓
Ability to release the primary entrance doorset from the dwelling or bedroom				✓	✓
Live audio and visual communication between the occupant and the visitor				✓	✓
Ability to recover from power failure instantaneously				✓	✓
Unrestricted egress from the building in the event of an emergency or power failure				✓	✓
Control equipment to be located in a secure area covered by the CCTV system and contained in a lockable steel cabinet to LPS 1175 SR1 or STS 202 BR1				✓	✓
SBD recommends the use of colour monitors to assist the occupier with the identification of visitors				✓	✓
C.					
Capture (record) images in colour of people using the door entry panel and store for those for at least 30 days					✓
If the visitor door entry system is not capable of capturing images, then it should be linked to a CCTV system or a dedicated CCTV camera should be installed for this purpose					✓
All visitor and resident activity on the visitor door entry system should be recorded and stored for at least 30 days					✓
SBD recommends the use of colour monitors to assist the occupier with the identification of visitors					✓
Systems must comply with General Data Protection Regulations (GDPR)					✓
Compartmentalisation	**4 or less**	**Over two floors**	**5- 10**	**11-25**	**26 and Above**
Prevent unlawful free movement throughout the building through the use of an access control system					✓

31 Lift security

31.1 BS EN 81 is a multi-part document detailing safety rules for the construction and installation of passenger lifts and passenger goods lifts.

31.2 BS EN 81-71:2020 refers to the vandal resistance qualities of passenger lifts and passenger goods lifts.

31.3 The three categories below set out the testing parameters in terms of vandal resistance. Each lift-car fixture, part and supply must remain functional after typical acts of vandalism.

31.4 As an approximate guide, in many SBD applications Category 1 qualification will suffice for approval. However, in high crime areas the DOCO may require Category 2 qualification.

- **Category 0** – To meet 'Cat 0', fixtures need to comply with the requirements of EN81-20:2014 and will cover strength requirements for both landing and car doors, as well as car walls. The strength requirement of the car walls is such that they must be capable of withstanding forces that are equivalent to a person pushing against them.
- Car and shaft lighting. In-car lighting must now provide an illumination intensity of 100 lux instead of 50 lux, and emergency in-car lighting 5 lux for one hour instead of 1W for one hour.
- **Category 1** – In addition to the requirements of Cat 0, all lift-car fixtures must be secured with tamperproof fixings.
- Fixtures must be able to withstand three impacts from a 1kg impactor, from a height of 0.2m at the weakest point of the lift component (as defined by the manufacturer).
- Fixtures must be able to withstand a flame being applied to the area most likely to be affected by flame for 60 seconds.
- **Category 2** – In addition to the requirements of Cat 0 all lift-car fixtures must be secured with fixings which are not visible to lift users.
- Fixtures must be able to withstand three impacts from a 1kg impactor from a height of 1.0m at the weakest point of the lift component (as defined by the manufacturer).
- Fixtures must be able to withstand a flame being applied to the area most likely to be affected by flame for 120 seconds.
- In order to pass the impact and flame tests, the elevator lift parts must also remain safe to use after vandal tampering (i.e. no sharp edges after a vandal's attempt to break or pry something open) and functional.
- In addition to enduring flame-exposure, the material of the lift component or fixture shall self-extinguish, and any resulting discolouration cannot obliterate any of the lift parts, written instructions or symbols.

32 Secure bicycle parking

Internal bicycle parking for residents

32.1 Internal bicycle parking facilities will be accessed via a fire, smoke and security rated doorset compliant with Section 23; (specifically addressing concerns over storage of e-bikes).

32.2 The bicycle parking facility should be constructed of dividing walls that extend from floor to ceiling with no windows set in them.

32.3 Bicycle parking access doors should be fitted with thumbturns, or other emergency furniture, on the inside face to facilitate emergency egress and so as to avoid locking people inside the store.

32.4 In England and Wales, doorsets providing access from the bicycle parking facility into communal parts of the building (including emergency egress doorsets) are required to meet Part B, Part M and Part Q of Building Regulations.

32.5 Bicycle parking facilities should be incorporated into any existing access control and monitoring systems.

32.6 Bicycle parking will comprise bicycle stands, anchor points, single and two-tier rack systems and dedicated lockers etc. The bicycle stands and rack systems, single or two tier, should be certified to one of the following standards:

- SS104 Security Rating Bronze, or
- STS 501 Security Rating TR1, or
- STS 503 Security Rating TR1, or
- STS 205 Issue 6:2021 Security Rating BR1, or
- STS 225 Issue 1:2021 Security Rating BR1 (S), or
- LPS 1175 Issue 8:2018 Security Rating A (A1), or
- LPS 2081 Issue 1.1:2016 Security Rating A

N.B. Careful consideration must be given to cater for sections of the community who may find vertical bicycle racks difficult to use.

32.7 Bicycle parking facilities should be limited to the storing of no more than seventy bikes; if larger numbers need to be stored at the same location, the facilities should be separated into discrete units and be subject to extra mitigating security measures as agreed with the DOCO *(Note 32.7).*

Note 32.7: When recommending appropriate security measures in this regard, DOCOs will make us of the information contained within the Standards for Public Cycle Parking, which is available at: https://www.securedbydesign.com/images/05132-Cycle-Parking-and-Security-Standards-June-2021-REV-6.pdf

32.8 DOCOs may require extra security measures to be put in place at bicycle parking facilities should an analysis of local crime rates indicate that they are necessary to ensure that security remains commensurate to the risk.

33 Integral bin stores and plant rooms

33.1 External doorsets to bin stores and/or plant rooms should comply with Section 23; where higher crime risks can be evidenced, higher doorset security specifications can be employed to combat the risks. Whatever the arrangements for the external bin store and/or plant room doorset, the internally accessing doorset should meet Section 23.

33.2 Internal and external doorsets would benefit from being an integral part of the access control system.

33.3 Emergency egress, eg. thumbturn or crash bar, from any bin store and/or plant room should be via the external doorset rather than through a doorset that leads back into the building.

33.4 External bin store and/or plant room doors should be fitted with automatic closers to prevent them from being left open and therefore the area insecure. Appropriate ventilation must be designed into these areas to avoid doors being left open for this purpose.

34 Emergency door release devices

34.1 Break glass emergency door exit release devices (often green in colour) on communal external doors that provide an important aid to egress in the event of an emergency have proven to be abused rendering some buildings insecure for long periods of time. SBD recommends vandal resistant stainless steel self-resetting emergency exit systems are installed as an alternative. The installation and system type must be in full compliance with the relevant Building Regulations and achieve final ‘sign-off’ by local Building Control or Approved Inspector.

34.2 If the break glass emergency door release device provides access to residential areas as part of the emergency egress route, additional security must be provided to restrict access to the fire egress route only to maintain the security of the building line. This is also a requirement of Part Q of the Building Regulations (England and Wales).

35 Telephone and Internet Protocol (IP) based visitor door entry systems with or without remote unlocking

35.1 To ensure that the viewed image is of appropriate quality, systems of this kind shall be demonstrated to the DOCO on equipment similar to that used by residents (e.g. TV smart phone or tablet), prior to receiving Secured by Design accreditation.

35.2 All systems shall comply with UL293 and where applicable the Internet Protocol security shall meet the requirements and become accredited with the SBD 'Secure Connected Device' accreditation scheme by being tested and certificated with an SBD approved certification body https://www.securedbydesign.com/internet-of-things

35.3 The system must be capable of catering for a minimum of 2 and a maximum of 6 devices being activated as controllers per dwelling.

35.4 Only the management body shall be permitted to add a device to the system, however the principal resident(s) shall be permitted to remove a device from the system.

35.5 Remote unlocking (e.g. when operated from outside the boundary of the residence utilising mobile equipment such as smart phones and tablets) should only be permitted when there is both a live audio and visual feed. Systems should not permit users to remotely release the door lock where there is audio only communication, e.g. poor signal area, loss of signal, etc.

35.6 If the facility of remote unlocking is abused by a resident, the system shall be capable of restricting their ability to unlock a door by way of a landline in the residence linked to a visual monitor only.

35.7 If residents do not possess the required equipment to use the system, a dedicated device should be installed inside the dwelling to give audio and visual communication.

35.8 Specifiers are reminded that if telephone and/or IP based visitor door entry systems are utilised there should be no usage charge incurred by the resident as a result of a system activation.

