



An  
Bord  
Pleanála

# Revised FSC Appeal Report

**ABP-317600-23**

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## Appeal v Conditions (7 no.)

Appeal against Conditions No.'s  
4,10,11,19, 24, 25 and 27 attached to  
granted Revised Fire Safety  
Certificate (Reg. Ref. No.  
FSC1281/23/REV)

## Development Description

Extension and Material Alteration to  
the previously approved design (Reg.  
Ref. No. FSC3571/18) for the National  
Maternity Hospital at St. Vincent's  
University Hospital, Elm Park, Dublin 4

## Building Control Authority Fire Safety Certificate application number:

FSC1281/23/REV

## Appellant

Health Services Executive

## Appellant's Agent

Maurice Johnson & Partners Ltd.

## Building Control Authority:

Dublin City Council

## Inspector

Dr. Raymond J. Connolly

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## 1.0 Introduction

- 1.1. The subject of the Revised Fire Safety Certificate application is the new National Maternity Hospital (NMH) which is to be located at the existing St. Vincent's University Hospital campus at Elm Park, Dublin 4.
- 1.2. The proposed NMH building comprises 8 no. storeys over a basement level and includes maternity, obstetrics, gynaecology and neonatal facilities. The new building is to be connected to the main St. Vincent's University Hospital building by link corridors at ground and upper levels.
- 1.3. The proposed NMH building was originally granted a Fire Safety Certificate (Re. Ref. No. 3571/18) by Dublin City Council on 20<sup>th</sup> September 2018 subject to 27 no. conditions. Subsequently, elements of the approved design were materially-altered and the previously approved building was extended to include additional plant accommodation. Accordingly, a Revised Fire Safety Certificate was applied for by the Health Services Executive and subsequently granted by Dublin City Council on 21<sup>st</sup> June 2023 (under Reg. Ref. No. FSC FRV 2201209DC) subject to 28 no. conditions.
- 1.4. This appeal relates to an **extension** and **material alteration** of a previously approved new building and specifically the attachment of Conditions No.'s 4, 10, 11, 19, 24, 25 and 27 by Dublin City Council to the granted Revised Fire Safety Certificate.
- 1.5. In my opinion, the specific nature of the appeal versus conditions attached to a Revised FSC does not require *de novo* consideration in this instance.

## 2.0 Information Considered

2.1. The information considered in this appeal comprised the following:

- Maurice Johnson & Partners Limited *Building Regulations 1997-2021 Revised Fire Safety Certificate Compliance Report (No. 21012 RFSC R02 Issue 02) for Extension and Material Alterations to previously approved design (Reg. Ref. No. FSC3571/18) for the National Maternity Hospital at St. Vincent's University Hospital, Elm Park, Dublin 4* and associated drawings.
- Maurice Johnson & Partners Limited *Building Regulations 1997-2021 Revised Fire Safety Certificate Compliance Report (No. 21012 RFSC R02 Issue 03) for Extension and Material Alterations to previously approved design (Reg. Ref. No. FSC3571/18) for the National Maternity Hospital at St. Vincent's University Hospital, Elm Park, Dublin 4* and associated drawings.
- Maurice Johnson & Partners Limited *FSC Further Information Letter FSC FI Letter No. 1* dated 15<sup>th</sup> October 2022.
- Maurice Johnson & Partners Limited *Building Regulations 1997-2021 Revised Fire Safety Certificate Compliance Report (No. 21012 RFSC R02 Issue 04) for Extension and Material Alterations to previously approved design (Reg. Ref. No. FSC3571/18) for the National Maternity Hospital at St. Vincent's University Hospital, Elm Park, Dublin 4* and associated drawings.
- Maurice Johnson & Partners Limited *FSC Further Information Letter FSC FI Letter No. 2* dated 9<sup>th</sup> May 2023.
- Maurice Johnson & Partners Limited *Building Regulations 1997-2021 Revised Fire Safety Certificate Compliance Report (No. 21012 RFSC R02 Issue 05) for Extension and Material Alterations to previously approved design (Reg. Ref. No. FSC3571/18) for the National Maternity Hospital at St. Vincent's University Hospital, Elm Park, Dublin 4* and associated drawings.

- Revised Fire Safety Certificate issued by Dublin City Council under reference SN:3006271/FRV2201209DC dated 21<sup>st</sup> June 2023 and subject of 28 no. conditions.
- Letter of Appeal (undated) received by An Bord Pleanála on 18<sup>th</sup> July 2023 from Maurice Johnson and Partners Limited acting on behalf of the Health Services Executive.
- Dublin Fire Brigade's submission to the Board on 18<sup>th</sup> August 2023 comprising Fire Officer's Report on Fire Safety Certificate appeal (dated 17<sup>th</sup> August 2023).
- Letter to An Bord Pleanála from Maurice Johnson and Partners Limited, acting on behalf of the Health Services Executive, dated 19<sup>th</sup> December 2023 and making observations regarding Fire Officer's Report.
- Dublin City Council Case History File (FSC 3571/18 - 17/1547).

### **3.0 Relevant History/Cases**

- 3.1.** Fire Safety Certificate FSC 3571/18 was issued by Dublin City Council on 20<sup>th</sup> September 2018 in respect of the construction of new national maternity hospital (NMH) building at the existing St. Vincent's University Hospital (SVUH) healthcare campus including maternity, obstetrics, gynaecology and neonatal facilities. The NMH will also provide for the replacement of displaced, existing in-patient accommodation for SVUH. The NMH will be connected to the existing SVUH building by link corridors at ground and upper levels.
- 3.2** I am not aware of any other Board decisions in respect of other developments elsewhere that may be relevant to this appeal and accordingly I am offering my opinion to the Board in this matter solely on the basis of the information provided to me as scheduled in Section 2.1 above.
- 3.3** I am aware that the appellant has made several references to some of the design approaches subject of this appeal having been previously approved by Dublin City Council at the new National Children's Hospital. I have not investigated the veracity of such claims and in any event would not give regard to same. I consider that the provision of consistency in the delivery of their approvals of fire safety designs to be an internal matter for Dublin City Council. I am concerning myself solely with the compliance of the proposed design with Part B to the Building Regulations and specifically the 7 no. conditions subject of the current appeal.

## 4.0 Appellant's Case

### 4.1. Condition No. 4

***The atrium enclosure shall have a minimum period of fire resistance of 60 minutes (integrity and insulation and where applicable, load-bearing capacity)***

4.1.1 The appellant is appealing the attachment of Condition No. 4 to the grant of the Revised Fire Safety Certificate largely on the basis that the submitted design complies with the guidance contained in HTM 05-02:2015 "*Firecode - Guidance in support of functional provisions (Fire safety in the design of healthcare premises)*" read in conjunction with HTM 05-03 Part M "*Guidance on the fire safety of atria in healthcare buildings*" for separation requirements of atria from normal and very high dependency patient access areas in hospitals.

4.1.2 The appellant includes the following points in support of the appeal:

- It has been demonstrated in the parent Fire Safety Certificate application (FSC 3571/18) and confirmed by an independent third party review (undertaken by Ger Sexton & Partners to discharge Condition No. 1 attached to FSC 3571/18) that the proposed mechanical smoke and heat exhaust ventilation system provided within the subject atrium will ensure that the maximum smoke temperatures arising therein remains significantly less than 140°C above ambient.
- Clause 4.51 of HTM 05-03 Part M [*Note: this reference by the appellant should read Clause 4.52*] states that "in circumstances where the rise in smoke temperature within the atrium can be demonstrated not to exceed 140°C above ambient temperature..... and there are no balconies or bridges on the atrium side of the enclosure, any glazed elements incorporated into the atrium enclosure at levels above the atrium base need not meet the requirement for insulation".
- The appellant highlights that the balconies/bridges within the atrium at upper levels are circulation routes (not escape routes) and are not enclosed on any side by accommodation facing the atrium along the bridge elevations.

