REPORT TO AN BORD PLEANÁLA

ON

APPEAL AGAINST CONDITIONS ON A FIRE SAFETY CERTIFICATE

ISSUED BY DUN LAOGHAIRE RATHDOWN COUNTY COUNCIL

FOR

MATERIAL ALTERATIONS AND EXTENSION AT FERNDENE NURSING HOME, DEANSGRANGE ROAD, BLACKROCK, CO. DUBLIN

Client:	An Bord Pleanála
An Bord Pleanála Ref:	FS 0567
Our Ref:	CTA 1756
Date:	NOV 2017

1.0 BACKGROUND

This Report sets out my findings and recommendations on the appeal submitted by Jeremy Gardner Associates, Fire Engineering Consultants (JGA) against Conditions Nos. 2, 3 and 4 on a granted Fire Safety Certificate (Register Ref. No: FA/16/8120/7D) dated 6th July 2017, issued by Dun Laoghaire Rathdown County Council (DLR) in respect of an application for *Material alteration: Extension to a building: It is proposed to extend Ferndene Nursing Home on ground, first and second floors for the provision of additional bedrooms including a sun room on first floor, and dining area and ancillary accommodation on the second floor.*

Condition 2:

a) *An FD30S cross corridor door shall be provided to the protected corridor at gridlines 2-3/H-I on the second floor*
b) *An FD30S cross corridor door shall be provided to the protected corridor at gridlines 2-3/R-S on the second floor*

Reason: *To comply with Part B1 of the Second Schedule to the Building Regulations 1997-2017*.

Condition 3:

Furniture and fittings located in the second floor waiting area shall comply with the recommendations set out in the "Code of practice for fire safety of furniture and fittings in places of assembly" document.

Reason: *To comply with Part B2 of the Second Schedule to the Building Regulations 1997-2017*.

Condition 4:

The section of wall which separates the new extension from the rest of the existing building on the second floor located at approximately gridlines 4/J-M shall be compartment walls in accordance with the recommendations of Section 1.2.7 of Technical Guidance Document B: 2006 and as per the previously approved fire safety strategy for the building contained in previous Fire Safety Certificate applications. The walls shall be constructed in accordance with the recommendations of Section 3.2.5 of Technical Guidance Document B: 2006 and shall achieve a minimum of not less than 60 minutes fire resistance complete with FD60S fire doors.

Reason: *To comply with Part B1 and B3 of the Second Schedule to the Building Regulations 1997-2017*.

Having considered the drawings, details and submissions on the file I am satisfied that the determination by the Board of this application as if it had been made to it in the first instance would not be warranted, as no significant matters have been noted other than the subject matter of the appeal. Accordingly, I consider that it would be appropriate to use the provisions of article 40(2) of the Building Control Regulations, 1997 in this case.

1.1 SUBJECT MATTER OF THE APPEAL

- The application for a Fire Safety Certificate was lodged by JGA on 16th August 2016.
- The Fire Safety Certificate, with 7 conditions, was issued by DLR dated 6th July 2017.
- An appeal against Conditions 2, 3 and 4 was submitted by JGA on 1st August 2017.

1.2 DOCUMENTS REVIEWED

- Application for Fire Safety Certificate lodged by JGA, with compliance report and drawings
- Revised information submitted by JGA on 26th June 2017,
- Appeal submission by JGA to An Bord Pleanala on 1st August 2017
- Submission to An Bord Pleanala by DLR dated 31st August 2017, with fire officers report
- Appeal submission to An Bord Pleanala by JGA dated 18th October 2017
- History files Reg. Ref. 11/8051 and 12/8143/REG, relating to previous applications for construction of a new nursing home and for material alterations.

2.0 FINDINGS

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

- The design for means of escape from the new bedroom area is based on provisions for progressive horizontal evacuation (PHE) as per Section 1.2.7 of Technical Guidance B, which recommends that each storey be sub-divided into separate compartments to allow for escape into another compartment (as a place of relative safety) or to a storey exit, depending on the circumstances.