36 CCTV and recording

36.1 For the purposes of this guide, the term Closed Circuit Television (CCTV) is used to describe all video surveillance systems capable of recording moving images or sound, from traditional CCTV systems with on-site or remote recording facilities to video doorbells that begin recording only when a doorbell is activated.

36.2 The purpose of a CCTV system and the results desired from it must be carefully detailed in the Operational Requirement so that an appropriate installation is identified and can be agreed upon with a prospective installer. Attendant problems that could detract from the success of a CCTV system should be identified and a solution to them sought at this early planning stage.

36.3 Although a CCTV system cannot address all aspects of security, it can form an invaluable element within a comprehensive security strategy as long as the specification and installation meets the users Operational Requirement.

36.4 CCTV is not a universal solution to security problems but it does form part of an overall security plan. It can help deter crime and criminal behaviour, assist with the identification of offenders, promote personal safety and provide reassurance for residents and visitors. Even the smallest development will benefit from the installation of a good quality CCTV system, which does not need to be expensive.

36.5 Images of people are covered by the General Data Protection Regulation (GDPR), and so is information about people which is derived from images – for example, vehicle registration numbers. Most uses of CCTV will be covered by the Data Protection Act 2018, which is the UK's implementation of the GDPR, regardless of the number of cameras or how sophisticated the equipment is.

36.6 Specifiers are reminded that there will be a requirement for a data controller to ensure compliance with the GDPR. The data controller must ensure that all CCTV images that can be used to identify individuals are used, stored and disclosed in line with the GDPR principles.

36.7 It is important that signs are displayed explaining that CCTV is in operation.

36.8 A CCTV system should:

- Have CCTV cameras contained in vandal resistant housings with the facility for ceiling or wall mounting
- Record images in colour HD quality
- Not be affected by concentrated white light sources directed at the camera, such as car head lights and street lighting
- Have a lockable steel cabinet for 'on-site' recording equipment or other hard drive units to one of the following standards:
  - LPS 1175 Security Rating 1 (A1), or
  - STS 202 Burglary Rating 1, or
  - SS314
- Identify each camera's location and record this information along with time and date stamping
- Provide suitable methods of export and incorporate the required software to view the exported footage
- Negatively impacted upon by lighting and landscape proposals
- Whether there is consideration for inclusion of comprehensive Operational use and Requirements Table
- Also, it is worth mentioning that the most important aspect of utilising CCTV is the quality of the system and its imagery

36.9 CCTV cameras associated with visitor door entry systems covering communal entrances and internal lobby areas should be installed and be capable of providing images of persons that are clearly identifiable on smaller devices such as smart phones.

36.10 Ideally, CCTV systems should be monitored live 24/7 giving the ability to react to a situation as it occurs. However, this is not a requirement of Secured by Design for residential developments. Most CCTV systems are designed for recording images and for the post event investigation only, in which case nobody is required to monitor the activities live. Police recommend that images are stored for a minimum of 31 days.

36.11 Early discussions with an independent CCTV expert and potential installers can resolve a number of matters, including:

- monitoring and recording requirements
- activation in association with the intruder alarm
- requirements for observation, facial recognition/identification and automatic number plate recognition (ANPR)
- areas to be monitored and field of view
- activities to be monitored
- the use of recorded images
- maintenance of equipment and the management of recording
- subsequent on-going training of operatives

36.12 Further advice, including the ICO CCTV Code of Practice is available at: www.ico.org.uk

36.13 The system will be fully operational and demonstrated to the DOCO upon final inspection, prior to receiving Secured by Design accreditation.

37 CCTV management and maintenance protocols

37.1 The data controller – the person, company or other body that determines the purpose and means of personal data processing – must facilitate the availability of images at all times to the police upon reasonable request. Contact details for the data controller must be clearly displayed in accordance with the requirements of the GDPR and the Information Commissioner's Office.

37.2 An 'As Installed' system specification and schematic, site specific drawing and logbook will be provided to the system controller(s) and available to be viewed at all times.

37.3 It is recommended that the system receives a minimum of two maintenance inspections per year. Each camera will be cleaned and a test recording completed and compared with the previous recording, to ascertain any deterioration in quality and performance. The contractor should issue a certificate of operational safety and security.

37.4 The contractor will provide system-operating manuals to the system controller(s), which will include the method of reviewing and archiving recorded images and will be available for use at all times.

37.5 The contractor will issue a certificate to confirm that the CCTV installation is compliant with BS 7958:2015 Closed circuit television (CCTV. Management and operation. Code of practice), and the requirements of the GDPR.

37.6 The contractor will issue an National Security Inspectorate (NSI) or Security Systems and Alarms Inspection Board (SSAIB) or equivalent certificate of compliance for the CCTV system.

37.7 The contractor will issue a certificate to confirm that the systems and installations are in compliance with SBD guidelines.

Further details regarding video surveillance systems are available at the following link: www.securedbydesign.com/guidance/design-guides

38 Doorsets providing alternative access to communal areas (other than the primary shared or communal access doorset) including emergency egress doorsets

38.1 Alternative access doorsets, emergency egress and fire doorsets that may be used by residents to access communal parts of the building are also required to be 'secure doorsets', see Approved Document Q, Section 1, paragraph 1.1. Doorsets shall meet the requirements within Section 23.

Emergency egress doorsets from underground car parks

38.2 Doorsets providing access to and emergency egress from underground car parking areas must meet the requirements of both Part B and Part Q of the Building Regulations (England). In practice this provides a dilemma as the performance requirements for the two Building Regulations can be diametrically opposed to one another and problematic if not dealt with appropriately at the design stage. As a result of detailed discussions with the fire service we have agreed the following requirements (see paragraphs 38.3 to 38.8) as an alternative design solution for just such a scenario.

38.3 Doorsets allowing emergency egress directly from the car park to the street, or any area that allows for the rapid dispersal of persons from the vicinity of the building, other than into common internal areas, are not required by the Building Regulations (England and Wales) to be secure doorsets. However, SBD requires all such doorsets shall meet the requirements within Section 23.

38.4 Emergency egress from the car park should be facilitated via the use of a 'break glass' unit and all such doors should be equipped with an audible warning which should also form part of a security alarm system.

38.5 Doorsets providing exit from underground car parking facilities (including emergency egress doorsets) into common or shared stairwells which rely on egress via communal areas of a development are required to meet all relevant Building Regulations. Due to the fact that emergency egress doorsets from such facilities must also be provided with 'break glass' to exit hardware, there is potential for such doorsets to be detrimental to the security of the building and at odds with the performance requirements with Part Q of the Building Regulations in England and Wales (Performance requirement 'b'). Therefore such doorsets shall be isolated from common or shared stairwells and preferably provide egress directly from the underground car parking area on to the street, or any area that allows for the rapid dispersal of persons from the vicinity of the building.

38.6 If this is not possible due to the design constraints of the building then emergency egress shall be afforded at the earliest possible opportunity and provision shall be made to restrict access to the common or shared stairwell beyond the ground floor, or first available floor level. Access must also be restricted to any other communal area of the building. All doorsets affording restricted access into the communal areas of the building, and all emergency egress doorsets exiting on to the street, shall meet the requirements within Section 23.

38.7 Where there is an underground car parking facility and emergency egress afforded via a route which utilises a common or shared stairwell or other communal areas it is required that an Access Control Box (ACB) is installed. This is in addition to a Secure Information Box (SIB) in accordance with BS 9991:2015 to provide the fire service the appropriate information about the building.

38.8 Access control systems on all doors allowing access to communal areas of the building shall meet the requirements within Section 29.

Glazing in communal entrance doorsets

38.9 Where a glazed vision panel is installed it must form part of the manufacturers certificated doorset range.

38.10 Specifiers should note that Part Q of the Building Regulations (England and Wales) and Building Standards 4.13 (Scotland) both reference PAS 24:2012. Therefore the minimum specification

for any glazing within shared or communal entrance doorsets is BS EN 356:2000 Class P1A (minimum). It should be noted that PAS 24:2022 and PAS 24:2016* make exactly the same requirement. NB This is a security performance criteria rather than a glazing thickness specification, so glazing thicknesses may vary between manufacturers/suppliers.

* PAS 24:2016 has been withdrawn by the British Standards Institute and replaced by PAS 24:2022, however PAS 24:2016 will continue to be an acceptable route to compliance until 31st December 2024.

