

# Proposed Development of 52 No Apartments at 289/290 Bluebell Avenue, Dublin 12

Consideration of Appeal against Condition  
2 attached to Fire Safety Certificate (Reg  
Ref: FSC4419/19)

MSA Reference > 20000

ABP Reference > FS306227-19

For An Bord Pleanála

# MMS

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## /1 INTRODUCTION

This report sets out my findings and recommendations on the appeal submitted by ORS against Condition 2 attached to the Fire Safety Certificate (Reg Ref No. FSC/4419/19) granted by Dublin City Council on 19<sup>th</sup> November 2019 for the development of 52 No apartments and associated car park at 289/290 Bluebell Avenue, Dublin 12.

### 1.1 Subject of Appeal

A Fire Safety Certificate application was made to Dublin City Council on 15<sup>th</sup> April 2019 for the development of 52 No apartments and associated car park at 289/290 Bluebell Avenue, Dublin 12.

The Fire Safety Certificate granted on 19<sup>th</sup> November 2019 which had 3No. conditions attached, as follows.

#### **Condition 1:**

The additional information received on the 8<sup>th</sup> of May 2019, 11<sup>th</sup> of September 2019 and the 5<sup>th</sup> of November 2019 shall be incorporated into the development

#### **Reason:**

To Comply with Part B of the Second Schedule to the Building Regulations 1997 to 2017.

#### **Condition 2:**

Common lobbies between stairways and dwelling units are to be ventilated in accordance with Figure 12(b) of BS5588 Part 1:2004 or one of the natural ventilation options in Section 14.1.3 of BS 9991:2015.

#### **Reason:**

To comply with Part B of the Second Schedule to the Building Regulations 1997-2017

#### **Condition 3:**

The maximum travel distance between a dwelling entrance doorway and the protected stairway is to be 7.5 m.

#### **Reason:**

To comply with Part B of the second Schedule to the Building Regulations 1997 to 2017

#### **Condition 2 is the subject of the appeal**

### 1.2 Documents Reviewed

- Application for a Fire Safety Certificate to Dublin City Council submitted on 15<sup>th</sup> April 2019 comprising of;
  - Technical Compliance Report FSC Application (revision P01 11/04/2019) prepared by ORS

- Plans, Sections and Elevations by ORS as scheduled in Table 1 of the Report
- Additional information submission by ORS to Dublin City Council lodged on 08/05/2019 comprising:
  - New site layout map
  - Elevation drawings including enclosing rectangles
  - Revised Compliance Report reflecting change in basis of design to BS 5581-1 in conjunction with Technical Guidance Document B (2006) (P02 – issue date 03/05/2019)
- Additional information submission by ORS to Dublin City Council lodged on 11/09/2019 comprising
  - Covering letter dated 06/09/2019
  - Revised drawings (Level 0 plan; Level 1 plan)
  - Revised Compliance Report (P03 – issue date 06/09/2019)
- Email submission from ORS to Dublin City Council (Keith Boland) dated 05/11/2019
- Grant of Fire Safety Certificate 19/11/2019 with certified copy by Chief Fire Officer Order FSC 4419/19
- Appeal Submission
  - ORS Appeal Submission dated 17/12/2019 with attached sketch drawings SK001 and SK002
  - Dublin City Council submission dated 28/01/2020 providing comments on ORS submission

## **/2 FINDINGS**

### **2.1 Case made by the Appellant**

In the original Compliance Report lodged with the Fire Safety Certificate application the basis of compliance was cited to be BS9991 2015 and a commitment was given to provide 1.5 m<sup>2</sup> Automatic Opening Vents (AOVs) in the common lobbies of all three stair cores. However, while these AOVs were shown on the drawings for Stair case 1 and 3, at Level 2 and upwards they were not shown on the Level 1 Floor Plan.

In the additional information submission lodged with Dublin City Council on 03/05/2019 the ORS Compliance Report was amended to cite BS5588-1 1990 as the basis of compliance instead of BS9991.

