



An  
Bord  
Pleanála

## FSC Report

**ABP 310100-21**

### **Appeal v Refusal or Appeal v Condition(s)**

Appeal v Condition 2 (in part)

### **Development Description**

Construction of new building: The Ormond Project is a large residential mixed use scheme consisting of 5 apartment blocks above a podium. The blocks range from 5 to 12 storeys. One of the Blocks (Block A) also consist of a Primary Care Unit on the lower levels – at – Former Ormond Site, Ashtown, Dublin 15

**An Bord Pleanála appeal ref number:**

ABP-310100

**Building Control Authority Fire Safety Certificate Register Ref No:**

FA/20/1105/7D

**Appellant & Agent:**

Applicant : Ballymore Properties Ltd

Agent : Jeremy Gardner Associates

**Building Control Authority:**

Dublin City Council

**Date of Site Inspection**

NA

**Inspector/ Board Consultant:**

Maurice Johnson

**Appendices**

NA

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## 2.0 Introduction

### 2.1 Subject Matter and Background to the Appeal

This report sets out my findings and recommendations on the appeal submitted by Jeremy Gardner Associates [hereafter referenced as JGA] on behalf of their Client, Ballymore Properties Ltd, against Condition No. 2 (in part) attached to the Fire Safety Certificate (Reg Ref No. FA/20/1105/7D) granted by Dublin City Council [hereafter referenced as DCC] in respect of Construction of new building: The Ormond Project is a large residential mixed use scheme consisting of 5 apartment blocks above a podium. The blocks range from 5 to 12 storeys. One of the Blocks (Block A) also consist of a Primary Care Unit on the lower levels – at – Former Ormond Site, Ashtown, Dublin 15.

The Fire Safety Certificate was granted on 1<sup>st</sup> April 2021 with 4 conditions attached.

Condition 2, which is the subject of the appeal, reads as follows:

*The Primary Care Centre and Car Park shall be provided with a sprinkler system in accordance with I.S EN 12845:2015 Fixed firefighting systems – Automatic sprinkler systems – Design Installation and maintenance*

With the stated reason for the condition being:

**Reason:** *To show compliance with Part B of the Second Schedule to the Building Regulations 1997 to 2019, Section B3; - Internal Fire Spread (Structure)*

It is noted that the appeal relates only to the requirement to sprinkler protect the car park. JGA are not appealing the requirement in Condition 2 to sprinkler protect the Primary Care Centre.

De novo consideration is not warranted and the Board can rely on the provisions of Article 40(2) of the Building Control Regulations and deal with the appeal on the basis of Condition 2 only.

### 2.2 Documents Reviewed

- 2.2.1 Fire Safety Certificate Application and Supporting Documentation and Additional Information submitted by JGA on behalf of their client
- 2.2.2 Further Information requests, decision and grant by DCC on 1<sup>st</sup> April 2021 with 4 conditions attached.
- 2.2.3 Appeal submission to An Bord Pleanala by JGA dated 29.04.2021 and 28.06.2021.
- 2.2.4 Appeal submission to An Bord Pleanala by DCC by cover letter dated 24.05.2021
- 2.2.5 Submission by JGA to An Bord Pleanala dated 18.08.2021 in response to a request for additional information made by ABP under Article 32 of the Building Control Regulations 1997 dated 29.07.2021.

### 3.0 Consideration of Arguments by Appellant and BCA

#### Condition 2

*The Primary Care Centre and Car Park shall be provided with a sprinkler system in accordance with I.S EN 12845:2015 Fixed firefighting systems – Automatic sprinkler systems – Design Installation and maintenance*

With the stated reason for the condition being:

**Reason:** *To show compliance with Part B of the Second Schedule to the Building Regulations 1997 to 2019, Section B3; - Internal Fire Spread (Structure)*

It is noted that the appeal relates only to the requirement to sprinkler protect the car park. JGA are not appealing the requirement in Condition 2 to sprinkler protect the Primary Care Centre.