39 Mail delivery in buildings containing multiple dwellings or bedrooms

39.1 There are increasing crime problems associated with the delivery of post to buildings containing multiple dwellings or bedrooms. Therefore, mail delivery that compromises the security of residential areas of a multi-occupied building in order to deliver individually to each residence is not permitted. Facilities should be provided that enable mail to be delivered to safe and secure areas such as described below.

Communal mail and parcel delivery

39.2 Communal mail and parcel delivery facilities serving multiple flats or rooms – such as student accommodation – should incorporate the following:

- External delivery facilities should be positioned adjacent to the entrance area
- Internal delivery facilities should be positioned within an entrance area with access control
- Access control to this area should have a data logging facility
- An air-lock entrance arrangement as part of the access control strategy would meet the Secured by Design criteria
- Both internal and external delivery areas should be comprehensively covered by CCTV
- Mail and parcel delivery boxes should be equipped with high security cylinders that are not subject to master key access
- Mail and parcel delivery boxes should be of robust construction, should incorporate an anti-fishing design and be fire resistant
- Individual letter boxes shall have a maximum aperture size of 260mm x 40mm
- All delivery boxes must be installed in accordance with the manufacturer's specification

- A secure system of depositing parcels, such as the smart parcel boxes used by the major internet shopping companies, should be considered where appropriate

39.3 Letter boxes certificated to Door & Hardware Federation Technical Specification 009 (TS 009) offer reassurance that all of the above attributes have been met. In high crime areas TS 009 provides the safest means by which mail can be delivered whilst eliminating the risks associated with letter mail delivery i.e. arson, 'fishing' for personal mail.

40 Loft hatches in communal areas

40.1 Loft hatches located in communal areas, such as over landings in blocks of flats, must be locked to prevent access into a dwelling via the loft space. This may still be required even where the loft space has been compartmented to prevent the spread of fire and smoke (products meeting the requirements of published fire safety standards are available). There are currently no 'hinged' or 'lift out' loft hatches being manufactured to recognised security standards, but where padlocks, hasps and staples are used to secure the hatch the products must be certificated to BS EN 12320:2021, Sold Secure 'Silver' or LPS 1654 Issue 1.1:2014 Security Rating 1 and fitted in accordance with the manufacturer's instructions.

40.2 The responsibility for the specification and location of fire rated security products lies with the developer or the developer's agent (responsible person).

41 Electrical sockets and USB charging points in communal areas

41.1 So as to discourage charging of mobile phones and any accompanying anti-social gatherings in communal areas, all 13-amp outlets or dedicated USB charging points intended for use by cleaners and building maintenance staff should be capable of being key locked in the off position to prevent misuse. The installation and product types should all comply with the appropriate requirements of BS 7671:2018+A2:2012 Requirements for Electrical Installations.

PART 2B Physical security for bespoke homes and existing refurbished homes

42 Introduction

42.1 In order to gain SBD approval, new and refurbished developments with standard doors and windows are expected to achieve the SBD Silver Award, as a minimum. However, bespoke developments which are subject to planning or specification restrictions owing to their listed building status, their locality within a designated conservation area or because they are determined to be of national importance, of special architectural or historical interest may not be able to achieve Silver compliance status; this said every effort should be made to achieve compliance with as many elements of the Silver award as possible.

42.2 Part 2B provides technical guidance for bespoke new homes and the refurbishment of existing homes. In most circumstances Secured by Design certification is only available if the provisions in Part 2A of this document are complied with, however, Approved Document Q (English and Wales Building Regulations) and Scottish Building Regulation 4.13 both allow an alternative route to compliance, which utilises a door or window specification incorporating components that have been tested to published security standards and therefore SBD has responded by providing additional guidance in these areas.

42.3 Approved Document Q, Appendix B, does not provide a definition of what is a 'bespoke' doorset or window. For the purposes of SBD it is considered beneficial for all parties, and in the interests of clarity, to provide a definition. SBD therefore has defined a bespoke doorset or window to be:

A single or small number of doorsets or windows installed within a development (normally no more than 4 homes) of unique design with non-standard features which preclude the use of conventional enhanced security door and window products. Doorsets or windows installed within buildings of specific architectural value, constrained by listed building or other conservation status may also be considered to be bespoke.

42.4 Where there is a client led requirement for Secured by Design accreditation, compliance with this part alone will lead to the issue of a Secured by Design Bronze Award, however when combined with compliance to Part 1, and where applicable the relevant security recommendations in Part 3, a Secured by Design Silver Award may also be achieved.

42.5 Major refurbishment schemes should meet the requirements within Part 2A.

42.6 Part 2B of this guidance document is further separated into two areas:

- Houses, bungalows, flats, apartments or maisonettes accessed via a private dedicated entrance doorset
- Buildings containing multiple dwellings or bedrooms accessed from a semi-private area and served by a shared or communal entrance doorset

43 New bespoke houses, bungalows, flats, apartments or maisonettes accessed via a private dedicated entrance doorset

43.1 The term “doorset” refers to a door, frame, locks, fittings and glazing as one combined unit.

43.2 All new bespoke doorsets allowing direct access into the home e.g. front and rear doors, interconnecting garage doorsets, French doors, bi-fold or sliding patio doorsets, dedicated private flat or apartment entrance doorsets, easily accessible balcony doorsets (*Note 43.2*) etc., are required to be secure doorsets within the UK Building Regulations (see paragraph 1.1).

Note 43.2: Easily accessible is defined within Approved Document Q Appendix A as:

- *A window or doorset, any part of which is within 2 metres vertically of an accessible level surface such as a ground or basement level, or an access balcony, or*
- *A window within 2 metres vertically of a flat roof or sloping roof (with a pitch of less than 30˚) that is within 3.5 metres of ground level*

43.3 Where there is a requirement for a doorset to be fire, smoke and security rated, e.g. flat or apartment entrance doorsets, interconnecting garage doorsets and some doorsets aiding security compartmentation, it is the responsibility of the developer or the developer’s agent to ensure compliance with all applicable Building Regulations.

Door and window materials

43.4 All bespoke window and doorsets constructed from materials commonly utilised for such purposes such as timber, PVCu, aluminium, steel and composite shall meet the minimum material specific requirements as detailed in 43.5 – 43.17.

Timber products

43.5 Approved Document Q of the Building Regulations sets out specific requirements for the material (Appendix B, clause B.2) and dimensions (Appendix B, clause B.3, B.4 & B.5) for bespoke timber doorsets. Secured by Design supports these requirements for both doors and windows, for clarity these are:

- Materials – doorsets and windows should be manufactured from solid or laminated timber with a minimum density of 600kg/m³

- Dimensions (doorsets):
  - Door rails, stiles and muntins should be at least 44mm thick. After rebating, frame components should retain at least 32mm of timber
  - Any panel within the doorset should be at least 15mm thick. The panel should be securely held in place. Beading should be mechanically fixed and glued in position
  - The smaller dimension of each panel, which can be either the width or height of the panel, should be 230mm or less
- Dimensions (windows):
  - Casement window frame components (head, sill, jamb, transom & mullion) should be a minimum of 67mm deep and 56 mm wide, rebated and moulded to retain a minimum section of 25mm
  - Casement and sash components (stiles and rails) should be a minimum of 56mm deep, ebated and moulded to retain a minimum section of 25mm
- Maximum length and height dimensions by window type:
  - Casement Windows – maximum mullion length 1350mm, maximum transom length 1200mm
  - Side hung casement (hinged and fully reversible) open out – 700mm wide by 1350mm high
  - Top hung casement (hinged and fully reversible) – 1200mm wide by 1200mm high
  - Tilt and turn casement, open in – 900mm wide by 1350mm high
  - Vertical sliding sash – maximum mullion length 1500mm, maximum transom length 900mm, maximum sash size 750mm high by 900mm wide

43.6 Further guidance for the construction of good quality timber windows and doorsets can be sought from BS 644:2012 ‘Timber windows and doorsets. Fully finished factory-assembled windows and doorsets of various types. Specification.’

PVCu products

43.7 All windows and doorsets should be constructed from profile meeting the requirements of BS EN 12608-1:2016+A2:2020 Unplasticized polyvinylchloride (PVCu) profiles for the fabrication of windows and doors. Classification, requirements and test methods.

43.8 Bespoke PVCu products e.g. those falling outside the scope of PAS 24:2022 or PAS 24:2016*, would benefit from being constructed from a profile that has already been proven by test to meet the security requirements of PAS 24:2022 or PAS 24:2016* in other window styles within the profile manufacturers or fabricators range.

