

**Report for An Bord Pleanala**

**on**

**Appeal against Condition 11 to Fire Safety Certificate (FSC4458/18)**

**for**

**Material Alterations / Extension to a Building**

**at**

**Carrisbrook House, Ballsbridge, Northumberland Road, Dublin 4**

Client: An Bord Pleanala  
An Bord Pleanala Ref: 303481-19  
Our Ref: ABP\_R003\_Issue 1  
Date: 23<sup>rd</sup> October 2019

## **1.0 Introduction**

This report sets out my findings and recommendations on the appeal submitted by Jeremy Gardner Associates, acting on behalf of Paddy Jordan., against Condition 11 to Fire Safety Certificate (FSC4458/18) by Dublin City Council in respect of an application for works related to the Proposed Material Alterations / Extension to a Building at Carrisbrook House, Ballsbridge, Northumberland Road, Dublin 4.

It is noted that having regard to the nature of the Conditions under appeal, it is considered that the appeal can be adjudicated upon without consideration of the entire of the application.

## **1.1 Subject of Appeal**

Condition 11 of the Fire Safety Certificate (FSC4458/18) granted by Dublin City Council is as follows: -

***Condition 11:***

*The building is to be provided with a fire-fighting shaft, designed and constructed in accordance with Clause 20 of BS 9999: 2017. Smoke Control to the fire-fighting shaft is to be in accordance with Clause 27 of BS 9999: 2017.*

***Reason:***

*To comply with Part B5 of the Second Schedule of the Building Regulations, 1997 to 2017.*

## **2.0 Documentation Reviewed**

- 2.1 Fire Safety Certificate Application (application form, compliance report and fire safety drawings) submitted by Jeremy Gardner Associates, acting on behalf of Paddy Jordan, on 12<sup>th</sup> June 2018.
- 2.2 Additional Information (letter, revised drawings, revised compliance report) submitted by Gardner Associates, acting on behalf of Paddy Jordan, on 28<sup>th</sup> September 2018.
- 2.3 Report on Assessment of Fire Safety Certificate Application recommending that a Fire Safety Certificate is granted with 12 conditions attached dated 17<sup>th</sup> December 2018.
- 2.4 Granted Fire Safety Certificate No. FSC4458/18 from Dublin City Council dated 20<sup>th</sup> December 2018.
- 2.5 Letter of Appeal from Jeremy Gardner Associates, acting on behalf of Paddy Jordan, received by An Bord Pleanála on 18<sup>th</sup> January 2019.
- 2.6 Fire Officer's report on the Fire Safety Certificate Appeal dated 12<sup>th</sup> February 2019 to An Bord Pleanála giving comments in relation to appeal of Condition 11.

### 3.0 Building Control Authority's Case

The decision of the Building Control Authority to impose Condition 11 is on the following basis: -

#### 3.1 Introduction

Carrisbrook House is an existing seven storey office building over basement. The building predates the current Building Regulations and regulatory approvals process and as such there is no Fire Safety Certificate for the entire building. There are however two previously granted Fire Safety Certificates for works to parts of the building in addition to the recently granted Fire Safety Certificate to which the appeal relates.

- Reg. Ref. No. f1/92 granted on 31/08/92 with the following condition "Staircases to be lobbied at ground floor level". This Fire Safety Certificate application was for the extension of the ground floor level of the building and construction of a detached ESB substation and IT switch room within the curtilage of the Carrisbrook House site.
- Reg. Ref. No. F488/96 granted on 28/08/96 with no conditions. This Fire Safety Certificate application was for the sub-division into two separate tenancies of the 4<sup>th</sup> Floor only,

The compliance report with the recently granted Fire Safety Certificate (FSC4458/18) states the following: -

Carrisbrook House is an existing seven storey office building over basement located in Ballsbridge, Dublin 4.

The building is currently occupied by the Israeli embassy on fifth floor only while the remainder of the building is unoccupied. It is proposed to extend the building by the provision of additional floor area (from ground to fourth floor levels) for office use. In addition to this it is proposed to carry out a number of material alterations and upgrade works within the existing areas as follows: -

1. It is proposed to provide a new stair core serving ground to fourth floor (stair 3).
2. It is proposed to upgrade the existing central core (Stair 1) to a fire-fighting shaft, to improve the standard of safety for fire-fighting facilities. The shaft will consist of a fire-fighting stair, fire-fighting lobby, fire-fighting lift and new dry riser. It should be noted that this will be an improvement from the existing situation as the height of the top storey will remain unchanged by the proposed works.
3. It is proposed to carry out a number of material alterations through the office building.
4. It is proposed to allow for a café at Ground Floor.