Insofar as the reason stated in the Grant of Fire Certificate for the imposition of Condition 2 is generic in nature it is considered appropriate to set out, in the first instance, the reasoning of DCC as outlined in more specific detail in their appeal submission to ABP by cover letter dated 24.05.2021

#### Case made by FCC in respect of Condition 2 as applied to the car park

- i. FCC correctly note the requirement in clause 30.2.2 of BS9999:2017 – being the code/guide adopted by JGA for the design of the car park (refer Section B1.1 of JGA Compliance Report D1/4388/R1/Issue 2) – that buildings having an occupied storey over 30m above access level should be sprinkler-protected throughout in accordance with EN 12845. DCC therefore conclude that the car park should be sprinkler protected insofar as it is part of Buildings A and D both of which have occupied storeys exceeding 30m above access level.
- ii. FCC correctly note the requirement in clause 11.1 and associated clause 16.2.2 of BS9991:2015 – being the code/guide adopted by JGA for the design of the residential blocks (refer Section B1.1 of JGA Compliance Report D1/4388/R1/Issue 2) – that buildings having an occupied storey over 30m above access level should be sprinkler-protected throughout in accordance with EN12845/BS9251 as appropriate. DCC therefore conclude that the car park should be sprinkler protected insofar as it is part of high-rise residential Buildings A and D both of which have occupied storeys exceeding 30m above access level.
- iii. FCC also refer to Clauses 5.1.1 and 5.3 of IS EN 12845 which prescribe that in instances where a building is sprinkler protected all areas of that buildings or communicating buildings should be sprinkler protected and that no part of an unsprinklered building should be located vertically below a sprinklered buildings. DCC therefore conclude that the car park should be sprinkler protected to comply with IS EN 12845 insofar as it communicates with the sprinklered residential blocks A and D and is also located vertically below them.
- iv. FCC also refer to large car park fires which occurred in Kings Dock Liverpool (31st December 2017) and more recently in Douglas Village Shopping Centre Cork (31 August 2019).

- v. FCC argue that fires in modern car parks can spread to multiple vehicles and that this risk needs to be mitigated by sprinkler protection particularly given the high life safety risk associated with the large/high-rise residential blocks overhead.

## Case made by JGA in respect of Condition 2 as applied to the car park

For their part, JGA make the following key arguments:

- I. JGA contend that the car park constitutes a low fire risk by virtue of the extent of natural ventilation being proposed and by virtue of the fire separation/compartimentation being provided between the car park and the other parts of the development including the high-rise residential blocks overhead. In this regard JGA contend that the car park is an “open-sided” car park which is defined as a car park which does not contain a basement storey, and which is provided with 5% permanent ventilation of which 50% is provided in opposing walls. A “basement storey” is in turn defined as a storey with a floor which at some point is more than 1.2m below the highest level of the ground adjacent to the outside walls.
- II. JGA contend that Clauses 30.2.2 of BS9999 and Clause 11.1/16.2.2 of BS9991 – which prescribe that sprinkler protection should be provided throughout buildings with top storeys exceeding 30m above access level – is not intended to apply to “open-sided” car parks the criteria for which they contend are being met in this development.
- III. JGA argue that the clauses in IS EN 12845 cited by DCC (refer para iii of DCC arguments above) – i.e. sprinklers to be provided throughout sprinklered buildings and in areas located below sprinklered buildings - is not relevant in this instance. The JGA argument is based on the fire separation/compartimentation being proposed between the car park and the high-rise blocks and JGA also argue that EN12845 is not relevant in any event as the sprinkler system in the high rise residential blocks is designed to BS9251 and not EN12845.
- IV. JGA contend that the Kings Road and Douglas Shopping Centre car parks – both of which are multi-storey car parks in which fire is reported to have spread vertically from one level to the level above/below – are not comparable to the single storey car park in the subject development. JGA contend that the fire spread risk in the subject car park is very low by virtue of the ventilation being provided.
- V. JGA also contend that the fire separation between the car park and the residential cores exceeds the requirements of BS9991 by virtue of their being “double-lobby” protection one of which has a 0.4sqm permanent vent duct to outside.
- VI. JGA also refer to TGDB 2020 which identifies in 3.5.2 that “car parks are not normally expected to be fitted with sprinklers”. It is noted however that the basis on which the fire design for this development has been devised, as set out in B1.1 of the JGA Compliance Report D1/4388/R1/Issue 2, is BS9991 and BS9999 and not TGDB 2020 and therefore the reference to TGDB has limited merit in this instance.

## 4.0 Assessment

The key issue on which JGA are relying in making this appeal is their contention that the car park is a ground level car park with substantial natural ventilation and thus satisfies the requirements for an *'open-sided car park'* and on this basis constitutes a very low fire risk for which sprinkler protection is not warranted.

It is noted that ABP in their correspondence dated 29.07.2021 requested clarification from JGA in relation to the ground levels adjacent to the perimeter of the car park and the area and disposition of the car park vents. This information was provided in the JGA submission DI/4388/bk/86abp dated 18.08.2021

I have reviewed the information submitted and find the following in relation to the criteria set out in 3.86 of BS9999 for *'open-sided car parks'*:

### Criterion (a) in 3.86 of BS9999 – the car park is not to be a basement storey:

It is noted that a *'basement storey'* is defined in 3.13 of BS9999 as a floor in which *'some point is more than 1.2m below the highest level of ground adjacent to the outside walls'*.