43.9 All window and door profiles should incorporate reinforcement to cater for the secure fixing of hardware and to provide additional strength to the profile.

43.10 Further guidance for the construction of good quality bespoke PVCu windows and doorsets can be sought from BS 7412:2007 'Specification for windows and doorsets made from unplasticized polyvinyl chloride (PVCu) extruded hollow profiles.'

Aluminium products

43.11 All windows and doorsets should be constructed from aluminium profile fabricated from designated alloys 6060 or 6063 in tempers T5 or T6 conforming to BS EN 12020-2:2016 or equivalent standard.

43.12 Aluminium profiles used in the construction of the frames excluding glazing beads, nibs, interlocks and similar features shall be not less than 1.2 mm thick.

43.13 Bespoke aluminium products e.g. those falling outside the scope of PAS 24:2022 or PAS 24:2016*, would benefit from being constructed from a profile that has already been proven by test to meet the security requirements of PAS 24:2022 or PAS 24:2016* in other window styles within the profile manufacturers or fabricators range.

43.14 Further guidance for the construction of good quality bespoke aluminium windows and doorsets can be sought from BS 4873:2016 'Aluminium alloy windows and doorsets. Specification.'

Composite products

43.15 The Association of Composite Door Manufacturers has advised SBD that it is unwise to produce a specification for a 'bespoke' application. This is because of the myriad of differing materials used and indeed the numerous combinations of composite products found in doorset products in more recent times. Therefore it is not possible to create a bespoke composite doorset that complies with Part 2B of this guide.

43.16 Although the material standard, BS 8529:2017 'Composite doorsets. Domestic external doorsets. Specification' was developed for composite doorset products, it may be used to provide further guidance for the construction of good quality bespoke composite window that could therefore be acceptable within Part 2B of this guide.

Steel products

43.17 Guidance for the construction of good quality bespoke steel windows and doorsets can be sought from BS 6510:2010 'Steel-framed windows and glazed doors. Specification.'

Doorset hardware and locking systems

43.18 The primary entrance doorset should be fitted with a multipoint locking system that meets the requirements of:

- PAS 3621:2011 (key locking both sides), or
- PAS 8621:2011 (non-key locking on the internal face), or
- PAS 10621:2011 (non-key locking on the internal face – with an external locking override facility)

43.19 Alternative lock configuration for a primary dwelling doorsets (usually the front doorset) can be achieved by the installation of a mortice or surface mounted lock conforming to the below standards and fitted one third of the way up the lock stile:

- BS 3621:2017 (key locking both sides), or
- BS 8621:2017 (non-key locking on the internal face), or
- BS 10621:2017 (non-key locking on the internal door face, but with an external locking override facility)

43.20 The above mortice locks should be supplemented with a surface mounted rim lock conforming to the same standard, fitted one third of the way down the lock stile.

43.21 Non-primary doorsets (back or garage interconnecting doorsets) may be fitted with a multi-point locking system conforming to the standards in paragraph 43.18. Alternatively, single point locks conforming to the standards in paragraph 43.19 are acceptable when supplemented with two mortised bolts with a minimum projection of 20mm (located a minimum of 100mm from the top and bottom corners of the door, avoiding any door construction joints).

43.22 BS 8607:2014+A1:2016 provides the British Standard classification for mechanically operated push-button locksets. These products are generally used as a means of convenience but, they are now also being used on fire and perimeter doors and the standard is available to give specifiers guidance for their performance.*

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43.23 Under the standard, Grades 1, 2 and 3 are not subject to high security testing. Grades 4 and 5 are SBD compliant:

- BS 8607:2014+A1:2016 Grade 4 – where a mechanically operated push button lock with a non-integrated BS 3621 compliant locking mechanism is appropriate, or
- BS 8607:2014+A1:2016 Grade 5 – where a mechanically operated push button lockset with an integrated BS 3621 compliant locking mechanism is required

43.24 All bespoke doorsets shall be installed with hinge bolts or specialist interlocking hinges. Hinges accessible from outside the building should not have removable pins.

43.25 To ensure that the end user of the door understands how to operate the locking system, clear operating instructions must be attached to the inner face of the door (*Note 43.25*). The instructions should be easily removable by the end user.

Note 43.25: The purpose of providing the end user with operating instructions is to reduce the number of burglaries through otherwise secure doorsets, because the full locking system has not been engaged. This is particularly problematic with split spindle multi-point locking systems, where, for example, the occupier goes to bed at night without engaging the locks in the mistaken belief that leaving the door closed only on the latch (live bolt) is sufficient. The instructions should point out that the doorset is not totally secure unless the locking system is fully engaged. The method of attachment of these operating instructions and the medium used to carry them is for the door manufacturer to decide but are not intended to be permanent.

Glazing in and adjacent to doorsets

43.26 Any glazing within bespoke doorsets, including glazed panels/side lights adjacent to doors installed within an integral door frame and windows adjacent to doorsets (within 400mm), must incorporate one pane of laminated glass meeting, or exceeding, the requirements of BS EN 356:2000 class P1A (*Note 43.26*). Specifiers are reminded that this is also a requirement within ADQ, Annex B, paragraph B.11.

Note 43.26: There is no specific requirement to install laminated glazing on the inner or outer face of a double glazed unit. However, specifiers may wish to take into consideration the fact that toughened glass is usually more resistant to accidental damage by blunt objects such as a football and therefore may be best placed on the external face of the double glazed unit. It is recognised however that there are many other factors that may also need to be considered such as thermal efficiency, aesthetics and the requirement for privacy or obscured glazing, which will influence the specifier's decision.

Door limitation and caller identification

43.27 A door chain or opening limiter meeting the requirements of the Door and Hardware Federation Technical Specification 003 (DHF TS 003) must be installed on the doorset to which a caller can be expected, normally the front door (see Approved Document Q, Section 1: Doors, paragraph 1.4). All such devices should be suitable for the door material to which they are fitted and be installed in accordance with the manufacturer's recommendations.

43.28 A door viewer meeting the requirements with the Door & Hardware Federation Technical Specification 002 (DHF TS 002) standard must be fitted between 1200mm and 1500mm from the bottom of the door, this is not required if the doorset is installed with clear glazing or if there is a side panel with clear glazing (see Approved Document Q, Section 1: Doors, paragraph 1.4).

Doorset installation

43.29 Door frames must be securely fixed to the building fabric in accordance with the manufacturer's specifications.

43.30 Due to the dynamic forces experienced when doorsets are opened and closed, frame installation packers should be used. This will limit outer frame distortion during installation and use, ensuring that the frame remains centralised, level and square and allows for thermal movement of the frame.

43.31 Doorsets that are hidden from public view, typically side or back doors, should not be recessed more than 600mm. This requirement is not applicable to doorsets that are located within public view (*Note 43.31*). However, no doorset should be recessed by more than 1000mm.

Note 43.31: For the purposes of this guidance document a doorset is considered to be within 'public view' when it can be seen from the street.

* PAS 24:2016 has been withdrawn by the British Standards Institute and replaced by PAS 24:2022, however PAS 24:2016 will continue to be an acceptable route to compliance until 31st December 2024.