### **3.2 Scope of Fire Safety Certificate Application**

- The extended internal floor area is interlinked with the existing floor plates on ground to fourth floor levels so that on each new level and existing floor areas will form a single uninterrupted space and the main means of escape and egress from these areas will be via the new stair (Stair 3) and the existing centrally located stair cores (Stair 1 and Stair 2). Given the nature of the proposed works it is not considered practical to assess the fire safety certificate application solely for the newly formed floor areas without giving due consideration to the remainder of the existing building. This appears to be implicitly acknowledged within the compliance report for example when calculating the stair capacity based on the entire number of upper levels served by the stairs and not just the levels to which the application is stated to relate. While this approach is considered logical it also highlights the necessity (when assessing compliance with the functional requirements of Part B of the Building Regulations) to consider aspects of the building holistically as opposed to selectively looking at very limited portions of the floor plate in isolation to the remainder of the building.
- They further note that in the compliance report occupancy figures have been calculated for all upper levels of the building. No reason is provided for this within the compliance report and its inclusion appears to be at odds with the stated intent of the report that “the application relates to the additional floor area from ground to fourth floor levels”.

### **3.3 Differences between Previously Granted Fire Safety Certificates & Proposed Arrangement**

- Within both previously granted Fire Safety Certificate applications both of the centrally located stair cores are provided with direct access to outside at ground level without having to pass through the central lobby. Within the proposed arrangement Stair 1 no longer discharges directly to outside and the occupants evacuating via this route will now have to discharge into a large reception / foyer from where they will have to travel approximately another 20m to reach the exterior of the building.
- The condition to lobby the Ground Floor is not complied with in the proposed arrangement however the compliance report accompanying the previously granted Fire Safety Certificate (FSC658/96) refers to this previous application and states that “this work has been completed in accordance with the relevant documents”.
- In relation to elements of structure the compliance report accompanying the Fire Safety Certificate application stated that “all new structural elements shall be designed to give fire resistance of 60 minutes when tested to the relevant parts of BS 476. No guarantee can be given as to the fire resistance of the existing elements”. No further opinion is given as to the fire resistance of the existing structure within any of the previously granted Fire Safety Certificate applications including the most recent application. TGD-B 2006 would recommend that a building of this size and use should be provided with at least 90 minutes fire resistance to elements of structure.

- Both of the previously granted Fire Safety Certificate applications state that “there is an existing foam inlet to the fuel storage tank in the basement whose access port is accessed from the external at ground level”. It is noted that due to changes to the ground floor layouts the location of this inlet will have changed however no reference is made to this within the compliance report.
- The compliance report accompanying the previously granted Fire Safety Certificate (FSC658/96) states that “it is necessary to ensure in the event of one stairway becoming affected by fire and / or smoke, that any other stairway and its access remain available for escape purposes. To this end it is recommended that a 30-minute fire screen and door (FD30S) is provided in the existing lift lobby”. This screen is not provided within this location.

### **3.4 Differences between Proposed Fire-fighting & Code Compliant Shaft**

- The layout of the fire-fighting shaft at ground level differs from the typical fire-fighting shaft layout indicated in Figure 20 of BS 9999: 2017, and summarised as follow: -
  - The fire-fighting lift is not separated from the fire-fighting stair
  - Access to the fire-fighting lift and stair at ground level does not comply with Clause 20.2.2(b) of BS 999:2017 as the distance of the protected corridor exceeds 18m and this space is not separated from the adjoining spaces by a fire rated lobby.
  - The fire-fighting lift is not separated from the fire-fighting stair at ground level and as such both are accessed from the reception / foyer. This area greatly exceeds the 20m<sup>2</sup> recommended in Clause 20.2.5 of BS 9999: 2017.
  - The commitment that the Reception / Foyer will comprise of material of limited combustibility should be viewed as a minimum requirement as opposed to a mitigating measure. It is also noted that this commitment cannot guarantee that this space would be kept free of transient fire-loads during the day to day operations of the building.
- Clause 20.2.5 of BS 9999:2017 states that for fire-fighting lobbies “all principal dimensions should not be less than 1.5m”. On the upper levels of the building this minimum dimension will not be achieved within the fire-fighting lobby. This limits space within the central core and in particular the fire-fighting lobby also results in the following:
  - A disabled refuge positioned directly in front of one of the doors leading from the fire-fighting lobby to the adjoining office accommodation on a number of levels which would present an obstruction to fire service personnel using this route.
  - A disabled refuge located within the fire-fighting lobby in front of the entrance to Core 1. The location of this refuge is impacted by the swing of the AOV to the smoke shaft.
- Clause 20.2.4 of BS 9999: 2017 states that the minimum clear width of a fire-fighting stair should be 1.1m. The proposed fire-fighting stair is stated as having a minimum clear width of 1.0m.