It is clear from a review of the JGA drawing DI/4388/1/3 that there is a substantial section of the car park at the Southern end which is substantially more than 1.2m below the adjacent external ground levels i.e., the Southern Plaza is at 38.825m whereas the car park floor level is 34.5m yielding a differential of 4.335m.

This basement condition is also evident from the FSC drawing Section GG DI/4388/1/25A through Block D and the Southern Plaza, a portion of which is reproduced below



Extract from drawing DI/4388/1/25A

Accordingly, the JGA assertion that the car park is a *'ground storey'* is not correct and consequently the car park does not satisfy criterion (a) of Clause 3.86 for an *'open sided'* car park.

It is further noted that the Southern section of car park appears to also have restricted fire service access from the Ratoath Road side (i.e. circa 100m walking distance for fire service personnel to traverse along the areaway to the East of the site to reach the stair core of Block D) and from the Hamilton View side access is via the vehicle entrance which it is noted is circa 100m from the SE corner of the car park.

**Criterion (b) in 3.86 of BS9999 – has natural ventilation of not less than 5% of the floor area at that level of which at least half is in opposing walls**

The fire ventilation requirement for *'open-sided'* car parks, which is double the requirement for other covered car parks, is intended to facilitate wind assisted crossflow ventilation to dissipate fire gases – refer 7.1 of BS7326 Part 7 2013.

Thought not explicitly stated in the definition it is evident that the ventilation must also be well distributed to achieve the crossflow ventilation which underpins the reduced fire risk in *'open-sided'* car parks.

I have reviewed the ventilation being proposed as set out in the JGA submission DI/4388/bk/86abp and note the following:

- i. There are no ventilation openings proposed in the SE section of the car park i.e., an area of circa 1400m<sup>2</sup> identified with yellow highlighter on the copy extract from drawing DI/4388/1/3 below. It is noted that this is also the section of the car park which is located below grade - i.e., is a *'basement storey'* - and which has limited fire service access.
- ii. There are no ventilation openings at the Northern end of the car park on the Eastern side for a zone extending circa 60m – identified with yellow highlighter on the copy extract from drawing DI/4388/1/3 below.
- iii. The vent at the NW corner of the car park comprises of a horizontal opening in the podium slab and is not a wall vent as stated in Criterion (b) – it is noted that this in turn raises question as to the effectiveness of this vent in achieving the wind assisted cross flow ventilation required for *'open sided'* conditions given the potential downdraft form the buildings overhead.
- iv. It is noted that the Ventilation Trough shown at the SW corner of the car park on Drawing DI/4388/1/3 was not shown on the FSC drawings i.e., was not shown on the ground or first floor FSC plans. This in turn raises the question as to whether this constitutes an alteration/revision to the design as submitted for FSC and Planning approval and ought therefore be a subject of a Revised FSC application.



In light of the foregoing, whilst I consider there to be merit in the argument that a relaxation of the requirement in BS9999 for sprinklers is justified in a car park which satisfies ‘open-sided’ criteria, I consider that these criteria are not being met in this instance for the reasons set out above.

Accordingly, having regard to the recommendations of BS9991/9999 – i.e. being the design basis on which FSC approval was sought in this application - I concur with the BCAs decision to impose sprinkler protection in this instance.

**5.0 Conclusions/Recommendation**

Having regard to the fact that the Applicant has presented the design based on BS9999/9991 and taking account of the non-compliances with the ‘open-sided’ car park criteria in BS9999 I conclude that DCC was justified in imposing a requirement for sprinkler protection of the car park.

Accordingly, I consider that the appeal should be refused and Condition 2 upheld.



## 6.0 Reasons and Considerations

Based on the assessment in 4.0 above I conclude that the car park does not satisfy the 'open-sided' criteria set out in BS9999 and insofar as BS9999 was presented as the basis for the design of the car park in the fire safety certificate application I conclude that Dublin City Council was justified in the circumstances in imposing a requirement for sprinkler protection of the car park.

Accordingly, I consider that the appeal should be refused and Condition 2 upheld

## 7.0 Conditions

The appeal should be refused and Condition 2 upheld without alteration.

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**MAURICE JOHNSON**

Chartered Engineer | BE, CEng, FIEI, MStructE, MSFPE  
Consultant/Inspector

Date : \_\_\_\_\_