44 Security of existing refurbished doorsets

44.1 The term "doorset" refers to a door, frame, locks, fittings and glazing as one combined unit.

44.2 It is difficult to provide a definitive requirement for each doorset type and material, therefore if the existing doorsets are to be retained during a refurbishment scheme the DOCO should be consulted before embarking on any improvements. However, some areas for improvement may include:

- The existing doorset should be thoroughly inspected to ensure that it is in a good state of repair, free from rot and damage. The material and dimensional requirements within Section 43 should be observed as a guide to the suitability of the existing doorset.
- Locking systems can be replaced with those referenced within Section 43
- Europrofile cylinders should be replaced with products certificated to the Door & Hardware Federation Technical Standard 007 (DHF TS 007) 3-Star rating, or a DHF TS 007 1-star cylinder may be utilised if accompanied by DHF TS 007 2-star external hardware (handle set or secure escutcheon) or cylinder protection, or Sold Secure SS312 (Diamond) standard cylinders. The Europrofile cylinder should be fitted flush with the exterior plate of the lock/handle plate or at most within a tolerance of 2mm of this plate
- Sliding patio doorsets should have a minimum of three locking points, which can be achieved by fitting additional surface mounted patio locks. Anti-lift hardware should also be used to prevent the doorset being lifted off its track
- The 'slave' door leaf of French or double doorsets should be securely fixed during the normal operation of the primary opening leaf, this can be achieved through the use of surface mounted or mortised bolts with a minimum engagement of 20mm into the head and sill of the door frame
- Timber doorsets can be enhanced if necessary by the installation of a deadlock guard, or an anti-thrust plate, and the installation of a London and/or Birmingham bar to provide additional strength to the frame
- Doorsets should be installed with hinge bolts or specialist interlocking hinges. Hinges accessible from outside the building should not have removable pins
- Doorsets incorporating 'panels' typically timber or PVCu should be reinforced. Any panel installed within a timber doorset should be at least 15mm thick, securely held in place with beading that is mechanically fixed and glued into position. PVCu panels can be replaced with new panels that have been shown by test to meet the security requirements of PAS 24:2022 or PAS 24:2016* (as a component part of a full test)
- Glazing in existing doorsets should be upgraded to meet the requirements in Section 23

44.3 Glazing in aluminium and PVCu doorsets can be secured through the use of glazing security clips or glazing security tape to reduce the likelihood of glazing beads being removed to gain entry.

* PAS 24:2016 has been withdrawn by the British Standards Institute and replaced by PAS 24:2022, however PAS 24:2016 will continue to be an acceptable route to compliance until 31st December 2024.

45 Secure mail delivery to bespoke houses, bungalows, flats, apartments or maisonettes accessed via a private dedicated entrance doorset

45.1 A letterplate tested to the requirements of the Door and Hardware Federation's Technical Standard 008 (DHF TS 008) will provide reassurance that the likelihood of the letter plate aperture being used to gain access to the home will be substantially reduced. Specifier's attention is drawn to the fact that DHF TS 008 is referenced within Approved Document Q as a proven method of protecting the dwelling from attacks known to be committed via the letter plate. Additionally, BS EN 13724 which is referenced within TS 008 provides details regarding the test methods and requirements for private letter boxes and letter plates. One of its stipulated criteria is that the lowest mailbox aperture should be no lower 700mm from delivery floor level and the height of the highest mailbox aperture should be no higher than 1700mm from delivery floor level.

45.2 Alternative compliance can be demonstrated by utilising letter plates meeting the following requirements (*Note 45.2a*):

- Maximum aperture size of 260mm x 40mm

- The fixing shall not be removable from the exterior side of the doorset
- Letter plates must achieve the requirements of the removal test from BS EN 13724:2002 (conducted during the PAS 24 or STS 201 test)
- Doorsets installed with non-key lockable internal hardware (*Note 45.2b*) shall either be installed with a suitable internal security deflector plate to restrict access to the hardware or the letter plate must be installed no less than 400mm from the internal locking point (measured in plane from the centre point of thumbturn to the nearest edge or corner of the letter plate aperture)

Note 45.2a: This specification is the minimum requirement within PAS 24:2022, PAS 24:2016 and STS 201.*

Note 45.2b: Specifiers should be aware that the National House-Building Council (NHBC) currently requires a release mechanism to be installed on the doorset designated as the primary fire exit route.

* PAS 24:2016 has been withdrawn by the British Standards Institute and replaced by PAS 24:2022, however PAS 24:2016 will continue to be an acceptable route to compliance until 31st December 2024.

External surface mounted letter boxes

45.3 There are increasing crime problems associated with letter plate apertures, such as identity theft, arson, hate crime, lock manipulation and 'fishing' for personal items (which may include post, vehicle and house keys, credit cards, etc.). In order to address such problems SBD strongly recommends, where possible, mail delivery via a secure external letter box meeting the requirements of the Door and Hardware Federation's Technical Standard 009 (DHF TS 009) or delivery 'through the wall' into a secure area of the dwelling. DHF TS 009 letter boxes offer reassurance that all of the above attributes have been met. In high crime areas DHF TS 009 provides the safest means by which mail can be delivered whilst eliminating the risks associated with letter plate apertures. The letter box must be securely fixed to the face of the building in accordance with the manufacturers specifications and be located in a position that benefits from natural surveillance.

Through-the-wall delivery

45.4 Where there are design constraints that prevent a letter plate with a security cowl being installed within a door e.g. narrow hallway, or where it is undesirable to install a surface mounted secure mail box e.g. in a corridor, it may be preferable to provide 'through-the-wall' mail delivery into a secure internal letter box. Such a box must incorporate the same design features as described above for a surface mounted box. Anti-arson design features may also be advised if such crime risks are present.

45.5 Products meeting the requirements of the Door and Hardware Federation's Technical Specification 008 (DHF TS 008) provide reassurance that 'through the wall' letter boxes offer similar security attributes as secure letter plates and many of the attributes that an external letter box conforming with DHF TS 009 would provide.

46 New bespoke windows, roof windows and roof lights

46.1 All new bespoke windows should comply with the applicable material and dimensions requirements within Section 43.

Window hardware

46.2 Windows should be installed with multipoint espagnolette locking systems that have been shown by test to meet the security requirements of PAS 24:2022 or PAS 24:2016* as a component part of a window of the same material. There should be locking points within 100mm from the corner of the casement.

46.3 Where a multipoint espagnolette locking system is not compatible or desirable e.g. listed building application, then there should be a minimum of two locking points per opening light.

46.4 All hinges and pivots installed within bespoke windows should incorporate an interlocking detail and be shown by test to meet the security requirements of PAS 24:2022 or PAS 24:2016* as a component part of a window of the same material.

46.5 Heritage hinges (untested as a component part of PAS 24) should be supplemented with hinge bolts.

46.6 Tilting window pivots and top retaining bolts should be enhanced to resist increased loads.

46.7 Sash fasteners (fitch catches) should also be enhanced to resist increased loads.

Glazing in windows

46.8 All glazing in bespoke windows installed within 400mm of an adjacent doorset shall incorporate one pane of laminated glass meeting, or exceeding, the requirements of BS EN 356:2000 class P1A (*Note 46.8*). NB This is a specific requirement within PAS 24:2022 and PAS 24:2016*, which is referenced within the Building Regulations (England and Wales) and the Scottish Building Standards.

Note 46.8: There is no specific requirement to install laminated glazing on the inner or outer face of a double glazed unit. However, specifiers may wish to take into consideration the fact that toughened glass is usually more resistant to accidental damage by blunt objects such as a football and therefore may be best placed on the external face of the double glazed unit. It is recognised however that there are many other factors that may also need to be considered such as thermal efficiency, aesthetics and the requirement for privacy or obscured glazing, which will influence the specifier's decision.

46.9 SBD requires all easily accessible emergency egress windows without locking hardware to incorporate at least one pane of laminated glass meeting the requirements of BS EN 356:2000 class P1A.

Window installation

46.10 Windows must be securely fixed to the building fabric in accordance with the manufacturer's specifications.

46.11 Due to the dynamic forces experienced when windows are opened and closed, frame installation packers should be used. This will limit outer frame distortion during installation and use, ensure that the frame remains centralised, level and square and allow for thermal movement of the frame.

46.12 Vertical Sliding sash windows should be securely retained in the frame by the face lining, parting bead and staff bead.

* PAS 24:2016 has been withdrawn by the British Standards Institute and replaced by PAS 24:2022, however PAS 24:2016 will continue to be an acceptable route to compliance until 31st December 2024.

47 Security of existing refurbished windows

47.1 It is difficult to provide a definitive requirement for each window type and material, therefore if the existing windows are to be retained during a refurbishment scheme the DOCO should be consulted before embarking on any improvements. However, some areas for improvement may include:

- Unless the window is a designated emergency egress route, it should have three points of locking consisting of a key operated locking handle and two surface mounted locks, one fitted to the end of each opener to prevent leverage

- The security of existing PVCu and aluminium windows can be improved through the use of hardware that has been shown by test to meet the security requirements of PAS 24:2022 or PAS 24:2016* as a component part of a window of the same material
- Glazing in existing windows should be upgraded to meet the requirements in Section 24. Glazing in aluminium windows can be secured through the use of glazing security clips or glazing security tape

* PAS 24:2016 has been withdrawn by the British Standards Institute and replaced by PAS 24:2022, however PAS 24:2016 will continue to be an acceptable route to compliance until 31st December 2024..

