

Fire Strategy

36 Lancaster Grove - Stage 2 Strategy

02th February 2016

NTA Planning

bbseven.com

FIRE | SECURITY | CONTINUITY



Revision History

VersionDate		Author	Comments	
Issue 01 02/02/2016 Sh		Shane Ryan	Initial Issue to Design Team	
Document Reference				

MSF 031 REV 4

Key to Annotations:

Revision Changes Items Requiring Attention

Prepared by	Prepared for	Architect	
Shane Ryan	Mandip Sahota	Shaun Knight	
BB7 Fire 23 Star Hill Rochester Kent ME1 1XF UK	Nicholas Taylor and Associates 31 Windmill Street London W1T 2JN	Shaun Knight Architecture Ltd 40 Falcon Road Hampton TW12 2RA	
0203 603 5535 shaneryan@bbseven.com	020 7636 3961 ms@ntaplanning.co.uk	020 8979 4949 skarchitecture@hotmail.co.uk	

bbseven.com

FIRE | SECURITY | CONTINUITY

Contents

BB7

Exe	ecutive Summary	1
1	Introduction	2
2	Building Description	3
3	Means of Escape	4
4	Internal Fire Spread and Fire Resistance	7
5	External Fire Spread	10
6	Fire Safety Systems	11
7	Fire Service Access	13
8	Management	14
9	Legislation	15

Executive Summary

The project consists of the refurbishment of the building 36 Lancaster Grove. The building is grade listed building, which is being converted from a fire station to residential use.

The following paragraphs give an outline to the main proposals contained within this report but should not be read in isolation to the provisions detailed throughout the document.

Evacuation Strategy

The residential parts of the building will adopt a stay put strategy whereby only the occupants of the apartment containing the fire are expected to make an escape.

Elements of Structure

The building is an existing building and therefore it is assumed that the structure of the building will satisfy this requirement. Where it is identified that this is not the case or new elements are provided then the structure should be upgraded to provide 60 minutes fire resistance where practicable.

Fire Alarm and Detection System

The following fire alarm and detection systems are proposed, which is detailed in section 5:

- Grade D Category LD3 in the residential apartments with protected hallways.
- Grade D Category LD1 in open plan apartments.
- Category L5 system in the common staircase to activate the mechanical ventilation.

Smoke Management

The staircase requires a high level automatic vent for smoke clearance for the fire service, with a minimum free area of $1m^2$. However, it is understood that the top floor does not have access to an external wall or roof and therefore a mechanical ventilation system will be provided to provide protection to the fire service. An engineering study or the smoke contractor needs to determine the appropriate extraction rate to offer the same protection to the fire service as a $1.0m^2$ vent.

Fire Suppression

A water mist system will be provided to the following apartments:

- Apartments that are open plan where the bedrooms have to escape through a living or kitchen area.
- Apartments that open directly into the single staircase without a protected hallway or lobby.

Access and Facilities for fire service

The fire service access to the site will be via Lancaster Grove.

As all buildings are less than 18m no firefighting shafts are provided and therefore the fire service access within the buildings will be via the residential staircase.

The distance from the firefighting appliance to the furthest point of the furthest apartments should be no further than 45m. If the distance is greater than 45m then a dry riser should be provided to provide adequate pressure on the top level.

1 Introduction

1.1 Project Description

The project consists of the refurbishment of the building 36 Lancaster Grove. The building is grade listed building, which is being converted from a fire station to residential use. This report outlines the proposed fire safety arrangements for the construction of the residential apartments.

1.2 Instructions

BB7 Fire has been appointed to develop an outline fire strategy for planning application of 36 Lancaster Grove.

1.3 Applicable guidance

The fire safety design has been based on the recommendations given in Approved Document B. However, as is the case with many complex buildings the architectural features mean that it is not possible to apply all the prescriptive recommendations of fire safety guidance in order to satisfy the requirements of the applicable legislation.

This report may therefore propose some additional fire engineered solutions which offer an alternative method of meeting the legislative requirements. As with all fire engineered solutions, the importance of early discussion and agreement with the Approving Body must be emphasised.