- The provision of sprinklers to the proposed building is a significant enhancement given that the building height is less than the 30 metres height threshold where HTM 05-02 makes provision of sprinklers mandatory. *[It is noted that the building height is declared in the parent FSC 3571/18 to be 26.6 metres whereas the appellant references the height to be 22.1 metres].*
- The proposed 60 minutes fire-resisting (integrity only) enclosure to the atrium exceeds the minimum 30 minutes level required by HTM 05-02.
- The atrium enclosure does not directly adjoin accommodation rooms (with one single limited exception per storey on Levels 1 to 4) and therefore the risk to fire-fighter safety is reduced.
- A 30 minutes fire-resisting (integrity only) design was approved by Dublin City Council for a similar atrium enclosure at the National Children's Hospital.



## **4.2      Condition No. 10**

***Single means of escape shall comply with section 3.30 of HTM 05-02:2015 and any enclosed escape routes that have a single direction of escape and exceed 4.5 metres in length shall be protected by 30 minutes fire-resisting construction in accordance with section 3.31 and section 3.32 of HTM 05-02:2015. In this regard, the fire rated dead-end portions of a corridor exceeding 4.5 metres in length shall be separated by self-closing fire doors (together with any necessary associated screens) from any part of the corridor which: (a) provides two directions of escape; or (b) continues past one storey exit to another.***

- 4.2.1      The appellant is appealing the attachment of Condition No. 10 to the grant of the Revised Fire Safety Certificate on the basis that the submitted design complies with the guidance contained in HTM 05-02:2015 “*Firecode Guidance in support of functional provisions (Fire safety in the design of healthcare premises)*” and specifically Clauses 3.31 and 3.32 therein.
- 4.2.2      The appellant considers that HTM 05-02 covers all hospital types and occupant risk profiles, including “critically ill or pregnant” patients.
- 4.2.3      The provision of fire doors at the commencement of dead-end sections of corridors would undermine the ability of staff to monitor patients in the normal manner and would adversely impact on normal work practices.

### **4.3      Condition No. 11**

***Fire hazard rooms as identified in Clause 5.41 of HTM 05-02:2015 shall be enclosed in 30 minutes fire-resisting construction complete with FD30S fire door sets in accordance with Clause 5.40 of HTM 05-02:2015 (e.g. clean/dirty utility rooms, cleaner rooms/stores, waste stores, ward storage rooms, linen stores, ICT Hub, etc.)***

- 4.3.1      The appellant is seeking removal of this condition requiring the blanket provision of fire-resisting enclosure to Fire Hazard Rooms and instead is seeking to avail of the guidance contained in Clause 5.43 of HTM 05-02:2015, which permits the need for fire-resisting enclosure to be “risk-assessed” on an individual basis. This relaxation is available because the building is fitted with sprinkler protection.
- 4.3.2      The appellant has undertaken extensive risk assessments and has specifically concluded the absence of need for fire-resisting enclosure to the following rooms:-
- Clean Utility
  - Dirty Utility
  - Ward Pantry
  - Staff Rest Rooms
  - Local Staff Change
  - Disposal Hold
- 4.3.3      The appellant has cited that a similar “risk assessment” based design approach was previously approved by Dublin City Council for the National Children’s Hospital under RFSC19/1316.

#### **4.4      Condition No. 19**

***The basement level (Level B1) external plant rooms at grid lines R-S/14-17 accommodating two no. Transformer Rooms, an MV switch-room and a Medical Gas Plant and at gridlines F-G/15-17 accommodating two no. Transformer Rooms, and an MV switch-room shall be provided with an appropriate automatic fire suppression system which shall be reviewed by an independent, competent specialist for safety and compliance with a specific expertise in this area who shall confirm or modify the design accordingly.***

- 4.4.1      The appellant is seeking removal of this condition on the basis that Clause 5.1 of IS EN 12845+A1 2019 requires that “where a building is to be sprinkler protected, all areas of that building or of a communicating building shall be sprinkler protected”.
- 4.4.2      The appellant argues that the subject plant rooms do not communicate with the remainder of the NMH building and are accessed from external fresh air via the east and west courtyards. As they do not form part of a communicating building to the “main hospital building”, the appellant contends that the plant rooms do not by default require automatic suppression to be provided.

#### **4.5      Condition No. 24**

***The fire-fighting shaft shall be in accordance with HTM 05-02:2015 and Clause 20.2.2 and Figure 21 of BS 9999:2017.***

4.5.1      The appellant is seeking removal of this condition on the basis that it relates to works previously approved under the parent Fire Safety Certificate application and accordingly the condition is outside the scope of the subject Revised Fire Safety Certificate application.

4.5.2      In any event, the appellant considers the proposed stair design to be justified because:-

- The stair is accessed at basement level by means of a double lobby.
- The building is sprinkler protected.
- The basement level is suitably ventilated in terms of smoke clearance.

#### **4.6      Condition No. 25**

***Only services associated with the fire-fighting shaft shall pass through or be contained within the fire-fighting shaft in accordance with HTM 05-02:2015 and Clause 20.2.3 of BS 9999:2017. The fire-fighting shaft shall not contain any cupboards or provide access to service shafts serving the remainder of the building.***

- 4.6.1      The appellant is seeking removal of this Condition on the basis that Section 0.2 of Technical Guidance Document B permits alternative design approaches to be adopted where rigid compliance with certain provisions within that document proves unduly restrictive.
  
- 4.6.2      Against such a background, the appellant has prepared a comparative assessment to demonstrate how the provisions of BS 9999 compare to his specific design proposals and concludes that the level of risk to the fire-fighting shaft is “commensurate with the prescriptive design solutions”.

**4.7      Condition No. 27**

***A FD60S fire door-set shall be provided between the lift core lobby and stair core lobby serving stair core 4 to provide direct access for fire-fighting personnel to facilitate fire-fighting operations.***

- 4.7.1      The appellant is seeking removal of this Condition on the basis that it relates to works previously approved under the parent Fire Safety Certificate application and accordingly is outside the scope of the subject Revised Fire Safety Certificate application.
- 4.7.2      The appellant suggests that inclusion of the subject door would potentially impact on circulation within the building due to potential obstructions caused by the door swing associated with the new door being required.

## 5.0 Building Control Authority Case

### 5.1. Condition No. 4

***The atrium enclosure shall have a minimum period of fire resistance of 60 minutes (integrity and insulation and where applicable, load-bearing capacity)***

- 5.1.1 Dublin City Council suggests that the reduced fire-resisting performance specification for the atrium enclosure is not justifiable in this instance because the subject atrium enclosure adjoins a hospital street. This is considered important by the Council because the fire-fighting access infra-structure for the building has been designed on the basis of the “hospital street design” model rather than the more traditional provision of fire-fighting shafts as per Clause 7.11 and Table 11 of HTM 05-02: *Firecode Guidance in support of functional provisions (Fire safety in the design of healthcare premises)*:2015.
- 5.1.2 Dublin City Council considers this to be particularly relevant in imposing higher standards of fire-resisting enclosure for the atrium because of the potentially increased risk arising during fire-fighting access and rescue operations. This is in addition to reliance on the hospital street for progressive horizontal evacuation of building occupants, including those known to be high-risk.

## 5.2 Condition No. 10

***Single means of escape shall comply with section 3.30 of HTM 05-02:2015 and any enclosed escape routes that have a single direction of escape and exceed 4.5 metres in length shall be protected by 30 minutes fire-resisting construction in accordance with section 3.31 and section 3.32 of HTM 05-02:2015. In this regard, the fire rated dead-end portions of a corridor exceeding 4.5 metres in length shall be separated by self-closing fire doors (together with any necessary associated screens) from any part of the corridor which: (a) provides two directions of escape; or (b) continues past one storey exit to another.***

5.2.1 The attachment of Condition No. 10 continues the intent of Condition No. 11 attached to the parent FSC 3571/18. However, the scope of the condition has been expanded by Dublin City Council to now require the separation of dead-end sections of corridor from adjacent sections of corridor requiring the introduction of new and additional cross-corridor fire-resisting doorsets.

5.2.2 This additional requirement is motivated by Dublin City Council's concern that the protection afforded to "critically-ill and pregnant" occupants should be "to an optimum" and that "any means to reduce the spread of fire and smoke should be inherent in the design and where omitted the Fire Authority must augment the design to require the incorporation of such requirements".