48 Conservatories and sunrooms

48.1 Where a conservatory or sunroom is installed in a bespoke home and it is not possible to utilise PAS 24:2022 or PAS 24:2016* doorsets and windows for the reasons previously mentioned, then the doors and windows must meet the same material, dimensional (where applicable), and physical security standards within Part 2B.

48.2 If a conservatory is installed with an untested roofing system e.g. polycarbonate glazing system, then where possible a doorset shall be installed separating the conservatory from the rest of the home. The doorset should either meet the requirements of Part 2A or comply with the relevant material, dimensional and physical requirements within Part 2B.

* PAS 24:2016 has been withdrawn by the British Standards Institute and replaced by PAS 24:2022, however PAS 24:2016 will continue to be an acceptable route to compliance until 31st December 2024.

49 Private external lighting

49.1 Where possible the lighting requirements within BS 5489-1:2020 should be applied (see Section 19) (*Note 49.1*).

Note 49.1: Developers are advised that there is further guidance available from the Chartered Institute of Building Services Engineers (CIBSE) and the Society of Light and Lighting (SLL).

49.2 Lighting is required to illuminate all elevations containing a doorset, car parking and garage areas and footpaths leading to dwellings and blocks of flats. Bollard lighting is not appropriate as it does not project sufficient light at the right height making it difficult to recognise facial features and as a result causes an increase in the fear of crime.

49.3 SBD requires that only luminaires with suitable photometry serving to reduce light spill and light pollution may be used. Reducing light spill from inefficient luminaires into areas where lighting is not required is extremely important (*Note 49.3*).

Note 49.3: Developers are reminded that intrusive lighting from the private lighting schemes into public areas may constitute a statutory nuisance and is wasteful and costly.

49.4 Using lamps with high colour rendering qualities (60 or above on the Colour Rendering Index for instance) often improves visual performance and people's personal experience of an area. Colour rendering qualities of lamps refers to their ability to represent the colour of objects under illumination. To help with lamp selection, a measure is given from 100 - the colour rendering qualities of daylight – all the way down to 0 – where no colour rendering quality is available. It is argued that if we can see the true colours of objects under night time lighting conditions, our surroundings will appear to us as more familiar and comfortable with the attendant benefits of higher levels of public reassurance and satisfaction.

49.5 Overall Lighting uniformity (Uo) – levels of 0.4 or 40% – are recommended where possible to ensure that lighting installations do not create dark patches next to lighter patches where the human eye has difficulty in adjusting quickly enough to see that it is safe to proceed along any route. If high levels of uniformity are neither achievable nor appropriate for technical or locally applying environmental reasons, the highest levels of uniformity possible should be achieved.

49.5 External public lighting must be switched using a photo electric cell (dusk to dawn) with a manual override or via a Central Management System (CMS) for large scale developments. If LED light sources are used, then shorter burning hours can be programmed as no warm up time is required for the lamp.

49.6 Secured by Design encourages, wherever possible, the use of the most environmentally friendly light sources. Moreover the Institute of Lighting Professionals (ILP) currently favours the use of good quality LED lighting and other energy effective light sources and advises against the use of fluorescent lighting which is environmentally unsustainable for a variety of reasons (*Note 49.6*). Further information is available at: www.securedbydesign.com

Note 49.6: Secured by Design has not specified PIR activated security lighting for a number of years following advice from the ILP and police concern regarding the increase in the fear of crime (particularly amongst the elderly) due to repeated PIR lamp activations. Research has proven that a constant level of illumination is more effective at controlling the night environment.

49.7 The use of light-emitting diode (LED) light sources is recommended with a colour temperature of no more than 4000 Kelvin and ideally below. This reduces blue light content and therefore the effects on human and ecology receptors.

Lighting in communal areas within flats/apartments

49.8 24-hour lighting (switched using a daylight sensor formally called photoelectric cells) to communal parts of blocks of flats will be required. It is acceptable if this is dimmed during hours of low occupation to save energy. This will normally include the communal entrance hall, lobbies, landings, corridors and stairwells and underground garaging facilities and all entrance/exit points. Technology exists in respect of energy efficient light dimming systems and other means of ensuring that security lighting is intelligently provided in the right quantities and only at the right time.

49.9 Secured by Design encourages, wherever possible, the use of the most environmentally friendly light sources. Moreover, the ILP currently favours the use of good quality LED lighting and other energy effective light sources and advises against the use of fluorescent lighting which is environmentally unsustainable for a variety of reasons. Further information is available at: https://www.securedbydesign.com/internet-of-things

50 Utility meters

50.1 There is no requirement for the location of the utility meters if 'smart meters' are utilised (remote signalling). Otherwise utility meters should, wherever possible noting the possible planning

constraints on listed buildings and dwellings in conservation areas, be located outside the dwelling at the front or as close to the front of the building line as possible (to ensure they are visible). If located to the side of the dwelling they must be as near to the front of the building line as possible and to the front on any fencing or gates (care should be taken not to provide a climbing aid). When installed in a building containing a number of residencies such as flats, apartments or maisonettes, the metres should be installed in a location that access does not introduce security risks to residential areas.

51 Additional or alternative requirements for new bespoke buildings containing multiple dwellings or bedrooms

51.1 A building containing multiple dwellings for the purposes of this document may include flats, bedsits or individual bedrooms accessed from a semi-private area and served by a shared or communal entrance doorset (including HMO's and student accommodation).

51.2 In these circumstances there may be a requirement for a doorset to be fire, smoke and security rated. It is the responsibility of the developer or the developer's agent to ensure compliance with all applicable Building Regulations.

Communal and shared doorset standards

51.3 Please refer to Section 29 for the SBD definition of a communal and shared doorset.

51.4 Specifiers should, where possible, specify a shared or communal doorset that has been tested and certificated to a recognised security standard (see Section 23) and has also been tested and certificated to BS 6375 to ensure that it is fit for purpose (see Section 22).

51.5 New bespoke shared or communal entrance doorsets that are constructed for a development of specific architectural value, constrained by listed building or other conservation status should be designed to be a secure. In such cases the DOCO should be contacted at the earliest possible opportunity to discuss the technical specification of the doorset, however general security features may include:

- Glazing within bespoke shared or communal doorsets, including glazed panels/side lights adjacent to doors installed within an integral door frame and windows adjacent to doorsets (within 400mm), must incorporate one pane of laminated glass meeting, or exceeding, the requirements of BS EN 356:2000 class P1A (*Note 51.5*). Specifiers are reminded that this is also a requirement within ADQ, Annex B, paragraph B.11

  Note 51.5: There is no specific requirement to install laminated glazing on the inner or outer face of a double glazed unit. However, specifiers may wish to take into consideration the fact that toughened glass is usually more resistant to accidental damage by blunt objects such as a football and therefore may be best placed on the external face of the double glazed unit. It is recognised however that there are many other factors that may also need to be considered such as thermal efficiency, aesthetics and the requirement for privacy or obscured glazing, which will influence the specifier's decision

- Mechanical locking systems used should meet the physical security requirements within Section 43. Magnetic doorset locking systems should be shown by test to meet the security requirements of PAS 24:2022, PAS 24:2016* or equivalent standard, as a component part of a doorset of the same material

- All bespoke doorsets shall be installed with hinge bolts or specialist interlocking hinges. Hinges accessible from outside the building should not have removable pins. Specifiers are reminded that hinges should also be correctly rated to support the weight of the doorset

- Timber doorsets can be enhanced if necessary by the installation of a deadlock guard or an anti-thrust plate, and the installation of a London and/or Birmingham bar to provide additional strength to the frame

- Door entry and access control systems should comply with the same standards within Section 23

* PAS 24:2016 has been withdrawn by the British Standards Institute and replaced by PAS 24:2022, however PAS 24:2016 will continue to be an acceptable route to compliance until 31st December 2024.

52 Mail delivery in bespoke buildings containing multiple dwellings or bedrooms

52.1 There are increasing crime problems associated with the delivery of post to buildings containing multiple dwellings or bedrooms. Communal mail delivery should therefore adhere to the requirements within Section 23.

53 Bespoke doorsets providing alternative access to communal areas (other than the primary shared or communal access doorset) including emergency egress doorsets

53.1 Alternative access doorsets, emergency egress and fire doorsets that may be used by residents to access communal parts of the building are also required to be 'secure doorsets', see Building Regulations (England and Wales) Section 1, paragraph 1.1. Bespoke doorsets shall meet the requirements within Section 43.