1.4 Drawings

This report is based on drawings provided at the time of this report by Shaun Knight Architecture Ltd. The drawings used are shown in the below table:

Drawing Number	Date	Drawing Title
003	December 2015	Proposed Basement
004	December 2015	Proposed Ground
005	December 2015	Proposed First
006	December 2015	Proposed Second
007	December 2015	Proposed 3 ^{rd,} 4 th & 5 th

Table 1: Drawings

1.5 Strategy Limitations

This strategy puts forward proposals for the design of the 36 Lancaster Grove and for the fire safety systems to be incorporated within the buildings. It is intended that these will satisfy the requirements of the relevant legislation. The final decision as to whether the proposals satisfy the requirements rests with the approving authority.



This document may contain some in-principle agreements already reached with the approving authorities. However, any agreements reached prior to a formal application under the Building Regulation or other relevant legislation must be considered as risk items until formally approved. Whilst these would have been negotiated and agreed in good faith, the approving authorities are not bound by them and they may therefore be subject to change.

Unless otherwise stated, the proposals in this document are intended to satisfy life safety requirements only. They are not directed towards property protection. Whether increased levels of protection are considered necessary to meet property protection requirements should be discussed by the client with those responsible for insuring the building.

The strategy should be seen as a live document that may evolve during further discussions within the design team and with the approving authorities.

2 Building Description

2.1 Project Location

36 Lancaster Grove is located in London. The site is bounded by Lancaster Grove to the North and Eton Avenue to the South. The east elevation is confined by Lambolle Place and the west elevation is adjacent to neighbouring buildings. The following indicative plan details the location of the development:



Figure 1: Location of 36 Lancaster Grove

2.2 Description

36 Lancaster Grove is a Grade II listed building, which was a former fire station building constructed in 1915. It is proposed that the building is refurbished and converted into residential

bbseven.com

FIRE | SECURITY | CONTINUITY



apartments. The conversion consists of a small single staircase building, which is provided with a partments on the ground, first and second level of the building. The building is provided with a third, fourth and fifth floor but this is a multi-storey apartment, which is accessed at second level. The first floor level is also provided with apartments that access the single staircase via an open balcony and open terrace. There are additional apartments that are accessed directly from outside at ground and basement level.

2.3 Purpose Groups

The below table outlines the purpose groups found at 36 Lancaster Grove:

Table 2: Purpose Groups

Title	Purpose Group	Description
Residential (Dwellings)	1 (a)	Flats
Storage and other non- Residential	7 (b)	Car Parks, Stores and plant

3 Means of Escape

3.1 Evacuation Strategy

In the residential parts of the building a 'stay-put policy' evacuation strategy will be adopted. The principle of such a strategy is that only the occupants of the flat containing the fire (the 'flat of origin') are expected to make an escape. This approach is supported by national guidance for the Building Regulations and is based on the following assumptions:

- A fire will generally only occur in a flat
- There is no reliance on external rescue
- There is a high degree of compartmentation and therefore a low probability exists that there will be fire spread beyond the flat of origin
- If a fire does occur within the common parts, the materials and construction used in these areas should limit the development and spread of fire

3.2 Internal arrangements of apartments

The following options are available regards to the internal arrangements of single level apartments, which is in accordance with the guidance of Approved Document B:

- a) Restricted travel distance; or
- b) Protected entrance hall;

In layout type a) the total distance from the most remote point within the apartment should not exceed 9m and cooking facilities should be located away from the entrance door.

BB7

In type b) the 9m distance limit is applied from the furthest room door to the main entrance door. There is no distance limit on travel within the room.



Figure 2: Aparment Layout Options

At 36 Lancaster Grove it is understood that a number of apartments are designed to have the kitchen/living room area open, but this is only acceptable if the bedrooms have an alternative escape directly from the bedroom, which can be achieved in the following way:

- An escape window that is not more than 4.5m above the ground directly below the window. The window must have an opening of at least 0.33m² (450mm high and 450mm wide) and the bottom of the openable area should be not more than 1.1m above the floor; or
- An alternative exit from the apartment that leads to outside or into the staircase. However, the occupants in the bedrooms should not have to escape through the living/kitchen area to reach the alternative exit.

If the above two options cannot be achieved then the apartments can remain open plan but a suppression system (proposed as a water misting system) will be required in the kitchen/living area and therefore designed as open plan apartments. A water mist system is considered to offer the same protection, if not better protection, than a code compliant protected corridor.

