

SECURITY DESIGN GUIDE

GENERAL PRINCIPLES OF BUILDING SECURITY

Secured by Design



Official Police Security Initiative

We are a proud member of Secured by Design

Secured by Design



Official Police Security Initiative

SECURED BY DESIGN LICENCE HOLDER

THIS IS TO CERTIFY THAT

NACD

OF

Unit 8 Heron Business Park,
Eastman Way, Hemel Hempstead, Hertfordshire, HP2 7FW

HOLDS A SECURED BY DESIGN LICENCE
VALID IN CONJUNCTION WITH THE CURRENT SCHEDULE UNTIL

8th December 2024

PLEASE REFER TO [HTTPS://WWW.SECUREDBYDESIGN.COM/MEMBER-COMPANIES/SBD-MEMBERS](https://WWW.SECUREDBYDESIGN.COM/MEMBER-COMPANIES/SBD-MEMBERS)
FOR THE CURRENT SCHEDULE INFORMATION



G. Ferguson —

GUY FERGUSON
CEO, POLICE CRIME PREVENTION INITIATIVES LIMITED

DATE

9th December 2023

Secured by Design



Official Police Security Initiative

The Security Proposal

Site specific security strategy and drawings must be provided to the Design Out Crime Officer (DOCO) representing Secured By Design.

The DOCO will evaluate the Security Proposal based on all relevant site specifics including, for example, local knowledge regarding crime rates.

To receive Secured By Design Certification, the Security Proposal must be approved in writing by the DOCO responsible for the area.

This manual is designed as a guide to assist in meeting the security requirements as determined by the DOCO.

Schematics legend

All installations must comply with the latest H&S and Building Code regulations. Safe emergency egress must be guaranteed to all persons at all times under any/all circumstances.

	Proximity keyfob reader (if NACD then anti-clone protected, ID numbered and remotely managed via BATICONNECT.COM cloud for SBD compliance).	L10
	Double Pole (DP) momentary NO/NC door release button (fitted within 1 metre maximum distance of the relevant door exit pull/ push handle at a maximum height of 1 metre from FFL). This is NOT an emergency exit device in its own right.	L04
	EM24EX stainless steel normal exit + self-resetting latching emergency exit system (fitted within 1 metre maximum distance of the relevant door exit pull/ push handle at a maximum height of 1 metre from FFL). All locking must be 12VDC fail safe.	L41
	PROTECTED door release exit button: Double Pole (DP) momentary NO/NC (fitted within 1 metre maximum distance of the relevant door exit pull/push handle at a maximum height of 1 metre from FFL). Purpose is to prevent unauthorised activation of the button from the public side, make sure correct model type selected. This is NOT an emergency exit device in its own right.	L47
	12VDC fail safe electric release or electro-magnet (as per advice or pre-installed by door supplier for door type, designation and usage profile).	L08
	Visitor Call Point (VCP), conventional hardwired video. Must be Equality Act 2010 (DDA) & Secured By Design compliant.	L48
	Gerda Access Control Box (ACB) to provide access to the Fire & Rescue Service through the Gerda One Key® system (Secured By Design Homes 2016, section 27.10). Refer to NACD drawing T12030 for cabling. For all information: www.gerdasecurity.co.uk	L67

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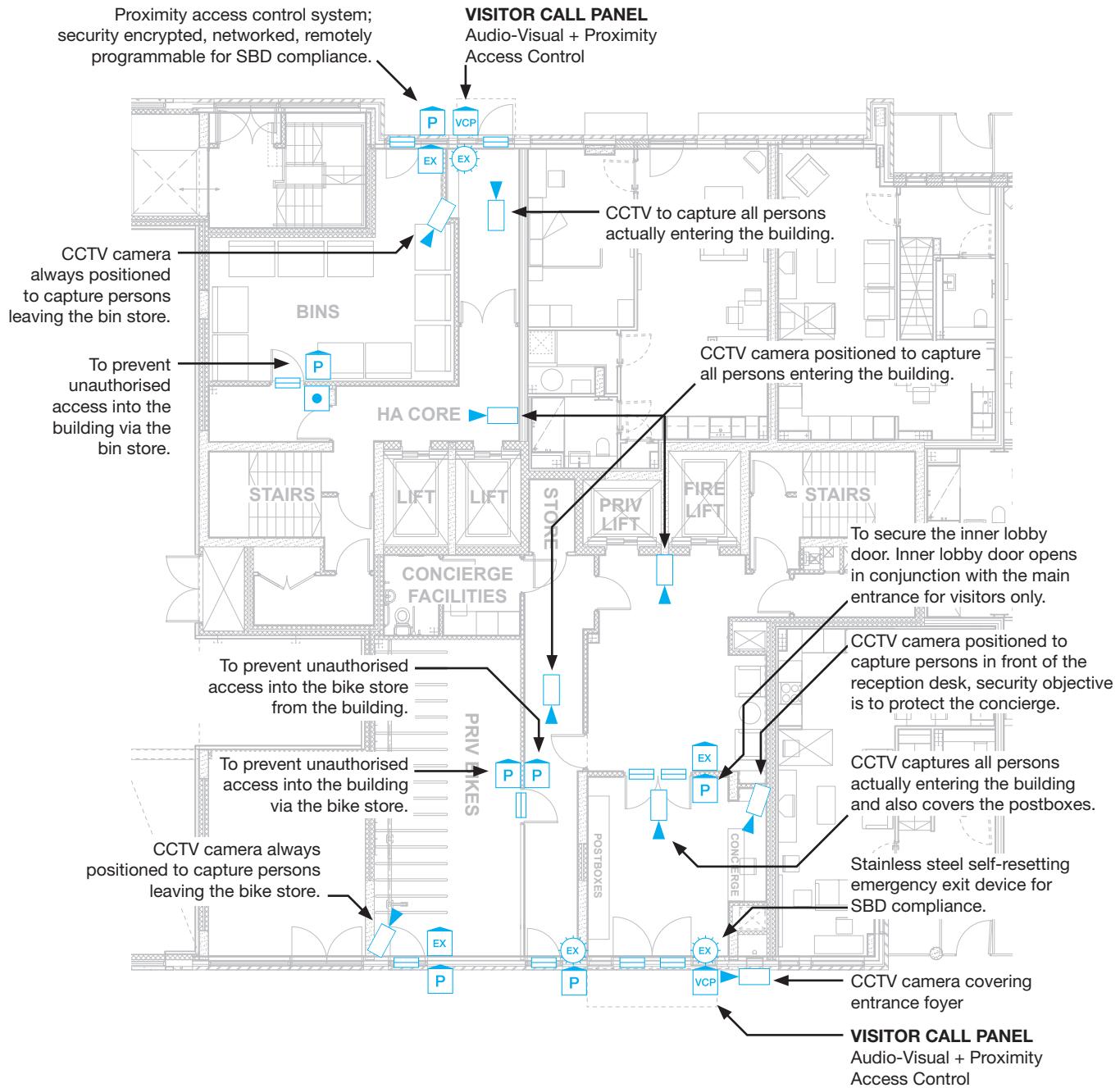
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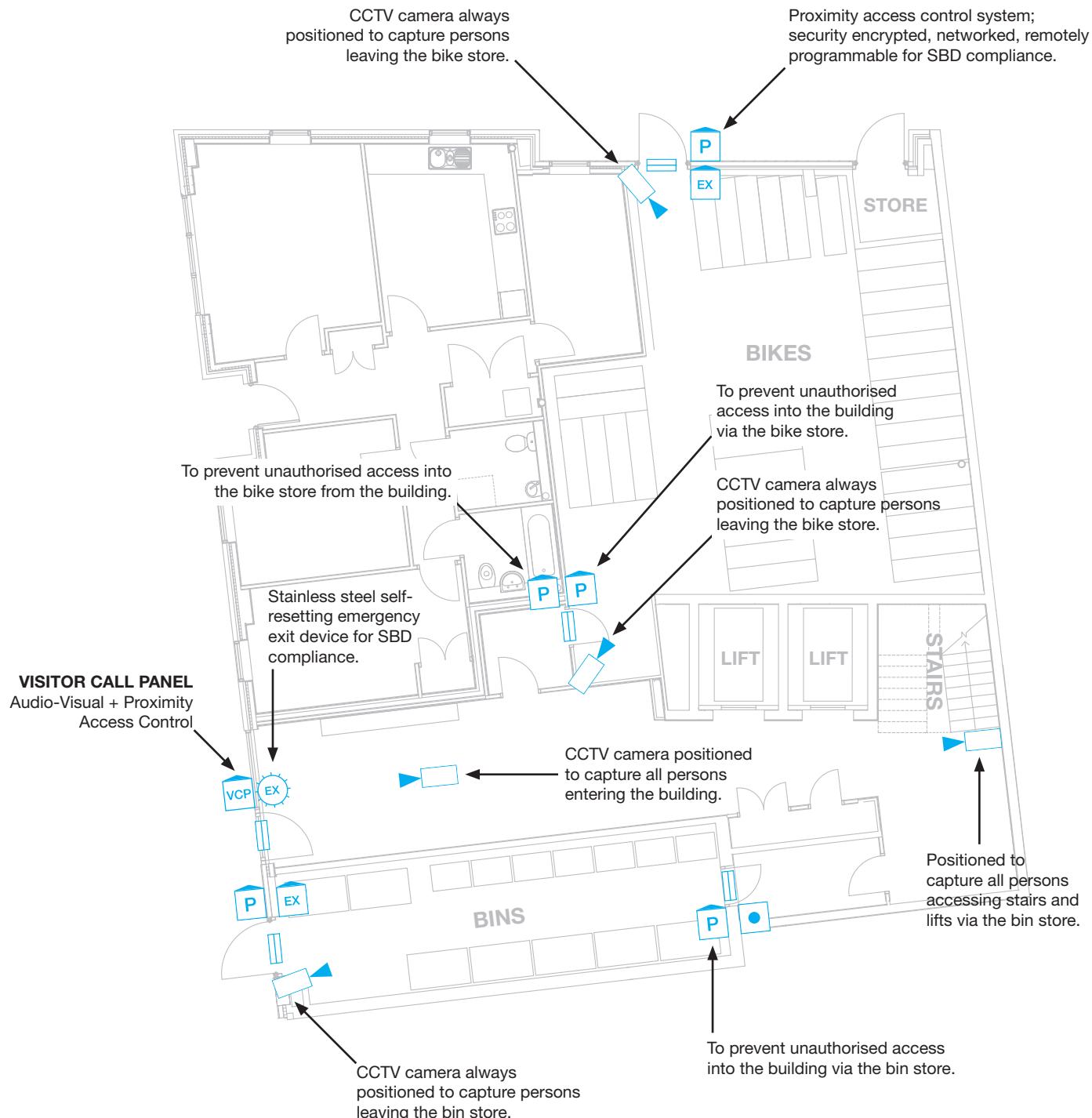
Fundamental principles

	TICK
1 All communal external doors and gates that give access into the building or car park must be controlled.	<input type="checkbox"/>
2 All communal external doors and gates that give access into a bin or bike store must be controlled.	<input type="checkbox"/>
3 Doors and gates within externally accessed rooms/stores that themselves give access into the building must be controlled.	<input type="checkbox"/>
4 Visitor door entry systems must log visitor calls to flats to enable identification of residents abusing the system.	<input type="checkbox"/>
5 Resident access control (proximity / radio) systems must log all usage to enable identification of residents abusing the system.	<input type="checkbox"/>
6 Visitor door entry and resident access control system equipment must all be technically compliant to Secured By Design (SBD).	<input type="checkbox"/>
7 Resident proximity and radio access control system must use security encrypted fobs / transmitters that prevent cloning.	<input type="checkbox"/>
8 Visitor door entry and resident access control system must be fully networked and remotely programmable.	<input type="checkbox"/>
9 Visitor door entry and resident access control system must be fully Equality Act 2010 (DDA) compliant.	<input type="checkbox"/>
10 Resident access control proximity keyfobs and radio transmitters must each have, as a minimum requirement, its unique Identification (ID) number visibly factory stamped on the device itself.	<input type="checkbox"/>
11 Management / system owner must be able to access the system remotely, from anywhere, via any internet enabled device, 24/7/365 for programming, data retrieval and system alerts.	<input type="checkbox"/>

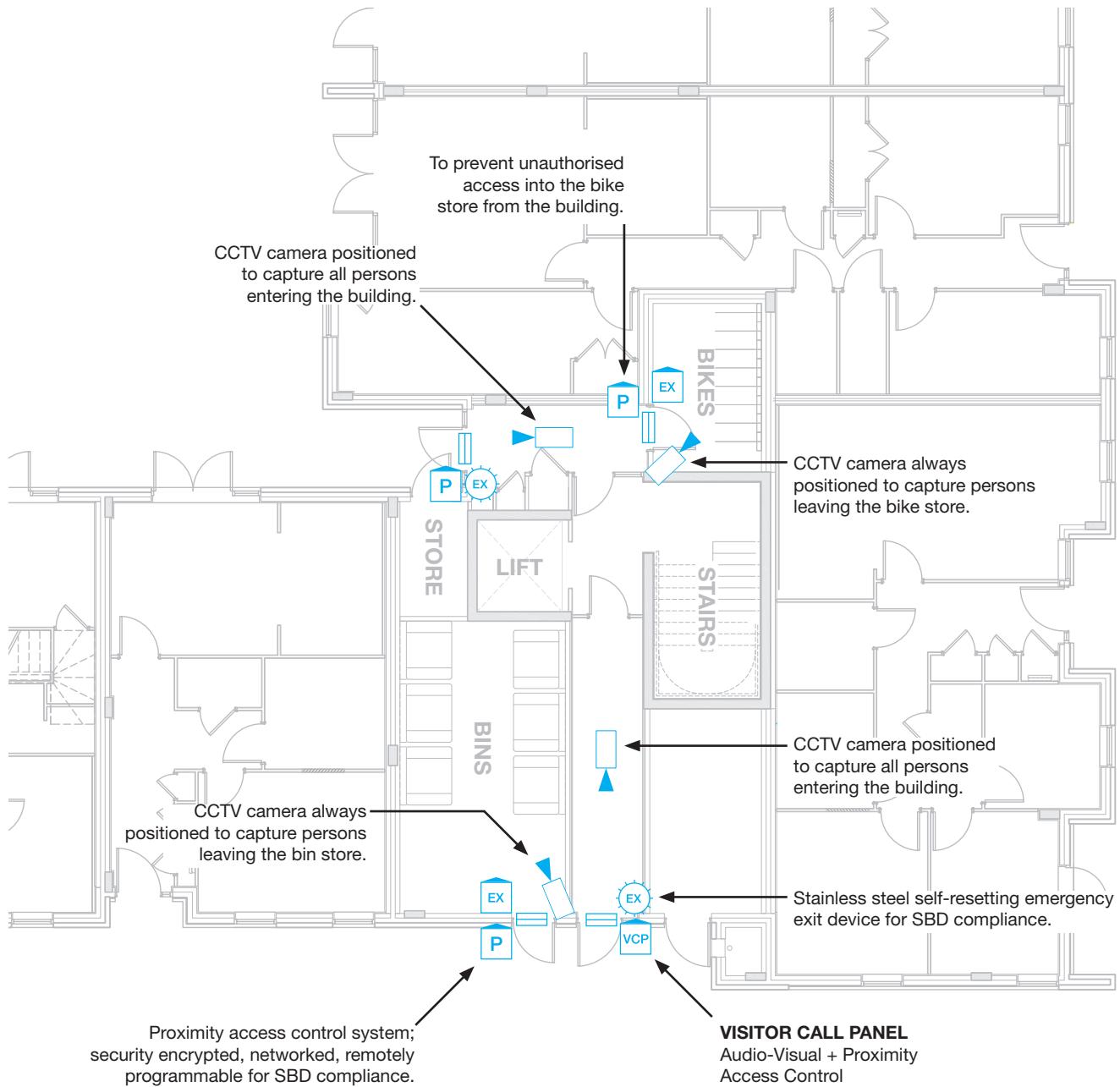
Communal residential buildings, ground floor, general security principles (1).