- This alternative escape route arrangement will be of little value if both escape routes are likely to be disabled simultaneously, therefore, where a corridor provides the access to these alternative escape routes, a cross corridor fire door should be provided in corridors greater

than 12m in length, to ensure these routes are not made impassable (in a fire scenario), as per 1.2.5.3 of TGDB.

- It is the opinion of the building control authority (BCA) that FD30S doors are required in these two corridors at second floor.

- The travel distances from within some of the new second floor bedrooms to the story exit at Stair 5 are in excess of the maximum permitted 20m and therefore it would be necessary to treat the compartment exit doors around Stair 5 as storey exits as per 1.2.7.3 of TGDB and as such the corridor between the storey exits, which is greater than 12m in length, is undivided but should be provided with cross corridor fire doors.

- This arrangement is incorporated into the existing fire safety design strategy for the existing building.

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

- At second floor level it was requested that cross-corridor be provided so that no length of undivided corridor exceeds 15m and to provide dead-end corridors with additional FD30S doorsets as per recommendations of “Fire Safety in Nursing Homes Guide” (DoE). However, that guide is not referenced in TGDB, was not referenced in the previously-approved fire safety certificates, is outdated (refers to TGDB 1991) and is not a statutory document. Therefore there is no requirement to adhere to it in terms of demonstrating compliance with Part B requirements.

- TGDB does reference “Guide to fire safety in existing nursing homes”, which is also not a statutory document. The proposed works involve a new extension so the above guidance is not applicable.

- TGDB recommends subdivision of a corridor connecting storey exits when it exceeds 12m in length, as per the documentation in the previously approved fire safety certificate documentation. The corridor sharing storey exits 3, 4 and 5 on the second floor has been separated with FD60S cross-corridor doors, forming compartment lines.

- As per 1.2.7.3 of TGDB, a compartment door can be regarded as a storey exit, for the purpose of travel distances. However, as the travel distances to Stairs 3, 4 and 5 are within the

recommended limits, there is not a need to consider the compartment doors as storey exits (the stairway doors serve as the storey exits).

- The compartment doors (across the corridors) serve, in this case, to subdivide the corridors between the stairway storey exits, so no length of undivided corridor is common to two storey exits.

- Dead-end corridors are protected and are no longer than 4.5m, so as per TGDB they do not require cross-corridor doors to separate them from the remainder of the corridor (past the stairway), and the provisions of the "Fire safety in nursing homes guide" (for existing buildings) are not applicable.

- It is noted that bedrooms are separated from each other in 30 minutes fire resisting construction, in excess of the recommendations of TGDB.

- Each compartment at the second floor extension is provided with an escape stair, in excess of the recommendations of Diagram 6 of TGDB, and compartments have 60 minutes separation rather than the recommended 30 minutes.

- The subdivision of the corridors with 60 minute compartment lines will ensure no more than one storey exit will be affected by a fire, meaning at least one route will always be available to occupants.

- All new second floor bedrooms have a travel distance to a storey exit of less than 20m

The case made by the building control authority in respect of Conditions No. 3 & 4 is summarised as follows:

- Conditions 3 and 4 are considered as being interconnected and are addressed together.

- It is noted that the applicant references TGDB 2006 to demonstrate compliance with the requirements of Part B of the regulations. However, TGDB has only two references to nursing homes, in Table 0.1 when providing examples of types of buildings considered to be in Purpose Group 2(a) Residential (Institutional) use and in "Other publications referred to" in Appendix G, where it references the DoE "fire safety in nursing homes" document.

- On the basis that TGDB has few means of escape provisions specific to nursing homes it is not considered unreasonable to consider fire safety measures in other guidance documents that do have more specific reference to nursing homes, such as Approved Document B (UK)

and the DoE nursing homes document. The recommendations in those two documents for example to separate bedrooms from one another with fire resisting construction should therefore not be considered as "over designs".

- The "open waiting area" is furnished with seating and is not separated from the corridor. JGA reference 8.5 of BS9991: 2015 re "furnished areas in corridors" as a basis to justify its proposed acceptance in nursing homes. However, BS9991 specifically states that nursing homes fall outside the scope of that document, so it cannot be considered as an acceptable reference document (with regard to the furnished waiting area).