53.2 In these circumstances where there is a requirement for a doorset to be fire, smoke and security rated, it is the responsibility of the developer or the developer's agent to ensure compliance with all applicable UK Building Regulations.

54 New windows, roof windows and roof lights in bespoke buildings containing multiple dwellings or bedrooms

54.1 All easily accessible bespoke windows, roof windows and roof lights in buildings containing multiple dwellings or bedrooms shall, where possible, meet the material and dimensional requirements within Section 46.

55 Lightweight framed walls in bespoke dwellings

55.1 The security of a development can be severely compromised if lightweight framed walls do not offer sufficient resilience to withstand a criminal attack; this is recognised within Approved Document Q (*Note 55.1*). The SBD requirements are primarily based upon products that have been tested and proven to provide additional security and are outlined in Section 26 of this document.

Note 55.1: See – The Building Regulations 2010, Security-Dwellings, Q1: Unauthorised access, Section 1: Doors, paragraph 1.6 (England) and paragraph 1.5 (Wales).

56 Loft hatches in communal areas

56.1 Loft hatches located in communal areas, such as over landings in blocks of flats, must be locked to prevent access into a dwelling via the loft space. This may still be required even where the loft space has been compartmented to prevent the spread of fire and smoke. There are currently no 'hinged' or 'lift out' loft hatches being manufactured to recognised security standards, but where padlocks, hasps and staples are used to secure the hatch the products must be certificated to BS EN 12320:2012, Sold Secure 'Silver' or LPS 1654 Issue 1.1:2014 Security Rating 1 and fitted in accordance with the manufacturer's instructions.

57 Secure bicycle parking

Internal bicycle parking for residents

57.1 Internal bicycle parking facilities will be accessed via a fire, smoke and security rated doorset compliant with Section 23; (specifically addressing concerns over storage of e-bikes).

57.2 The bicycle parking facility should be constructed of dividing walls that extend from floor to ceiling with no windows set in them.

57.3 Bicycle parking access doors should be fitted with thumbturns, or other emergency furniture, on the inside face to facilitate emergency egress and so as to avoid locking people inside the store.

57.4 In England and Wales, doorsets providing access from the bicycle parking facility into communal parts of the building (including emergency egress doorsets) are required to meet Part B, Part M and Part Q of Building Regulations.

57.5 Bicycle parking facilities should be incorporated into any existing access control and monitoring systems.

57.6 Bicycle parking will comprise bicycle stands, anchor points, single and two-tier rack systems and dedicated lockers etc. The bicycle stands and rack systems, single or two tier, should be certified to one of the following standards:

- SS104 Security Rating Bronze, or
- STS 501 Security Rating TR1, or
- STS 503 Security Rating TR1, or
- STS 205 Issue 6:2021 Security Rating BR1, or
- STS 225 Issue 1:2021 Security Rating BR1 (S), or
- LPS 1175 Issue 8:2018 Security Rating A (A1), or
- LPS 2081 Issue 1.1:2016 Security Rating A

NB. Careful consideration must be given to cater for sections of the community who may find vertical bicycle racks difficult to use.

57.7 Bicycle parking facilities should be limited to the storing of no more than seventy bikes; if larger numbers need to be stored at the same location, the facilities should be separated into discreet units and be subject to extra mitigating security measures as agreed with the DOCO *(Note 57.7)*.

Note 57.7: When recommending appropriate security measures in this regard, DOCOs will make us of the information contained within the Standards for Public Cycle Parking, which is available at: www.securedbydesign.com/images/05132-Cycle-Parking-and-Security-Standards-June-2021-REV-6.pdf

57.8 DOCOs may require extra security measures to be put in place at bicycle parking facilities should an analysis of local crime rates indicate that they are necessary to ensure that security remains commensurate to the risk.

58 Internal communal drying rooms

58.1 Where dedicated communal internal drying rooms are located in blocks of flats, they must be fitted with doorsets that meet the same physical specification as a front door in Section 23. This is to ensure that they are only accessible to the residents. The locking system must be operable from the inner face by use of a thumbturn to ensure that residents are not accidentally locked in by another person.

PART 3

Additional features for an SBD Gold Award or a Silver Award for a bespoke development

59 Introduction

59.1 This part of Secured by Design is intended to be used by those seeking to achieve the full SBD Gold Award or a SBD Silver Award for a bespoke development. The SBD Gold Award is awarded to new developments or refurbishment schemes that have achieved compliance with the external security features within Part 1 of this document, together with the physical security requirements in Part 2A (applicable to the majority of developments), supplemented by any discretionary or ancillary requirements within Part 3 where applicable. Ancillary requirements are not compulsory features e.g. underground car parking, etc., but where installed they should meet the requirements within this section to ensure that the full award is achieved. Bespoke developments cannot achieve a full SBD Gold Award due to the fact that either/or both doors and windows have not been proven to resist an attack, however this section of SBD Homes may be used to ensure that the security of the supplementary or ancillary requirements are also catered for.

59.2 This part also addresses an additional glazing requirement that the DOCO may invoke for SBD Gold applications if the area crime profile indicates an increased level of risk.

59.3 This part may also be utilised when seeking to increase security in an existing development.

59.4 Developers wishing to apply for the SBD Gold Award shall adhere to Parts 1 and 2 in full together with the relevant features contained within this.

60 Doorsets providing access/egress from communal areas, houses and buildings containing multiple dwellings or bedrooms

60.1 All doorsets providing access to communal areas of a building containing multiple dwellings (e.g. flats) or bedrooms (e.g. student accommodation), together with communal facility areas such as bicycle stores, bin stores (with external access), underground car parks (including fire egress doorsets) shall meet the security requirements of Section 23.

61 Additional window requirements for an SBD Gold Award

61.1 In certain high crime locations only, to ensure that security is commensurate with the risk, the DOCO may require laminated glass meeting the requirements of BS EN 356:2000 class P1A (*Note 61.1a*) to be installed on all ground floor and basement windows and those easily accessible above ground floor (*Note 61.1b*). Such a requirement will be justified and evidenced by the DOCO and will be communicated to the developer, or the developer's agent, in writing prior to commencement of building construction. Developers are advised that a late SBD Gold application for a development in a high crime area may require glazing to be replaced if it does not meet the standard required.

Note 61.1a: There is no specific requirement to install laminated glazing on the inner or outer face of a double glazed unit. However, specifiers may wish to take into consideration the fact that toughened glass is usually more resistant to accidental damage by blunt objects such as a football and therefore may be best placed on the external face of the double glazed unit. It is recognised however that there are many other factors that may also need to be considered such as thermal efficiency, aesthetics and the requirement for privacy or obscured glazing, which will influence the specifier's decision.

Note 61.1b: Easily accessible is defined within Approved Document Q Appendix A as:

- *A window or doorset, any part of which is within 2 metres vertically of an accessible level surface such as a ground or basement level, or an access balcony, or*
- *A window within 2 metres vertically of a flat roof or sloping roof (with a pitch of less than 30˚) that is within 3.5 metres of ground level*

62 External garage doorsets

62.1 If a development incorporates garages and the developer wishes to gain the full SBD Gold Award then the security of both the dwelling and the garage must be considered. If a garage is not secured as part of the security of the dwelling, or it is detached from the dwelling, then external pedestrian access doors must meet the same physical, locking and fixing specification, as 'Dwelling entrance doorsets' (Section 23).

62.2 Vehicle access doorsets shall be certificated to one of the following standards (*Note 62.2*):

- LPS 1175 Issue 7.2:2014 Security Rating 1+ (or above), or
- LPS 1175 Issue 8:2018 Security Rating 1+/A1+ (or above), or
- STS 202 Burglary Rating 1+ (or above), or
- LPS 2081 Issue 1:2015 Security Rating A, or
- STS 222 Issue 1:2021

Note 62.2: Where a manufacturer has demonstrated, to the satisfaction of SBD, that compliance with a similar alternative standard from another supplier or country has been achieved this may be accepted as an alternative to the above standards.

62.3 The DOCO must be supplied with proof of certification including the technical schedule (sometimes referred to as 'Scope of Certification') prior to the SBD certificate being awarded, unless the supplier is a member of the Secured by Design Licensing Scheme and the doorset can be identified on the SBD website.