There is no explanation as to why this change was made. It is noted that BS 5588-1 1990 is an outdated Code of Practice which has been withdrawn by BSI and replaced by BS9991 2015. Notwithstanding the change in position by the Applicant the Compliance Report continued to commit to the provision of 1.5 m<sup>2</sup> AOV in the common lobbies of all three stairs as per Clause 12 and Figure 12(b) of BS5588 Part 1 which has similar provisions in this regard to BS9991 2015.

However, the drawings lodged with this additional information submission did not indicate the provision of the 1.5 m<sup>2</sup> AOV in the Level 1 common lobbies of Stair 1 & 3.

In the third additional information submission lodged with Dublin City Council on 11/09/2019, BS5588 Part 1 1990 was again cited as the basis of compliance with the same commitment to provision of 1.5 m<sup>2</sup> AOV to common lobbies in all three stair cores. However, in the submission the Level 1 floor plan was amended to include a note indicating provision of 1.5 m<sup>2</sup> AOVs to the common lobby in Stair 1 at Level 1 without showing how this was being practically achieved. It is evident from the drawings that the provision of a 1.5 m<sup>2</sup> AOV with associated fire resisting ducting to open air is in fact impractical with the proposed layout.

In the final additional information submission to Dublin City Council on 05/11/2019 ORS refer back to BS9991 2015 and specifically to Section 14 of the Code which addresses smoke control for means of escape.

In this submission the applicant proposed a common lobby smoke control design based on 14.1.3 of BS9991 which presents a number of options including

- 1.5 m<sup>2</sup> AOVs to the exterior of the building
- Mechanical smoke ventilation system achieving an equivalent level of performance
- A pressure differential system

While Dublin City Council in Condition 2 of the Fire Safety Certificate made reference to 14.1.3 of BS9991: 2015 they limit its use to one of the natural ventilation options (1.5 m<sup>2</sup> AOV) to open air or a smoke shaft.

In the Appeal Submission to the Board the Appellant proposes a further revised strategy which includes

- Provision of 0.4 m<sup>2</sup> permanent ventilation rather than 1.5 m<sup>2</sup> to the Common Lobbies of Stair cores 1 and 3 at Level 1 (podium level)
- Provision of protected entrance halls with FD30s doors together with FD60s apartment entrance doors
- Upgrading of both the “domestic” apartment fire detection and alarm system and common alarm system

The appellant also refers to the provision of alternative escape from the Level 1 apartments as being a further mitigating factor

## **2.2 Case Made by the Dublin City Council**

In the decision on the Grant of the Fire Safety Certificate the reason stated for this condition is “to comply with the provision of Part B1 of the Second Schedule to the Building Regulations 1997 – 2019”. There is no further information (e.g., Fire Officer Report with recommendations) on the file which justifies this or elaborates as the reason for the Condition.

In the Dublin Fire Brigade submission dated 28/01/2020 which provides commentary on the ORS appeal submission they identify that ORS are incorrect in their interpretation of the Method A and Method B alternative options referred to in Clause 12.1 of BS5588 Part 1 noting that the proposed alternative window escape option being provided for the Level 1 apartments does not fulfil the requirement of Method B.

They correctly identify that the provision of 1.5 m<sup>2</sup> AOV to the stair lobby is to minimize ingress of smoke to stair to allow occupants of all floors to escape the single stair building.

They conclude their submission stating that it has not been demonstrated that the proposed additional measures referred to in the ORS appeal submission adequately compensate for the reduction in lobby vent size from 1.5 m<sup>2</sup> to 0.4 m<sup>2</sup>.

They have not elaborated in their submission on their reasons in Condition 2 for their limiting of the options in Section 14.1.3 of BS9991: 2015 to exclude mechanical ventilation or pressure differential system.

