REPORT TO AN BORD PLEANÁLA

ON

APPEAL AGAINST CONDITIONS ON A FIRE SAFETY CERTIFICATE

ISSUED BY DUBLIN CITY COUNCIL

FOR

MATERIAL ALTERATION: PROPOSED MATERIAL ALTERATIONS AT THIRD FLOOR LEVEL TO AN EXISTING FIVE STOREY EDUCATIONAL CENTRE AT 60-63 DAWSON STREET, DUBLIN 2

Client:	An Bord Pleanála
An Bord Pleanála Ref:	FS 0565
Our Ref:	CTA 1753
Date:	Sept 2017

1.0 BACKGROUND

This Report sets out my findings and recommendations on the appeal submitted by Pro-Fire & Design Ltd. (PFD) against Condition Nos. 2 and 3 on a granted Fire Safety Certificate (Register Ref. No: FA/17/1017/7D) dated 24th May 2017, issued by Dublin City Council (DCC) in respect of an application for *Material alteration: Proposed material alterations at third floor level to an existing five storey educational centre* at 60-63, Dawson Street, Dublin 2.

Condition 2: *Stair 5 is to be provided with an imperforate protected lobby. The Store and Kitchen are not permitted to open directly into the protected lobby, in accordance with the previously approved Fire Safety Certificate FA/08/1458*.

Reason: *To ensure compliance with Regulation B1 of the Second Schedule to the Building Regulations 1997-2017*.

Condition 3: *The cross-corridor doors separating the storey exits are to be FD30S fire doors, and they are to be provided with 30 minute fire resisting construction, which extends horizontally from either side of the fire doors, to the external walls (i.e. between Lecture Rooms 1/2/9/10 and Lecture Rooms 3/4/6/7), and vertically to the underside of the floor above.*

Reason: *To ensure compliance with Regulation B3 of the Second Schedule to the Building Regulations 1997-2017*.

1.1 SUBJECT MATTER OF THE APPEAL

- The application for a Fire Safety Certificate was lodged by PFD on 16th January 2017.
- The Fire Safety Certificate, with 3 conditions, was issued by DCC dated 24th May 2017.
- An appeal against Condition 2 and Condition 3 was submitted by PFD on 19th June 2017.

1.2 DOCUMENTS REVIEWED

- Application for Fire Safety Certificate lodged by PFD, with compliance report and drawings
- Additional information submitted by PFD on 18th April 2017 and on 18th May 2017
- Appeal submission by PFD to An Bord Pleanala, dated 19th June 2017
- Submission to An Bord Pleanala by DCC with fire officers report, dated 14th July 2017

- Appeal submission to An Bord Pleanala by PFD dated 11th September 2017
- History file Reg. Ref. 08/1458, relating to previous applications for fire safety upgrade works at the centre

2.0 FINDINGS

The case made by the building control authority in respect of Condition No. 2 is summarised as follows:

- While it is acknowledged that the Store and Kitchen opening off the protected lobby to Stair 5 are enclosed in fire resisting construction, their layout could easily be modified to ensure that they do not communicate directly with the lobby, reducing the number of doors opening onto the protected lobby and affording a greater level of safety to occupants of the third floor.

- This would afford the occupants of the third floor a suitably protected route via an imperforate protected lobby, in compliance with the requirements of Part B1 of the building regulations, similar to the arrangement proposed for the protected lobbies associated with Stairs 2 and 3 at this level.

The case made by the Appellant in respect of Condition No. 2 is summarised as follows:

- The wording used by DCC suggests that the proposed level of fire safety is compliant but they would like to have a greater level of safety provided (beyond that which is considered compliant).

- There is no situation in TGDB where it is not permitted to open any room into a protected lobby, whether it is high or low risk, therefore the current layout as proposed fully demonstrates compliance with Part B (Fire safety) of the Second Schedule to the building regulations.

- Section 1.3.8.4 of TGDB addresses requirements for protected lobbies and corridors, and there is no recommendation for not permitting certain rooms to enter a protected lobby. It is noted that the lobby is fully enclosed in 30 minute fire resisting construction and the rooms off are separated in fire resisting construction with FD30S doors, so this is considered compliant with Part B.

- The kitchen will only be used to reheat food and will not be provided with any high risk cooking items. The Store will be used as a dry goods/general low risk store, so as neither of these rooms can be considered high risk there is no issue with them opening directly itno the protected lobby.

- It is considered therefore that the lobby as proposed is fully compliant with 1.3.8.4 of TGDB, and any costs associated with the requested modifications (going beyond what is considered compliant) would be unjustified.