The second floor is provided with a multi-storey apartment. This apartment will be provided with a protected staircase that consists of 30 minutes fire resistant construction and all doors to habitable rooms should be FD20 (or E20) doors but self-closers will not be required. The apartment will also be provided with a water mist system throughout and therefore the apartment is considered to be in accordance with section 2.16, bullet point D of ADB.

An apartment on the first floor is provided with a mezzanine level, which is more than 4.5m above ground level and not provided with alternative exit, therefore the following measures, should be followed:

- The gallery should overlook at least 50% of the room below;
- The distance between the stair to the gallery and the front door should be within 3m;
- The distance from the furthest point of the mezzanine level to the stair should be no more than 7.5m; and



• Cooking facilities should either be contained in fire resisting construction or remote from the final exit and escape route from the apartment.

There is also a two storey house that is accessed directly from outside on the site and therefore this will be treated as a dwelling house. The dwelling house should either be provided with a protected staircase or escape windows from the top floor (the design of escape windows are detailed in the above bullet point). If the two options are not possible then a water mist system should be provided throughout the dwelling house.

3.3 Common parts to apartments

There are six units that are accessed directly from outside at the ground and basement level, the rest of the apartments are accessed via a common staircase.

The apartments that access the common staircase can be viewed in accordance with the guidance for a small single stair building based on the following reasons:

- The top floor where apartments are accessed is less than 11m above ground level;
- There are no more than 3 storeys above ground where apartments are accessed;
- The staircase does not connect to a covered car park or an ancillary accommodation; and
- A high level vent will be provided at the head of the stairway for the fire service.

Most of the apartments open directly into the staircase, which is considered acceptable under the guidance as long as it is no more than 2 dwellings per storey. As such, the apartments should be provided with a protected entrance hall or a lobby between the common stair and dwelling.

On the ground and first level only two apartments open directly into the staircase, which is considered reasonable. However, these apartments should either be provided with a protected hallway as shown in figure 2 or each apartment is accessed via a communal lobby. Both scenarios are designed to form two door protection between the apartment's habitable rooms and the common staircase. If this is not achievable then a water mist system is required in the apartments. This is considered to offer the same level of protection if not better than a protected lobby and therefore considered an acceptable alternative.

The second storey is provided with four apartments and currently two apartments are accessed via a protected lobby and the other two apartments open directly into the staircase. All apartments at this level will need to open into a protected lobby. If this is not achievable non-compliant apartments on the second level will require a water mist system throughout to ensure there is adequate protection to the single staircase.

The single staircase also provides escape from the apartments that are accessed via the external balcony or open terrace. This is considered acceptable as the occupants escaping from this area will only escape if there is a fire in their own apartment not when there is a fire in one of the apartments opening into the staircase due to the proposed evacuation strategy. However, if the occupants did wish to escape, if there was a fire in an apartment that opened into the staircase, they can either escape via the staircase if possible or the external balcony. The external balcony is no more than 4.5m above ground level, which is no different to escaping from a first floor window. However, if occupants did not wish to escape off the balcony they can use it as a safe refuge.

The exit widths within the residential elements of the development should be above 750mm. This is because the exit widths in residential elements are not critical and the minimum size of exits can be based on the needs for everyday use.



As these parts of the premises are primarily residential with an evacuation strategy based on evacuation of only the dwelling concerned, the common staircase width will be deemed acceptable if they are sufficient for everyday use. However, in the upper part of the building the rise of each step is steep, and does not meet the appropriate guidance in Approved Document K. To change the staircase within the existing restraints of the building would prove both impracticable and very cost prohibitive. It should be noted that the occupants using the staircase for means of escape, use the staircase for day to day use and therefore would be familiar with the steepness of the steps and pitch of the flight. However, to reduce the likelihood of falling during means of escape it is recommended that appropriate signage to warn the occupants about the staircase condition is provided within the stair enclosure.

The staircase requires a high level automatic vent for smoke clearance for the fire service, with a minimum free area of $1m^2$. However, it is understood that the top floor does not have access to an external wall or roof and therefore a mechanical ventilation system will be proposed. An engineering study needs to determine the appropriate extraction rate to offer the same protection to the fire service as a $1.0m^2$ vent

3.4 Disabled Evacuation

Specific escape measures for mobility impaired persons within the residential blocks are not considered necessary. It is generally considered that persons able to access their apartments unaided will be able to egress unaided. The high level of compartmentation will also protect them from the effects of fire and combustion gases.

