



***Fire Engineering Consultants***

**Appeal Against Conditions attached to  
Fire Safety Certificate (FA/16/1311)**

**Appeal Ref: 29B. FS0545**

**Project                    133 James Street, Dublin 8**

**Local Authority    Dublin City Council**

**Date                      23<sup>rd</sup> November 2016**

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## 1.0 INTRODUCTION

The project involves alterations and change of use of existing structure to provide a café at basement level with apartments provided at 1<sup>st</sup>, 2<sup>nd</sup>, 3<sup>rd</sup> floor level.

A Fire Safety Certificate application for the works was granted by Dublin City Council on the 11<sup>th</sup> August 2016. The following conditions were attached:-

### Condition 1

The proposed scheme shall be in compliance with BS 9991: 2015 in respect of the relevant sections as they apply to the residential accommodation and ancillary areas.

**Reason:** To comply with **Part B** of the Second Schedule to the **Building Regulations, 1997 to 2014**.

### Condition 2

In accordance with Section 30.2 of BS 9991: 2015, the basement level lobby that separates the protected stair serving the apartments from the ancillary plant and storage rooms to be ventilated by means of permanent openings to the open air having an area not less than 0.4m<sup>2</sup>, in addition the basement to be provided with automatic sprinkler protection in accordance with IS EN 12845: 2015 or an appropriate watermist system in accordance with BS 8458: 2015.

**Reason:** To comply with **Part B1** of the Second Schedule to the **Building Regulations, 1997 to 2014**.

### Condition 3

The Plant Room and Storage Rooms at basement level be fully enclosed in a minimum of 60 minutes fire resisting construction complete with FD60s doorsets.

**Reason:** To comply with **Part B1** of the Second Schedule to the **Building Regulations, 1997 to 2014**.

### Condition 4

The proposed dry recycling space at ground floor level shall be in accordance with BS 5906: 2005 and shall be approached by way of protected lobby having not less than 0.2m<sup>2</sup> of permanent ventilation or suitable mechanical alternative. In addition the external door providing access to the yard/bin store to be an FD30s doorset.

**Reason:** To comply with **Part B1** of the Second Schedule to the **Building Regulations, 1997 to 2014**

### Condition 5

In accordance with Table 12 of BS 9991: 2015 the apartments to be provided with protected entrance halls with FD30 doors to the accommodation rooms that require fire doors including the third floor proposed study. In addition the 30 minutes fire resisting glazing between the protected entrance hall and kitchen of apartment 02 shall be of the integrity and insulation type.

**Reason:** To comply with **Part B1** of the Second Schedule to the **Building Regulations, 1997 to 2014**

### Condition 6

The proposed Grade D type, LD2 coverage fire detection and alarm system within apartments to be in accordance with BS 5839: Part 6: 2013. In addition, as part of

the commissioning of the fire detection and alarm system, balconies to be assessed to ensure adequate audibility levels and compliance with Section 12 & Section 13 of BS 5839: Part 6. Apartments generally to be in accordance with the appropriate sections of IS 3218: 2013.

**Reason:** To comply with **Part B1** of the Second Schedule to the **Building Regulations, 1997 to 2014**

**Condition 7**

The communal areas of the residential section of the building to be protected with an L3X fire detection and alarm system complying with IS 3218: 2013, complete with heat detectors in the entrance hallways of apartments and interlinked with the system provided in the café below.

**Reason:** To comply with **Part B1** of the Second Schedule to the **Building Regulations, 1997 to 2014**

**Condition 8**

First aid fire-fighting equipment to be provided in accordance with the recommendations of IS 291: 2015 and manufactured to the appropriate standard such as IS EN 3-7.

**Reason:** To comply with **Part B1** of the Second Schedule to the **Building Regulations, 1997 to 2014**

**Condition 9**

The store room in the ground floor café to be fully enclosed in a minimum of 60 minutes fire resisting construction complete with FD60s doorset.

**Reason:** To comply with **Part B1** of the Second Schedule to the **Building Regulations, 1997 to 2014**

**Condition 10**

The basement stair of the café shall be enclosed at ground floor level with a smoke resisting lobby to provide egress for occupants of the basement directly to the final exit.

**Reason:** To comply with **Part B1** of the Second Schedule to the **Building Regulations, 1997 to 2014**

**Condition 11**

All doors on escape routes serving more than 20 persons within the café to open in the direction of escape in accordance with Section 1.4.3 of Technical Guidance Document B, 2006.