### 3.0 Conclusion

In my opinion Dublin Fire Brigade are correct in their assertion that it has not been demonstrated by the Appellant in the Appeal Submission that the additional measures proposed in that submission compensate for the reduction in lobby vent size from 1.5 m<sup>2</sup> to 0.4 m<sup>2</sup>.

As alluded to earlier in this Report I find it somewhat extraordinary that the Appellant in this case changed the basis of compliance from BS9991 2015 to BS5588-1 and this was considered by Dublin Fire Brigade.

Given that it is noted in foreword to BS9991 2011 edition that the new BS9991 code “superseded BS5588 Part 1 which is withdrawn” and that BS9991 “is a full revision of BS 5588 Part 1”.

I have therefore reviewed the issues relating to Condition 2 by referring to BS9991 2015 which deals more comprehensively with smoke control for means of escape in single stair buildings. I note the following key points in Section 14 and Annex A of this code:

- The primary objective of a smoke control system in apartment buildings is to protect the stair enclosure means of escape which is of particular importance in single stair buildings
- It is also stated that in buildings designed with a stay put strategy additional protection of the stair case should be provided in the form of a smoke control system.

This could be taken to infer in buildings not designed with a stay put strategy a smoke control system with a lower level of performance than specified in 14.1.3 of the Code could be considered

- In reviewing the Compliance Report, it appears that the building evacuation strategy is stay put in any event as on activation of the fire alarm system automatic action of the sounders to evacuate the building is not proposed

A particular point noted in relation to the fire detection and alarm is the proposal to interlink the landlord fire detection and alarm systems with the domestic system in each apartment to achieve 75 dBa. There is no technical specification provided for the interlinking of these systems which is not provided for in IS3218 2013 or in BS9991 2015. Furthermore, the current Technical Guidance Document B 2006 + 2020 Amendment clearly recommends that common fire alarm system should not be connected with “domestic” alarm systems within individual dwellings. The current Technical Guidance Document B 2006 + 2020 addresses the specific design requirements of common alarm systems with reference to detection and

sounder provision in apartments and I am recommending that this also be addressed by the Board by way of a new Condition.

In regard to the venting of the common lobbies in Staircase 1 and Staircase 2 at Level 1 I am of the opinion

- (a) That the alternative proposals put forward by ORS do not satisfy the recommendations of BS9991: 2015 and do not adequately protect the staircases as a means of escape
- (b) That Dublin City Council in wording Condition 2 so as to restrict the available venting options by reference to Section 14.1.3 to one of the natural venting options were unreasonable, particularly given that the natural venting option could not be practicably achieved in the current layouts whereas a solution using mechanical ventilation or pressure differential system may be more practicable

My recommendations accordingly are as follows

**Recommendation 1:**

The Board directs the Building Control Authority to amend Condition 2 to read as follows:

“Common lobbies between stairways and dwelling units throughout the development are to be provided with a smoke control system which is in accordance with recommendations in 14.1.3 of BS9991: and other applicable recommendations in Section 14 and Annex A of BS 9991 2015.

The Applicant is to make a technical submission to the Building Control Authority for their approval in respect of the smoke control system option proposed, demonstrating compliance with the applicable recommendations in Section 14 and Annex A of BS9991 2015.”

**Reason:** To Comply with Part B of the Second Schedule to the Building Regulations 1997 to 2017.”

**Recommendation 2:**

The Board should direct the Building Control Authority to attach a new Condition 4 to the Fire Safety Certificate which reads:

“The common fire detection and alarm systems in the development are to be in accordance with the recommendations in 1.4.14 of Technical Guidance Document B 2006 + 2020 where the system design installation and commissioning is to be in accordance with the recommendations in IS 3218 2013 read in conjunction with the particular recommendations 1.4.14.4 applicable to buildings containing flats or maisonettes.

**Reason:** To Comply with Part B of the Second Schedule to the Building Regulations 1997 to 2017.”

Signed: 

Michael Slattery, BE MSc (Fire Eng) CEng FIEI MSFPE EUR ING