

Report to An Bord Pleanála

on

Appeal against Conditions No 1 and 2

Fire Safety Certificate (Reg Ref No. FA/17/1461)

by

Dublin City Council

for

Block H, North Circular Road Student Accommodation,

at

North Circular Road, Dublin 1

CLIENT	:	AN BORD PLEANALA
AN BORD PLEANALA REF NO	:	ABP-300926-18
BCA REG REF No.	:	FA/17/1461
OUR REF.	:	18121_ABP.300926.18_R01
DATE	:	01 June 2018

1.0 Introduction

1.1 Subject Matter of 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, Ziggurat Dominick Street Ireland Limited – Ziggurat Student Fund IV, against Conditions No 1 and 2 attached to the Fire Safety Certificate (BCA Reg. Reference No. FA/17/1461) granted by Dublin County Council [hereafter referenced as DCC] in respect of a new Student Accommodation Block at Block H, North Circular Road Student Accommodation, at North Circular Road, Dublin 1

The conditions under appeal state the following:

Condition 1

Vehicle access for high-reach vehicles is to be provided to 50% of the perimeter of the building and is to comply with Section 5.2.4 (Design of Access Routes and Hardstanding), Table 5.2 and Diagram 32 of Technical Guidance Document B

With the stated reason for the condition being:

Reason:

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

Condition 2

The firefighting shafts are to be designed and installed in accordance with Section 5.3.4 of Technical Guidance Document B not BS9991:2015 in respect of the following:

- *Planning within the firefighting shaft,*
- *Fire mains and landing valves located in the firefighting lobbies,*
- *Smoke control,*
- *Fire resistance,*
- *Fire doors,*
- *Glazed areas,*
- *Fire-fighting lift installation,*
- *Electricity supply,*
- *Fire brigade communications system.*

With the stated reason for the condition being:

Reason:

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

Having reviewed the documents on the appeal file I am satisfied that the determination by the Board of this application as if it had been made the Board in the first instance would not be warranted. Accordingly I consider that it would be appropriate to use the provisions on Article 40(2) of the Building Control Regulations 1997-2015 in this instance.

1.2 Documents Reviewed

- 1.2.1 Fire Safety Certificate Application and Supporting Documentation submitted by JGA on behalf of their Client
- 1.2.2 Appeal submission to An Bord Pleanala by JGA dated 14.02.2018 and 14.05.2018.
- 1.2.3 Appeal submission to An Bord Pleanala by DCC dated 21.03.2018.

2.0 Condition 1 and 2 – Consideration of Arguments by Appellant and BCA

2.1 Condition 1

Vehicle access for high-reach vehicles is to be provided to 50% of the perimeter of the building and is to comply with Section 5.2.4 (Design of Access Routes and Hardstanding), Table 5.2 and Diagram 32 of Technical Guidance Document B

Case made by DCC in respect of Condition 1

DCC refer to Section 5.2 of Technical Guidance Document B in support of the imposition of the condition under appeal.

They note that Technical Guidance Document B, in Table 5.1, prescribes that perimeter access should be provided taking account of the height and volume of the building in question.

In this instance the overall volume of the building is estimated to be circa 7,623m³ – and thus falls into the 7,000 to 28,000m³ band in Table 5.1 of TGD-B - and the height of the top floor of the building exceeds 10m.

On that basis DCC correctly identify that Table 5.1 of TGD-B prescribes that there be 50% perimeter access suitable for High Reach appliances.

DCC go onto assert that TGD-B does not set aside perimeter access requirements in circumstances where the building is fitted with internal fire-fighting facilities such as dry risers.

DCC also reference the potential need for external rescue as a reason for requiring 50% perimeter access for High Reach Appliances.

Finally DCC take issue with JGA referring to Northern Ireland Technical Booklet E in their appeal submission and assert that JGA had indicated that the basis for compliance in their original FSC submission was TGD-B. In fact it is noted that JGA referred to Section 5 of TGDB and Section 8 of BS9991 in their Compliance Report AI/3517/R2 Issue 02

Case made by JGA in respect of Condition 1

For their part, JGA dispute the DCC interpretation of TGDB Section 5.2.2 and argue that TGD-B only requires access within 18m of dry riser inlet in circumstances where buildings are fitted with dry risers. The JGA interpretation of this paragraph in TGD-B is open to interpretation however.