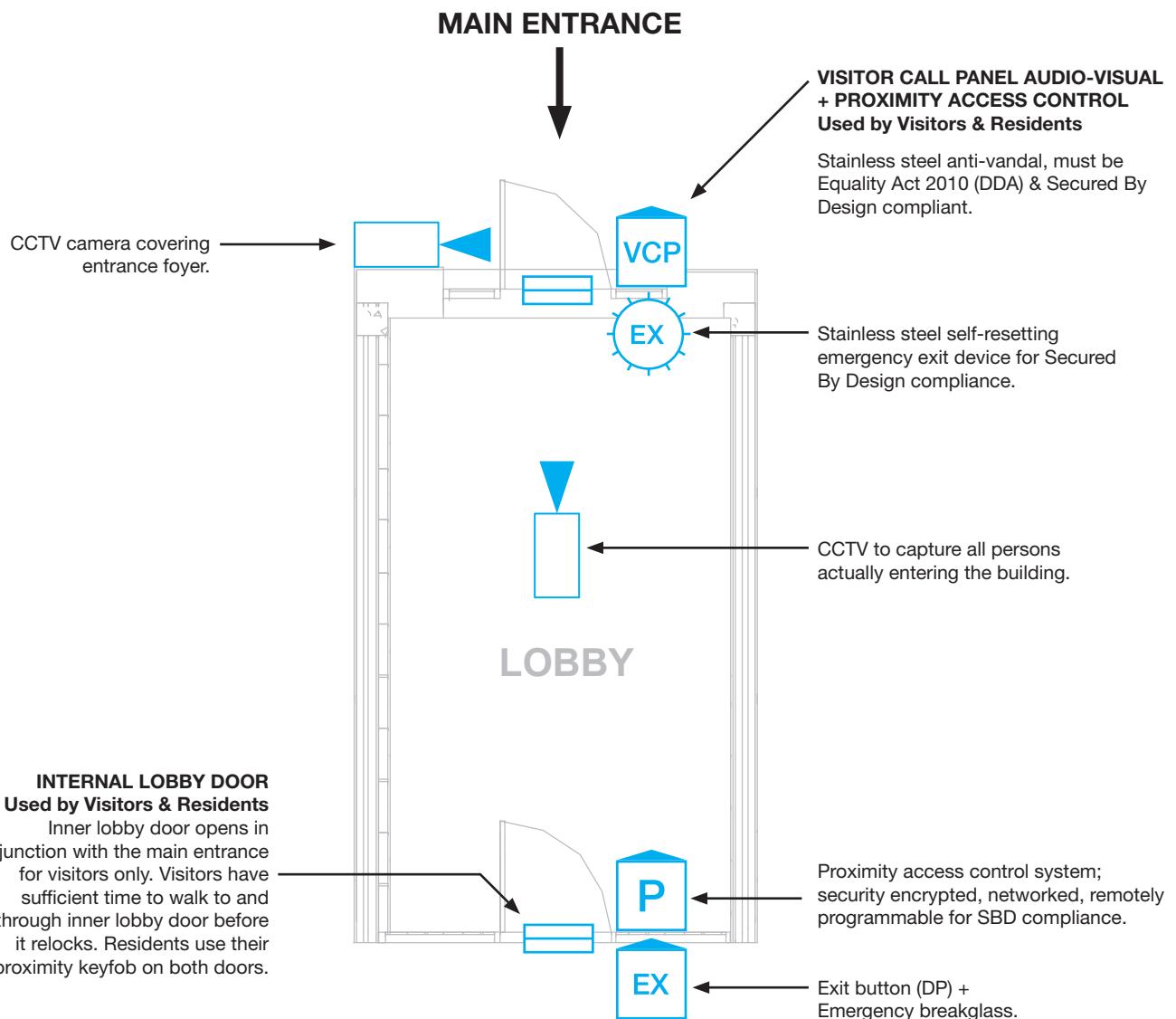
Communal residential buildings, ground floor, general security principles (2).



Communal residential buildings, ground floor, general security principles (3).



Securing the inner lobby door, option 1 with proximity access control.

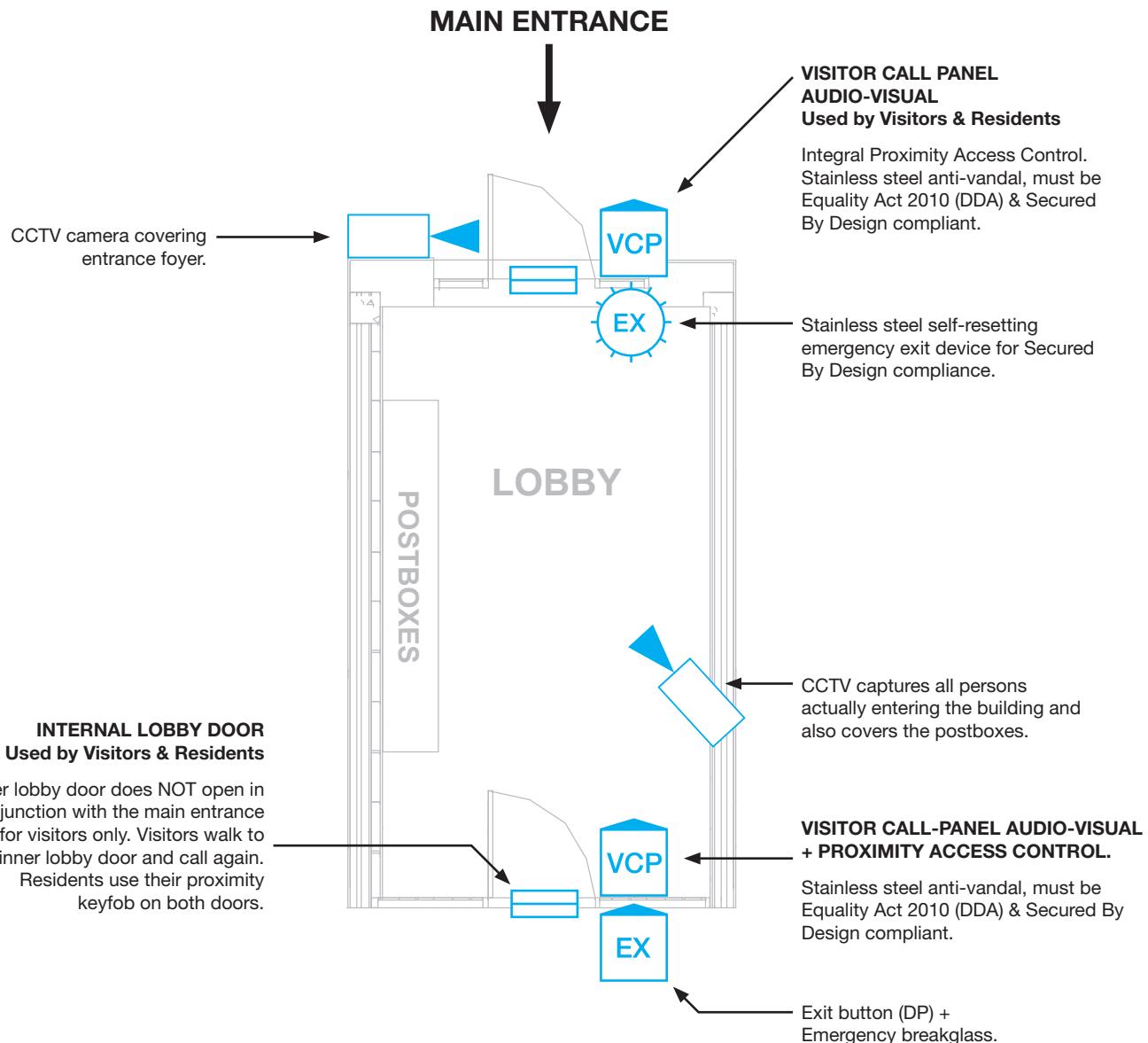


Security objective:

To create an additional barrier to unauthorised access into the building when (1) main entrance door has been left unlocked (2) trades have access rights into the lobby (via code etc).

It is NOT to prevent or even reduce tailgating. Residents do not all know each other and they certainly do not know visitors to other flats. Visitors will not interfere with other persons also entering the building. Residents "buzzing-in" their visitor will not challenge the legitimacy of an unknown visitor also waiting to enter.

Securing the inner lobby door, option 2 with visitor call-panel + proximity access control.



Security objective:

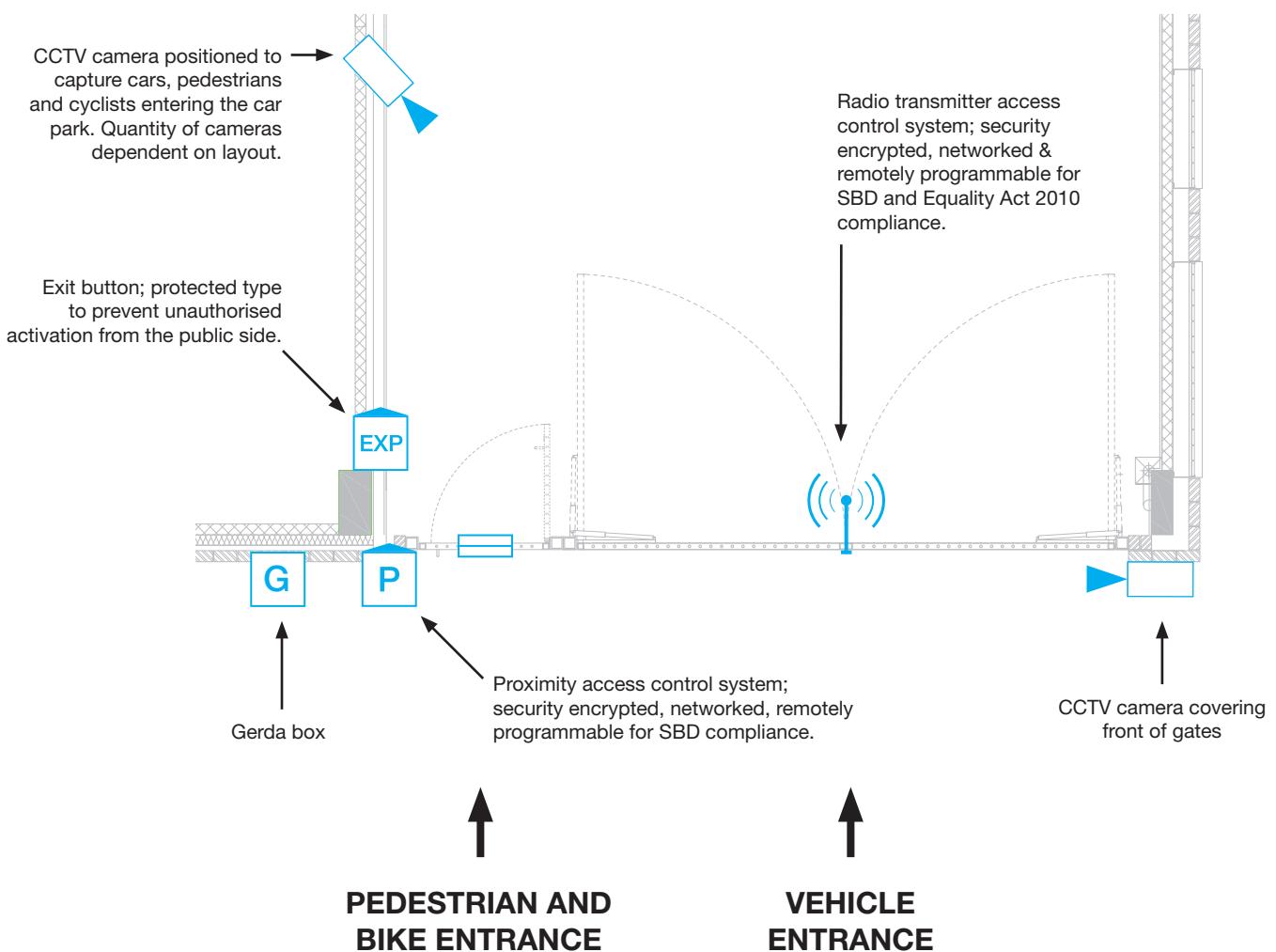
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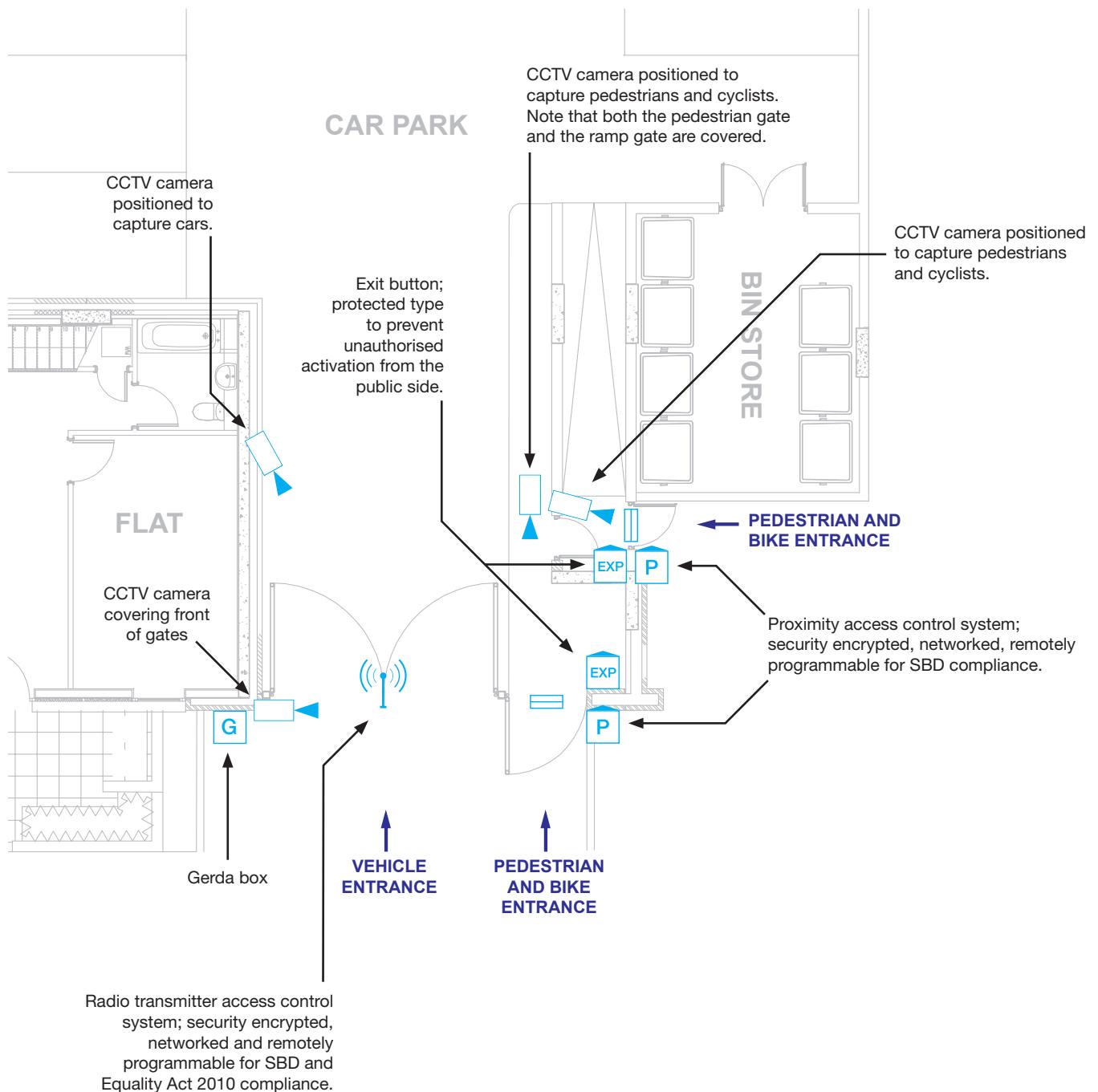
Secondary visitor call panel is primarily for convenience:

Equipping the inner lobby door with visitor calling facilities is a client choice. It is the fact that the door is kept electronically locked by the proximity access control that provides the security as explained above.

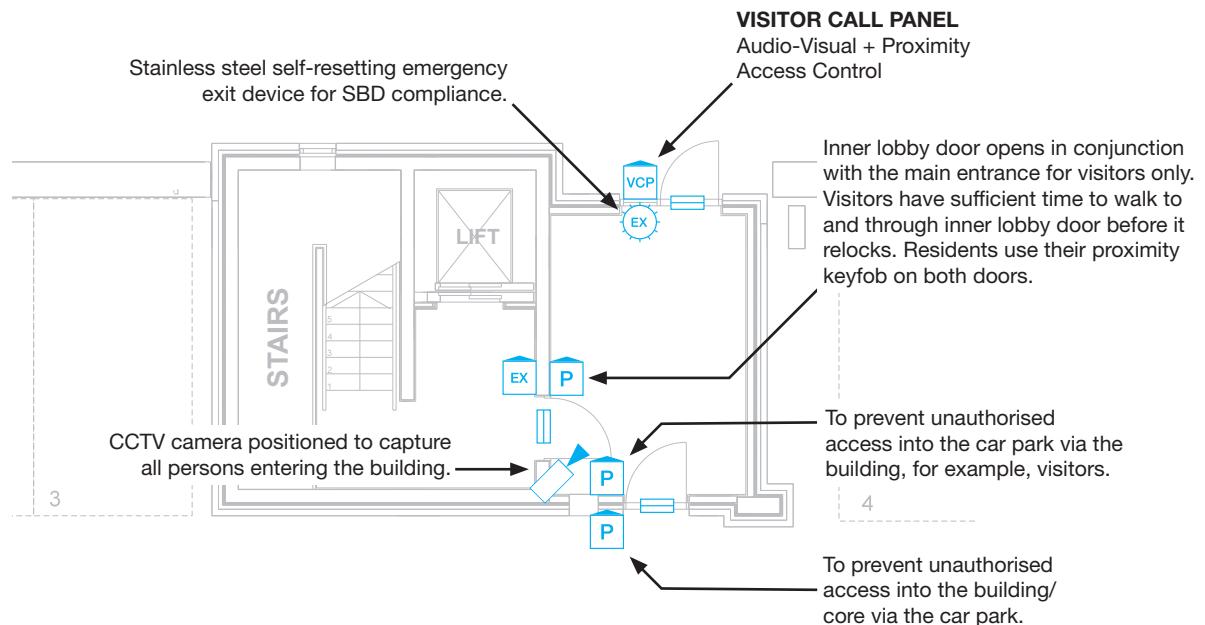
Security for and from car parks (1).



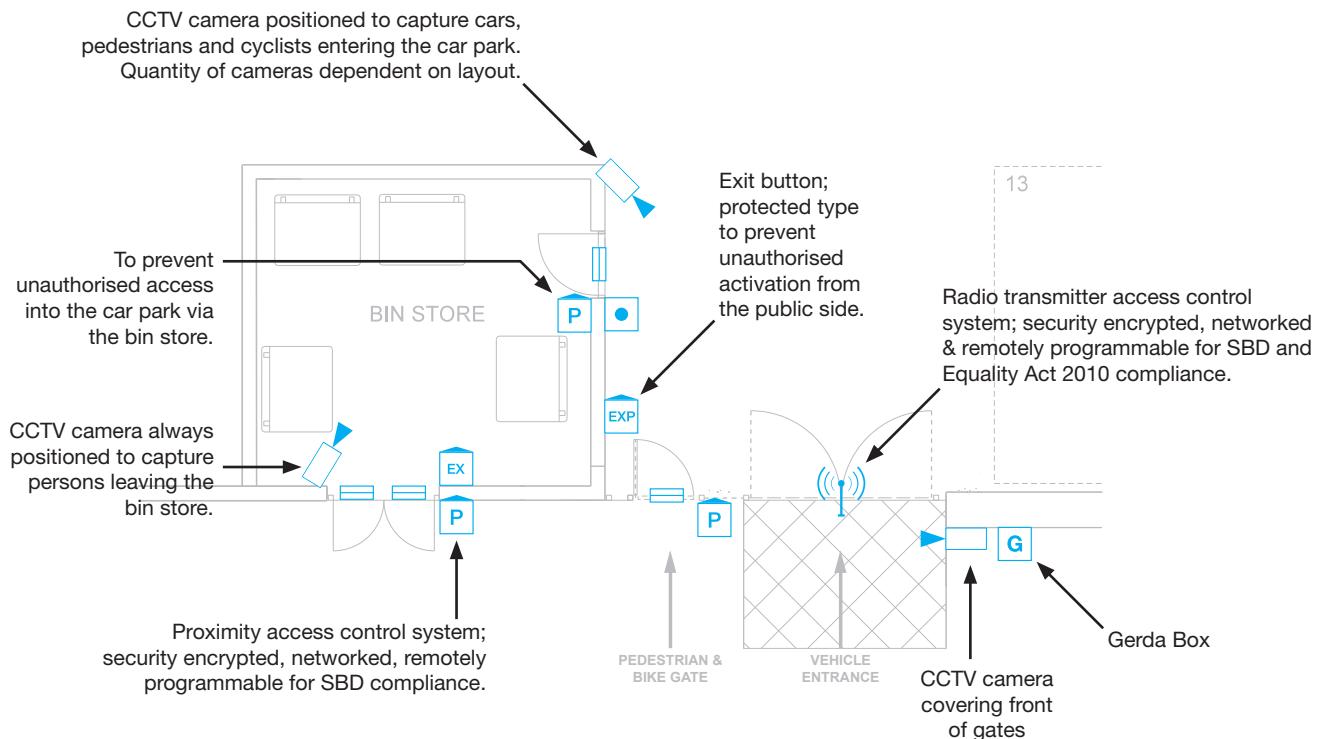
Security for and from car parks (2).



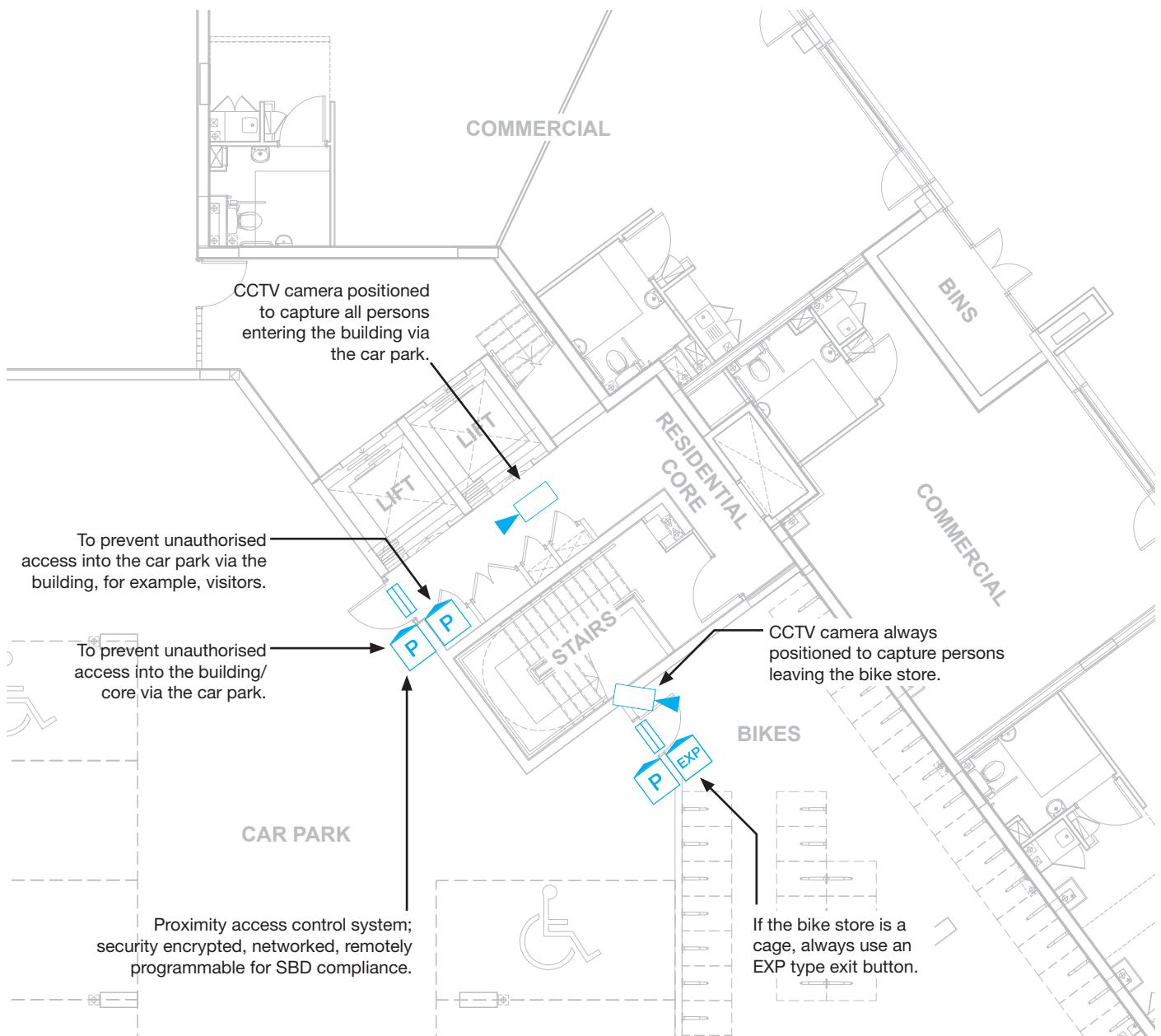
Security for and from car parks (3).



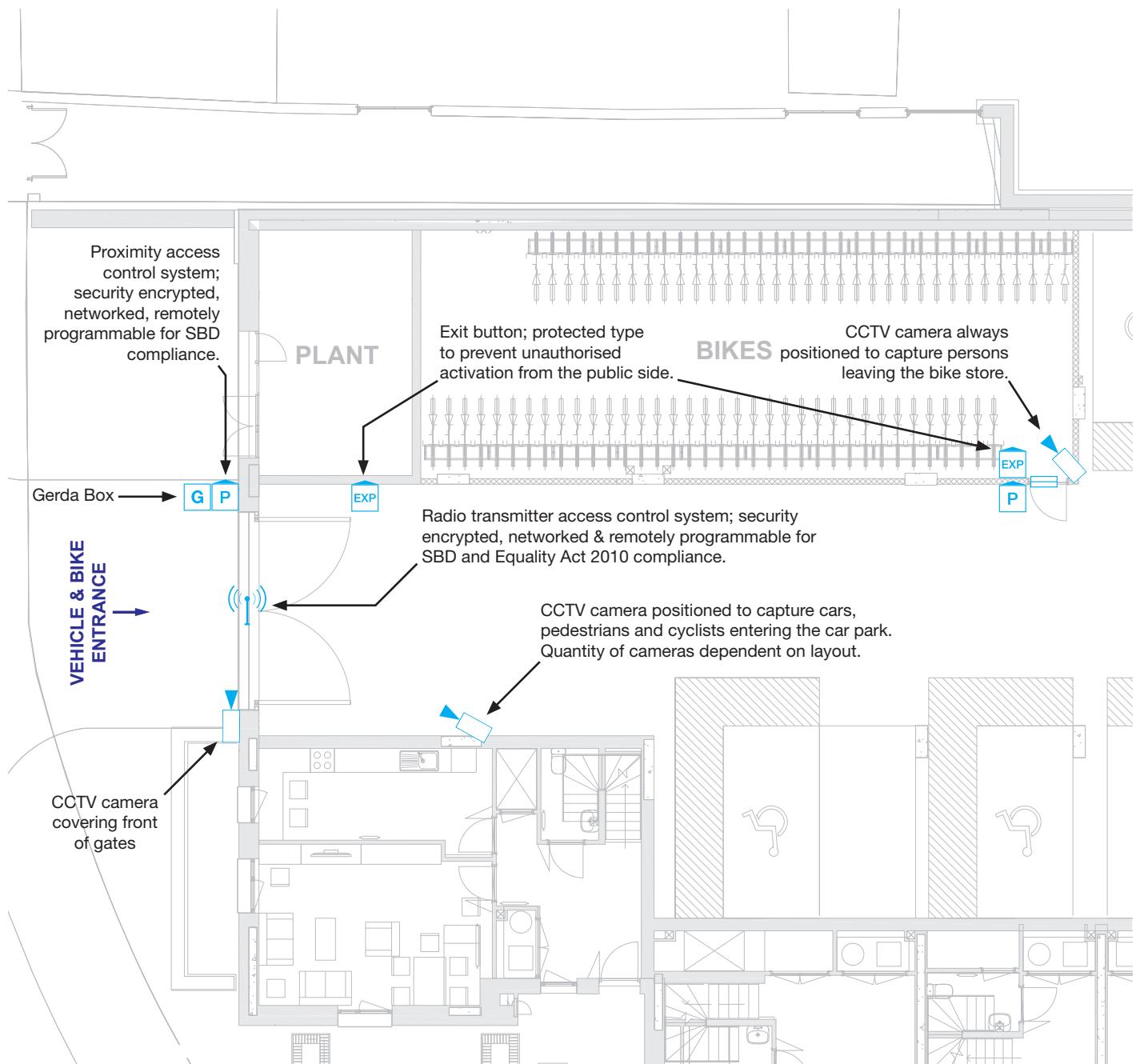
CAR PARK



Security for and from car parks (4).