**Reason:** To comply with **Part B1** of the Second Schedule to the **Building Regulations, 1997 to 2014**

**Condition 12**

Any kitchen cooking equipment and associated extract ductwork to be installed in accordance with NFPA (National Fire Protection Association) 96: "STRANDARD FOR VENTILATION CONTROL AND FIRE PROTECTION OF COMMERCIAL COOKING OPERATIONS" or equal equivalent standard. The cooking equipment and associated ductwork to be protected by an approved wet chemical extinguishing system in

accordance with: NFPA 17a: "STANDARD FOR WET CHEMICAL EXTINGUISHING SYSTEMS 2009 EDITION", (or equal equivalent system) and to be interfaced with the electrical/fuel supply systems (to shut off on activation) and also with the fire detection and alarm system. In addition suitable heat detection to be provided in the extract ductwork. The ductwork to be cleaned at regular intervals (as recommended by HVCA TR / 17: "GUIDE TO GOOD PRACTICE: CLEANLINESS OF VENTILATION SYSTEMS" (or equal approved) to avoid grease build up and associated filters to be replaced as required. A suitably located "Lock Stop" (electrical knock off) switch to be provided for manually isolating any gas and electrical supply in the kitchen area. The equipment to be satisfactorily tested and listed in accordance with UL 300: "STANDARD FOR FIRE TESTING OF FIRE EXTINGUISHING SYSTEMS FOR PROTECTION OF COMMERCIAL COOKING EQUIPMENT". Maintenance testing and inspection details to be recorded in the fire safety register.

**Reason:** To comply with **Part B1** of the Second Schedule to the **Building Regulations, 1997 to 2014**

Conditions 2 (ventilation and sprinkler/watermist protection) and Condition 10 (smoke resisting lobby) are the subject of this appeal.

## **2.0 INFORMATION REVIEWED**

In assessing this appeal the following information was considered:-

- Fire safety certificate application including
- Drawings submitted 14<sup>th</sup> June 2016
  - Proposed Site Location Map & Layout Plan
  - Proposed Floor Plans and Roof Plan
  - Proposed Front & Rear elevations and Section A-A
- Fire Safety Certificate grant dated 11<sup>th</sup> August 2016
- Appeal submission from Fire Cert Ltd. dated 8<sup>th</sup> September 2016
- Fire Officers Report on Fire Safety Certificate appeal dated 5<sup>th</sup> October 2016
- Response to Fire Officers Report letter from Fire Cert Ltd. dated 26<sup>th</sup> October 2016.

## **3.0 DISCUSSION**

### **3.1 Condition No. 2**

#### **Condition**

In accordance with Section 30.2 of BS 9991: 2015, the basement level lobby that separates the protected stair serving the apartments from the ancillary plant and storage rooms to be ventilated by means of permanent openings to the open air having an area not less than 0.4m<sup>2</sup>, in addition the basement to be provided with automatic sprinkler protection in accordance with IS EN 12845: 2015 or an appropriate watermist system in accordance with BS 8458: 2015.

**Reason:** To comply with **Part B1** of the Second Schedule to the **Building Regulations, 1997 to 2014**.

#### **BCA**

The main concern from the BCA is that the applicant is selecting different recommendations from different codes to form their fire safety strategy for the building. Concern is that certain fire safety measures, which complement each other, are not being fully incorporated into the design and therefore, the fire strategy may be compromised. The BCA have argued that by not providing sprinkler protection in conjunction with a 0.4m<sup>2</sup> permanent vent, they are not complying with the relevant recommendations.

#### **Appellant**

FCC acknowledge that in order to comply with Section 30.2 of BS 9991: 2015, the basement lobby should be provided with a vent of area of 0.4m<sup>2</sup> in conjunction with a sprinkler system, as a vent of 1m<sup>2</sup> area cannot be achieved due to the small size of the basement lobby at 4.3m<sup>2</sup>. FCC have stated they will provide a vent area of 0.4m<sup>2</sup>, however, due to the small size of the basement at 20.4m<sup>2</sup>, it is both impractical and an economic burden to provide sprinkler protection. They have also stated that there is insufficient space to house the required sprinkler water tank in the basement.

#### **Discussion**

BS 9991: 2015 states that care needs to be taken when using a "pick-and-mix" approach as it is essential to ensure that an integrated approach is used in any one building. However, it does also states that there are circumstances where it is necessary to use one publication to supplement another. Due to the small size of the basement at 20.4m<sup>2</sup>, which also greatly constricts the available space to house the necessary sprinkler water tank, it is considered impractical to provide sprinkler protection to such an area where other more suitable safety systems may be installed as an alternative.

