

Report to An Bord Pleanála

on

Appeal against Condition No 1

Fire Safety Certificate (Ref No. FS112/18)

by

Galway County Council

for

134 Bedroom Hotel,

at

Dean Hotel, Prospect Hill, Galway

CLIENT	:	AN BORD PLEANALA
AN BORD PLEANALA REF NO	:	ABP-304155-19
BCA REG REF No.	:	FA/17/1461
OUR REF.	:	19200_ABP. 304155-19_R01A
DATE	:	04 February 2020

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, Advanced Vision Limited, against Condition No 1 attached to the Fire Safety Certificate (BCA Reference No. FS112/18) granted by Galway County Council [hereafter referenced as GCC] in respect of a new 134 Bedroom Hotel at Dean Hotel, Prospect Hill, Galway

The condition under appeal states the following:

Condition 1

The entire building shall be protected with a fixed firefighting automatic sprinkler system to comply with EN 12845:2015

With the stated reason for the condition being:

Reason:

In order to comply with B1 & B5 (means of escape in case of fire) to the Building Regulations 2006 and subsequent amendments

The appeal is against a single condition. 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 only.

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 submissions to An Bord Pleanala by JGA dated 09.04.2019 and 24.06.2019.
- 1.2.3 Appeal submission to An Bord Pleanala by GCC dated 25.04.2019.

2.0 Condition 2 – Consideration of Arguments by Appellant and BCA

2.1 Condition 1

The entire building shall be protected with a fixed firefighting automatic sprinkler system to comply with EN 12845:2015

Case made by GCC in respect of Condition 1

GCC in their submission to An Bord dated 25.04.2019 set out the following reasoning behind the imposition of the subject condition:

1. GCC note that sprinklers will reduce fire growth rates and control fire size and assert that this additional design feature, which is not routinely required in Technical Guidance Document B, is necessary in this particular instance to mitigate “*several potential fire safety risks*” which they outline in more detail in the subsequent paragraphs of their submission as summarised below.
2. GCC note that for a building of this size (i.e. height of top floor at the rear = 11m and volume = 18,467m³ according to the JGA submissions) the requirement in Table 5.1 of Technical Guidance Document B is to provide 50% perimeter vehicle access suitable for high reach type appliances. GCC go on to note that the access being provided to the rear and side of the proposed hotel does not meet the criteria in Diagram 32 of TGD-B for high reach vehicles. Accordingly GCC regard the imposition of sprinkler protection to be warranted in mitigation of the restriction on fire vehicle access.
3. In regard to the proposal by the Applicant to provide dry risers in each of the escape stairs GCC note that fire vehicle access is required near the mains where fire-fighters can enter the building and argue that this access is not available.
4. In regard to means of escape GCC note that the 4 staircases discharge to the rear/east and side/south of the building and assert that there is, as a consequence, conflict between patrons egressing the building and the fire service accessing the building for fire-fighting. GCC do not elaborate on this in terms of the available width of the roadway to the East and South of the building and the potential required width for fire vehicles and escapees i.e. GCC offer no calculations demonstrating that the widths are inadequate.

5. In regard to the Applicants proposals for fire service venting of the lower ground floor bar, GCC assert that there is not adequate cross ventilation in the “*basement tunnel area and adjoining room*” – the latter being a reference presumably to the room to the west of Core 01.

Case made by JGA in respect of Condition 1

For their part, JGA argue that imposition of sprinkler protection throughout the building is not warranted for the following reasons:

1. In relation to means of escape JGA assert that the design substantially accords with Technical Guidance Document B in terms of travel distances, exit widths etc – which is not disputed by GCC. They go on to argue that there is ample available space for escape from the rear of the building via the laneway to the south of the site, over which they say their client has right of egress, in addition to egress via the vehicle ramp towards Prospect Hill. JGA also state in their submission to GCC dated 01.12.2018 that they would expect the building to be evacuated before the fire brigade arrive on site. JGA do not provide any timeline figures to support this assertion. It is noted however that the subject site is located at a distance of circa 1.2km from the fire-station in Father Griffin Street and therefore, having regard to the various elements of fire service intervention time as set out in the National Directorate Fire and Emergency Management *Making Communities Safe* document, it is estimated that the fire service attendance *time* from the 112/099 call being made will likely be of the order of 10 minutes. It is conceivable therefore that building evacuation would still be in progress on attendance of the fire service i.e. BS PD 7964-6 2019 suggest pre-movement times of up to 15-30 minutes for hotels.
2. In relation to fire vehicle access JGA assert that they are providing 50% high reach appliance access in accordance with TGD-B taking account of the access on Prospect Hill combined with the access to the south and west of the building. This assertion is very questionable in that the width of the hardstanding to the south and west falls short of the widths/locations prescribed in Diagram 32 of TGD-B which is designed to accommodate the outriggers for high reach vehicles together with minimum distances away from the face of the building to enable deployment. Neither of the set of distance criteria in Diagram 32 for turntable ladder or hydraulic platform are being satisfied with the widths indicated on the JGA Site Layout Plan drawing BG/561/01/02 Rev B.