62.4 Alternatively a vehicle access door that is not certificated to one of the above standards, and not subject to the requirements within the English and Welsh Building Regulations (Approved Document Q), may be deemed satisfactory if an external 'garage door defender' type security product is also fitted. Such products must be certificated to Sold Secure Bronze level or above.

63 Car parking

Communal car parking areas

63.1 Where communal car parking areas are necessary they should be in small groups, close and adjacent to homes and must be within view of the active rooms within these homes (*Note 63.1*). It may be necessary to provide additional windows to facilitate overlooking of the parking facility.

Note 63.1: The word 'active' in this sense means rooms in building elevations from which there is direct and regular visual connection between the room and the street or parking court. Such visual connection can be expected from rooms such as kitchens and living rooms, but not from more private rooms, such as bedrooms and bathrooms.

63.2 Lighting must be at the levels recommended by BS 5489-1:2020. The DOCO shall be provided with a declaration of conformity to BS 5489-1:2020 by a 'competent' designer. Competency shall be demonstrated by achievement to at least ILP competency level 3 or 4, i.e. the designer will be a member of the ILP (MILP) and either IEng or CEng qualified to be deemed competent to be able to design under Construction Design and Maintenance (CDM) Regulations. Further information is available at: www.securedbydesign.com

Underground car parking

63.3 Where a development incorporates an underground car parking facility the following security enhancement is required (please also note the requirements for emergency egress within Section 38):

- An access control system must be applied to all vehicular and pedestrian entrances to prevent unauthorised access into the car park.

- Inward opening automatic gates or roller grilles must be located at the building line or at the top of ramps to avoid the creation of a recess. They must be capable of being operated remotely by the driver whilst sitting in the vehicle, the operation speed of the gates or shutters shall be as quick as possible to avoid tailgating by other vehicles or pedestrians. This will allow easy access by a disabled driver, and should satisfy the requirements of the Highways Department who under normal circumstances do not permit vehicles to obstruct the pedestrian footway whilst the driver is unlocking a gate. Automatic roller shutters must be certificated to one of the following minimum security standards:
  - LPS 1175 Issue 7.2:2014 Security Rating 1, or
  - LPS 1175 Issue 8:2018 Security Rating 1 (A1), or
  - STS 202 Issue 7:2016 Burglary Rating 1, or
  - LPS 2081 Issue 1.1:2016 Security Rating A, or
  - STS 222

63.4 Additional security measures may be required if a crime risk analysis identifies that such measures are necessary and commensurate with the risk.

- Automated gates supplied and installed must meet the relevant statutory safety standards and be CE marked accordingly. Specifiers may wish to satisfy themselves that installers of powered gates are appropriately qualified, trained and follow recognised industry guidance. The following organisations provide guidance and training for installers:
  - Door Hardware Federation – the DHF has a revised Code of Practice (DHF TS 011) designed to raise standards of powered gate safety. Gates installed to the new Code of Practice will be inspected by the NSI
  - Gate Safe – The Gate Safe organisation produces operational good practice guidance designed to raise standards in this industry sector
- Lighting must be at the levels recommended by BS 5489-1:2020. The DOCO shall be provided with a declaration of conformity to BS 5489-1:2020 by a ‘competent’ designer. Competency shall be demonstrated by achievement to at least ILP competency level 3 or 4, i.e. the designer will be a member of the ILP (MILP) and either IEng or CEng qualified to be deemed competent to be able to design under CDM regulations. Additionally, a risk and environmental assessment (EMS) for the CDM designer compliance requirements must be included. Manufacturer designed schemes without risk or environmental assessments should not be accepted as they do not cover the CDM designer risk elements which are required

- Walls and ceilings must have light colour finishes to maximise the effectiveness of the lighting as this will reduce the luminaires required to achieve an acceptable light level *(Note 63.4)*

  (Note 63.4): Reflective paint can reduce the number of luminaires needed to achieve the desired lighting level and reduce long-term running costs.

- Any internal door that gives access to the residential floors must have an access control system

- In developments where closed circuit television (CCTV) is required by the client or by the DOCO, such systems shall comply with the requirements of BS EN 62676:2015 Video surveillance systems for use in security applications and where applicable BS 7958:2015 CCTV management and operation Code of Practice, and the requirements of the Data Protection Act and GDPR. Developers are reminded that if images of public space are visible and recorded then there may be a legal responsibility to register the system with the Information Commissioner's Office – www.ico.org.uk Such a system would only be practical if there is a planned management service for the development

64 External bicycle parking for residents in public areas

64.1 External bicycle parking facilities will be designed for secure storage using bicycle lockers, hangers or dedicated storage devices and be certified to one of the following standards:

- SS104 Security Rating Silver, or
- STS 501 Security Rating TR2, or
- STS 503 Security Rating TR2, or
- STS 205 Issue 6:2021 Security Rating BR2, or
- STS 225 Issue 1:2021 Security Rating BR2 (S), or
- LPS 1175 Issue 8:2018 Security Rating B (B3), or
- LPS 2081 Issue 1.1:2016 Security Rating B

64.2 External bicycle parking facilities will be located as close to the primary entrance as possible, and in any case within 50m of it and be subject to natural surveillance by occupants where feasible. Current video surveillance systems should be extended to ensure that this parking facility is within view of the cameras.

64.3 During the hours of darkness the facilities should be well lit, using energy efficient lamps.

Sheds used for bicycle parking

64.4 Where family bicycle parking is provided in a robust garden shed, the minimum requirements for the shed construction and security are as follows:

- 38x50mm (minimum) planed timber frame
- Floor and roof constructed from 11mm boards (minimum)
- 11x125mm (minimum) tongue & grooved board walls and door
- No window to be present
- Door hinges should be coach-bolted through the shed structure or secured with security or non-return screws
- Two hasp and staples that meet minimum 'Sold Secure' SS303 Bronze should be used. One positioned 200mm – 300mm down from the top of the door and one positioned 200mm – 300mm up from the bottom of the door. Additionally, hasp and staples should be coach bolted through the shed structure or secured with either security or no return screws

- Both padlocks should meet minimum ‘Sold Secure’ SS303 Bronze or (LPS 1654 Issue 1.1:2014 Security Rating 1 standard padlocks to be used
- Shall be securely fixed to a suitable substrate foundation
- Bicycles and other property that are to be stored within the shed should have a security ground anchor system, wall mounted shed shackle or bicycle stand and shall also meet the minimum requirements of paragraph 64.1
- All products should be securely fixed to suitable foundations in accordance with the manufacturer’s specifications

65 Intruder alarms

65.1 Where an intruder alarm system is installed then it shall meet the requirements of BS EN 50131 (wired and wire free systems). All installations shall be in accordance with the current electrical regulations. If an immediate police response is required then installers must meet the requirements of the National Police Chiefs’ Council (NPCC) policy document – *Guidelines on Police Requirements & Response to Security Systems* are available at:

www.policesecuritysystems.com/national-police-chiefs-council-security-systems-policy

www.policesecuritysystems.com/secured-by-design-alarm-standard

65.2 Specifiers should be aware that a Secured by Design Alarm Standard exists for intruder alarm installations. Its creation is due to our work with the national alarm inspectorate bodies and trade organisations with the aim of improving the performance of security systems and increasing the preventative impact and detection rate emanating from them. Whilst meeting the requirements of the Secured by Design Alarm Standard is not necessary, details of it should be shared with those charged with responsibilities in this sector. Further information is available at:

www.policesecuritysystems.com/secured-by-design-alarm-standard/sbd-technical-guide

66 Future Homes Standard

66.1 The Future Homes Standard is a key component of the British government’s ten point plan for a green industrial revolution and is an important part of enabling the UK to become net carbon zero by 2050. Along the journey to reaching this goal it is likely that new technologies will be introduced for both the heating and cooling of homes. As is often the case, such installations often become the focus for the criminal as the equipment is in high demand resulting in strong financial values. It is important that where a development incorporates products such as Mechanical Ventilation with Heat Recovery (MVHR) systems externally to a dwelling, that this is brought to the attention of the DOCO. The nature of advice provided will consider such issues as:

- When the unit should be installed with a strong preference being immediately prior to, or at the point of, first occupation
- The siting of the unit to maximise natural surveillance
- Access to and from the unit so that this does not undermine security of the plot, or the defensible space for the dwelling
- The nature of any physical security required whilst being mindful that MVHR require ventilation and ongoing maintenance

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We trust that by the application of the design principles and security standards described within this guide, that communities will be protected from crime for years to come.

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