### **5.3      Condition No. 11**

***Fire hazard rooms as identified in Clause 5.41 of HTM 05-02:2015 shall be enclosed in 30 minutes fire-resisting construction complete with FD30S fire door sets in accordance with Clause 5.40 of HTM 05-02:2015 (e.g. clean/dirty utility rooms, cleaner rooms/stores, waste stores, ward storage rooms, linen stores, ICT Hub, etc.)***

- 5.3.1      Dublin City Council requires Fire Hazard Rooms to be enclosed in 30 minutes fire-resisting construction in order to delay and reduce the likelihood of fire and smoke spread outside these rooms as might impact on adjacent spaces used for patient care.

#### **5.4 Condition No. 19**

***The basement level (Level B1) external plant rooms at grid lines R-S/14-17 accommodating two no. Transformer Rooms, an MV switch-room and a Medical Gas Plant and at gridlines F-G/15-17 accommodating two no. Transformer Rooms, and an MV switch-room shall be provided with an appropriate automatic fire suppression system which shall be reviewed by an independent, competent specialist for safety and compliance with a specific expertise in this area who shall confirm or modify the design accordingly.***

- 5.4.1 Dublin City Council considers that the subject externally accessed plant rooms form part of the Revised Fire Safety Certificate application.
- 5.4.2 Dublin City Council further considers that such rooms pose a potential threat to the patient accommodation overhead due to the risk of vertical external fire spread from the basement level to upper storeys via the building's unprotected external façade.
- 5.4.3 Dublin City Council highlights that the storage of compressed gases potentially represents an increased fire and explosion hazard. In such a context, the Council considers that the risks involved necessitate specialist fire protection systems.

## **5.5      Condition No. 24**

***The fire-fighting shaft shall be in accordance with HTM 05-02:2015 and Clause 20.2.2 and Figure 21 of BS 9999:2017.***

- 5.5.1      Dublin City Council considers that the undertaking given within the original Fire Safety Certificate application that the fire-fighting shaft (Core No. 1) would comply with guidance given in HTM 05-02 attracts the provisions of Clause 7.17 therein, which states “*the shaft should be constructed generally in accordance with clauses 7 and 8 of BS 5588-5*”.
- 5.5.2      Dublin City Council highlights that HTM 05-02 recognises the withdrawal of BS 5588: Part 5:2004 and confirms the need for building control body approval for any replacement measures as might be adopted from BS 9999.
- 5.5.3      Dublin City Council considers that the proposed design of fire-fighting stair (Core No. 1) deviates from the relevant guidance contained in BS 9999:2017 and that such a deviation has not been justified.

**5.6      Condition No. 25**

***Only services associated with the fire-fighting shaft shall pass through or be contained within the fire-fighting shaft in accordance with HTM 05-02:2015 and Clause 20.2.3 of BS 9999:2017. The fire-fighting shaft shall not contain any cupboards or provide access to service shafts serving the remainder of the building.***

5.6.1      Dublin City Council considers the subject condition to be a reiteration of the guidance given in HTM 05-02 and specifically Clause 7.17 therein which states “*the shaft should be constructed generally in accordance with clauses 7 and 8 of BS 5588-5*”, which following the withdrawal of BS 5588 in turn leads to BS 9999:2017 and Clause 20.2.3 therein.

5.6.2      The subject condition is a minor re-wording but otherwise faithful replica of that guidance.

**5.7      Condition No. 27**

***A FD60S fire door-set shall be provided between the lift core lobby and stair core lobby serving stair core 4 to provide direct access for fire-fighting personnel to facilitate fire-fighting operations.***

- 5.7.1      Dublin City Council suggests that the new fire doorset being required adjacent Core No. 4 would allow more direct access between the fire-fighting lift and the stairway and will offer a significant number of enhancements to the movement of fire-fighting personnel within the building.

## **6.0 Assessment**

### **6.1. “De Novo” assessment/appeal v conditions**

- 6.1.1. Having regard to the nature of the appeal which is solely against attachment of conditions and having considered the drawings, details and submissions on the file and having regard to the provisions of Article 40 of the Building Control Regulations, 1997 (as amended), 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. Accordingly, I consider that it would be appropriate to use the provisions of Article 40(2) of the Building Control Regulations, 1997 (as amended).

## 6.2. Content of Assessment

### 6.2.1 Condition No. 4

***The atrium enclosure shall have a minimum period of fire resistance of 60 minutes (integrity and insulation and where applicable, load-bearing capacity)***

- 6.2.1.1 HTM 05-03 Part M “*Guidance on the fire safety of atria in healthcare buildings*” gives guidance regarding requirements for enclosing atria in fire-resisting construction. Specifically, Clause 4.52 of HTM 05-03 Part M states that “in circumstances where the rise in smoke temperature within the atrium can be demonstrated not to exceed 140°C above ambient temperature...and there are no balconies or bridges on the atrium side of the enclosure, any glazed elements incorporated into the atrium enclosure at levels above the atrium base need not meet the requirement for insulation”.
- 6.2.1.2 I am satisfied that the appellant has appropriately demonstrated that the design fire scenario smoke temperatures arising within the ventilated atrium are unlikely to exceed 140°C by reference to the computational fluid dynamics modelling undertaken by RPS in the application documentation for the parent Fire Safety Certificate (FSC 3571/18), which was subsequently confirmed by an independent review undertaken by Ger Sexton & Partners.
- 6.2.1.3 In such a context, the criteria contained in HTM 05-03 for relaxing the requirement for provision of insulation to glazing at the upper levels of an atrium are satisfied. The presence of open circulation walkways within the subject atrium is not considered to be a sufficient deviation from the HTM 05-03 guidance to undermine the applicability of this relaxation on the basis that such walkways are to be substantially free of combustible materials (as committed to within the application documentation to the parent FSC 3571/18). It is highlighted that this undertaking is non-trivial and needs to be communicated to the building’s end-user.
- 6.2.1.4 In that context, the proposed use of 60 minutes fire-resisting (integrity only) glazing to enclose the upper levels of the atrium is justifiable solely within the context of HTM 05-03 guidance.

- 6.2.1.5 However, there is a valid fundamental point being made by Dublin City Council regarding the underlying regime used as the basis of designing the fire-fighting infra-structure within the building. The appellant has not changed the parent Fire Safety Certificate's (FSC 3571/18) approach of generally not providing fire-fighting shafts in accordance with Table 11 of HTM 05-02: *Firecode Guidance in support of functional provisions (Fire safety in the design of healthcare premises)*:2015, with the sole exception of Core No. 1.
- 6.2.1.6 Clause 7.18 of HTM 05-02:2015 allows for omission of fire-fighting shafts in buildings designed using the "hospital street model" whereby an alternative model of fire-fighting access is considered sufficient, i.e. relying on the use of hospital streets as part of the fire-fighting infra-structure. In such a context, the fire safety measures associated with hospital streets are required to be enhanced relative to the design of traditional circulation corridor escape routes.
- 6.2.1.7 A cursory review of the parent FSC 3571/18 application would suggest that adoption of the more traditional approach, i.e. HTM 05-02 Table 11 guidance, for the stated ground floor footprint of c.9,450 m<sup>2</sup> could potentially have attracted a need for 7 no. fire-fighting shafts. There was a very significant saving to the building's design accrued from the decision to adopt the "hospital street model".
- 6.2.1.8 Clause 3.37 of HTM 05-02 is explicit in defining a hospital street as requiring the same standard of fire-resisting enclosure appropriate to a fire compartment. Despite their fire-fighting function, HTM 05-02 does not increase these fire-resisting standards to the 120 minutes levels ordinarily associated with fire-fighting infra-structure in other building types.
- 6.2.1.9 Clause 5.12(b) of HTM 05-02 allows the specification of compartment walls, and by direct association walls enclosing hospital streets, within sprinkler protected buildings to be reduced from 60 minutes fire resistance to 30 minutes fire-resistance but requires separation performance of both integrity (resistance to the passage of flames) and insulation (resistance to the passage of heat).