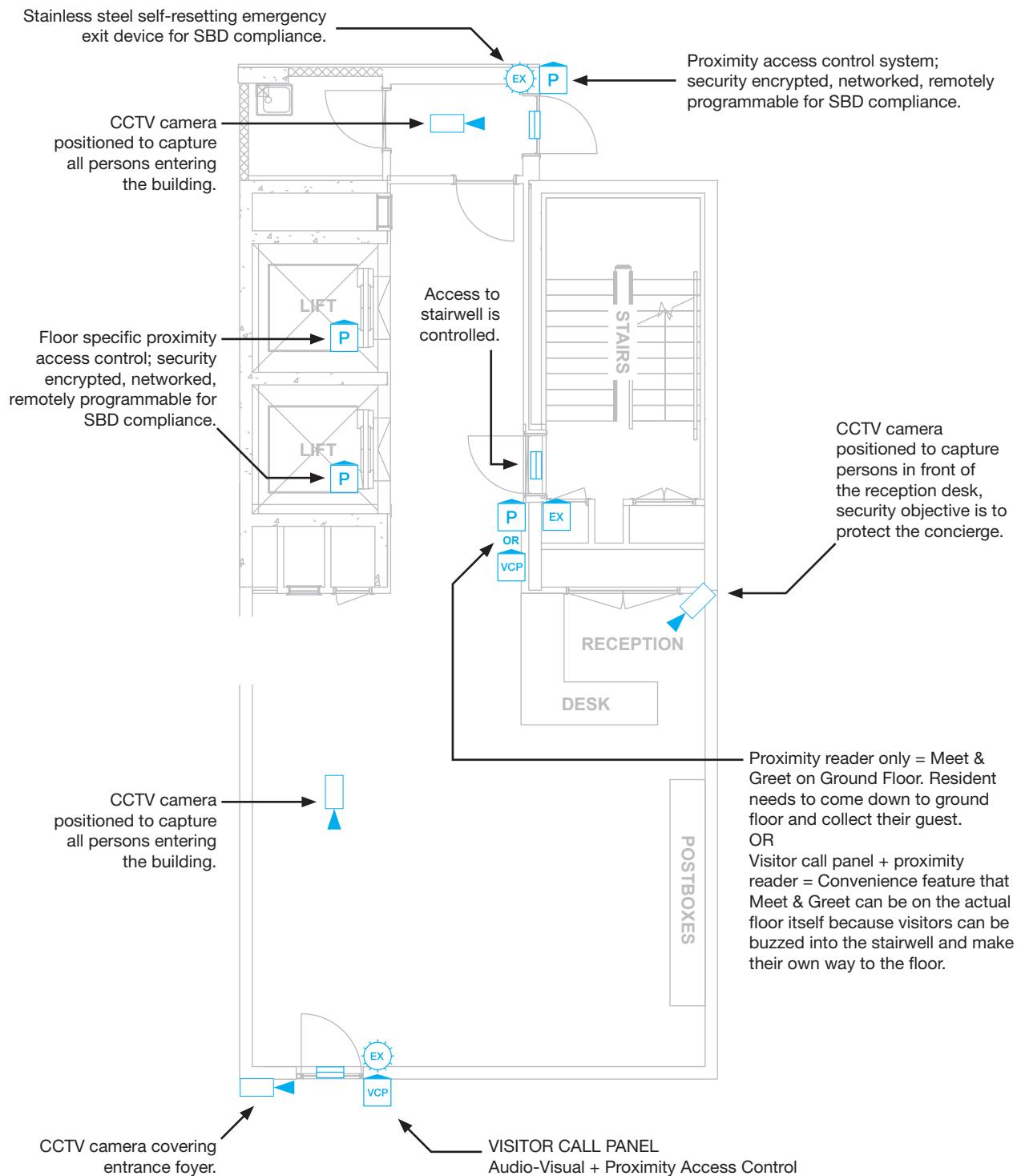
Security for and from car parks (5).



An automated entrance used by both cars and cyclists requires both radio access control for cars and proximity access control for cyclists.

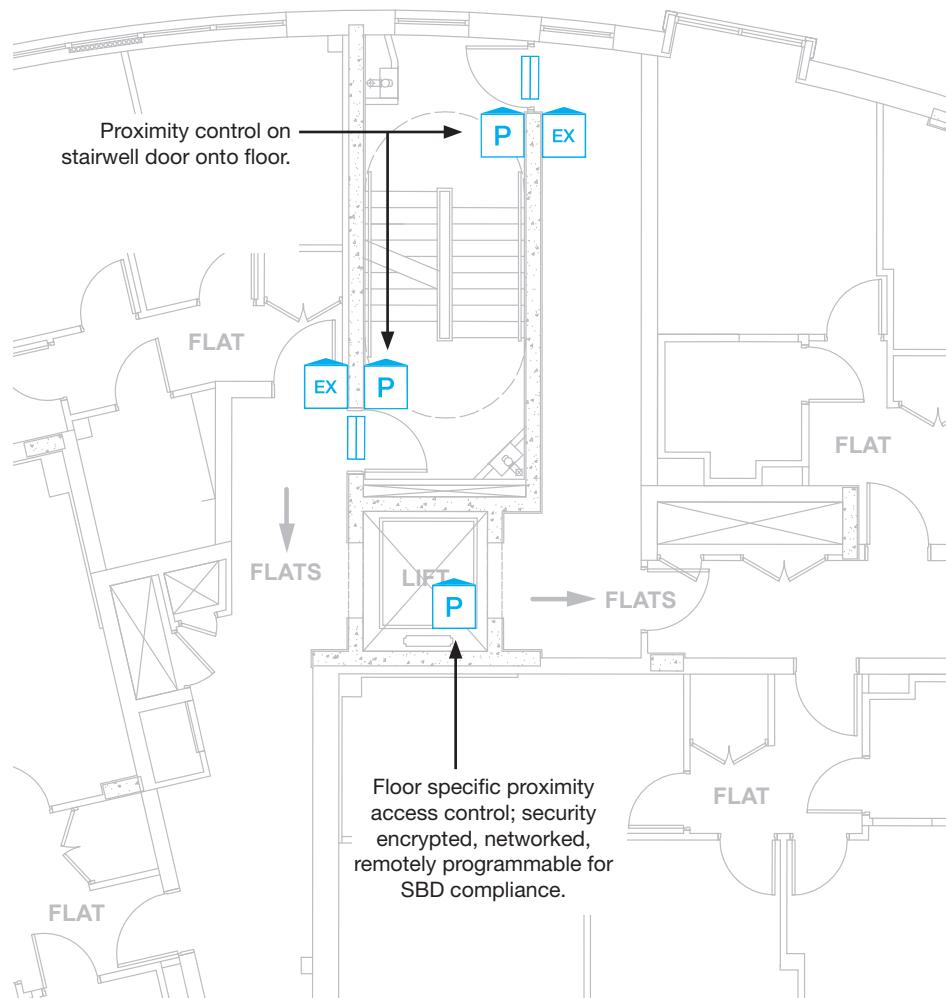
Securing a residential building through compartmentalisation (1).

Most crime and anti-social behaviour within a communal building is committed by a small minority of residents and their guests. Security objective, therefore, is to restrict residents and visitors to areas relevant to them.



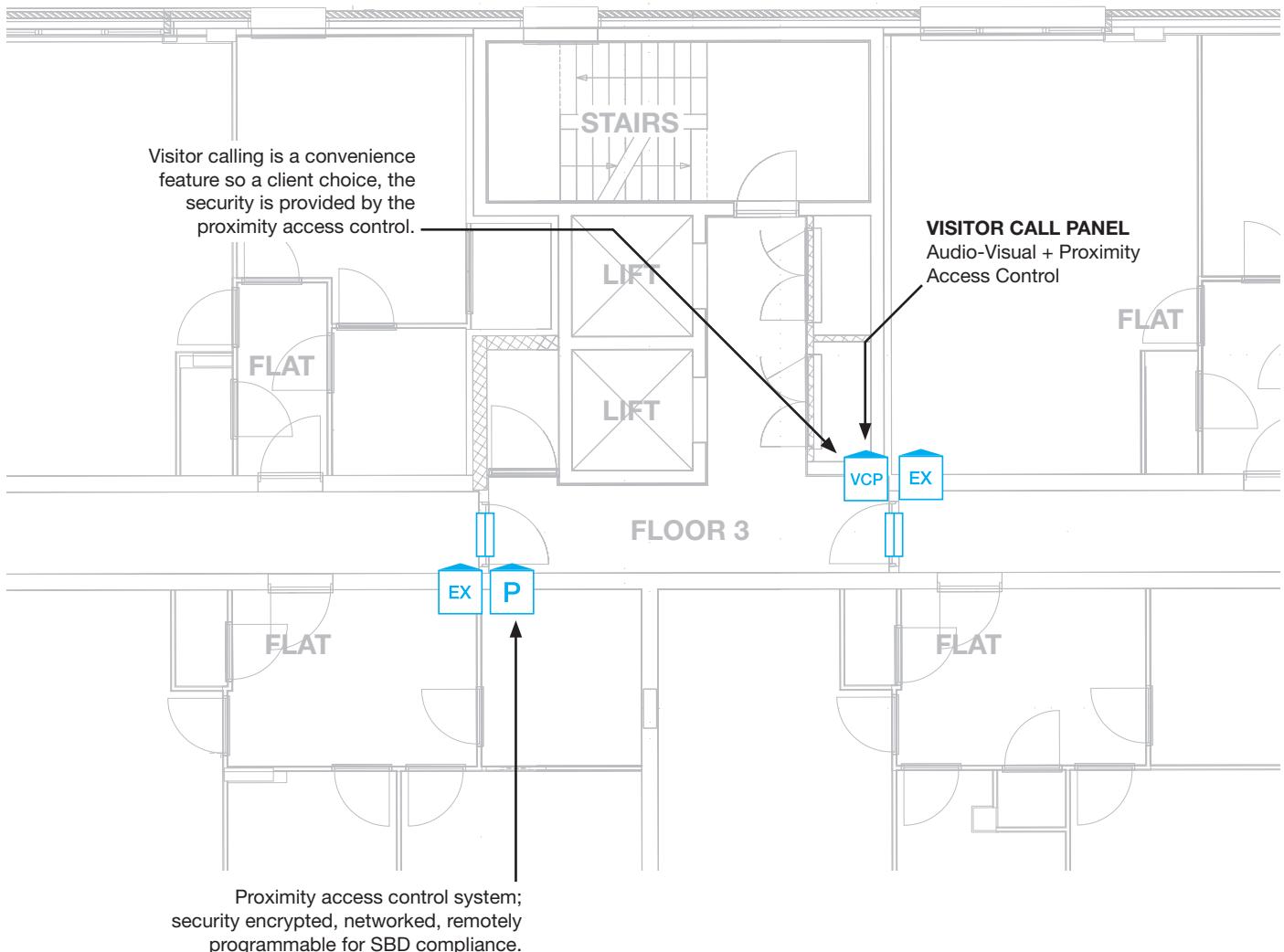
Securing a residential building through compartmentalisation (2).

Proximity access control means that unless you live on this floor, or have a proximity key that has been authorised, you cannot access this floor.



Securing a residential building through compartmentalisation (3).

