



Fire Engineering Consultants

**Appeal Against Conditions attached to
Fire Safety Certificate (FSC/16/1632)**

Appeal Ref: 29B. FS0532

Project **Office Development at Harcourt
Terrace Lance, Harcourt Terrace,
Dublin 2**

Local Authority **Dublin City Council**

Date **18th August 2016**

Contents

1.0 INTRODUCTION

2.0 INFORMATION REVIEWED

3.0 DISCUSSION

4.0 RECOMMENDATIONS

1.0 INTRODUCTION

The project involves the construction of a six storey office building at the site formerly known as the Dairy Science Laboratory (also known as Harcourt Terrace Lane), Dublin 2.

A Fire Safety Certificate application for the works was granted by Dublin City Council on the 27th April 2016. The following conditions were attached:-

Condition 1

Sprinklers shall be provided throughout the building and shall be designed, installed and maintained in accordance with IS EN 12845 2015.

Reason: To comply with **Part B1** of the Second Schedule to the **Building Regulations, 1997 to 2014**.

Condition 2

Except as modified by the condition above the proposed works shall be carried out in accordance with the additional particulars submitted by Messers: Maurice Johnson and Partners under cover of letter dated 12th April 2016.

Reason: To comply with **Part B1** of the Second Schedule to the **Building Regulations, 1997 to 2013**.

Condition 1 (sprinklers) is the subject of this appeal.

2.0 INFORMATION REVIEWED

In assessing this appeal the following information was considered:-

- Fire safety certificate application including
- Drawings submitted 25th January 2016
 - Urban PLACE Map
 - Site Layout Plan & Fire Fighting Layout
 - Proposed Ground & First Floor Plans
 - Proposed 2nd & 3rd Floor Plans
 - Proposed 4th & 5th Floor Plans
 - Proposed Roof Plan
 - Proposed Sections A-A & B-B
 - Proposed East & South Elevations
 - Proposed West & North Elevations
- Drawings submitted 19th April 2016
 - Site Layout Plan & Fire Fighting Layout
 - Proposed Ground & First Floor Plans
 - Proposed 4th & 5th Floor Plans
- Drawings submitted 23rd June 2016
 - Auto TRACK of a Fire Tender Exiting the Site
- Electronic copies submitted 23rd June 2016
 - Auto TRACK video file
 - CCTV survey video findings
- Additional information submission dated 19th April 2016
- Fire Safety Certificate grant dated 27th April 2016
- Appeal submission from Maurice Johnson & Partners dated 10th May 2016
 - Includes comparable 2004 An Bord Pleanála decision (29B.FS.0216)
- Fire Officers Report on Fire Safety Certificate appeal dated 25th May 2016
- Response to Fire Officers Report letter from Maurice Johnson & Partners dated 23rd June 2016
- Appeal 29B.FS.0216: Successful appeal of Fire Safety Certificate for redesign of already approved structure to avail of exemptions for fire brigade access. – Block 3 and Mill 2, Grand Canal Exchange, Barrow Street, Dublin 2, 9th July 2004

3.0 DISCUSSION

3.1 BCA's Case

The BCA's primary concern was related to fire fighting access and that the design did not comply with Technical Guidance Document B, or an equivalent benchmark. They quoted the requirements of B5 as being necessary to "assist the fire service in the protection of life and property". They had three main concerns:

- There was insufficient access to a percentage of the perimeter for high reach access and the design did not comply with section 5.2.1 of TGD B.
- There was insufficient turning facilities at the end of the roadway for a fire appliance to enter, turn and leave the site.
- The building is located at the end of the dead-end access road where any illegal street parking would prohibit fire tender access beyond that point.

The BCA's view was that in the light of these deficiencies a sprinkler system would be beneficial in many aspects of fire safety in the building but primarily for fire fighting.

3.2 Appellants Case

The appellant acknowledges that access to the site is difficult and have offered up a range of measures to demonstrate compliance comply with B5. These include;

- Providing a dry riser in the central stair
- Providing 3 hydrants although not required due to the size of the building. (The provision of fire mains would however, require the provision of at least one hydrant).
- Provide 60 minute fire protected lobbies to each stair
- Access is available to almost 50% of the perimeter with a pump appliance
- A 48 hour cctv analysis of Harcourt Terrace was carried out which showed no illegal parking.
- They included a report by Mr. Iain Goodlet BSc (Hons) GIFireE, a former UK operational fire fighter who assessed the design and concluded that fire fighting access was adequate without the provision of sprinklers.

They also included reference to a previous successful appeal on Bloc 3/Mill 2 at Grand Canal Exchange which did not comply with Part B5. Dry risers and fire fighting lobbies were considered a reasonable solution by the board in that case.

3.3 Consideration

From their report the BCA had three concerns:

1. Access was required to a percentage of the perimeter of the building and this was not achieved.
2. Adequate turning facilities were not provided for a fire appliance
3. There is the potential for illegal parking on Harcourt Terrace posing difficulties for fire fighter vehicle access.

3.3.1 Access to Building Perimeter

The guidance in TGD B in relation to vehicle access is clear. It states in section 5.2.1

"Access requirements increase with building size and height and also depend on whether the building is fitted with internal fire mains."

From the above it is clear that fire mains are an important consideration when assessing fire brigade access. However, in my view the intent of TGD B is even clearer in section 5.2.2.

“Vehicle access should be provided in accordance with the criteria indicated in table 5.1. Any elevation to which access is provided in accordance with 5.1 should contain a door giving access to the interior of the building.

In the case of a building fitted with a dry internal fire main, access for a pump appliance should be provided to within 18m and within sight of the inlet connection point.”