- 6.2.1.10 The relaxation of the requirement for insulation fire resistance that is available in Clause 3.33 of HTM 05-02 for glazing (with the exception of “modified toughened” glazing) in sub-compartment walls in sprinklered buildings is not available to glazing in compartment walls or hospital streets. Clause 5.21 of HTM 05-02 requires glazing enclosing hospital streets to be 30 minutes fire-resisting (integrity and insulation).
- 6.2.1.11 The appellant is not proposing to avail of the permitted reduction from a 60 minutes fire-resisting standard in the context of the integrity criterion, i.e. resistance to the passage of flames. However, the applicant is seeking to do away entirely with the insulation criterion, i.e. resistance to the passage of heat.
- 6.2.1.12 The basis for the applicant’s proposal is founded on the fact that the subject glazing is faced on one side by the upper levels of an atrium. However, this does not address the fundamental concern raised by Dublin City Council, namely whether the relaxation of the fire resistance rating to omit the insulation parameter is justifiable in circumstances where the atrium’s glazed enclosure simultaneously serves as an enclosure to a hospital street, forming part of the fire-fighting infra-structure for the building to an extent that supplants the provision of traditional fire-fighting shafts.
- 6.2.1.13 It is a long-standing fire safety design principle that where two potentially conflicting sets of guidance occur simultaneously that the more onerous conditions should apply. Whilst this issue is not addressed explicitly in either HTM publication, I am satisfied that the combined application of HTM 05-02 and HTM 05-03 should conclude that guidance regarding fire protection levels required for hospital streets should take precedence over guidance relating to atria. In simple terms, the higher fire resistance standard from HTM 05-02 for hospital streets should apply even if that 30 minutes (integrity and insulation) standard remains very modest in the context of fire-fighting and progressive horizontal evacuation.
- 6.2.1.14 In my opinion, the proposed design does not, as has been claimed by the appellant, satisfy the requirements of HTM 05-02:2015.

- 6.2.1.15 Mindful of the very significant differences arising from the change of specification from integrity and insulation to integrity only and the Board's key role in this project of national significance, it behoves me to consider the issue further and to offer my opinion as to whether the functional requirements of Parts B3 and B5 to the Building Regulations (1997 to 2022) have nonetheless been met despite the absence of *prima facie* evidence of compliance using HTM 05-02.
- 6.2.1.16 It is acknowledged that 60 minutes fire-resistance (integrity) is being provided for all construction enclosing the atrium. Solid components enclosing the atrium and all enclosure at ground level (except doorsets) are to comprise 60 minutes fire resistance (integrity and insulation). Doorsets into the atrium are to comprise 60 minutes fire resistance (integrity only) as is standard practice.
- 6.2.1.17 The proposed specification of glazed elements enclosing the atrium as 60 minutes fire-resisting (integrity only) is in my view justifiable on the basis of the significant bespoke extent of fire engineering that has been undertaken within the parent FSC (3571/18) and re-iterated in this appeal.
- 6.2.1.18 The appellant's fire engineering approach has comprised a robust quantitative analysis that gives me confidence that in the event of a fire within the sprinkler protected mechanically ventilated atrium, smoke and gas temperatures would be insufficiently high to adversely impact on the adjacent hospital streets, where separated by 60 minutes fire-resisting (integrity only) glazed construction. It is noted that the appellant's analysis has also considered direct heat transmission from a fire on the atrium base by radiation to the glazing at first floor levels and that such analysis is predicated on the end-user observing certain fire safety management practices.
- 6.2.1.19 I share the unease of Dublin City Council that reductions in the standards of fire protection "may imperil and impinge on fire-fighting activities and firefighter safety". However, the appellant has committed to 60 minutes fire-resisting enclosure to the atrium notwithstanding the reduced 30 minutes standard available under HTM 05-02 and I do not believe the omission of the insulation criterion will materially reduce the risk to firefighters. I say this in a context where the building-wide fire-fighting infra-structure is

being bench-marked against the 30 minutes fire resistance baseline permitted by HTM 05-02 for buildings fitted with sprinklers. It is difficult to comprehend how a building in excess of 20 metres in height, even when fitted with sprinkler protection, could possibly be designed to a 30 minutes fire protection standard whilst complying with Parts B3 and B5 to the Building Regulations – noting the specific difference in scope of Building Regulation B5 between Ireland and England & Wales. However, in the context of the appeal relating to a Revised Fire Safety Certificate, I cannot consider this matter *de novo*.

6.2.1.20 I suggest that the subject condition be amended as follows:-

*The atrium enclosure shall have a minimum period of fire resistance of 60 minutes (integrity and insulation and where applicable, load-bearing capacity) with the exception of fixed-shut glazing systems, which shall have a minimum period of fire resistance of 60 minutes (integrity only). This exception does not extend to glazing of the type referred to as “modified toughened”.*

**6.3      Condition No. 10**  
***Single means of escape shall comply with section 3.30 of HTM 05-02:2015 and any enclosed escape routes that have a single direction of escape and exceed 4.5 metres in length shall be protected by 30 minutes fire-resisting construction in accordance with section 3.31 and section 3.32 of HTM 05-02:2015. In this regard, the fire rated dead-end portions of a corridor exceeding 4.5 metres in length shall be separated by self-closing fire doors (together with any necessary associated screens) from any part of the corridor which: (a) provides two directions of escape; or (b) continues past one storey exit to another.***

6.3.1      The attachment of Condition No. 10 continues the intent of Condition No. 11 attached to the parent Fire Safety Certificate FSC 3571/18. However, the scope of the condition has been expanded by Dublin City Council to now require the separation of dead-end sections of corridor from adjacent sections of corridor. This approach is not founded on any guidance contained in HTM 05-02: *Firecode Guidance in support of functional provisions (Fire safety in the design of healthcare premises)*:2015, which forms the basis of design agreed between both parties.

6.3.2      The appellant is agreeable to the enclosure of dead-end sections of corridor with fire-resisting construction as per Clauses 3.31, 3.32 and 3.33 of HTM 05-02:2015 and indeed is obliged to do so under Condition No. 11 attached to the parent FSC 3571/18.

6.3.3      The design approach being advocated by Dublin City Council to separate dead-end corridors reflects guidance contained in Technical Guidance Document B (Vol. 1):2024 as opposed to guidance contained in HTM 05-02:2015. As such the guidance within the condition is new and additional to the otherwise self-contained guidance in HTM 05-02, which, rightly or wrongly, is recognised nationally as providing *prima facie* evidence of compliance with Part B to the Building Regulations.

6.3.4      These additional requirements are stated by Dublin City Council to be motivated by a concern that the protection afforded to “critically ill and pregnant” occupants should be “to an optimum” and “any means to reduce the spread of fire and smoke should be inherent

in the design and where omitted the Fire Authority must augment the design to require the incorporation of such requirements”

- 6.3.5 By definition HTM 05-02 takes cognisance of the full range of occupant profiles within hospital buildings, including the likely presence critically ill patients.
- 6.3.6 It is far from ideal for Dublin City Council to undertake to augment designs prepared by legally responsible third parties in instances where the Council perceive designs by those third parties to be deficient in certain respects until remediated by Council intervention by way of attaching Conditions. Ideally, designers should demonstrate to the Council the basis upon which their design achieves compliance with the fundamental requirements of the Building Regulations to the point that allows the Council to grant approval. There should not be any need for the attachment of conditions that comprise additional design (undertaken by the Local Authority) and such an approach is fraught with difficulties in the event of an adverse fire safety outcome.
- 6.3.7 With sensible engagement, the impartial advice of the Council should be able to persuade responsible designers to supplement their designs particularly where based on guidance documents prepared outside the State to incorporate those additional measures comprising standard national practices as described in Technical Guidance Document B. This is moreso the case when the agreed basis for design (HTM 05-02) is not a design standard that includes levels of detail that are ordinarily available for other building types and in any event is 10 years old.
- 6.3.8 A review of the general arrangement drawings would suggest that there are only limited locations that might be impacted by application of Condition No. 10. Certainly the dead-ends arising on Level 2 would in my opinion benefit from increased protection of the type suggested by Dublin City Council. However, this is a matter for the responsible designer.
- 6.3.9 In my opinion, the proposed design does, as has been claimed by the appellant, satisfy the requirements of HTM 05-02:2015. Given the existing Condition No. 11 attached to FSC 3571/18 remains in place, the subject Condition No. 10 should be removed.