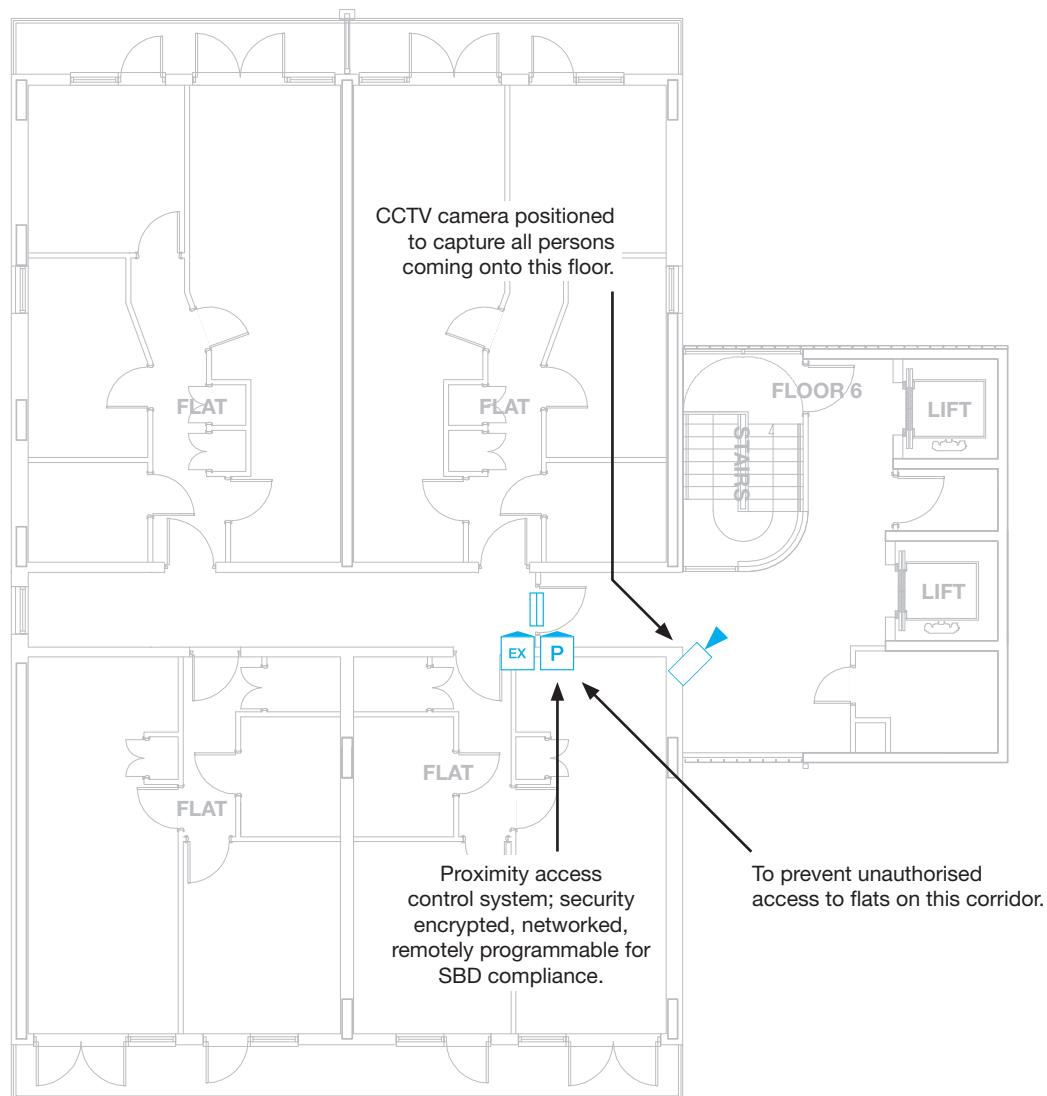
The stairs and lift open into a lobby. The flats are behind corridor doors which can be proximity access controlled. The security disadvantage is that access to the floor itself is not controlled. The convenience feature is that Meet & Greet of visitors can be on the actual floor itself.



Proximity access control on the corridor doors means that unless you live in one of those flats, or have a proximity key that has been authorised, you cannot get into the corridor leading to the flat.

Securing a residential building through compartmentalisation (4).

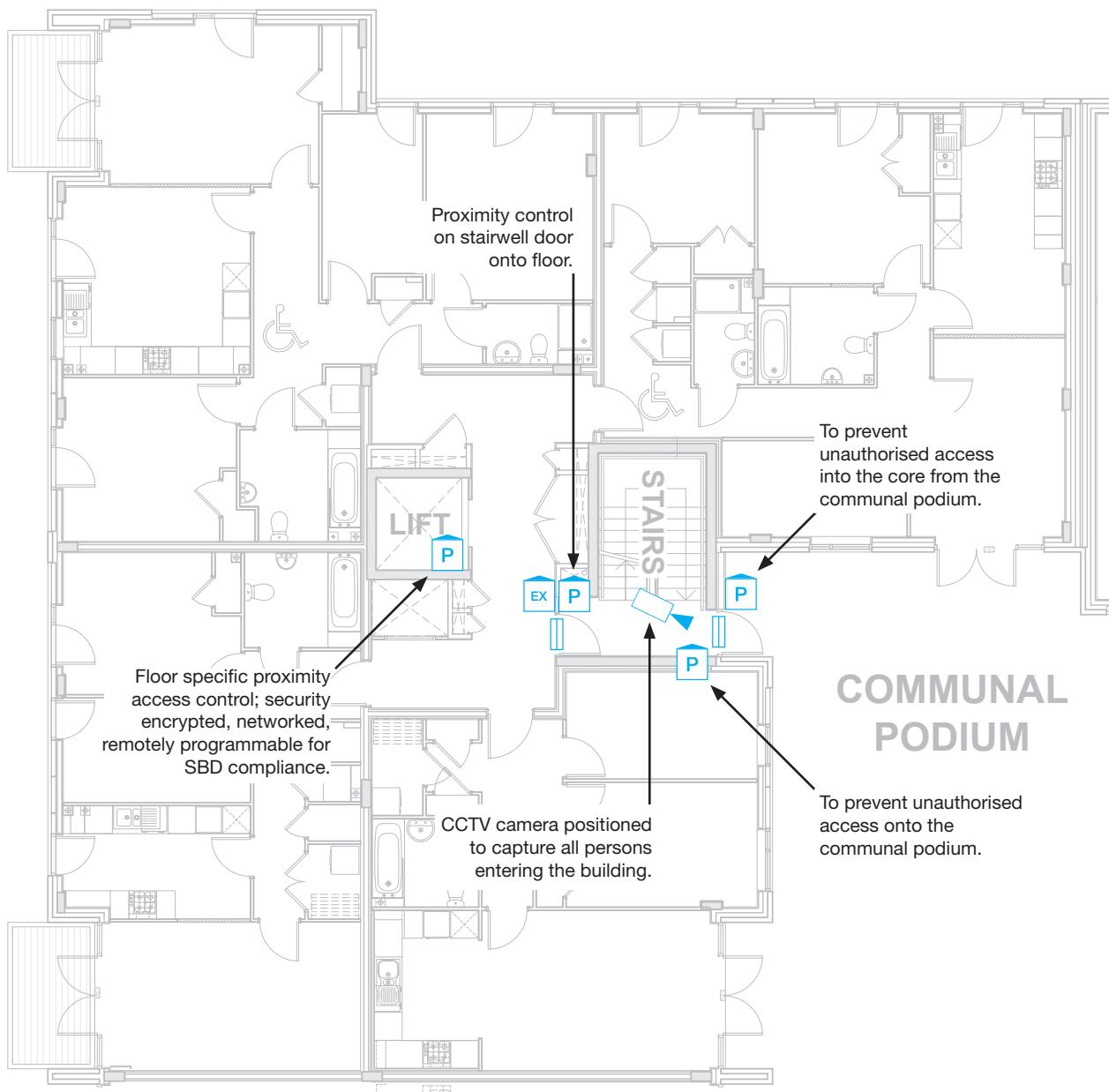
The stairs and lift open into a lobby. No need to have floor specific lift control and stairwell door control because the corridor door to the flats is proximity access controlled. The security risk associated with allowing free access onto the floor itself is mitigated by the installation of a CCTV camera.



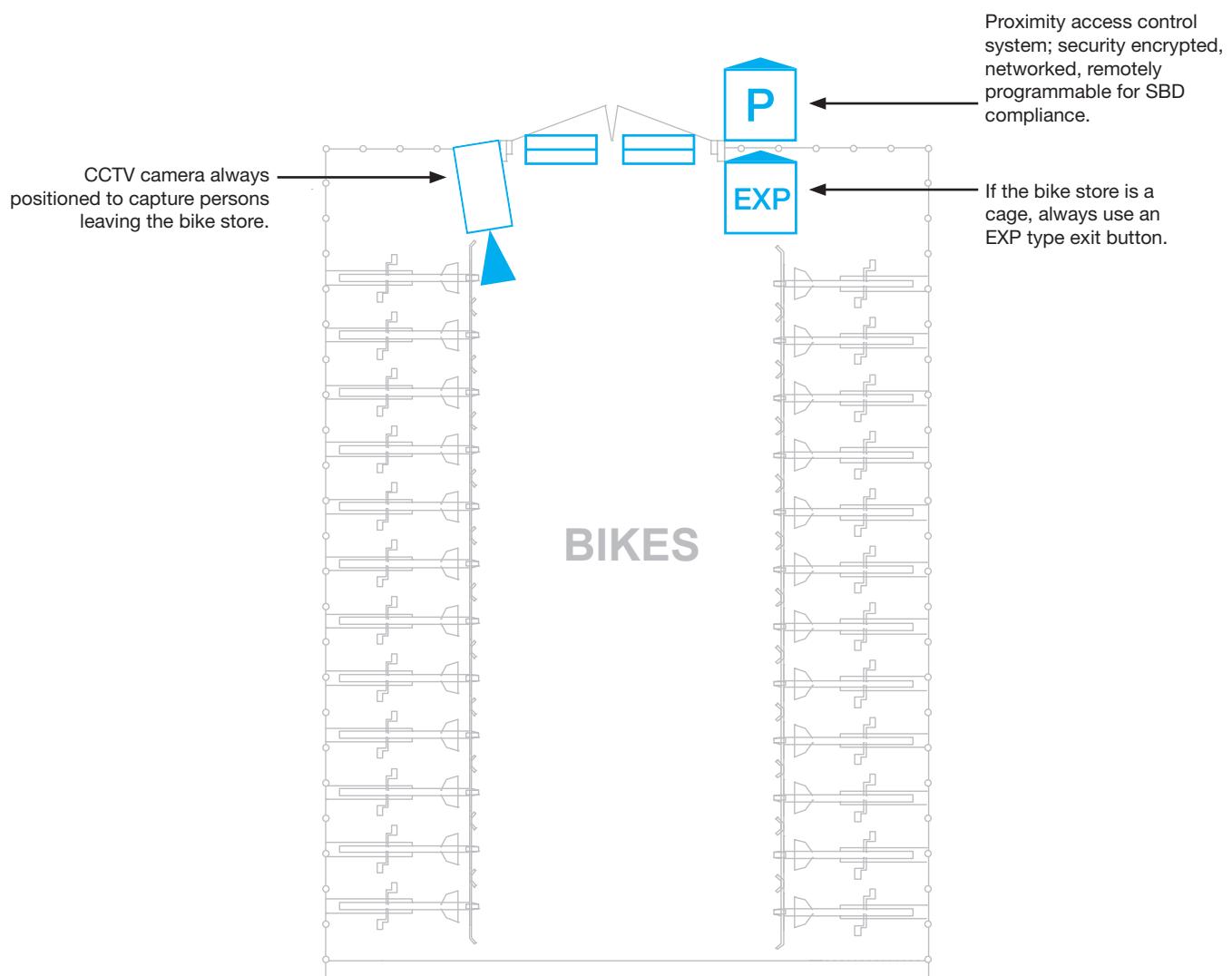
Adding a CCTV camera helps mitigate the security disadvantage that the floor itself is accessible to all.

Securing a residential building through compartmentalisation (5).

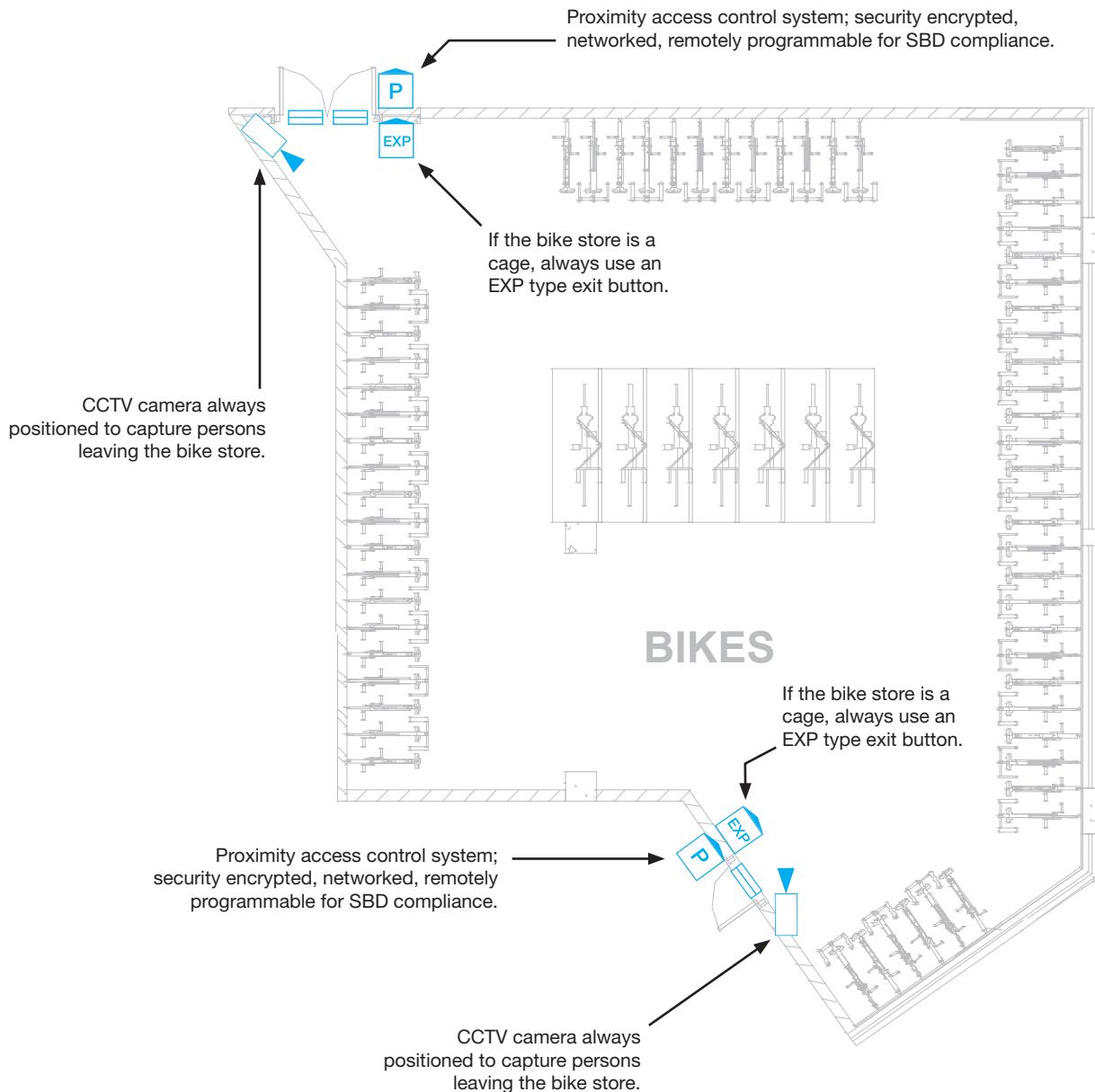
Security objective is to prevent unauthorised access from the podium into the building. CCTV camera captures all persons entering the building via the podium. Proximity access control to prevent unauthorised access onto the podium from the building is recommended.