The case made by the building control authority in respect of Condition No. 3 is summarised as follows:

- Clause 1.2.5.3 of TGDB, which refers to subdivision of corridors, deals with the risk of smoke logging of long corridors that provide access to alternative exits. Where the corridor is more than 12m long, it should be subdivided by FD30S doors, "*positioned having regard to the layout of the corridor and to any adjacent fire risks".*

- The proposed layouts make provision for doors to subdivide the corridors as above, but the corridor walls are not shown as in fire resisting construction, and there is no clarification of the materials of construction of the walls between the lecture rooms. In the event of a fire in a lecture room, the current (proposed) arrangement would not inhibit the spread of smoke throughout, thereby rendering both storey exits potentially ineffective for occupants.

- In order to comply with 1.2.5.3(b) and Diagram 20(b)/Section DD of TGDB respectively, it is reasonable to assume that the construction on either side of the cross-corridor doors would be fire resisting (in the locations shown, between rooms 1/2 and 9/10, and between rooms 3/4 and 6/7).

The case made by the Appellant in respect of Condition No. 3 is summarised as follows:

- The walls to the corridor connecting Stairs 2 and 3 are (plasterboard) stud walls taken up to the underside of the floor above, showing compliance with Diagram 20(a) of TGDB, therefore the walls in the lecture rooms either side of the cross-corridor doors do not need to be fire rated or extend horizontally to the external wall of the building or vertically to the underside of the floor above.

- Diagram 20(a) clearly outlines that if the walls to the corridor are taken up to the underside of the floor above then there is no requirement for the fire rated walls outlined above (across the storey) and as the door is not required to be fire rated then there is no requirement for a fire rated wall over the cross corridor doors (it is noted that the submissions with the application

confirm that the cross corridor doors will be FD30S, with the fire resistance continued up to the underside of the floor above).

- DCC raised a query regarding the construction of the walls between lecture rooms, although there is no requirement for these walls to have fire resistance. Nonetheless, it is confirmed that the walls are constructed as plasterboard stud partitions, constructed up to the underside of the slab above, with all opes/penetrations sealed.

- DCC argues that in the event of a fire in a lecture room, the proposed arrangement (of non-fire rated corridor walls taken up to slab level) would not inhibit the spread of smoke throughout the corridor. However, the corridor walls as proposed will inhibit smoke spread for a sufficient period to allow escape, on the basis that they are imperforate up to slab level, and the cross-corridor door will prevent complete smoke logging of the corridor.

- It is therefore considered that the provision of fire rated walls in the lecture rooms is not required as the proposal complies with Diagram 20(a) of TGDB, and Diagram 20(b) is not applicable (as there is no void passing over the corridor walls).

3.0 CONSIDERATIONS:

Condition 2:

DCC does not argue that having the store room and the kitchenette open directly off the protected lobby to Stair 5 would be non-compliant with the requirements of regulation B1. Rather, they say that having the doors from those rooms not communicating directly with the lobby would provide a better protected escape route than one with doors opening into it.

Nonetheless, based on the recommendations of TGDB, the proposed layout is considered to be compliant. An argument can be made for non-communication with a protected corridor or lobby in the case of certain high fire risk areas such as refuse stores, basement areas etc. In this case, the store, kitchen and washing areas are described in terms of low-risk activities e.g. reheating of food only (no higher risk cooking equipment) and there is no recommendation in TGDB, under general principles of fire safety design or under the functional requirements of Part B of the building regulations that would prohibit these rooms communicating directly with the lobby.

Condition 3:

The reason stated for this condition is "*To ensure compliance with Regulation B3 of the Second Schedule to the Building Regulations 1997-2017*". However, the main argument set out by DCC relates to 1.2.5.3 of TGDB, which is a means of escape (regulation B1) issue.

It is proposed to subdivide the corridors as per the recommendations of 1.2.5.3(a) of TGDB. The main issue argued by DCC relates to the recommendations of 1.2.5.3(b) of TGDB, which states that *"the fire doors are positioned to effectively safeguard the route from smoke, having regard to the layout of the corridor and to any adjacent fire risks".*

The trust of the argument from DCC is that a fire in a room off one section of the corridor could bypass the cross-corridor door and affect the other section of corridor, unless (a) the corridor walls are fire rated or (b) a fire rated barrier is provided across the width of the building, in line with the cross corridor door. In this manner, any fire in a room off one section of corridor would not be able to extend past the line of the cross-corridor door and affect the other section of corridor.

There is a correlation (within TGDB) between the recommendations of 1.2.5.3 and the recommendations under Part B3 of the regulations/Section 3.3 of TGDB, which relate to the provision of cavity barriers.