- The recommendations of TGDB require that corridors serving bedrooms be protected corridors. Approved Document B (UK) recommends that ancillary areas in residential care homes, such as day rooms (and therefore by inference seating areas with tables and chairs) be enclosed with fire resisting construction. This would seem to suggest that there is no provision which permits seating areas that are open (not separated by fire resisting construction) to corridors that provide access to alternative escape routes.

- When reviewing the fire safety provisions of the proposed layout of the new extension on the second floor, it was considered reasonable not to object to the open seated area if the furniture and fittings located within this area meet a recognised flame retardant standard for a commercial premises and the new bedroom extension wing is compartmented from the existing wing (in and around gridlines 4 and J to M) as per the existing first floor arrangement, in lieu of fire resisting enclosure of the open seating area.

The case made by the Appellant in respect of Conditions No. 3 and 4 is summarised as follows:

- The current extension and the previous new building were designed based on the recommendations of TGDB, for a Purpose Group 2(a) Residential (Institutional) use, which clearly relates to nursing homes. It is redundant for guidance to refer to purpose groups (grouping a number of similar specific uses together) as part of its scope and to then need to refer to each specific use throughout the guidance. It is considered reasonable to use TGDB as the basis for the design when the proposed use is one listed as being within the scope of TGDB.

- The second floor waiting area is not intended to be separated from the corridor in fire resisting construction, it does not encroach on or minimise the required width of escape routes and is

separated from the the escape routes serving sleeping accommodation by a minimum of 30 minutes fire resistance.

- Doors along the escape route have vision panels which provides staff with clear visibility of any potential fire/smoke ahead. Also, staff are able to reach all occupants of the home without having to walk by the the waiting area (due to the number of available stairways).

- TGDB does not provide specific guidance for furniture on escape routes. Section 8.5/Figure 9 of BS9991: 2015 says that in specialised housing, furniture provided in common corridors be only provided where there is on-site management, be of limited combustibility, not be greater than 10sqm, not be in a dead-end corridor and be separated from the remainder of the escape route by minimum 30 minutes fire resisting construction.

- The waiting area will meet the above criteria, with 24 hour onsite trained staff and an L1 fire detection and alarm system, providing the earliest warning of a potential fire.

- A similar arrangement (with open Reception area on an escape route) was previously approved at ground floor level in the existing building.

- 2.0.3 of TGDB states that "*Furniture and fittings can have a major effect on fire spread but it is impractical to attempt to control them through Building Regulations and no provisions are made in this document about them".* Also it is not reasonable to deduce that a waiting area and a day room are equivalent in relation to assessing fire risk. Approved Document B recommends that ancillary areas such as day rooms be enclosed in fire resisting construction and considers an area as ancillary if the compartment is less than 280sqm and the ancillary area is less than one fifth of the overall area. As the waiting area is 25.3sqm and the compartment area is 393.7sqm, the area is not considered as ancillary so does not need to be enclosed.

- The purpose of a fire safety certificate application is to demonstrate compliance with building regulations. As furniture and fittings are not included in TGDB for residential buildings and TGDB states it is impractical to control them, it is considered unreasonable to require by condition that they are to comply with the requirements of "Code of practice for fire safety in furniture and fittings in places of assembly". It is however intended that furniture in the waiting area will be of material of limited combustibility, as per the fire safety certificate application.

- All occupants of second floor have alternative means of escape away from the waiting area, and the waiting area is separated from all alternative escape routes via 30 minutes fire resistance.

The compartment layout at second floor meets the requirements of 1.2.7 and Table 3.1 of TGDB, and each floor is a compartment floor. The DLR request to have a compartment line located along gridlines 4 and J-M is merely a preference and not a specific requirement of TGDB.

- The building will have a high level of 24 hour management, including procedures for regular fire drills and staff training, will be a non-smoking facility, have 30 minutes fire resisting enclosure to each room (in excess of TGDB recommendations), have dry risers in each escape stairway (also exceeding TGDB recommendations) and will have an L1 fire detection and alarm system.