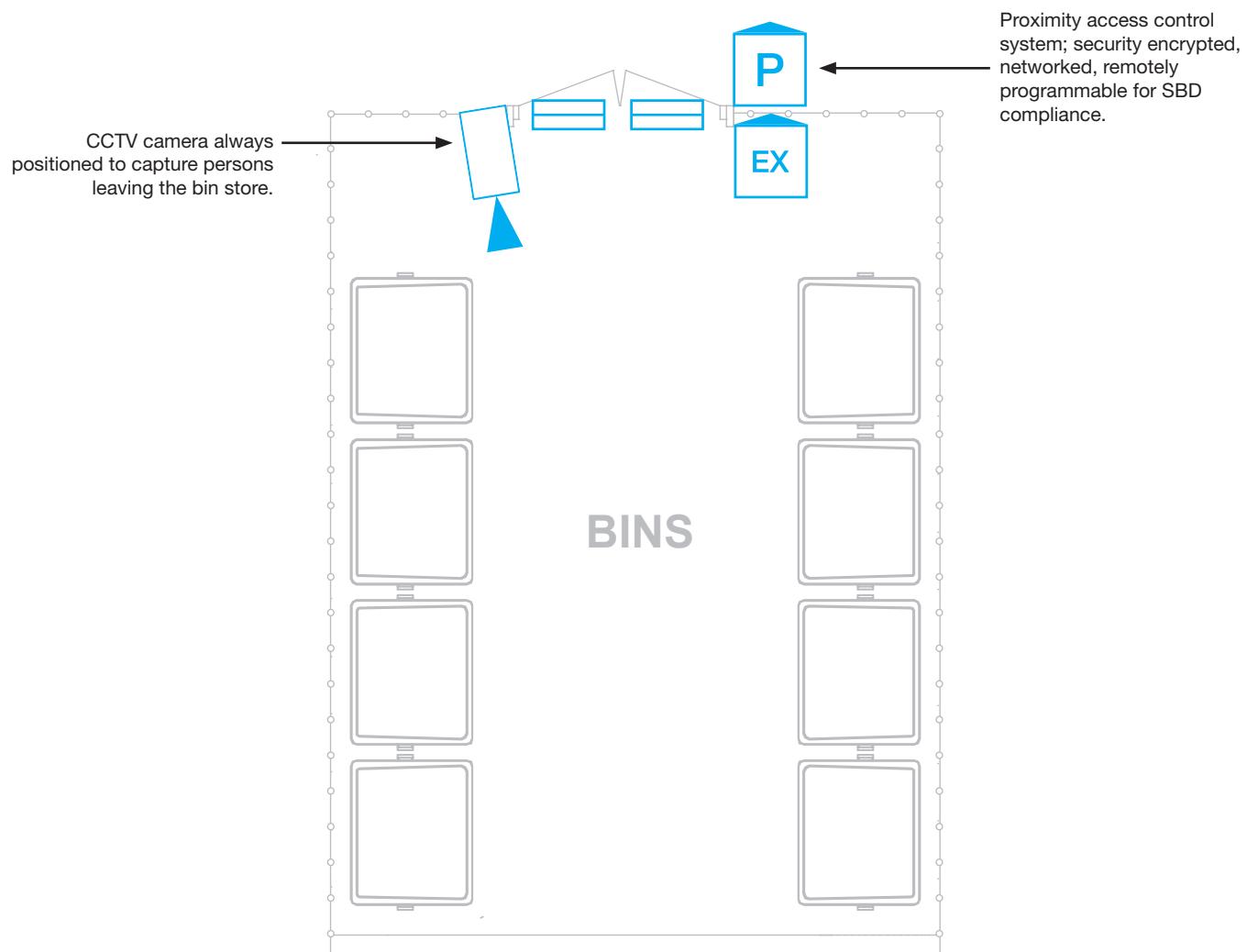
Security for bike stores (1).



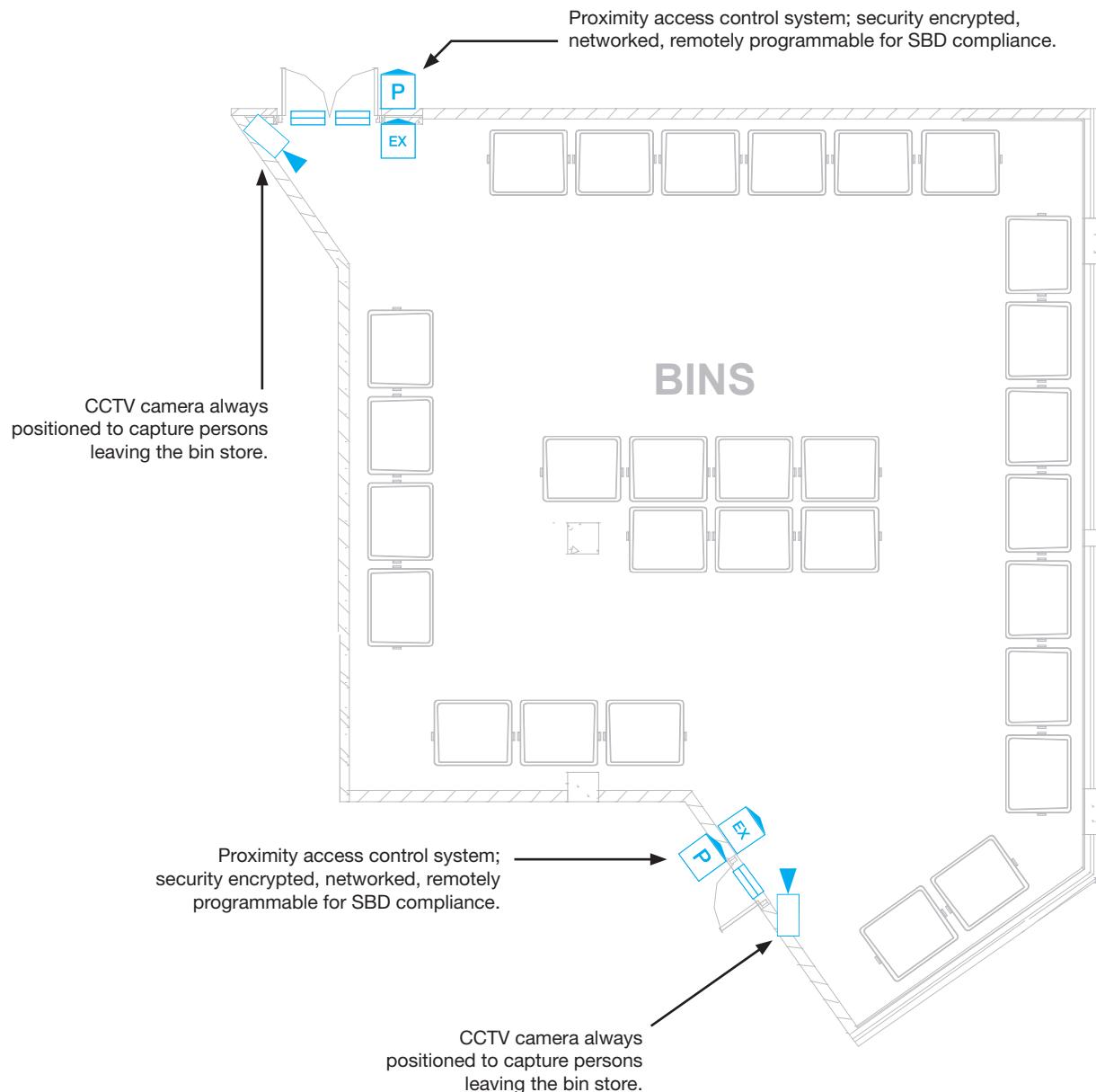
Security for bike stores (2).



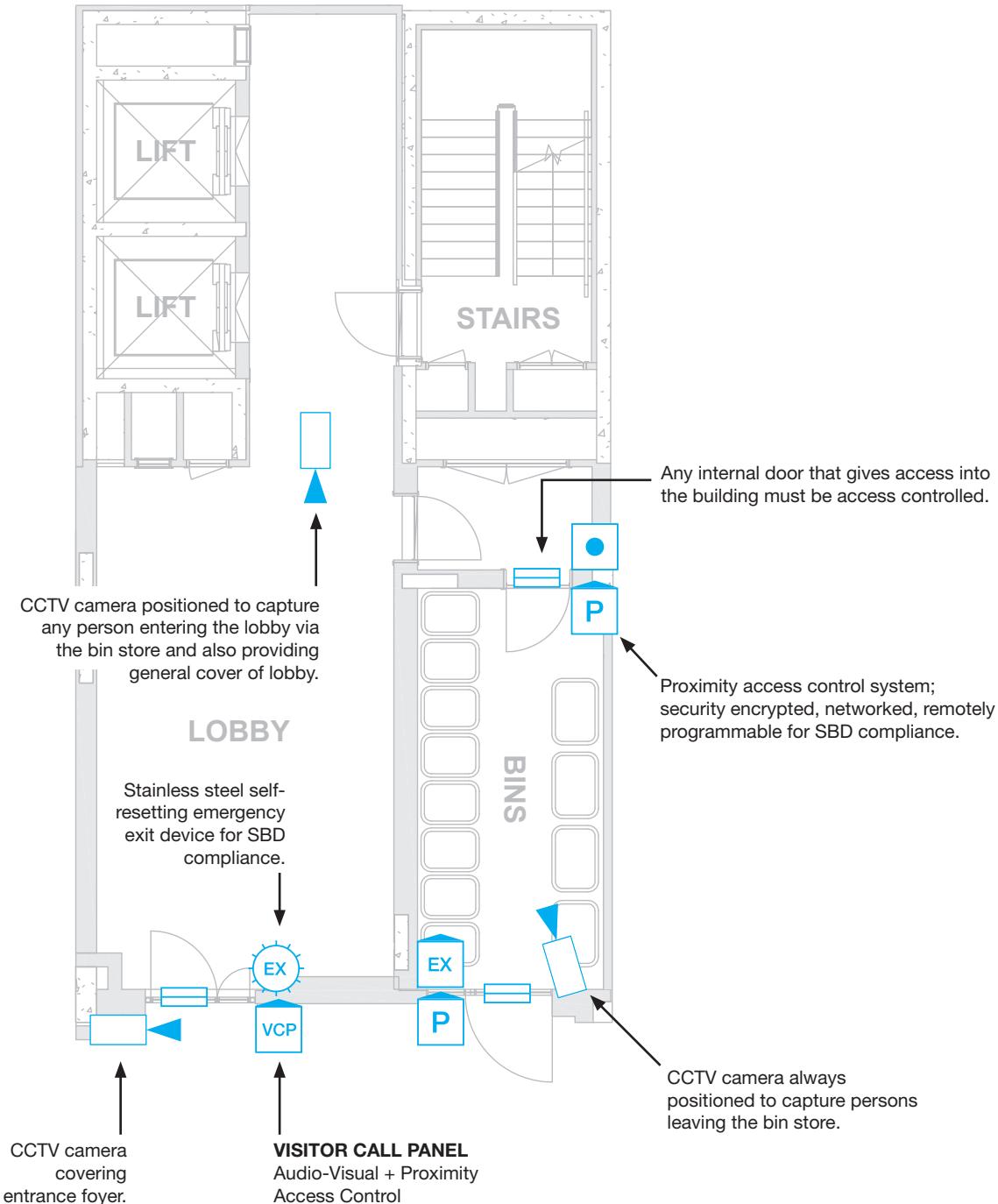
Security for bin stores (1).



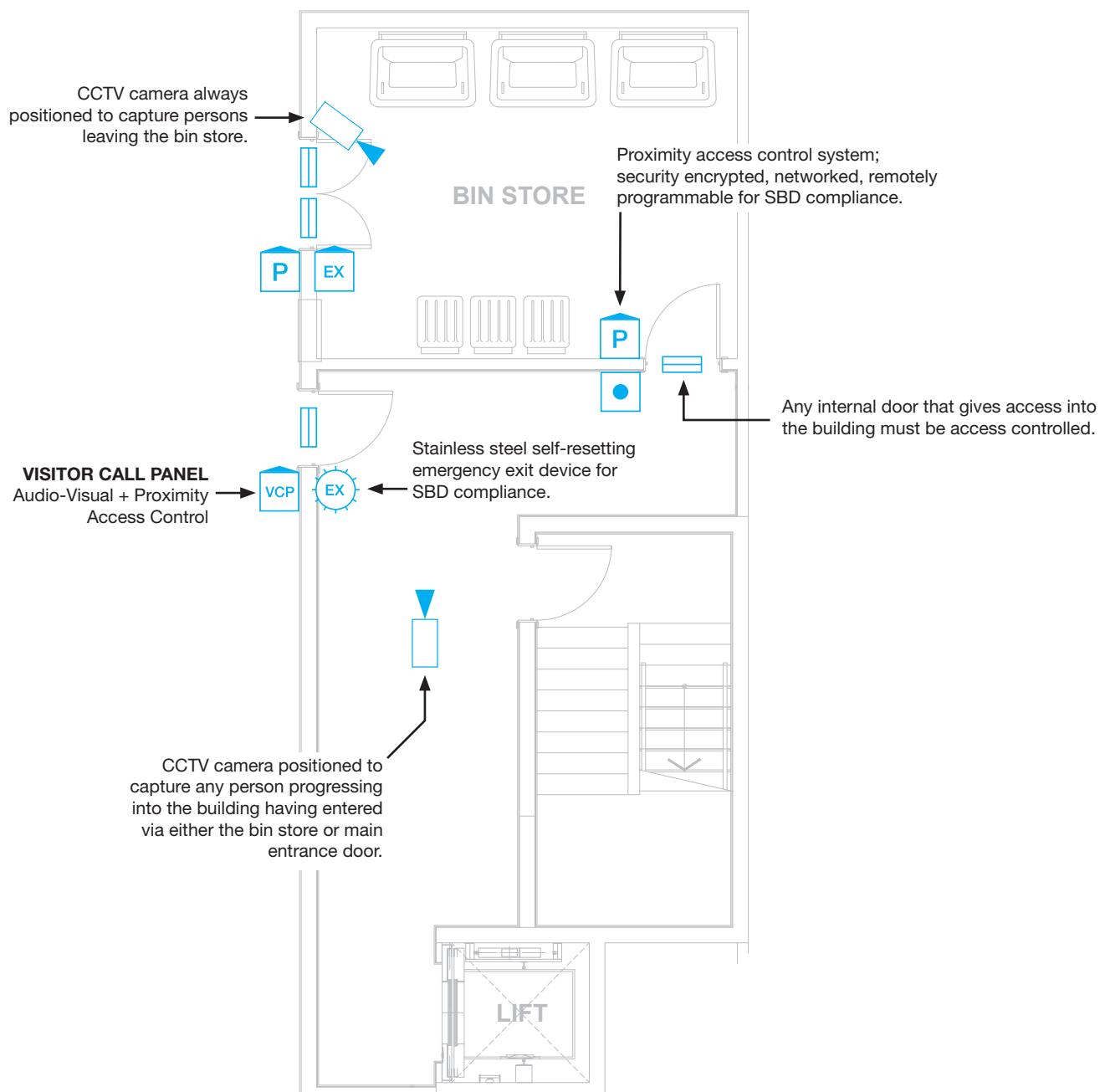
Security for bin stores (2).