In larger basements, the space can fill with smoke which in turn can be forced into the stair. Therefore, ventilation is recommended in the lobby in order to protect the stair. However, in the situation here, the basement is considerably small at 20.4m<sup>2</sup> and is further subdivided with fire resistant walls and doorsets enclosing each store and the plant room. The fire resistant rooms would localise the fire to the room of origin and the small size of the rooms would limit the overall fire size. These measures would reduce the risk of fire and smoke spreading throughout the basement.

It should be noted that the Technical Guidance Document B does not require a basement to be provided with any ventilation, provided it has an area less than 200m<sup>2</sup>

and is less than 3m below ground level. The area of the basement in question only has an area of 20.4m<sup>2</sup> and just is 2.23m below ground floor level.

An alternative measure to providing sprinkler protection would be to install a second 30 minute fire door at ground level between the head of the basement stair and the foot of the ground floor stair, creating an additional protected lobby. Although this is not a recommendation of BS 9991: 2015, a second lobby would further delay the spread of smoke from the basement, allowing ample time for the occupants in the storeys above to safely escape. Providing double lobby protection to the basement, with one of which being ventilated with an area of 0.4m<sup>2</sup>, is therefore considered a suitable and more practical alternative fire safety measure for the basement. This recommendation should be applied to Condition 2.



## 3.2 Condition No. 10

### Condition

The basement stair of the café shall be enclosed at ground floor level with a smoke resisting lobby to provide egress for occupants of the basement directly to the final exit.

**Reason:** To comply with **Part B1** of the Second Schedule to the **Building Regulations, 1997 to 2014**

### BCA

The BCA considers that the proposals don't comply with Section 10.2.4 of BS 5588: Part 11 which states there should be not less than two protected stairways available from each storey except in the case of 1) small premises other than bars or restaurants. Notwithstanding this, they are accepting a single escape stair on the condition that lobby protection is provided on the ground floor leading direct to the external.

### Appellant

FCC have demonstrated their proposals meet the requirements of BS 5588: Part 11 for a small premises:

- The premises is a single occupancy.
- The premises doesn't comprise more than a basement, ground floor and first storey.
- No floor area exceeds 280 m<sup>2</sup>.
- The open cooking arrangement is situated at the extremity of any dead end and remote from the exits.
- The seating accommodation will not exceed 30 persons per storey.

FCC have argued that they meet the requirements of BS 5588: Part 11 for a single stair as:

- A single escape is considered acceptable for small premises other than bars or restaurants.
- The maximum travel distances are all within the recommended limits.

They have also argued that the escape stair can be an open stair as it complies with the recommendations of BS 5588: Part 11:

- The stair does not connect more than two storeys.
- The stair delivers into the ground storey not more than 3 m from the final exit.
- The floor area in any storey is not exceeding 90 m<sup>2</sup>.

### Discussion

The BCA's argument for the inclusion of a protected lobby is that the café should be considered the same as a bar or restaurant and therefore should be provided with a protected lobby. FCC have stated that their proposed café fully complies with the recommendations of BS 5588: Part 11 for a single open escape stairway and therefore does not require a protected lobby. The disagreement here lies with how a café is defined and which relevant code guidance it should comply with.

No code guidance is given for the definition of a café or which recommendations a café should be designed to in terms of fire safety. Therefore each situation should be considered on a case by case basis. The BCA are considering the café to have the same fire risk and fire load as a bar or restaurant and therefore want it to comply with these relevant recommendations. However, FCC have stated that their café is different from a bar or restaurant as it will only contain a toaster and a coffee machine, whereas a bar would contain alcohol or a restaurant would contain a full commercial kitchen. Considering the café here to be the same as a bar or restaurant is considered an unreasonable assessment as the café will have a significantly lower fire risk and fire load.

To uphold this condition would be therefore considering every café to be provided with the same fire safety provisions as a bar and restaurant, without considered the intended use and fire load of each café. The café has been shown to comply with the recommendations of BS 5588: Part 11 for a small premise served by a single open escape stair, and reasonable grounds have been given for the café to be considered differently from a bar or restaurant. Therefore the condition should be removed.

## 4.0 RECOMMENDATIONS

The BCA should be directed to remove condition 2 and replace it with a new condition, as follows:

The basement level lobby that separates the protected stair serving the apartments from the ancillary plant and storage rooms to be ventilated by means of permanent openings to the open air having an area not less than 0.4m<sup>2</sup>. A second protected lobby should be included at ground floor level between the head of the basement stair and the foot of the ground floor stair.

**Reason:** To comply with **Part B1** of the Second Schedule to the **Building Regulations, 1997 to 2014**

The BCA should be directed to remove condition 10.

Signed.....  
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Date: 23 November 2016