4 Internal Fire Spread and Fire Resistance

4.1 Test Standards

Fire resisting elements should meet the performance standards recommended by the relevant part of BS 476, BS EN 1363, BS EN 1365 or BS EN 1366.

4.2 Elements of Structure

The height of upper floor surface of the topmost floor to lowest ground level external to the building is greater than 5m and lower than 18m in height. Therefore the elements of structure will therefore achieve a minimum of 60 minutes fire resistance.

The building is an existing building and therefore it is assumed that the structure of the building will satisfy this requirement. Where it is identified that this is not the case then the structure should be upgraded to provide 60 minutes fire resistance where practicable.

Any areas of the structure replaced or new elements of structure will be constructed to achieve a minimum of 60 minutes fire resistance.

All floors will form compartment floors achieving the same period of fire resistance as the elements of structure.

Any elements of structure which only support themselves or a roof do not require any specific fire resistance.

4.3 Compartmentation

Any elements of compartmentation or structure that are clearly not provided with fire rating will be upgraded with the recommended levels of fire protection. Each floor is required to be a fire compartment floor to ensure fire spread does not occur between floors, this should meet 60 minutes fire resistance. It's understood that the building is a listed building and the ceiling will not be removed, therefore to provide compartment floors this can be achieved from the floor above by removing the floor boards and using a proprietary fire barrier system fixed to the floor joists.

Apartments shall be separated from the rest of the building by 60 minutes fire resistance. All apartment entrance doors will be FD30S (E30 Sa) and self-closing.

Apartments with internal protected internal hallways will be enclosed in 30 minutes fire resistance construction and FD20 fire doors.

The escape stair will be constructed as protected shafts having a minimum fire resistance not less than that of the elements of structure i.e. 60 minutes.

The communal lobby doors leading onto the staircase from apartments will be provided with FD30s doors with a self-closer.

The service riser should conform to the fire rating of the building, 60 minutes with FD30s doors where these doors open into the protected corridor/lobby.

Any bin stores should be separated from the residential element by 60 minutes fire resisting construction.

Any storage areas will be separated from the remainder of the building by construction having a minimum of 30 minutes fire resistance with FD30s doors.

4.4 Fire Doors

The general rating of a fire door is half the rating of the wall in which it is contained but no less than 30minutes.

All doors should be provided with closers, except doors to internal hallways, riser and small cupboard doors. Riser and small cupboard doors should be kept locked shut and signed as such.

It is acceptable to provide doors on hold open devices which release on detection. The detectors should be located suitably close to the doors.

Doors should open in the direction of escape. This may require some doors to open in two directions (i.e. cross corridor doors).

Stair doors or cross corridor doors on cores with mechanical ventilation don't require cold smoke seals.

4.5 Fire Stopping

Any openings for services within compartment lines will be provided with a proprietary sealing system which has been shown by test to maintain the fire resistance of the wall/floor/cavity barrier. However, fire stopping may be used around a pipe where the nominal internal diameter of the pipe does not exceed the provisions set out on the table below:

Situation		Pipe material and maximum nominal internal diameter (mm)			
		(a)	(b)	(c)	
		Non-combustible material	Lead, Aluminium, aluminium alloy, UPVC, fibre cement	Any other material	
1)	Structure (but not a wall separating buildings) enclosing a protected shaft which is not a stairway or a lift shaft	160	110	40	
2)	Compartment wall/floor between flats	160	160 Stack pipe 110 branch pipe	40	
3)	Any other situation	160	40	40	

Table 3: Pipes passing through walls/floors

Ductwork passing through compartment/fire resistance walls should be either contained within fire resisting construction or provided with fire dampers.

Where duct work serves both escape routes and accommodation, or passes through walls separating zones the ductwork should be provided with fire and smoke dampers activated on detection (unless it is contained within fire resisting construction through its route to fresh air).

Pipes should be suitably protected where they break through a compartment walls or floors. In some instances where they are of limited internal diameter and suitable material, no other measures will be required as detailed in the above table. Fire collars will also be acceptable for pipes and ducts where they are appropriate.

All fire stopped products should have been tested in accordance with the relevant part of BS 476. They should also be fitted in accordance with the manufactures instructions.

Any duct passing through the enclosure of a protected stairway or entrance hall of residential apartments will be constructed of rigid steel construction and appropriately fire stopped.