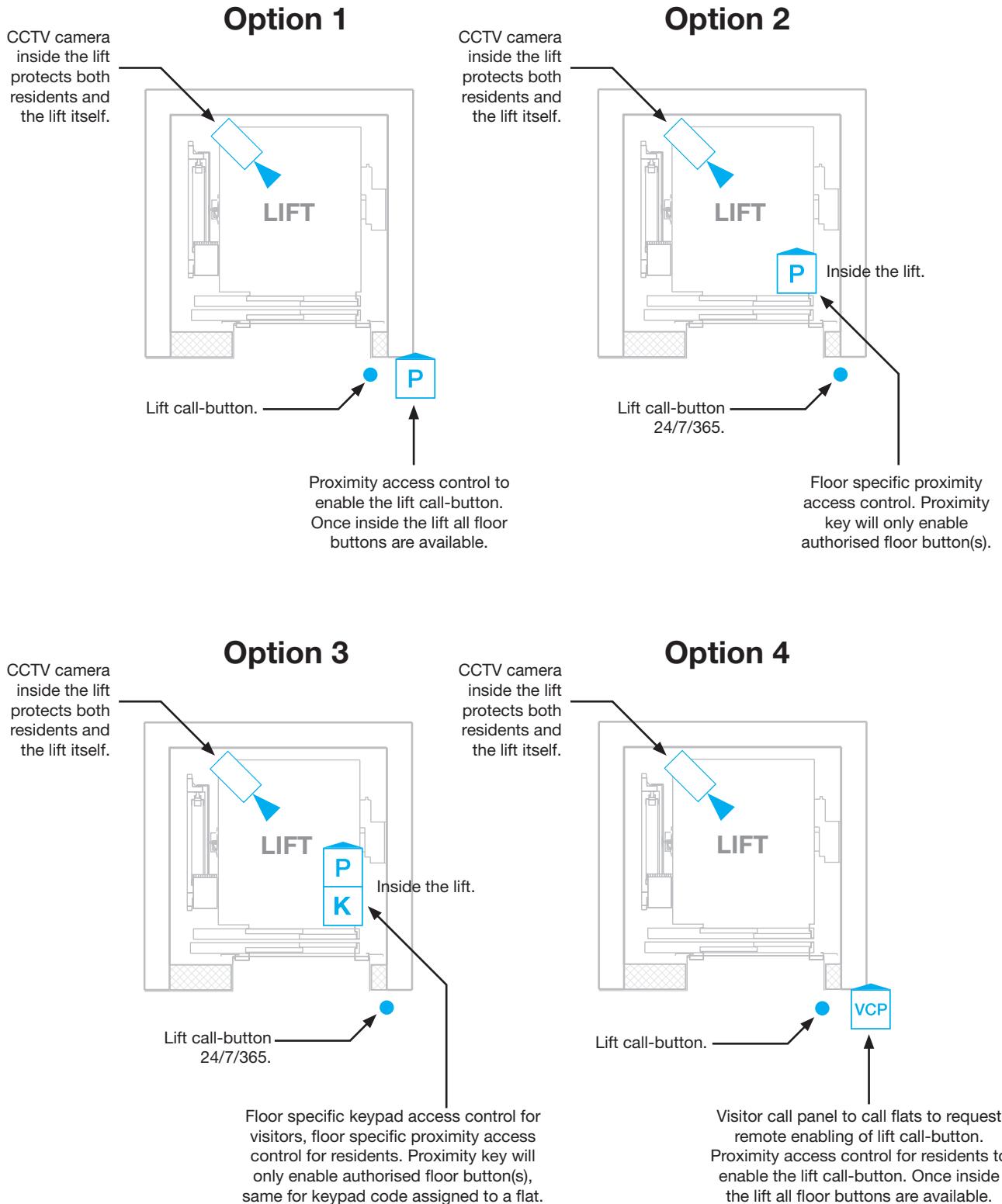
Security for bin stores (3).



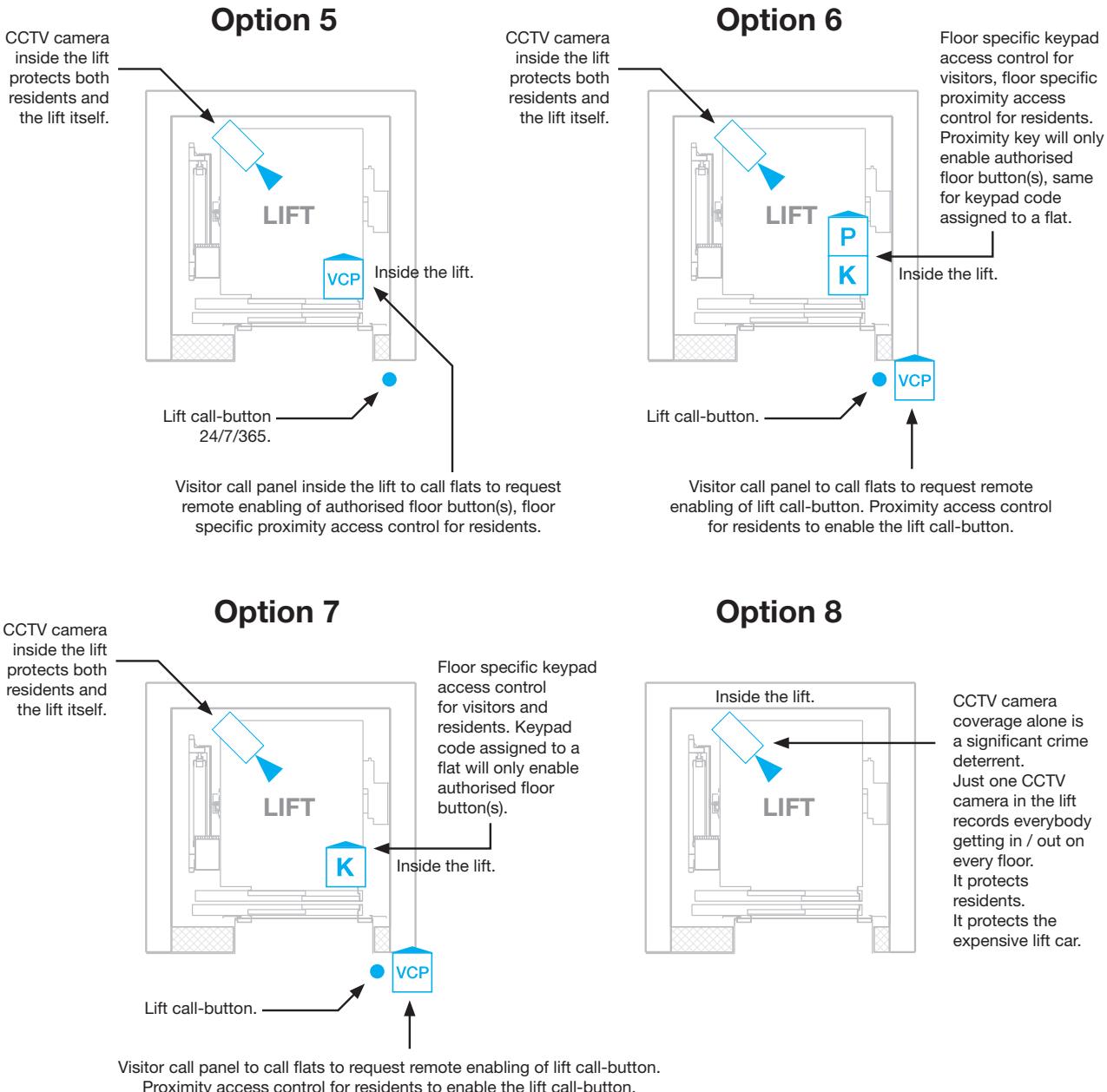
Security for bin stores (4).



Security for lifts (1).



Security for lifts (2).



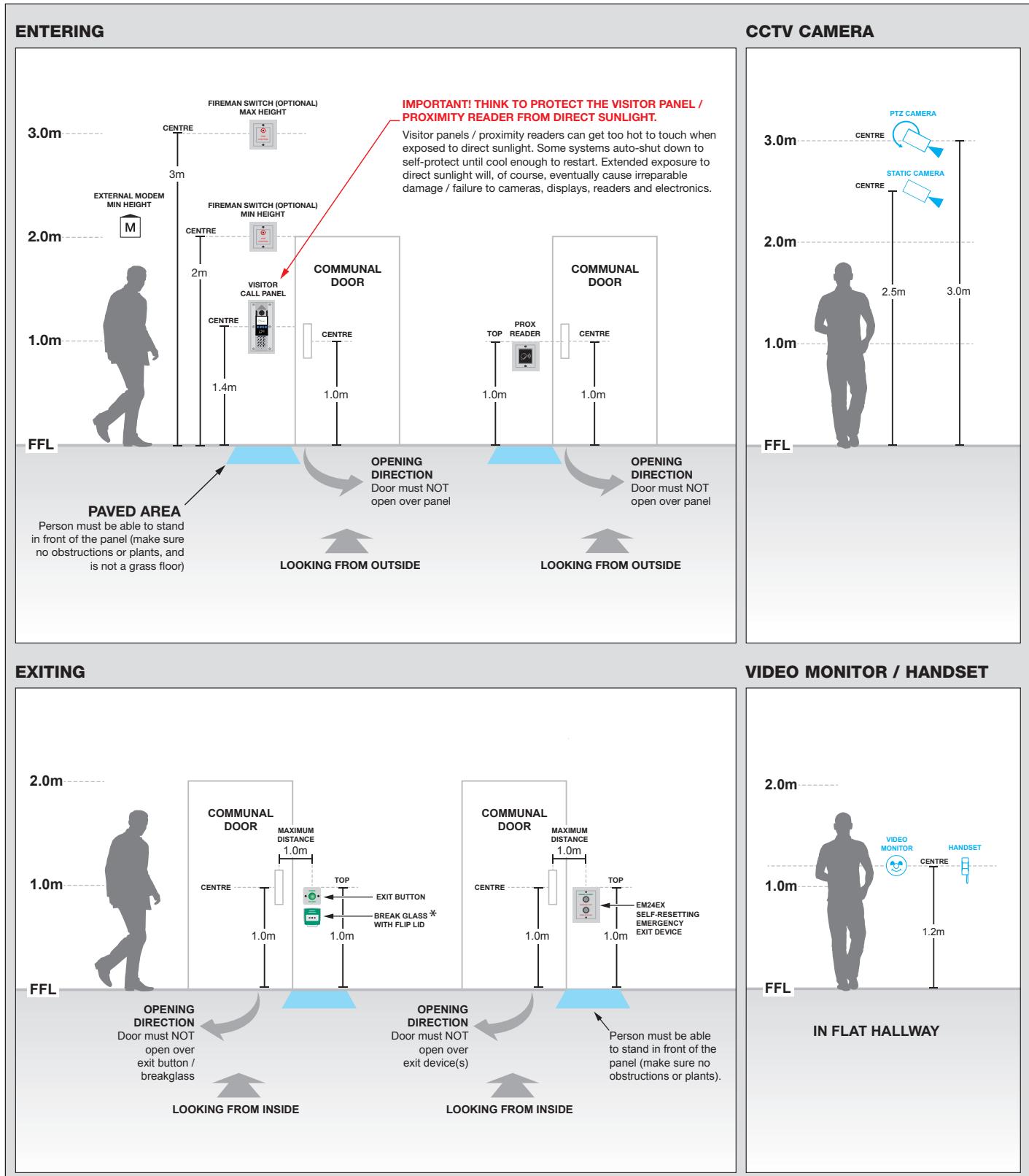
SECURITY OBJECTIVE

To compartmentalise the building restricting visitors and residents to specific floors and other relevant communal areas. It will not prevent or even reduce tailgating. Visitors using the lifts have already passed through a minimum of one and maybe two access controlled points (1) Main Building Entrance Door (2) Inner Lobby Door.

Options 6 or 7 requires the visitor to again call the resident for entry (to enable the lift call-button) and be verbally given the floor specific keypad code whilst inside the building not in the public street.

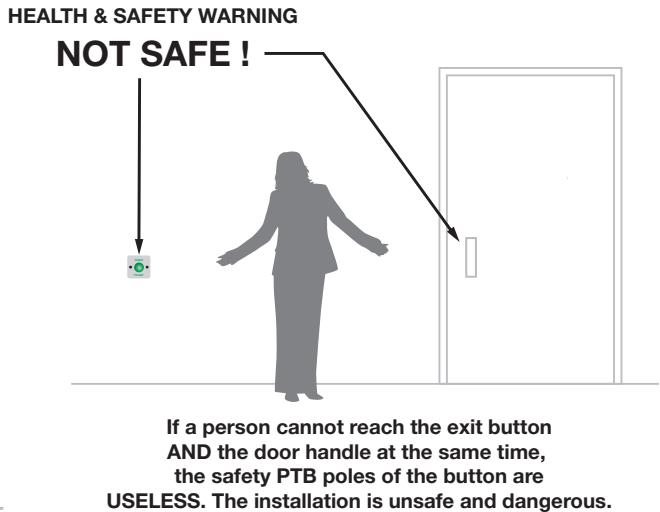
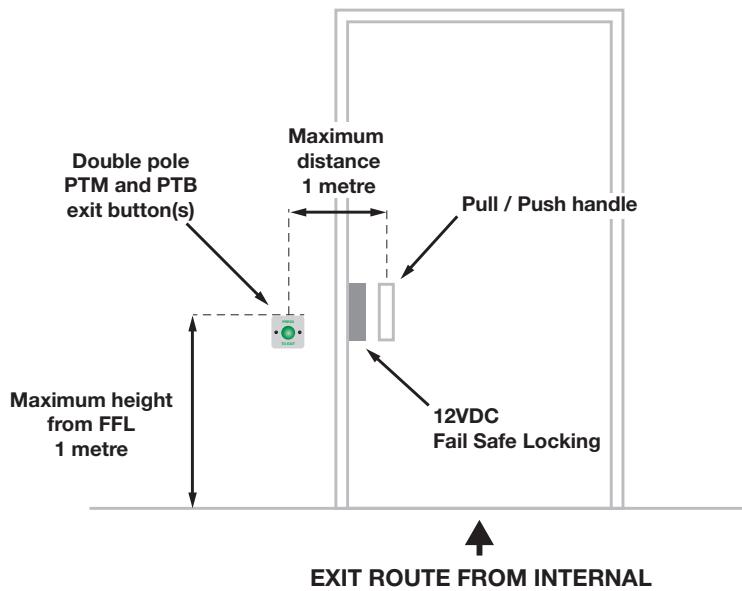
Security is, therefore, not compromised and residents/visitors benefit from convenience (no Meet & Greet). Additionally both install and maintenance costs are lower because the system is less complicated than option 5.