- 6.4**      **Condition No. 11**  
***Fire hazard rooms as identified in Clause 5.41 of HTM 05-02:2015 shall be enclosed in 30 minutes fire-resisting construction complete with FD30S fire door sets in accordance with Clause 5.40 of HTM 05-02:2015 (e.g. clean/dirty utility rooms, cleaner rooms/stores, waste stores, ward storage rooms, linen stores, ICT Hub, etc.)***
- 6.4.1      Dublin City Council requires the identified Fire Hazard Rooms to be enclosed in fire-resisting construction in order to delay and reduce the likelihood of fire and smoke spread outside these rooms as might impact on adjacent spaces used for patient care.
- 6.4.2      The appellant is seeking removal of this blanket provision condition requiring fire-resisting enclosure to all Fire Hazard Rooms and instead is seeking to avail of the guidance contained in Clause 5.43 of HTM 05-02:2015, which permits the need for fire-resisting enclosure of Fire Hazard Rooms to be “risk-assessed” on an individual basis. This relaxation is offered within HTM 05-02 to buildings fitted with sprinkler protection.
- 6.4.3      The appellant has undertaken extensive risk assessments and has concluded the absence of a need to provide fire-resisting enclosure specifically to; Clean Utility Rooms; Dirty Utility Rooms; Ward Pantries; Staff Rest Rooms; Local Staff Change Rooms and Disposal Hold Rooms.
- 6.4.4      It is noted that Clause 5.40 of HTM 05-02:2015 explains that the fundamental motivation underlying the Fire Hazard Room design concept is to avoid requiring excessive fire doors with self-closing devices as might prove to be a hindrance to staff and patients during the everyday running of a healthcare building. It need not be spelled out that the HTM’s motivation is not to reduce costs or to avoid fire precautions as might, for example, arise with air transfer ductwork and grilles. In such a context, it is noted that the rooms on the appellant’s list have controlled access with “doors either locked shut or under access control” making is unclear as to what is motivating the appellant to seek to avoid the provision of fire-resisting enclosure to these rooms.

- 6.4.5 The compliance report underpinning the subject Revised Fire Safety Certificate application is incorrect and misleading in its assertion that “HTM 05-02, Clause 5.40-5.43 set out rooms considered to be “Fire Hazard Rooms” on foot of such rooms containing either a higher than normal fire risk, fire loading or risk of fire occurrence than other rooms within the hospital” (*Appendix 2.1 of MJP Compliance Report 21012 R02 Issue 05*).
- 6.4.6 It is highlighted that the list of Fire Hazard Rooms offered in Table 6 of HTM 05-02 is clearly identified as a list of examples. It is not the case that room types omitted from the list in Table 6 can also by default be omitted from designation as Fire Hazard Rooms. For example, the equivalent Table 3 in the previous (2007) version of HTM 05-02 also included Day Rooms, Laboratories and Laundry Rooms as examples of Fire Hazard Rooms.
- 6.4.7 HTM 05-02 defines a Fire Hazard Room in Appendix A as a room “which because of its function and/or contents presents a greater hazard of fire occurring and developing than elsewhere”. Identification of Fire Hazard Rooms is a matter for the responsible designer. The limited extent of Fire Hazard Rooms identified in Condition No. 11 has the potential to misleadingly infer that the list of rooms identified in Clause 5.41 is exhaustive as opposed to comprising exemplars.
- 6.4.8 HTM 05-02 does not give a detailed protocol for the risk assessment of Fire Hazard Rooms to outline the characteristics required to allow for fire resistance to be omitted where sprinklers are provided. It is clear that HTM 05-02 does not offer a blanket omission of the need for fire-resisting enclosure to all Fire Hazard Rooms in buildings where sprinklers are provided. Equally, all Fire Hazard Rooms require fire-resisting enclosure in buildings where sprinklers are not provided.
- 6.4.9 By HTM 05-02’s definition a Fire Hazard Room is a room “which because of its function and/or contents presents a greater hazard of fire occurring and developing than elsewhere”. On the basis that the effectiveness of a sprinkler system is not related to room type, the presence of sprinklers can be assumed to restrict the development of a fire in a consistent manner between Fire Hazard Rooms and adjacent areas. Therefore, the presence of sprinklers dilutes the need for the subject room to be considered as a

Fire Hazard Room, because it presents no greater risk of increased fire development relative to adjacent sprinklered spaces. This is a sound argument for omission of the need for fire-resisting enclosure. Despite this logic, the fact that this trade-off is not offered universally by HTM 05-02 is likely to reflect a residual concern about the increased hazard of a fire occurring. Hazard combines the product of risk and consequence. Given the presence of sprinklers has no impact on the risk of a fire ignition, the beneficial impact of sprinklers would therefore relate to their capacity to mitigate the consequences of a fire. Obviously, this potential benefit can only accrue after sprinklers have activated. Prior to such activation, the adverse consequences of a fire event would predominantly comprise the generation of smoke and the absence of fire-resisting enclosure, as exemplified by open doorways, would permit ready smoke spread to adjacent areas. It is my opinion that the relevant measure to be considered where the need for fire-resisting enclosure is to be “risk assessed” is the propensity for smoke generation in the early stages of a fire and the consequences of movement of such smoke into adjacent areas.

6.4.10 The risk assessment presented by the appellant is generic and more suited to identifying Fire Hazard Rooms in the first instance rather than distinguishing between individual Fire Hazard Room types to identify those rooms that may omit fire resistance. The appellant has undertaken such a risk assessment to determine that certain Fire Hazard Rooms at fourth floor level require fire-resisting enclosure even though the equivalent rooms at other levels do not. Presumably, the basis for this distinction is the determination that the consequences of smoke movement in the early stages of a fire beyond these rooms would be potentially exacerbated given the local Neo-natal Intensive Care Unit. It would have been useful had the appellant explained the basis by which he has distinguished between different Fire Hazard Rooms to identify that IT hub rooms, electrical rooms, general stores and linen stores require fire-resisting enclosure whilst ward pantries, staff rest rooms, staff change and disposal rooms do not. The appellant has identified utility rooms (clean and dirty) as Fire Hazard Rooms, albeit not requiring fire-resisting enclosure, whilst not identifying undefined workshops as Fire Hazard Rooms. If it is the case that Utility Rooms are not Fire Hazard Rooms in the first instance then the issue of their fire-resisting enclosure does not arise.

6.4.11 It is clear that Dublin City Council is set against the “risk assessment” approach on principle. The Council has not directly explained its reasoning other than an expectation



that standards be optimised given the building's occupant profile but it may reflect Dublin Fire Brigade's long-standing institutional experience of fire safety management in the everyday operation of healthcare premises in Dublin.

- 6.4.12 It should also be noted that HTM 05-02 is aimed at healthcare buildings within the United Kingdom's National Health Service that are in any event subject to ongoing statutory controls by way of the UK's Regulatory Reform (Fire Safety) Order. This statutory risk assessment regime for occupied non-residential buildings is significantly more robust in ensuring the identification and management of fire safety risks in hospital buildings than would be the case in Ireland. This is relevant in that there may not locally be the equivalent confidence underpinning the HTM's inherent presumption that any future changes in the use of rooms or their fixtures, fittings and contents, would be subject to the necessary risk assessment and fire resistance upgrades.
- 6.4.13 It is noted that any future changes to the use, fixtures and fittings within an individual room would not attract the need for an application to be made under the Building Control Regulations.
- 6.4.14 The need for the appellant to avoid uncertainty in these matters, particularly at the BCARS sign-off stage is acknowledged. The wording of Condition No. 11 and its provision of a list of exemplar Fire Hazard Rooms concluding with "*et cetera*" is correctly perceived by the appellant to be a potential source of confusion and uncertainty at handover. However, the potential uncertainties are two-fold, namely; whether any particular room is a Fire Hazard Room and subsequently in such circumstances whether the room requires fire-resisting enclosure. To this end, one option might have been to submit a room schedule with explicit identification of all Fire Hazard Rooms (as determined by the specialist designer). The option adopted by the appellant, however, has been to identify fire-resisting enclosure to individual rooms on the Revised Fire Safety Certificate drawings with the inference that same is due to them comprising Fire Hazard Rooms. However, when the level of fire-resisting enclosure shown in the "approved" drawings conflicts with the appellant's written description of his proposals as occurs in some locations, for example with ward pantries, confusion at sign-off becomes more likely. Indeed such

confusion is potentially exacerbated by uncertainty as to whether fire-resisting enclosure is missing or whether it has been omitted following risk assessment.