- It is noted that the compliance report does not discount a stair on the basis that all stairs are provided with a protected lobby on all levels. It is noted that Stair 1 and Stair 2 can be accessed from the reception / foyer at ground level. In the event of a fire within this space there is potential for Stair 1 and Stair 2 to become compromised by smoke as these stairs only have a single door separation from the reception / foyer. If a code compliant fire-fighting shaft was provided within the central core then Stair 1 would discharge to outside via a fire rated route which would be lobby protected from other spaces thereby achieving adequate lobby protection at ground level.

## 4.0 Appellant's Case

The appellant's case for removing Condition 11 is as follows: -

- It is proposed to extend the existing seven storey office building over basement by the provision of additional floor area from Ground to Fourth floor. In addition, it is also proposed to carry out a number of Material Alterations and upgrade works within the existing area as follows: -
  - It is proposed to provide a new stair core serving Ground to Fourth floor (Stair 3).
  - It is proposed to upgrade the existing central core (Stair 1) to a fire-fighting shaft, to improve the standard of safety for fire fighting facilities. It being noted that this will be an improvement from the existing situation as the height of the top storey will remain unchanged by the proposed works. The shaft will consist of a fire-fighting stair, fire-fighting lobby, fire fighting lift and a new dry riser.
- Condition 11 that states that the fire-fighting shaft should be designed and constructed in full accordance with Clause 20 of BS 9999: 2017 is not considered practical given that the existing stair core that is being upgraded is located centrally in the building.
- Section 5.3.3 of TGD-B 2006 states that the number of fire-fighting shafts should be such that there is at least one for every 900m<sup>2</sup> (or part thereof) of floor area of the largest floor that is over 20m above ground floor. The Fire Safety Certificate application relates to the additional floor area from ground to fourth floor levels, which are below 20m. The fourth floor is at 13.7m. On this basis it is not required to provide a fire fighting shaft as part of this Fire Safety Certificate as the proposed works will not worsen the existing situation in terms of firefighting access. The proposed upgrades have been provided regardless to demonstrate that the standard of safety in the building is being increased and will greatly improve the access and facilities for the fire brigade within the building.
- Given the above, it is demonstrated that a firefighting shaft will not be required for the proposed works within the building. It has been demonstrated that the new extension will not create a greater contravention compared to the existing situation. The following improvement are proposed:
  - New fire-fighting lift
  - New mechanical smoke shaft serving lobbies to Stair 1
  - 1.5m<sup>2</sup> AOV over Stair 1 and 1.0m<sup>2</sup> AOV's over the other stairs
  - New dry riser located within lobbies to Stair 1 instead of in mechanical riser adjacent Stair 1
  - New fire doors throughout
  - Mustery point at ground floor within the large and protect lobby
  - Existing mechanical risers relocated to open to the office area



- TGD-B 2006 states “In the case of Material Alterations or Changes of Use of existing buildings, the adoption of the guidance in this document without modification may not, in all circumstances, be appropriate. In particular, the adherence to guidance including codes, standards or technical specifications, intended for application to new work may be unduly restrictive or impracticable. In these situations, alternative approaches based on the principles contained on the document may be more relevant and should be considered”.
- BS 9999: 2017 states in Section 0.1 “Fire precautions in all premises – however old – need to be seen as a whole, a package aimed at achieving an acceptable standard of safety. In modifying existing structures, if the new work can be shown not to have a negative impact on the remainder, it is possible that no work will be needed on the remainder, although it might be possible to offer improvement as good practice. Whilst existing buildings need not be retrospectively subject to the same standards as new buildings, it is important that designers apply the general principle that the safest practicable design is to be sought, and that the prior existence of an unsafe situation is not allowed to persist if it is practicable to provide remedy.
- Additional it is noted: -
  - The provision of new smoke control system to the lobbies to Stair 1 and the provision of AOV’s to the stairs will improve the existing situation.
  - The previously unprotected entrance to the building will be upgraded to form part of the new fire-fighting shaft and the width will be significantly increased at fire service level to allow room for the fire service personnel to move towards the fire-fighting shaft and provide adequate area as a fire service mustering point.
  - The provision of a fire fighting lift will improve the existing situation.
  - The reception area within the fire-fighting core (120min fire rated enclosure) due to its size and limited combustibility will not contribute to the spread of fire elsewhere in the building. In the unlikely event of a fire within the reception area the fire-fighting shaft is not required as fire fighters have direct access to this area from the street.

## 5.0 Consideration

Section 0.1.5 of TDG-B 2006 states the following: -

**0.1.5** In the case of an existing building there may be constraints that would not exist with a new building and some variation of the provisions set out in this Document may be appropriate. Alternative solutions (see 0.1.4), whether applied to all or part of the building or to specific provisions, may be employed in these situations.