The key point is that buildings fitted with dry risers do not have to comply with table 5.1 in terms of vehicle access to the perimeter of the building but only need to ensure that the fire appliance can park within 18m and with sight of the dry riser inlet. This interpretation is explained more clearly in other more recent guidance documents.

For example, Technical Booklet E Northern Ireland 2012 states the following:-

6.19 The provisions for vehicle access are related to whether or not the building has a fire main or mains and, where it does not, to the size and height of the building. Where a building –

(a) does not have a fire main and is a block of flats, access for a pump appliance should be provided to within 45 m (hose route) of each door giving access to each individual dwelling;

(b) does not have a fire main, is not a block of flats and is less than 2000 m² in area and the height to the top storey is less than 11 m, access for a pump appliance should be –

(i) provided to within 45 m (hose route) of the building other than for a dwellinghouse where the 45 m should be to a door giving access to the interior; or

(ii) provided to 15% of the perimeter;

(c) does not have a fire main and is other than as described in (a) and (b), access should be provided in accordance with Table 6.2;

(d) has a dry fire mains, access for a pumping appliance should be provided to within 18 m, and within sight of, each fire main inlet connection point;

The first sentence in TBE section 6.19 clarifies that vehicle access depends on whether or not a fire main is installed. If it isn't then access is required to a percentage of the perimeter and the degree of access is dependent on the size and height of the building. However, if a fire main is provided then this does not apply and access is only required to within 18m and within sight of the fire main inlet.

Approved Document B (England and Wales) also provides similar guidance but breaks it down into separate sections. Sections 16.2 to 16.5 deal with buildings not fitted with fire mains and refers to table 19 for perimeter access depending on the height and size of the building. However, sections 16.6 and 16.7 deal with buildings fitted with fire mains, where access should be provided to within 18m and within sight of the dry riser inlet.

From the above therefore, it is clear in my opinion that where a dry riser is provided then to comply with TGD B, access is only required to within 18m and within sight of the inlet. The office building at Harcourt Terrace achieves this.

3.3.2 Turning Facilities

The road is more than the required 3.7m wide (4.3m kerb to kerb) and has a turning facility for a fire appliance at the end. Auto-tracking analysis has been done to demonstrate that a pumping appliance can drive into the site and reverse out of it. Three fire hydrants are provided, despite the building only requiring one.

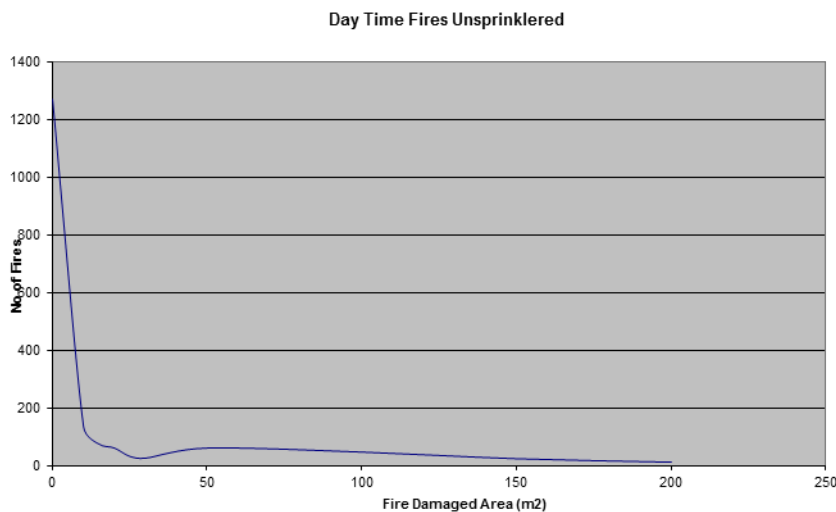
3.3.3 Access Via Harcourt Terrace

In addition to the lack of perimeter access the BCA also have a concern about the width of the road and illegal parking. The issue of illegal parking on this road is outside of the control of the appellant and could occur on any street en route to an incident. However, the appellant have undertaken a still frame CCTV analysis over a 48 hour period which showed no illegal parking taking place. The only cars visible belonged to security staff in a building next door. The road also has double yellow lines to manage parking. Finally it is noted that the new development is provided with on site parking and that for staff to access the site, the road will have to be kept clear.

3.4 Summary

The development is an office which represents one of the lowest fire safety risks of all building purpose groups. Means of escape is good as the upper floors are provided with two lobbied protected stairs. Each floor in the building is constructed as a 60 minute compartment floor, therefore, fire spread throughout the building is unlikely. The building is also provided with automatic fire detection and alarm which will ensure that a fire is detected at a very early stage. The significance of automatic fire detection is important for fire fighters and not just occupants, as the earlier the fire is detected, the sooner fire brigade attendance occurs when the fire is smaller.

UK fire statistics show that during 1978-79 there were 1,783 fires in un-sprinklered offices during the day. Of these fires only 1.7% (31) exceeded 200m². This figure increased to 5% for night time fires. The reason for this was that there was less chance of the fire being detected earlier as there were no occupants in the building and fire brigade attendance would be have been later.



The building is within maximum compartment sizes and the elevations have been designed to comply with section B4 for external fire spread. There would not therefore, be a significant property protection risk with this building.

The conditions that fire fighters would be presented with in the Harcourt Terrace office building would be significantly better when compared to an unsprinklered retail or storage building, however, the same access requirements are imposed by TGD B. Notwithstanding that, the access provided in conjunction with the dry riser is in compliance with the guidance in TGD B and sprinklers are not warranted.

4.0 RECOMMENDATIONS

The Building Control Authority should be directed to remove condition 1.

Signed.....
Martin Davidson
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Date: 15th August 2016