3. JGA go on to argue that 5.2.2 of TGD-B can be interpreted as setting aside the requirement for “%-perimeter” access where a building is provide with dry rising mains in favour of a requirement for pump appliance access within 18m of the dry riser inlets which JGA note that they are proposing in the subject design i.e. pump appliance access is available within 18m of the dry riser inlets which they propose on Prospect Hill for Stairs 1 and Stairs 2/4 and on the ramp to the south of the building in relation to the inlet to stairs 3. JGA also note that they offered an additional dry riser inlet on Prospect Hill to serve the rising main in Stairs 3 in their submission to GCC dated 13.02.2019 thus enabling the fire service to access all of the rising mains without having to commit vehicles to the south/west of the building at all.

JGA assert that the provision of dry risers, which are not routinely required in buildings of this height, is offsetting the restrictions on perimeter access and they note that this approach is endorsed also in BS9999: 2017, UK Approved Document B 2019, and Northern Ireland Technical Booklet E.

4. JGA further note that the high level of compartmentation being incorporated in the design far exceeds the requirements of TGD-B and thus serves to further aid the fire service by controlling the likely maximum size of fire which the fire service will have to contend with.
5. JGA contend that the venting being proposed at lower ground floor level is sufficient to assist fire service and satisfies the requirement of B5 of the Second Schedule without recourse to sprinkler protection. They note also that most of the venting – i.e. 4 of the 5 vents – are automatically operated on activation of the fire alarm system in this area and thus are a further improvement on the venting envisaged in Technical Guidance Document B which references the use of manually openable vents, JGA therefore note that the vents will have activated in advance of fire service arrival thus providing superior conditions for the fire service than would be the case with manually operated vents per TGDB. JGA conclude that sprinkler protection is not warranted on this basis.

3.0 Considerations and Recommendation

1. It is noted that the compartment size limit in TGD-B Table 3.1 for Hotels (i.e. PG 2.b) is 2000m² with no volumetric limit. The compartment sizes being proposed for the subject building are only a

fraction of this size (i.e. circa 700m²) and consequently the maximum likely fire size which the fire service will have to contend with is considerably smaller than envisaged in TGD-B.

2. It is noted that sprinkler protection is not a requirement of TGD-B for Hotels (i.e. P.G. 2b) irrespective of height. Consequently in high rise hotels (i.e. outside the reach of the fire service high reach appliances and for which therefore “%-perimeter” access is of little benefit) the fire service are required to deal with a fire using internal fire-fighting facilities without the benefit of sprinkler protection. In such buildings the requirement in TGD-B is to provide fire-fighting mains sufficient to ensure that the maximum distance from a landing valve to the furthest point on the floor does not exceed 60m. It is noted in the subject building that the maximum distance from a landing valve in Stairs 1, 2/4 or 3 to the furthest point on the floor is estimated to be circa 30m i.e. 50% of the permitted distance in a high rise hotel in TGD-B.
3. It is noted that the applicant has provided fire vehicle access to the rear of the building which, although not of the recommended width for the deployment of high reach appliances, will nevertheless enable the fire service to readily access Stairs 2/4 and 3 and will also enable the fire service to tackle fires at levels LGFL, GFL and FFL using portable ladders in addition to the use of the internal fire mains.
4. It is noted that the Applicant has also offered to provide an addition dry riser inlet to the rising main in Stairs 3 such that the fire service could charge all of the rising mains from Prospect Hill thus avoiding the need to drive to the rear of the buildings if the responding fire personnel deemed that to be the more prudent approach having regard to the location of the fire
5. Having regard to the widths of the paved area to the SE and South of the building - i.e. circa 5-5.5m – there is ample available width to accommodate a fire appliance and escapees should the fire service elect to drive into the yard during the course of the building evacuation. It is noted also that the *Standard Operational Guidance* [SOG] issued by the National Directorate Fire and Emergency Management also acknowledges that Incident Commanders may need to consider allowing evacuation which is already underway underway to continue or be completed before commencing fire-fighting activities. Accordingly if the fire service Incident Commander is concerned about the safety of escapees at the rear of the building he can elect to defer the deployment of an appliance at the rear and commence fire-fighting operations from Prospect Hill instead.

6. Having regard to the limited size of the LGFL bar area - i.e. circa 260m² - it is considered that the venting being proposed by the Applicant is sufficient to satisfy the requirements of B5 of the Second Schedule

In light of the arguments put forward by the Applicant and taking account of the comments above I conclude that the imposition of a requirement to sprinkler the building is unwarranted.

Accordingly I recommend that Condition 1 be removed and replaced with a new Condition 1 to read as follows:

Condition 1:

An additional dry riser inlet valve to serve the riser in Stairs 3 shall be provided on the Prospect Hill frontage adjacent to the gates leading to the rear of the building. Revised drawings incorporating this inlet shall be submitted to and agreed with Galway County Council prior to commencement.

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 : _____