Many fire safety provisions are inter-dependant and should not be considered in isolation. Where a particular provision outlined in this Document can not be practicably achieved, account may be taken of compensating fire safety measures, depending on the nature and circumstances of each particular case. Such measures would include active and / or passive provisions. Active provisions are those which come into action on detection of fire (such as fire suppression systems) while passive provisions relate to the defence against fire provided by the fabric and construction of a building (such as floors and walls).

Section 0.1 of BS9999: 2017 states the following: -

In both new construction and upgrading existing buildings, the various aspects of fire precautions are interrelated and weaknesses in some areas can be compensated for by strengths in others. A higher standard under one of the areas might be of benefit in respect of one or more of the other areas. BS 9999 provides a level of flexibility that allows the fire protection measures and the risks to be assessed to enable reasonable practical solutions to be designed.

Fire precautions in all premises – however old – need to be seen as a whole, a package aimed at achieving an acceptable standard of fire safety. In modifying existing structures, if the new work can be shown not to have a negative impact on the remainder, it is possible that no work will be needed on the remainder, although it might be possible to offer improvement as good practice. Whilst existing buildings need not be retrospectively subject to the same standards as new buildings, however, it is important that designers apply the general principle that the safest practicable design is to be sought, and that the prior existence of an unsafe situation is not allowed to persist if it is practicable to provide remedy.

The approach with alterations to existing buildings is that the existing is acceptable so long as there is no new or greater contravention of the Building Regulations. The Appellant is correct in the assumption that if there is no new or greater contravention created with the proposed extension then there is no requirement to provide the existing floors that are over 20m with a fire fighting shaft. As the proposed extension is less than 20m then there should be no need to provide a fire fighting shaft to the existing upper floors than are over 20m.

It is noted that the Appellant in their application offered improvements to Stair 1 as good practice, however, by calling these improvements the 'provision of a fire fighting shaft' when what is proposed will clearly not be a compliant firefighting shaft they have muddied the water and made their application confusing. Dublin Fire Brigade on being offered a 'fire fighting shaft' then logically conditioned that this shaft should be in compliance with Clause 20 of BS 9999: 2017.

Therefore, the key issue is, do the proposed extension and Material Alterations give rise to new or greater contraventions of the Building Regulations. It is noted that the existing building has two lobbied stairs. At Ground level Stair 1 has direct access to open air and Stair 2 access via a protected route. Both of these stairs open into a lift lobby, which in turn opens into a reception foyer. On the upper levels both stairs are lobby protected with the lobbies opening onto the office floorplate and a shared lift lobby.

In the proposed design Stair 1 no longer has direct access to open air. Instead it exits via the new large entrance foyer, this foyer in affect is part of the stair enclosure. It is also noted that Stair 2 also opens directly onto this entrance foyer (and therefore Stair 1). On the upper levels Stair 1 opens onto the lift lobby that is vented with a 0.6m<sup>2</sup> cold smoke shaft and Stair 2 is lobby protected with the lobby opening onto the floorplate and the lift lobby.

Therefore, on the upper levels the proposed changes result in there being a reduction in the physical separation between the two stairs, from two door separation to a single door separation. The offset is the door is increased from a FD30S to a FD60S door set and the lift lobby is provided with a mechanical smoke shaft system. The Appellant however does not demonstrate that this proposed new layout offers the same protection as the existing layout. Therefore, they have not demonstrated that that there is no new or greater contravention.

Furthermore, on ground floor, the reliance on Stair 1 on escape through the reception is a significant change from the existing design. It is acknowledged that reception areas are allowed in some instances in stair enclosures, however the proposed change here can also be considered to be a new or greater contravention that has the potential to adversely impact on the exiting design of the upper floor levels.


So therefore, whilst I agree that height of the existing building does not lead to the requirement for a fire fighting shaft, it is noted that the purpose of Condition 11 can be deemed not only to address the requirements of the upper levels but also the perceived issues with the lower levels and ground level. Issues which have not been addressed by the Appellant.

It is noted that Dublin Fire Brigade's issue raised with respect to the fire rating of the existing building and the foam inlet are not considered relevant to the Condition under appeal.

## 6.0 Recommendation

On the basis of my findings and conclusions I recommend that An Bord Pleanala should either deny the appeal or alternatively give the Appellant the opportunity to demonstrate that the proposed layouts are in compliance with B1 (Mean of Escape) of the Second Schedule of the Building Regulations.

**Signed by:**



**Des Fortune**  
MSc(Fire Eng), BSc(Eng), CEng MIEI, MIFireE

**Date:**                   **13<sup>th</sup> November 2019**