4.6 Concealed Spaces

Cavity barriers, providing the following periods of fire resistance, will be provided in accordance with the recommendations of Section 9 of Approved Document B in order to prevent fire spread around a fire-separating element or within extensive cavities:

Table 4: Fire Reistances (Mins)

Load Bearing Capacity	Integrity	Insulation
No Requirement	30	15

4.7 Internal Surface Finishes & Linings

To reduce the potential for uncontrolled spread of flame and unreasonable contribution to the fire size from the wall and ceiling linings; the materials used will be limited by the recommended performance specification in BS999, when tested in accordance with BS 476 Parts 6 and 7 for the national classifications or BS EN 13501 Part 1 and the associated ISO test methods for the European classifications.

Wall and ceiling linings will be installed to comply with the following restrictions:

BB7

Location	Integrity	European Class
Small rooms of area not more than:		
a. 4m ² in residential accommodation	3	D-s3, d2
b. 30m ² in non-residential accommodation		
Other rooms	4	
Circulation spaces within dwellings		C-S3, d2
Other circulation spaces, including the common areas of blocks of flats	0	B-s3, d2

Table 5: Internal Surface Finishes & Linings

5 External Fire Spread

5.1 Space Separation

External fire spread calculations will be checked against the guidance given in BR187, in the design stage of the project. However, it should be noted that it is unlikely the external fire spread will be an issue as the floors and walls between apartments are compartment walls and floors.

5.2 Construction of External Walls

In order to prevent fire spread on the external wall of the building, the following surface finishes will be used:

Table 6: Surface Finishes of External Walls

Use	Distance from Boundary (m)	Building Height (m)	National Class	European Class
	<1	Any	Class 0	B-s3, d2
Any Other		<18	No Pr	ovision
Dullaing	≥1	≥18†	Class 0	B-s3, d2

*Timber cladding at least 9mm thick is acceptable

+Can be reduced to a BS 476-6 index of not more than 20, or class C-s3, d2 for elements not more than 18m above ground

The proposed building is less than 18m in height and is more than 1m from the boundary; therefore there is no fire provision for external surface or walls.

6 Fire Safety Systems

6.1 Fire Alarm and Detection Systems

6.1.1 Categories of Fire Alarm Systems

Other than where mentioned below, automatic fire detection and alarm system will be provided within each dwelling to meet the recommendations of BS 5839-6 (2013 edition) to a Grade D Category LD3.

The apartments with open plan layout will be provided with an automatic fire detection system complying with a minimum of Category LD1 grade D standard in accordance with BS 5839-6 (2013 edition). To avoid false alarms a multi-criteria detector head can be used in the living/kitchen area instead of using a heat detector in the kitchen and a smoke detector in the living room, but this is optional and down to the designer of the system.

6.1.2 Category of fire detection and alarm system in the common parts

An automatic fire detection system will be provided in the common residential staircase at each level to operate automatic smoke ventilation systems. These systems will meet the recommendations of BS 5839-1 Category L5, with detectors typically sited only in the common stair. No warning devices (alarms) or manual call points will be provided in the common residential areas.

6.2 Smoke Management

It is proposed that ventilation to this block will be based on the recommendations for small single stair buildings.

The staircase requires a high level automatic vent for smoke clearance for the fire service, with a minimum free area of $1m^2$. However, it is understood that the top floor does not have access to an external wall or roof and therefore a mechanical ventilation system will be provided to provide protection to the fire service. An engineering study or the smoke contractor needs to determine the appropriate extraction rate to offer the same protection to the fire service as a $1.0m^2$ vent.

6.3 Fire Suppression

A water mist system will be provided to the following apartments:

- Apartments that are open plan where the bedrooms have to escape through a living or kitchen area.
- Apartments that open directly into the single staircase without a protected hallway or lobby.

6.4 Escape Lighting

Emergency lighting, meeting the recommendations of BS 5266 Parts 1 and 7, will be provided in the following areas:

Table 7: Areas of Escape Lighting

Purpose group or use	Areas requiring escape lighting	
Residential	All common escape routes	
Generally	a. All toilet accommodation with a floor area over 8m2	
	b. Electricity and generator rooms	
	c. Switch room/battery room for emergency lighting system	
	d. Emergency control room	

6.5 Escape, Equipment and Other Signage

All signage will meet the recommendations of BS 5499-1.