3.0 CONSIDERATIONS:

Condition 2(a):

The general recommendation in 1.2.5.3 of TGDB is for long corridors between storey exits to be subdivided such that smoke will not render storey exits at both ends impassable before all occupants (who have to use that corridor) have escaped. In TGDB, the recommendation is that corridors in excess of 12m in length between storey exits should be subdivided (guidance for existing nursing homes recommends a limit of 15m in corridor length).

JGA have stated that in the case of the second floor, the exits to the stairways are considered as the storey exits, as they are within the relevant travel distance limits. Compartment doors have also been provided across the corridors at either side of the exit to Stair 5 but, although allowed to be considered as storey exits in themselves, these doors are not considered to be such in this case.

As the length of corridor between the storey exit to Stair 5 and the storey exit to Stair 3 is subdivided by the cross-corridor compartment door, JGA considers that "no length of corridor between storey exits is undivided", as per 1.2.5.3(a) of TGDB, and so no further subdivision is required.

However, 1.2.5.3(b) of TGDB has an additional recommendation that would be considered an essential qualification to the provision of cross-corridor doors. They should be positioned to "*effectively safeguard the route from smoke, having regard to the layout of the corridor and to any adjacent fire risks*".

The reference to the "layout of the corridor" is considered as referring to the layout of the accommodation served by the corridor, rather than to the geometry of the corridor itself, and is taken to mean that the level of risk to the corridor should be balanced as to the number, type and

size of 'hazard rooms' that may open onto it, so as to "effectively safeguard the route". The proposed layout (with the compartment door serving as the cross-corridor subdividing door) would have six bedrooms and an office opening off one section of corridor, with the dining room (and relatively sterile waiting area) opening off the other section, which would expose one section of the corridor to most of the 'adjacent fire risks'.

Condition 2(a) seeks to set a cross-corridor door at gridlines 2-3/H-I, which would have five bedrooms opening into one section and one bedroom, office, dining room and waiting area opening into the other section, which is considered a more reasonable provision having regard to the requirement to "effectively safeguard the route", and on that basis it is considered that Condition 2(a) should be upheld.

Condition 2(b):

This seeks to provide a cross-corridor door to separate the main part of the corridor from the dead-end section of corridor that extends beyond Stair 4. However, 1.2.5.4 of TGDB applies this recommendation only where the dead-end corridor exceeds 4.5m in length, which in this case it does not (guidance for existing nursing homes does not exempt short dead-end corridors from this recommendation). However, compliance with the recommendations of TGDB should be taken as prima facie compliance with the functional requirement of Part B of the building regulations, and so this part of the condition should be removed.

With reference to Condition 2(a) above, a similar condition was not applied by DLR to the corridor between Stairs 4 and 5, which is around 21m in length between the storey exit to Stair 4 and the compartment door before Stair 5 (which can be considered as a storey exit). This was presumably as they had conditioned (under 2(b) above) that an additional cross-corridor door would be provided near Stair 4, reducing the corridor length to around 17m.

In the absence of requiring a cross-corridor door under Condition 2(b) above, it is considered reasonable to require a door across the corridor around midway between gridlines M and S, to comply with the recommendations of 1.2.5.3 of TGDB.

Condition 3:

2.0.3 of TGDB notes that furniture and fittings can have a major effect on fire spread, but considers it impractical to attempt to control them through building regulations, and no provisions are made in TGDB about them. However, they do draw attention to "Code of practice for fire safety of furnishings and fittings in places of assembly" for guidance on these items in use in existing buildings. The Code has been referenced in Condition 3 of the granted Fire Safety Certificate.

JGA make reference to Section 8.5 of BS9991: 2015 in terms of furnished areas in corridors in specialised housing/sheltered housing, where furniture is provided in communal areas. While residents in this type of accommodation generally are not as dependent on the level of care provided in a nursing home, they do have needs for an element of care and support, so would have some vulnerabilities.

The recommendations allow for furniture to be used in a corridor space, provided it does not encroach on the required escape width of the corridor and the area is fire-separated from the remainder of the corridor, and have an area of not more than 10sqm. There is also a flammability restriction on the furniture used (medium hazard to BS7176). This recommendation is strictly not applicable to nursing home use but the principle could be considered there, subject to other relevant factors being taken into account e.g. a higher level of life risk.