6.4.15 I am not satisfied that the form of risk assessment presented by the appellant is a sufficient basis to justify the omission of fire-resisting enclosure of ward pantries, staff changing, staff rest rooms or disposal holds.

6.4.16 Notwithstanding that fact, Condition No. 11 is misleading as currently drafted and should be re-worded to avoid giving the false impression that Clause 5.41 in HTM 05-02 provides an exhaustive list of Fire Hazard Rooms.

6.4.17 Re-worded condition to read.....

*Fire Hazard Rooms as defined in Appendix A of HTM 05-02:2015 shall be enclosed in not less than 30 minutes fire-resisting construction complete with FD30S fire door-sets.*

## 6.5 Condition No. 19

***The basement level (Level B1) external plant rooms at grid lines R-S/14-17 accommodating two no. Transformer Rooms, an MV switch-room and a Medical Gas Plant and at gridlines F-G/15-17 accommodating two no. Transformer Rooms, and an MV switch-room shall be provided with an appropriate automatic fire suppression system which shall be reviewed by an independent, competent specialist for safety and compliance with a specific expertise in this area who shall confirm or modify the design accordingly.***

- 6.5.1 The appellant is seeking removal of this Condition on the basis that Clause 5.1 of IS EN 12845+A1 2019 requires that “where a building is to be sprinkler protected, all areas of that building or of a communicating building shall be sprinkler protected”. The appellant argues that the subject plant rooms do not communicate with the remainder of the NMH building and are accessed from external fresh air via the east and west courtyards.
- 6.5.2 It is noted that the subject NMH building communicates with the main St Vincent’s University Hospital Campus and the logic of the appellant’s argument would suggest that the proposed sprinkler system should be extended into the existing SVUH building.
- 6.5.3 However, IS EN 12845+A1(2019) is a design standard for sprinkler installations and is not a design standard for hospital buildings. In that context, IS EN 12845+A1(2019) could be regarded as a secondary standard and should not allow relaxations (or impose obligations) that trump the primary design standard, i.e. HTM 05-02.
- 6.5.4 The route by which personnel come and go from the subject plant rooms is not considered relevant. The plant rooms form part of the subject NMH building or otherwise they would have been subject of a separate FSC application.
- 6.5.5 The applicant has committed to providing sprinkler protection to the NMH building and has made many references to that fact in the course of this appeal.

- 6.5.6 Therefore, the plant rooms require sprinkler protection or if the contents of the rooms are unsuited to sprinkler protection, e.g. due to electrical hazards, then alternative forms of automatic fire suppression should be provided as outlined in Condition No. 19.

## 6.6 Condition No. 24

***The fire-fighting shaft shall be in accordance with HTM 05-02:2015 and Clause 20.2.2 and Figure 21 of BS 9999:2017.***

- 6.6.1 To put this condition in context, it is worth noting that the building design's application of the "hospital street model" to the western block of the building (sitting between gridlines A-H/3-9) was deemed to be inappropriate. Accordingly, Core No. 1 was specified as a fire-fighting shaft, i.e. including a fire-fighting lift, dry main system, ventilated stairway and protected ventilated lobbies at upper levels.
- 6.6.2 It is noted that had the guidance in Table 11 of HTM 05-02 been followed, the floor area of the western block together with the building's height would have required 2 no. fire-fighting shafts to be provided within the western block, as opposed to one. The fact that the subject shaft comprises the sole fire-fighting shaft within the western block increases the importance of Core No. 1 to the Fire Service and significantly reduces motivations for departures from best practice design.
- 6.6.3 There is an undertaking given within the original Fire Safety Certificate application that the fire-fighting shaft (Core No. 1) would comply with guidance given in HTM 05-02 and specifically Clause 7.17 therein which states "*the shaft should be constructed generally in accordance with clauses 7 and 8 of BS 5588-5*".
- 6.6.4 Dublin City Council has highlighted that HTM 05-02 recognises the need for building control body approval for any replacement measures adopted from BS 9999 following the withdrawing of BS 5588 Part 5:2004 by the British Standards Institution. Whilst this is true, it is largely irrelevant given that the guidance regarding the continuation of fire-fighting stairs down into basements is the same within both BS 5588:Part 5:2004 and BS 9999:2017.
- 6.6.5 Dublin City Council considers that the proposed design of the fire-fighting stair (Core No.1) deviates from BS 9999 guidance. Condition No. 24 impacts on the proposed design in that the fire-fighting stair is shown continuing uninterrupted down to basement level in

a manner that conflicts with the guidance contained in both BS 5588:Part 5:2004 and BS 9999:2017. Both design guides require provision of a separating door at ground level between the upper and lower parts of the stair or provision of a direct exit from a separate basement level stairway.

- 6.6.6 The Council is therefore correct in its view that the submitted design does not accord with the relevant guidance because the basement component of the proposed stairway does not exit directly to fresh air at ground level nor is it otherwise sub-divided between basement and upper levels.
- 6.6.7 The appellant is not arguing this point but is seeking removal of this Condition on the basis that it relates to works previously approved under the parent Fire Safety Certificate application and accordingly is outside the scope of the subject Revised Fire Safety Certificate application.
- 6.6.8 Whilst there may be some procedural validity to this argument, it behoves a responsible designer to meet the design standards to which he has committed or alternatively to justify deviations. It is not incumbent on the Council to undertake detailed examination of general arrangement drawings to identify every non-compliance or design deviation. The default position is that an applicant who commits in a Compliance Report to deliver Core No. 1 as a “fire-fighting shaft” should be taken in good faith to meet normal industry standards, which in this case could comprise either BS 5588:Part 5:2004 or BS 9999:2017. Deliberate design deviations should be identified to the approving authority and justified by the appellant to the point where a duly considered approval is obtained.
- 6.6.9 It is quite clear from the appeal process that Dublin City Council does not approve of the design of the stairway. Whether or not they “missed” this detail in their consideration of FSC 3571/18 does not materially reduce the designer’s responsibilities to deliver a design that complies with the Building Regulations.
- 6.6.10 In that context, the appellant seeks to justify the omission of the separating door within the stairway on the basis that:-
- The stair is accessed at basement level by means of a double lobby.

- The building is sprinkler protected.
- The basement level is suitably ventilated.

- 6.6.11 It is considered that the extension of fire-fighting shafts to basement levels in commercial buildings of any reasonable size would typically require provision of sprinklers and mechanical smoke ventilation and as such these characteristics of the NHM design are not considered compensatory in the context of deviation from normal practice in fire-fighting shaft design.
- 6.6.12 The argument that a double lobby is being provided at basement level is undermined by the fact that one of the referenced lobbies comprises a corridor which is designed to act as the space from which smoke entering from adjacent rooms is mechanically extracted, i.e. the design expectation is that smoke will reach the corridor which is separated from stairway no. 1 by a single lobby. The provision of a prescriptive mechanical extraction rate of 10 air changes per hour to this corridor (with unidentified air inlet paths) does not give any assurance of performance in respect of control of smoke movement or location.
- 6.6.13 It is understood from the parent Fire Safety Certificate application (FSC 3571/18) *Section 12.5 of RPS Fire Safety Certificate Technical Compliance Report IBF-1357-NMH-TCR-10.09.18* that this single lobby at basement level is not being fitted with smoke ventilation facilities, which is a further deviation from the guidance contained in BS 5588:Part 5:2005 and/or BS 9999:2017.
- 6.6.14 In summary, a manually openable 1 m<sup>2</sup> natural smoke ventilation route (or mechanical equivalent) is missing from the basement lobby and the basement stairway should not be continuous with the stair serving upper levels of the building.
- 6.6.15 I do not consider that the arguments offered by the appellant are sufficient to justify such significant deviations within his proposed design from the guidance contained in BS 9999:2017 and in that context I support the retention of the condition as attached by Dublin City Council.