It is clearly envisaged under 1.2.5 (Corridors) of TGDB that some corridors do not need to be constructed as protected corridors but nonetheless need to be subdivided by cross-corridor doors in order to restrict smoke spread (and not necessarily fire spread). This also implies that smoke can be restricted by construction that is not fire-rated (e.g. cold-smoke seals on fire rated doors are not required to be fire resistant). This is reflected in recommendations in 1.2.5.2 which look for corridor walls (which are not fire-rated) to be carried up to the structural floor or suspended ceiling above, and that all openings in corridor walls be fitted with doors (not-fire rated).

In relation to corridor enclosures, there are recommendations under Section 3.3 of TGDB that seek to provide additional protection by way of cavity barriers above corridor walls and/or above cross-corridor doors, where unseen smoke spread through hidden voids might otherwise occur.

Table 3.2(7) of TGDB states that a cavity barrier is to be provided "*where a corridor (which is not a protected corridor) should be sub-divided to prevent fire or smoke from affecting the routes to two exits simultaneously (see B1, sub-section 1.2 and Diagram 20(a)), above any corridor enclosures which*

are not carried full storey height, or (in the case of a top storey) to the underside of the roof covering [(2)]*".*

Note (2) above says "*The provision in item 7 of this table does not apply where the storey is sub-divided by fire resisting construction carried full storey height and passing through the line of sub-division of the corridor (see Diagram 20(b), or where the cavity is enclosed on the lower side as described in Note 1"* (with a fire rated ceiling extending throughout the storey).

From the above, the cavity barrier is recommended only where a corridor which is not a protected corridor does not have walls that extend up to the floor above. The appellants have stated that the corridors will be constructed of plasterboard stud partitions, carried up to the underside of the structural floor above.

In the absence of fire rated corridor walls, DCC argues that the recommendations of Diagram 20(b) should apply, whereas the appellant argues that the recommendations of Diagram 20(a) are applicable. However, the recommendations of Diagram 20(b) apply to a situation where the corridor walls in a non-protected corridor are not carried full storey height and cavity barriers as per Table 3.2(7) are not provided. In other words, if the corridor walls are continued up, and there is no void passing across between the room and the corridor, then the recommendations of Diagram 20(b) are not considered applicable.

DCC also make reference to Section DD which shows a fire rated partition across the storey, but they have not referenced the associated Section BB which shows a void passing across the corridor, which is not present in this case.

3.1 CONCLUSIONS:

It is considered that the proposed alterations demonstrate compliance with the recommendations of TGDB and that the appeal against Condition 2 and Condition 3 should be allowed.

4.0 REASONS and CONSIDERATIONS:

Having regard to the submissions made in connection with the Fire Safety Certificate application and the appeal, the type of use and layout of the building and having regard to the proposed construction of corridor and lobby enclosures and cross-corridor doors and the extent of their compliance with the

relevant recommendations of Technical Guidance Document B, it is considered that the functional requirements of Part B1 and Part B3 of the Second Schedule of the Building Regulations 1997-2014 are being satisfied and that the Fire Safety Certificate should be granted without the stated Conditions 2 and 3.

NOTE:

While the appeal has been considered in terms of the issues raised in respect of Conditions 2 and 3 of the granted Fire Safety Certificate and the application has not been considered de novo, in the course of considering the issues related to the lobby to Stair 5 (as referenced in Condition No. 2), a separate issue of compliance was noted that does not appear to have been considered by the applicant or by DCC.

Under Condition 2, DCC had concerns regarding the level of protection of the escape route from the storey to Stair 5. The proposed material alterations include the creation of a new Lecture Room 11, formed within the previous larger recreation room. There are two escape routes from the new lecture room, one of which runs through the washing area (shown on the previous application as a toilet) to the Stair 5 lobby, and the other through the recreation room to the lobby to Stair 1. As there is no shown fire separation between the washing area and the recreation room, these can be considered as effectively within the same space.

The lecture room is considered to be an inner room, although the Fire Safety Certificate application documents state that no new inner room is being created (ref. Section 1.3.5 of the revised compliance report). The escape routes from the room require travel through an outer access room in order to reach a protected lobby/stairway.

Under 1.2.3.1 of TGD, an inner room should have an occupancy of no more than 20 persons, whereas in this case the proposed occupancy is 30 persons. The room will meet the other 'inner room' criteria from TGDB. Ideally, the protected lobbies to Stairs 1 and 5 should be extended to 'capture' the exit doors from the lecture room, or a corridor should be formed between the exit doors and the lobbies.

If the board wishes to address this issue, it could be dealt with by the addition of a further condition such as the following:

Condition: The new inner Lecture Room 11 should be provided with escape routes to Stair 1 and Stair 5 without the need to pass through an access room.

Reason: To provide for adequate means of escape from the inner Lecture Room 11.

Signed by:

COLM TRAYNOR BE FIEI Chartered Engineer

Date: **19th September 2017**