JGA argues that the impracticability of controlling furnishings as referenced in TGDB means flammability standards should not be imposed by way of a condition; nonetheless, they state that the materials used will be 'materials of limited combustibility', indicating that some form of control is envisaged. The condition makes reference to "Code of practice for fire safety of furniture and fittings in places of assembly" as an appropriate guidance document in that regard. However, the technical references in the document are generally out of date with some no longer applicable.

More relevant standards are published in the UK, including BS7176: *Specification for resistance to ignition of upholstered furniture for non-domestic seating by testing of composites,* which sets the relevant level of specification depending on assessment for the hazard level. Based on guidance from HTM 05-03, premises with elderly residents are classed as 'high risk', so would be classified as 'high hazard' under BS7176. It is likely that furniture sold in this country will be tested to the UK standard, rather than to an outdated Irish standard.

With regard to the fact that control of furnishings might generally be considered as impractical in terms of compliance with building regulations, in a nursing home setting much higher levels of control are of necessity exercised with regard to all aspects of the operation, so control of furnishings should be considered as practically achievable, and not considered as beyond the scope of the Fire Safety Certificate requirements in this instance.

Indeed, the applicant has undertaken to ensure that furniture in materials of 'limited combustibility' only will be used, which indicates a need to properly specify, purchase and control the use of the furniture (notwithstanding that the specification of 'limited combustibility' is generally not applied to the testing of furniture, and assuming that soft furniture of some nature will be used). The TGDB caveat re control of furnishings is based on the normal reality of operating a premises (with limited controls), but the much higher level of controls in the nursing home scenario makes this a more realistic proposition, and takes account of the actual level of risk in this case.

It is therefore considered reasonable, in this instance, to allow use of the furniture as proposed subject to compliance with specified standards.

Condition 4:

This condition relates to the provision of compartmentation between the central area around Stair 5, containing the waiting area, and the remainder of the second floor. DLR have accepted the placing of furniture in the waiting area subject to flammability standards, but also to enhancement of the compartmentation between the waiting area and other parts of the second floor. They reference a similar arrangement at the same location on the existing floor below.

The effect of the condition would be to have:

- The wall between the waiting area and the existing wing constructed as a compartment wall
- The wall between the new section of corridor and the extended dining room (from the door to the existing building around to gridline M) constructed as a compartment wall.

As the above construction is proposed to be constructed in any case with 30 minutes fire resistance, this is considered adequate in terms of providing separation from the waiting area. It is noted that the proposed second floor will already be constructed with four separate compartments in 60 minute fire resisting construction, so it is not considered necessary to provide further compartmentation for

the purposes of progressive horizontal escape, so the appeal against this condition should be allowed.

3.1 CONCLUSIONS:

It is considered that Conditions 2 and 3 as set out in the granted Fire Safety Certificate are generally reasonable in the circumstances, and should be upheld, subject to the revised conditions as set out below, and that the appeal against Condition 4 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 provision of cross-corridor doors and the provision of lines of compartmentation vis-à-vis the recommendations of Technical Guidance Document B, it is considered that the functional requirements of Part B1 of the Second Schedule of the Building Regulations 1997-2014 are not being satisfied and that the appeal against Conditions 2 and 3 should be refused, subject to modifications to the Conditions as set out below, and that the functional requirements of Part B3 of the Second Schedule of the Building Regulations 1997-2014 (with regard to compartmentation) are being satisfied and the appeal against Condition 4 should be allowed.

Condition 2:

An FD30S cross-corridor door shall be provided to the protected corridor at second floor between gridlines O and P

Reason: To provide adequate protection against smoke spread along the corridor

Condition 3:

Any furniture located in the second floor waiting area shall be compliant with BS7176 *Specification for resistance to ignition of upholstered furniture for non-domestic seating by testing of composites - High Hazard*

Reason: To provide adequate protection against possible ignition of furniture located on an escape route.

Signed by:

---------- COLM TRAYNOR BE FIEI Chartered Engineer

Date: **7th November 2017**