Fixing heights



IMPORTANT HEALTH & SAFETY

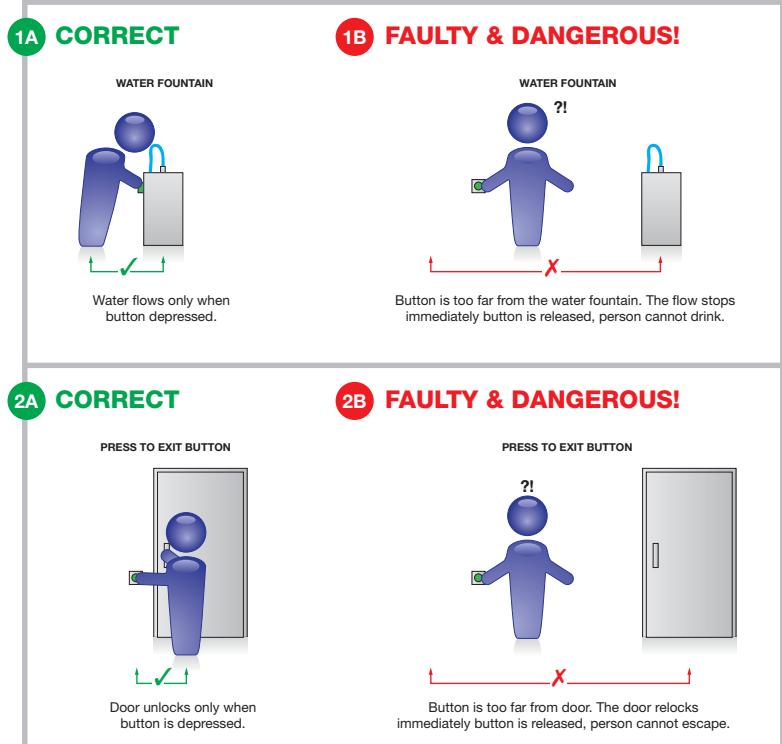
Double pole exit button position.



The **PTB (Push to Break)** contacts on the button break the lock power circuit but only when the button is pressed in.

The instant the button is released, the lock is immediately re-powered and the door immediately locks.

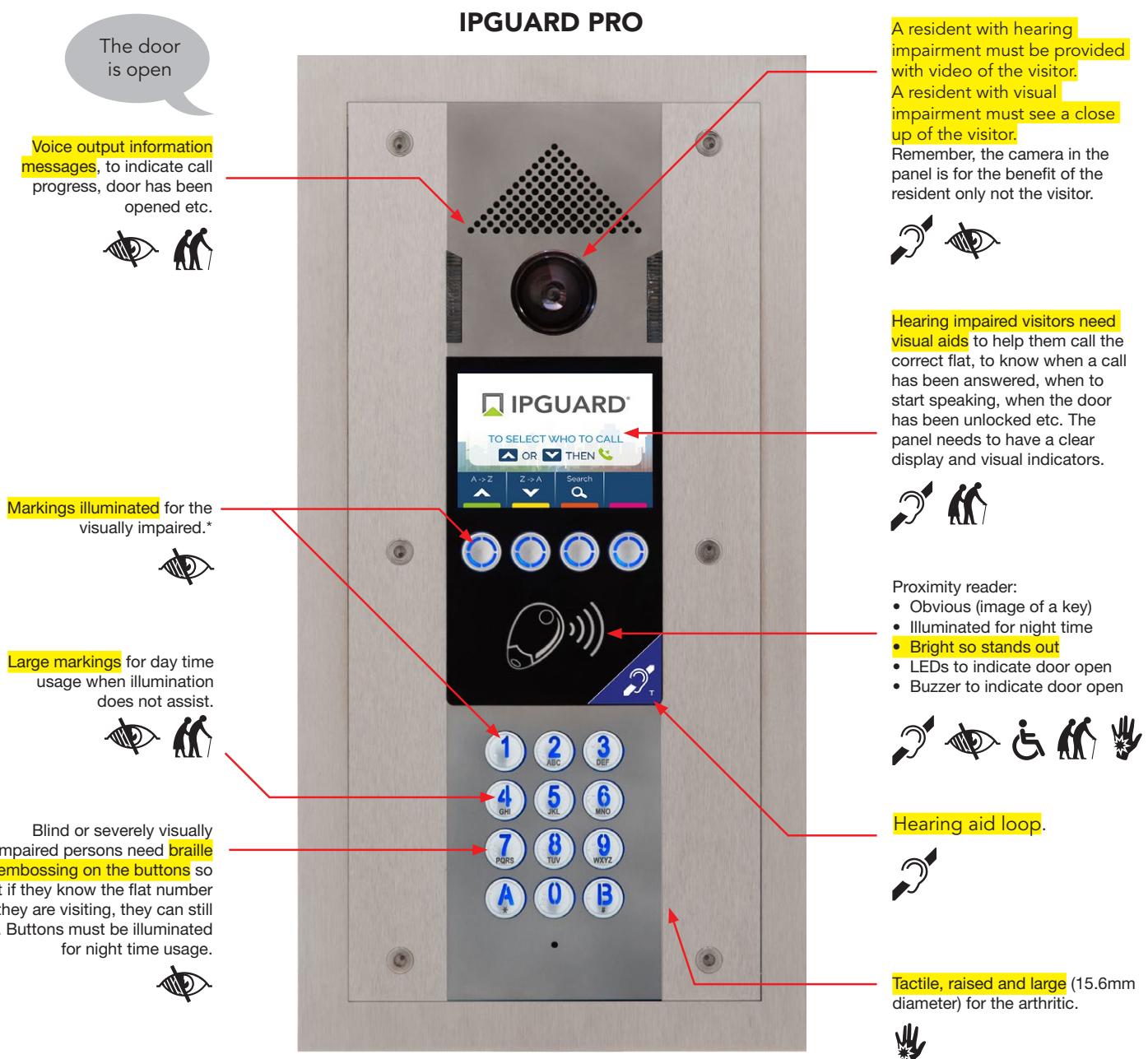
If the person cannot both press the button in and push or pull the door open at the same time, the installation is dangerous.



ALWAYS CHECK THAT WHEN A BUTTON IS PUSHED AND HELD DOWN THE DOOR STAYS UNLOCKED AND DOES NOT RE-LOCK. ALL INSTALLATIONS MUST COMPLY WITH BUILDING CONTROL REGULATIONS.

Visitor Door Entry Panels must be Equality Act 2010 (DDA) compliant.

FEATURES REQUIRED FOR EQUALITY ACT 2010 (DDA) COMPLIANCE.



* Panels with a yellow ring only around each button are not compliant because the yellow rings are of no use at night, no use to the colour blind, and do not assist in identifying the markings on a button.

Visitor Door Entry Panel, Equality Act 2010 Compliance Requirements

QUICK CHECKLIST

- | | TICK |
|---|--------------------------|
| 1. Camera integral to panel so that a resident with visual impairment can see a close-up of the visitor. | <input type="checkbox"/> |
| Note: An additional camera above the door covering the entrance area is highly recommended for security but only if it is recorded and/or displayed on resident televisions. | <input type="checkbox"/> |
| 2. Large, raised tactile buttons. | <input type="checkbox"/> |
| 3. Large descriptive markings / digits on buttons for daytime use. | <input type="checkbox"/> |
| 4. Large illuminated digits on buttons for night time usage. | <input type="checkbox"/> |
| 5. Braille embossing on buttons. | <input type="checkbox"/> |
| 6. Visual output information messages and LED icons on the panel to assist the hearing impaired. | <input type="checkbox"/> |
| 7. Voice output information messages on the panel to assist the visually impaired. | <input type="checkbox"/> |
| 8. Large obvious proximity keyfob reader with visual and audible output. | <input type="checkbox"/> |

Note: it must be obvious where the proximity reader is and what it is for, consider night time usage (if you have trouble seeing it or knowing what it is, it cannot be Equality Act compliant).

JUST LOOK AT THE VISITOR DOOR ENTRY PANEL:

What meaningful features have been provided to make it easier for blind, visually impaired, hearing impaired, arthritic, mobility impaired, or elderly people?



We know the risks. We have implemented security features to reduce those risks.

SECURITY MEASURE(S)

1. IDENTIFYING SECURITY RISKS AT VISITOR ENTRANCE DOORS.

- Anybody can enter the building simply by tailgating.
- Nobody can see who is entering the building in real-time.
- Multiple simultaneous nuisance calling of residents inevitably results in somebody opening the door.
- Problem residents (illicit trades) anonymously abusing the system by opening the door for their clients.
- Children and the elderly innocently opening the door to unwelcome visitors.
- Door is wedged open or not properly shut.

2. EVERY RESIDENTIAL BUILDING HAS INTERNAL RISKS.

- Burglary and other crimes committed by other residents and their visitors.
- Anti-social behaviour by other residents and their visitors.
- Illicit trades (prostitution, drugs, clubs).
- Illegal subletting.

3. VISITOR DOOR ENTRY SYSTEMS MUST BE COMMUNAL NOT PRIVATE.

Security can only be achieved by inclusion which means the community. Insecurity results when any one person, any one flat can let anybody into the building with total impunity because there is no management control. Management must always be part of the security equation.

A building visitor entrance door is shared by all. It is not a private entrance. All entry and exit through this door affects the whole building and all residents. The visitor door entry system should, therefore, provide for the convenience and security needs of the building as a whole.

Example: Illicit trades (prostitution, drugs) benefit from a conventional video monitor only door entry system because they can let anyone into a building with impunity.

- Picture log sent to the flat of the visitor who called.
- Full visitor call log.
- Inner lobby proximity controlled door.
- CCTV

- Compartmentalisation by floors.
- Picture log sent to the flat of the visitor who called.
- Full visitor call log.
- CCTV

- Picture log sent to the flat of the visitor who called.
- Full visitor call log.
- CCTV

4. UNDERSTANDING CRIME & ANTI-SOCIAL

We know the risks. We have implemented security features to reduce those risks.

SECURITY MEASURE(S)

BEHAVIOUR.

- Criminals do not want to be seen and recorded.
- Criminality and anti-social behaviour requires anonymity and secrecy.
- If the criminals and problem residents (illicit trades) cannot operate freely, they go elsewhere.

5. CONTROL HOW RESIDENTS SPEAK TO VISITORS AND OPEN THE DOOR.

Video monitors allow anybody in any flat to open the door to visitors.

- Children can open the door for visitors without supervision.
- Illicit trades (prostitution, drugs) can open the door to clients with impunity.
- Illegal sublet tenants, guests can open the door.

The security risk is increased if the:

- System cannot identify residents abusing the visitor door entry system.
- No system visitor and resident usage information available to management.

When residents know that the visitor door entry system installed logs all visitor/resident usage, they behave much more responsibly and do not simply buzz anybody into the building because they could be held accountable.

6. PROBLEM RESIDENTS.

Unfortunately, in some residential buildings, criminality and anti-social behaviour is caused by a small minority of problem residents. These people live in the building so keeping them out is not an option. The objective, therefore, is to limit the damage and anti-social behaviour caused from "within" to an absolute minimum. Obviously, all security measures implemented will also impact on unwelcome intruders.

The following security measures will assist in making the building more secure:

- Additional proximity access controlled stairwell / corridor doors and lifts to restrict access to only the relevant residents.
- CCTV cameras located on every communal landing level covering access onto that floor via the lift or stairwell are a powerful deterrent to problem residents / visitors.

- **CCTV**

- **Full visitor call log.**

- **Compartmentalisation by floors.**
- **CCTV**

EM24EX self-resetting emergency exit system

PRESS & HOLD of the Emergency button also cuts power to the EM24EX (Fail Safe Timer Relay) so both its lock relays fail (they need power to be operational) thereby **mechanically (physically) breaking** the fail safe lock power circuits so electrical locking released.

PRESS & HOLD of the Green Mushroom exit button also **mechanically (physically) breaks** the fail safe lock power circuit so electrical locking released.

AUTOMATICALLY SELF-RESETS



To comply with both BS EN 60839-11-2 and the NSI NCP 109.3 Code of Practice for Illumination & Sound Indication.

Pressing the Emergency button momentarily:

Green light illuminates for the preset duration the electrical locking is released.

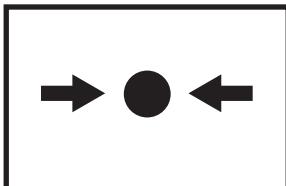
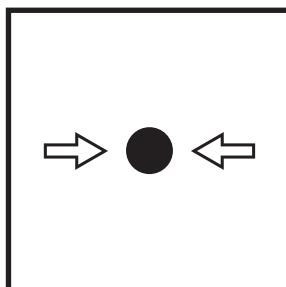
Alarm buzzer sounds for the preset duration the electrical locking is released.



PRESSING THE EMERGENCY BUTTON MOMENTARILY (**Press & Release**) acts as a power OFF / ON to the EM24EX (Fail Safe Timer Relay) which activates the hold unlocked release feature of the electrical locking for the preset duration period.

PRESS & HOLD of the Emergency button also **mechanically (physically) breaks** the lock power circuit so electrical fail safe locking released.

BS-EN-11 provides examples of symbols on emergency "call-points", to simplify understanding of usage for all.



EMERGENCY BUTTON



Building Regulations Part M (Access), Clause 2.17C.

"Doors must be openable.....using a CLOSED/CLENCHED fist..."

The Emergency button must be raised proud of the mounting surface to comply.

DELIVERING SECURITY SOLUTIONS

NACD specialises in the manufacture, trade supply, project design, installation, commissioning, service and repair of security systems.

OUR PRODUCT RANGES

BATICONNECT® CLOUD Total Remote Management

CCTV video surveillance systems

Thermal CCTV protection detection

IPGUARD® 4G/IP/GSM Smart Visitor Door Entry

IPVIEW® Full IP/PoE visitor video door entry

EVE196-X3-RS access control

Satellite TV-IRS installations

Automatic gates

Equality Act compliance product solutions

Powered doors

Contract and planned maintenance

Emergency 24/7 building security systems support

Refurbishments



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