JGA go on, in any event, to argue that high reach appliance access is not required on the basis that they are providing fire mains and fire-fighting shafts in accordance with BS9991:2015 and

that the fire service will therefore undertake fire-fighting from inside the building and not from High Reach appliances. They refer also to UK Approved Document B and Northern Ireland Technical Booklet E in support of this approach.

They go on to note that their proposals provide for pump appliance access within 18m of the dry riser inlet valve via the on-site access roadway and refer to Section 5.2.2 of TGD-B in support of this proposal.

Finally JGA refers to a number of other developments where they say internal fire-fighting facilities were provided and accepted in lieu of perimeter access including Block G in the same development.

Consideration of the case made by both parties in respect of Condition 1

It is noted that the development has a top storey height of 19.35m above external ground level and a building volume of circa 7,623m³. Thus, by reference to Section 5 of TGD-B, the building would be required to have 50% perimeter access suitable for High Reach appliances and insofar as the height of the top storey does not exceed 20m the building would not require any internal fire-fighting facilities such as dry risers or fire-fighting lifts/shafts.

Accordingly the guidance in TGD-B envisages that firefighting in a building of this height/size will be undertaken from a combination of the normal means of escape stairs and the ability to work from ladders and appliances on the perimeter without any internal firefighting facilities such as dry risers, fire-fighting lifts or vented lobbies.

It is also noted that the guidance in TGD-B does not discriminate between residential buildings, which are typically sub-divided into small fire compartments - i.e. individual apartments/clusters – and commercial buildings such as offices which are typically characterised by large undivided floor plates e.g. typical office buildings.

UK Guidance on the other hand, as set out in BS9991:2015 and the UK Approved Document B, adopt a different approach for apartment type buildings in that they do not prescribe any specific percentage of perimeter access to apartment blocks – including student cluster housing – but rather seek to restrict the distance which the fire service have to lay hoses to 45m. This is achieved by either laying hoses directly from the fire appliance parking position up the stairs and then to the most remote part of the floor plate or by provision of dry risers in which case the 45m is measured from the dry riser landing valves. BS9991:2015 and UKADB also prescribe that the dry riser inlets be located within 18m of the fire vehicle standing position.

It is considered that the strategy in BS9991 for apartment-type buildings, including student clusters, is more rational/logical than the “% perimeter access” approach in TGD-B having

regard to the level of internal compartmentation in apartment buildings. It is anomalous for instance to provide 50% perimeter access to an apartment/student housing block which, while of value to those apartments/clusters which front onto the accessible perimeter, is of little/no value to apartments which do not front onto that section of building perimeter.

It is further noted that adherence to TGD-B in this instance would result in the building in question not being fitted with any internal fire-fighting facilities in that the top floor is not in excess of 20m above ground level which is the threshold in TGD-B for fire-fighting shafts.

In regard to rescue by the fire service – which is referred to in the DCC submission of 21.03.2018 – it is noted that BS9991 sets out clearly in the Commentary to Clause 7 that the provisions for means of escape are based on the assumption that “*there is no reliance on external rescue*”.

This is also consistent with 1.0.1 of TGD-B. Accordingly the consideration of fire service access is concerned with fire-fighting and not rescue.

On the basis of the foregoing it is considered that the strategy proposed by JGA, which is based on the recommendations of BS9991:2015, is an appropriate and compliant approach for this type of student-cluster development.

However, on review of the JGA Site Plan drawing A1/3517/2/2 Rev A, a number of issues arise:

- i. It is entirely unclear if the landscaping features and the geometry of the “*Fire Tender Access*” route as indicated on this drawing satisfy the dimensional criteria in Table 5.2 of TGD-B for fire appliance access roadways. It is noted for instance that the turning circle at corners appears to be of the order of 10m or less whereas the turning circle requirements in Table 5.2 of TGD-B for fire vehicles far exceed these dimensions.
- ii. It is entirely unclear as to what surfaces are paved and what surfaces are landscaped.
- iii. It is noted that the access route appears to pass through parking spaces at the NE corner of Block E

It is noted that fire appliance access routes are normally affirmed using vehicle tracking software in which the vehicle parameters are clearly set out i.e. vehicle dimensions, turning circles, tracking manoeuvres vis kerb lines etc. Also, it is normal to denote fully on Site Plans full details of the landscaping, road surfaces and parking or other obstructions which might impede fire appliance access together with site levels.