- 6.6.16 It is a matter for the Board to decide whether it was appropriate for Dublin City Council to impose a new condition at Revised Fire Safety Certificate stage in respect of an unchanged design arrangement previously approved at the original Fire Safety Certificate stage following belated discovery that the detail does not comply with Part B5 to the Building Regulations.



**6.7      Condition No. 25**

***Only services associated with the fire-fighting shaft shall pass through or be contained within the fire-fighting shaft in accordance with HTM 05-02:2015 and Clause 20.2.3 of BS 9999:2017. The fire-fighting shaft shall not contain any cupboards or provide access to service shafts serving the remainder of the building.***

- 6.7.1      Dublin City Council considers the subject condition to be a reiteration of the guidance given in HTM 05-02 and specifically Clause 7.17 therein which states “*the shaft should be constructed generally in accordance with clauses 7 and 8 of BS 5588-5*”, which following the withdrawing of BS 5588 in turn leads to BS 9999:2017 and Clause 20.2.3 therein, which states that “only services associated with the fire-fighting shaft should pass through or be contained within the fire-fighting shaft. A fire-fighting shaft should not contain any cupboards or provide access to service shafts serving the remainder of the building”.
- 6.7.2      The subject condition is a minor re-wording but otherwise faithful replica of this BS 9999:2017 guidance, which in turn reflects guidance previously contained in BS 5588:Part 5:2004. The guidance therefore reflects standard industry practice over many years.
- 6.7.3      The appellant is seeking removal of this Condition on the basis that Section 0.2 of Technical Guidance Document B permits alternative design approaches to be adopted where rigid compliance with certain provisions within that document prove unduly restrictive. The guidance contained in Technical Guidance Document B is irrelevant when the chosen basis of design is HTM 05-02, more so when the provisions of the chosen HTM 05-02 have resulted in significantly less onerous fire precautions being adopted in certain regards including fire-fighting infra-structure, fire resistance ratings and the design of dead-end corridors (as previously discussed in regard to Condition No. 10).
- 6.7.4      Despite such a background, the appellant has prepared a comparative assessment to demonstrate how the provisions of BS 9999 compare to his specific design proposals and concludes that the level of risk to the fire-fighting shaft is “commensurate with the

prescriptive design solutions”. This is predicated on the relevant electrical services comprising only fire alarm repeater panel, sub-main distribution board, building management system board and associated cabling, with all boards operating at extra low voltage, i.e. < 50V. For the avoidance of doubt, this commitment by the appellant is being assumed to confirm that no 230V or 400V equipment is to be located within the subject fire-fighting shaft, except for local lighting.

- 6.7.5 The appellant is also proposing to increase the fire-resisting enclosure to the services riser to 120 minutes (as opposed to 60 minutes) with FD60S door-sets (as opposed to FD30S) door-sets and to provide 60 minutes fire-resisting fire-stopping at each floor slab level. These enhancements are relevant.
- 6.7.6 The facts that the building is sprinkler protected and fitted with a Type L1 automatic fire detection and alarm system are not considered to be relevant to the issue at hand.
- 6.7.7 In my opinion, the proposed design clearly does not, as has been claimed by the appellant, satisfy the requirements of HTM 05-02:2015.
- 6.7.8 Mindful of the very significant difficulties in relocating the subject services and the Board’s key role in this project of national significance, it behoves me to consider the issue further and to offer my opinion as to whether the functional requirement of Part B5 to the Building Regulations (1997 to 2022) is nonetheless being met despite the absence of *prima facie* evidence of compliance using HTM 05-02.
- 6.7.9 I give consideration to the appellant’s proposals that the subject electrical services be extra low voltage, that they be enclosed in 120 minutes fire-resisting construction, be accessed via FD60S fire doorsets (I recommend same to be locked shut) and that services are fire-stopped at every floor slab level. In such a context, I consider that the extra risk posed to Fire Service personnel by the proposed design relative to the baseline risk inherent in a BS 9999:2017 compliant design arrangement is limited to the extent that I would agree with the appellant’s opinion that the risk levels are commensurate. Against such a background, I am satisfied that compliance with Part B5 is being achieved and that the condition could be removed.

**6.8**      **Condition No. 27**

***A FD60S fire door-set shall be provided between the lift core lobby and stair core lobby serving stair core 4 to provide direct access for fire-fighting personnel to facilitate fire-fighting operations.***

- 6.8.1      The appellant is seeking removal of this Condition on the basis that it relates to works previously approved under the parent Fire Safety Certificate application and accordingly is outside the scope of the subject Revised Fire Safety Certificate application.
- 6.8.2      The appellant also suggests that inclusion of the subject door would potentially impact on circulation within the building due to obstruction caused by the door swing.
- 6.8.3      Dublin City Council suggests that the new door being required within Core No. 4 will offer a significant number of enhancements to the movement of fire-fighting personnel within the building.
- 6.8.4      The protected stair and adjacent fire-fighting lift at Core No. 4 are not directly connected, except via the “hospital street”. There is no guidance in HTM 05-02 as would prohibit this arrangement. In fact, HTM 05-02 gives very little guidance on the detailed provisions regarding fire-fighting lifts, where the guidance contained in BS 5588:Part 5 is not being adopted on the basis of the “hospital street” concept.
- 6.8.5      Fire-fighting lifts are typically provided within a fire-fighting shaft, i.e. with associated ventilated protected lobbies and a stairway. For reasons associated with the need to ensure safe retreat for fire-fighters, fire-fighting lifts are typically required to be as close as possible to stairways and application of the proposed condition would indeed reduce the escape distances and would remove the need to traverse the hospital street.
- 6.8.6      It is recognised that escape from both the stair and fire-fighting lift in Core No. 4 requires traversing the “hospital street” in any event at ground floor level.

6.8.7 It is also noted that the wall separating the lift lobby from the stair lobby is not necessarily required to be fire-resisting and that the appellant's offer to form an opening within that wall would facilitate the requested circulation without causing issues with door leaf swings or giving rise to an undue fire spread risk. Given that Dublin Fire Brigade personnel are expected to rely on use of the subject fire-fighting lift, the appellant should be guided by their views in this matter and I recommend that the appellant's design solution be adopted.

6.8.8 However, the condition as attached is not justifiable with reference to HTM 05-02.

## 7.0 Recommendations

### 7.1 Condition No. 4

*The atrium enclosure shall have a minimum period of fire resistance of 60 minutes (integrity and insulation and where applicable, load-bearing capacity)*

7.1.1 The appeal against the attachment of Condition No. 4 does not require *de novo* consideration under Article 40(1).

7.1.2 Applying the provisions of Article 40(2), it is recommended that the Board directs Dublin City Council to attach Condition No. 4 as amended below and the reason therefor and for the reasons and considerations set out below:-

#### Condition No. 4

*The atrium enclosure shall have a minimum period of fire resistance of 60 minutes (integrity and insulation and where applicable, load-bearing capacity) with the exception of fixed-shut glazing systems, which shall have a minimum period of fire resistance of 60 minutes (integrity only). This exception does not extend to glazing of the type referred to as “modified toughened”.*

#### Reason

*To comply with Part B of the Second Schedule to the Building Regulations 1997 to 2022.*

## 7.2 Condition No. 10

***Single means of escape shall comply with section 3.30 of HTM 05-02:2015 and any enclosed escape routes that have a single direction of escape and exceed 4.5 metres in length shall be protected by 30 minutes fire-resisting construction in accordance with section 3.31 and section 3.32 of HTM 05-02:2015. In this regard, the fire rated dead-end portions of a corridor exceeding 4.5 metres in length shall be separated by self-closing fire doors (together with any necessary associated screens) from any part of the corridor which: (a) provides two directions of escape; or (b) continues past one storey exit to another.***

7.2.1 The appeal against the attachment of Condition No. 10 does not require *de novo* consideration under Article 40(1).