Fire resisting doors will be provided with signage meeting the recommendations of BS 5499-5 depending on their method of closure, namely:

Table 6: File Doo	signage		
Method of Closure	Signage	Sign Diameter	Letter Height
Self-closing device	Fire door keep shut	00	From
Kept locked shut	Fire door keep locked shut	60mm	Smm

Table 8:Fire Door Signage

Fire exit doors and escape routes in and around the building will be provided with signage complying with the recommendations of BS 5499-5.

6.6 Secondary Power Supply

A secondary power supply will be provided to any services in the building essential to maintaining the effectiveness of life safety systems and fire equipment installation; this consists of the following systems:

- Smoke ventilation system
- Emergency Lighting
- Fire alarm and detection systems
- Fire and Smoke Control devices

The above systems backup supplies should comply with their perspective British Standards and in some the supply can be achieved with battery backup.

7 Fire Service Access

7.1 General Vehicle Access

Fire Service access is required to provide access for fire personnel and a water supply to within a reasonable distance of the building entrances. Where there are dead end routes within the site, these should either be limited to approximately 20m or a turnaround (turning circle or hammerhead) facility provided.

All routes will be suitable for a fire appliance in terms of hard standings supporting the mass of a fire appliance (14 tonnes). Fire access routes should also have dimensions in accordance with the table below:

	-					
Appliance type	Minimum width between kerbs	Minimum width of gateways	Minimum turning circle between curbs	Minimum turning circle between walls	Minimum clearance height	Minimum carrying capacity
Pump	3.7m	3.1m	16.8m	19.2m	3.7m	14.0
High Reach	3.7m	3.1m	26.0m	29.0m	4.0m	17.0
Neter les entre etter		and a second base of a	the off a further of a structure of a	and the second s	and a fail and all the	e de sta

Table 9: Vechicle Requirments

Note: because the weight of high reach appliances is distributed over a number of axles, it is considered that their infrequent use of a carriageway or route designed to 14.0 tonnes is not likely to cause damage. It would therefore be reasonable to design roads bases to 14.0 tonnes, although structures such as bridges podium etc. should have the full 17 tonnes capacity.

The fire service access to the site will be via Lancaster Grove where the fire service will be able to drive and park outside the entrance to the site.

7.2 Fire-fighting Access within the Building

The height of the topmost floor, excluding the upper level of the multi-storey apartment, is measured at 4.2m above access level therefore the residential area does not require a firefighting shaft or lift.

The distance from the firefighting appliance to the furthest point of the furthest apartments should be no further than 45m. If the distance is greater than 45m then a dry riser should be provided to provide adequate pressure on the top level. This will be reviewed and discussed with the design team to determine the correct distance.

7.3 Smoke Extraction

Ventilation is provided to the residential staircase which will significantly assist the fire service.

7.4 Water Supplies

Hydrants should be provided within 90m of the dry fire main inlet. Where there is insufficient pressure and flow a tank may be required.

Consultation will take place with the fire authority to establish the need, if any, for additional fire hydrants.

8 Management

8.1 Management plan

A management plan is to be formulated that ensures the maintenance of all fire safety features within the building. This is to include suitable risk assessment of any variations to the management plan.

Annex H of BS9999 should be consulted as it provides generic guidance on the provision of fire precautions and facilities within a building. It addresses the issues that need to be considered during the design process as well as those that will apply whilst the building is in use or which need to be taken into account when alterations to the building or the use of it are being considered.

Procedures for the management of fire safety should be developed by the premises management and documented in a fire safety manual.

A typical fire safety manual might include all or some of the following:

- Fire safety policy statement
- Fire safety management structure
- Coordination with other parties (e.g. in a shared building)
- Emergency response
- Evacuation of people with special needs
- Contingency and salvage plans
- Emergency responsibilities of designated staff
- Summary of fire safety strategy and plans for the building
- Fire risk assessment
- Procedures for dissemination of information
- Selection and control of materials
- Maintenance and testing of fire safety equipment
- Routine housekeeping (e.g. removal of combustible waste)
- Fire safety training
- Fire drills
- Decoration, alteration and building work
- Audit procedures and updating of the manual
- Fire safety records

8.2 Arson / Security

Appropriate measures should be developed by the management company to assess and deter against the risk from arson.