2.2 Condition 2

The firefighting shafts are to be designed and installed in accordance with Section 5.3.4 of Technical Guidance Document B not BS9991:2015 in respect of the following:

- *Planning within the firefighting shaft,*
- *Fire mains and landing valves located in the firefighting lobbies,*
- *Smoke control,*
- *Fire resistance,*
- *Fire doors,*
- *Glazed areas,*
- *Fire-fighting lift installation,*
- *Electricity supply,*
- *Fire brigade communications system*

Case made by DCC in respect of Condition 2

DCC contend that the specific recommendations of BS9991:2015 for fire-fighting shafts in residential buildings constitute a lesser standard than the provisions of BS5588 Part 5 and that the fire-fighting shafts ought therefore be amended to conform with BS5588 Part 5 being the standard referenced in Section 5.3.4 of TGD-B 2006.

They take issue in particular with the proposal by JGA that the dry riser landing valves be located in the stairs – as compared to the lobbies in BS5588 Part 5 - and that the fire rating of the common corridors be 60 minutes as compared to 120 minutes in BS5588 Part 5.

Case made by JGA in respect of Condition 2

For their part, JGA argue that BS5588 Part 5 is an obsolete standard and has been superseded by BS9999. They go onto note that BS9999 refers in turn to BS9991 as the standard to use in the specific case of certain residential buildings including “*residential accommodation blocks (e.g. for students or hospital staff), with individual bedrooms and the provision of kitchen/sanitary facilities constructed within a fire compartment*” i.e. student cluster blocks.

JGA argue that BSI have recognised that residential blocks configured in the way of separate fire compartments for each unit are different to all other types of building which typically will have much larger fire compartments and contend that it is for this reason that the provisions for fire-fighting shafts in BS9991 have been altered compared to BS9999 or BS5588 Part 5.

JGA argue that compliance with BS9991 in regard to the fire-fighting shafts satisfies the requirements of B5 of the Building Regulations.

Consideration of the case made by both parties in respect of Condition 2

Having reviewed the case made by both parties I concur with the JGA position that the provisions in BS9991 are appropriate in relation to the design of fire-fighting shafts for this type of development insofar as the BS9991 code reflects most recent guidance for buildings of this type – i.e. comprising apartment type clusters – and noting that BS5588 Part 5 is now a superseded standard.

However, in reviewing the floor plans I note that the dry rising landing valves appear to encroach on the disabled refuge spaces on the upper floors and that there is no spare space between the refuge and the storey exit door and stairs flight. This requires review and adjustment as necessary to accommodate both.

3.0 Recommendations

Having considered the submissions made by the Appellant and BCA I consider that the BCA should be directed to amend Conditions 1 and 2 to read as follows:

Condition 1

The fire appliance access routes shall conform to Table 5.2 of Technical Guidance Document B 2006 without encroaching on landscaping features or parking within the site and shall be demonstrated as such by means of a vehicle swept track analysis and detailed site plans showing road surfaces, levels and all landscaping features.

Revised particulars demonstrating compliance with the foregoing shall be submitted to and agreed in writing with the Building Control Authority.

Reason:

To comply with Requirement B5 of the Second Schedule to the Building Regulations 1997-2017.

Condition 2

The dry riser landing valves and rising main shall not encroach on the disabled refuge spaces. Revised particulars demonstrating compliance with the foregoing shall be submitted to and agreed in writing with the Building Control Authority.

With the stated reason for the condition being:

Reason:

To comply with Requirement B5 of the Second Schedule to the Building Regulations 1997-2017.

MAURICE JOHNSON

Managing Director | Chartered Engineer | BE(Hons), CEng., MStructE, MIEI, MSFPE

Date : _____