9 Legislation

9.1 Relevant Legislation

The building will be subject to control under the following pieces of legislation:

- Building Regulations 2010
- Regulatory Reform (Fire Safety) Order 2005

9.2 Building Regulations 2010

The Building Regulations, produced under the Building Act 1984, is the primary legislation controlling building work and applies to the majority of new or materially altered buildings.

The fire safety requirements are given in Part B of Schedule 1 to the Regulations and make requirements for specific areas:

- B1 Means of warning and escape
- B2 Internal fire spread (linings)
- B3 Internal fire spread (structure)
- B4 External fire spread
- B5 Access and facilities for the fire service

Responsibility for deciding if the requirements of the Regulations have been met rests with the building control body (a Local Authority Building Control Officer or an Approved Inspector).

9.3 Regulatory Reform (Fire Safety) Order 2005

The Fire Safety Order is the primary piece of legislation relating to fire safety in existing, nondomestic premises, and is usually enforced by the local fire authority.

The duty of ensuring that the requirements of the Order are met rests with the Responsible Person, who must undertake a risk assessment for the purpose of identifying the fire precautions he needs to take.

9.4 Statutory Consultation

During the Building Regulations application process, the building control body is required to formally consult with the local fire authority. The purpose of this consultation is to give to fire authority the opportunity to make observations with respect to the Building Regulations and to provide an opportunity to make the applicant aware of action that may have to be taken to meet the requirements of the Fire Safety Order.

The consultation should allow both parties to reach mutually compatible views on whether the building meets the requirements of both pieces of legislation. In the exceptional event that the fire authority propose to require physical changes to the building to meet the requirements of the Fire Safety Order, the building control body should make the applicant aware.

9.5 Fire Risk Assessment

There is now a requirement for a fire risk assessment to be undertaken for virtually all nondomestic premises including the common areas of blocks of flats. In many instances the significant findings of this assessment to be recorded. Furthermore, the onus on proving what reasonable fire safety measures should be provided lies with the person responsible for the building, not the enforcing authority.

According to PAS 79 - Fire Risk Assessment – Guidance and a recommended methodology – the risk assessment can only validly be carried-out when a building is in normal use. However, it should be noted that there is no grace period between occupation and completion of the risk assessment, and thus failure to undertake a risk assessment prior to occupation could constitute a breach of legislation. BB7 Fire Engineering is therefore of the opinion that a pre-occupation risk assessment is essential to assist the responsible person in fulfilling their legal obligations.

As a leader in fire safety consultancy, BB7 Fire Engineering is able to undertake a full range of risk assessment services, providing the assistance the responsible person needs.

The Building Regulations does not specifically require a risk assessment to be undertaken. However, the development of a fire strategy has risk assessment at its core, thereby ensuring that the measures provided in the building reflect the risk presented by that building's intended use.

9.6 Regulation 38

Regulation 38 of the Building Regulations requires fire safety information for a new or altered building to be passed to the responsible person at the completion of the project or on occupation, whichever comes sooner.

The aim of this requirement is to provide the responsible person with appropriate information to assist him to operate and maintain the building in reasonable safety. This information can therefore assist the responsible person in undertaking a risk assessment to meet the requirements of the Fire Safety Order.

As the developer of the fire strategy, BB7 Fire Engineering is well-placed to produce the information to meet these requirements. This will ensure a smooth transition between the design stage and the safe occupation of the completed building.



BB7 is a specialist consulting firm. We imagine new ways to mitigate risk within the built environment.

E INFO@BBSEVEN.COM

ROCHESTER OFFICE

23 Star Hill Rochester Kent ME1 1XF UK **T +44 (0) 203 603 5535**

CAMBERLEY OFFICE

Basepoint 377 – 399 London Road Camberley Surrey GU15 3HL UK

T +44 (0) 203 603 5535

WARRINGTON OFFICE

Carnoustie House, The Links, Kelvin Close Birchwood Warrington WA3 7PB UK

T +44 (0) 161 956 8973

HUNTINGDON OFFICE

Castle Hill House Huntingdon Cambridgeshire PE29 3TE UK

T +44 (0) 1223 855422

GLASGOW OFFICE

Pentagon Centre 36 - 38 Washington Street Glasgow Scotland G3 8AZ

T +44 (0) 141 5305805