7.2.2 Applying the provisions of Article 40(2), it is recommended that the Board directs Dublin City Council to remove Condition No. 10.

### 7.3 Condition No. 11

*Fire hazard rooms as identified in Clause 5.41 of HTM 05-02:2015 shall be enclosed in 30 minutes fire-resisting construction complete with FD30S fire door sets in accordance with Clause 5.40 of HTM 05-02:2015 (e.g. clean/dirty utility rooms, cleaner rooms/stores, waste stores, ward storage rooms, linen stores, ICT Hub, etc.)*

7.3.1 The appeal against the attachment of Condition No. 11 does not require *de novo* consideration under Article 40(1).

7.3.2 Applying the provisions of Article 40(2), it is recommended that the Board directs Dublin City Council to attach Condition No. 11 as amended below and the reason therefor and for the reasons and considerations set out below:-

#### Condition No. 11

*Fire Hazard Rooms as defined in Appendix A of HTM 05-02:2015 shall be enclosed in not less than 30 minutes fire-resisting construction complete with FD30S fire door-sets.*

#### Reason

*To comply with Part B of the Second Schedule to the Building Regulations 1997 to 2022.*

**7.4      Condition No. 24**

***The fire-fighting shaft shall be in accordance with HTM 05-02:2015 and Clause 20.2.2 and Figure 21 of BS 9999:2017.***

- 7.4.1      The appeal against the attachment of Condition No. 24 does not require *de novo* consideration under Article 40(1).
- 7.4.2      Applying the provisions of Article 40(2), it is recommended that Condition No. 24 remains attached to the Revised Fire Safety Certificate with the same wording and same reason therefor as drafted by Dublin City Council.



**7.5      Condition No. 25**

***Only services associated with the fire-fighting shaft shall pass through or be contained within the fire-fighting shaft in accordance with HTM 05-02:2015 and Clause 20.2.3 of BS 9999:2017. The fire-fighting shaft shall not contain any cupboards or provide access to service shafts serving the remainder of the building.***

7.5.1      The appeal against the attachment of Condition No. 25 does not require *de novo* consideration under Article 40(1).

7.5.2      Applying the provisions of Article 40(2), it is recommended that the Board directs Dublin City Council to remove Condition No. 25.

**7.6      Condition No. 27**

***A FD60S fire door-set shall be provided between the lift core lobby and stair core lobby serving stair core 4 to provide direct access for fire-fighting personnel to facilitate fire-fighting operations.***

- 7.6.1      The appeal against the attachment of Condition No. 27 does not require *de novo* consideration under Article 40(1).
  
- 7.6.2      Applying the provisions of Article 40(2), it is recommended that the Board directs Dublin City Council to remove Condition No. 27.

## **8.0 Reasons and Considerations**

### **8.1 Condition No. 4**

***The atrium enclosure shall have a minimum period of fire resistance of 60 minutes (integrity and insulation and where applicable, load-bearing capacity)***

- 8.1.1 Having regard to the presented design of the extension and material alteration to a previously approved new hospital building and the accompanying technical compliance report, to the submissions made in connection with the Revised Fire Safety Certificate application and the appeal, and to the report and recommendation of the reporting Inspector, it is considered that, by reference to the appellant's bespoke fire engineering design calculations that fire-resisting (integrity only) glazing to the upper levels of the atrium is sufficient in this case, the Board was satisfied that the Building Control Authority be therefore directed to amend Condition No. 4 and the reason therefor. The Board was further satisfied that, subject to the attachment of the conditions, including the amended Condition No. 4, it has been demonstrated that the subject works, if constructed in accordance with the design presented with the application and appeal, would comply with the requirements of Part B of the Second Schedule to the Building Regulations 1997, as amended.

## 8.2 Condition No. 10

***Single means of escape shall comply with section 3.30 of HTM 05-02:2015 and any enclosed escape routes that have a single direction of escape and exceed 4.5 metres in length shall be protected by 30 minutes fire-resisting construction in accordance with section 3.31 and section 3.32 of HTM 05-02:2015. In this regard, the fire rated dead-end portions of a corridor exceeding 4.5 metres in length shall be separated by self-closing fire doors (together with any necessary associated screens) from any part of the corridor which: (a) provides two directions of escape; or (b) continues past one storey exit to another.***

- 8.2.1 Having regard to the presented design of the extension and material alteration to a previously approved new hospital building and the accompanying technical compliance report, to the submissions made in connection with the Revised Fire Safety Certificate application and the appeal, and to the report and recommendation of the reporting Inspector, it is considered that it has been demonstrated by the first party appellant in the fire safety application and appeal that the fire-resisting enclosure proposed to protect dead-end corridors meets the requirements of HTM 05-02:2015. Therefore Condition No. 10 as originally attached by the Building Control Authority to the Revised Fire Safety Certificate is not necessary to meet the guidance set out in HTM 05-02:2015 or accordingly to demonstrate compliance with Part B1 of the Second Schedule to the Building Regulations 1997, as amended. The Board was satisfied that, subject to the attachment of the remaining conditions (excluding Condition No. 10 as removed by the Board), it has been demonstrated that the subject works, if constructed in accordance with the design presented with the application and appeal, would comply with the requirements of Part B of the Second Schedule to the Building Regulations 1997, as amended.

### **8.3 Condition No. 11**

***Fire hazard rooms as identified in Clause 5.41 of HTM 05-02:2015 shall be enclosed in 30 minutes fire-resisting construction complete with FD30S fire door sets in accordance with Clause 5.40 of HTM 05-02:2015 (e.g. clean/dirty utility rooms, cleaner rooms/stores, waste stores, ward storage rooms, linen stores, ICT Hub, etc.)***

- 8.3.1 Having regard to the presented design of the extension and material alteration to a previously approved new hospital building and the accompanying technical compliance report, to the submissions made in connection with the Revised Fire Safety Certificate application and the appeal, The Board concluded with respect to this condition that it has not been demonstrated by the first party/appellant in the Revised Fire Safety Certificate application and appeal documentation that the fire-resisting enclosure to Fire Hazard Rooms could be omitted. For reasons of providing improved clarity, the Board was satisfied that the Building Control Authority be directed to amend Condition No. 11 and the reason therefor. The Board was further satisfied that, subject to the attachment of the conditions, including the amended Condition No. 11, it has been demonstrated that the subject works, if constructed in accordance with the design presented with the application and appeal, would comply with the requirements of Part B of the Second Schedule to the Building Regulations 1997, as amended.

#### **8.4      Condition No. 24**

***The fire-fighting shaft shall be in accordance with HTM 05-02:2015 and Clause 20.2.2 and Figure 21 of BS 9999:2017.***

- 8.4.1      Having regard to the presented design of the extension and material alteration to a previously approved new hospital building and the accompanying technical compliance report, to the submissions made in connection with the Revised Fire Safety Certificate application and the appeal, The Board concluded with respect to this condition that it has not been demonstrated by the first party/appellant in the Revised Fire Safety Certificate application and appeal documentation that the fire-fighting shaft, including stair core 1, meets the requirements of HTM 05-02:2015. The Board was satisfied that it would be appropriate to attach Condition No. 24 and the reason therefor. The Board was further satisfied that, subject to the attachment of the conditions, including Condition No. 24, it has been demonstrated that the subject works, if constructed in accordance with the design presented with the application and appeal, would comply with the requirements of Part B of the Second Schedule to the Building Regulations 1997, as amended.

## **8.5 Condition No. 25**

***Only services associated with the fire-fighting shaft shall pass through or be contained within the fire-fighting shaft in accordance with HTM 05-02:2015 and Clause 20.2.3 of BS 9999:2017. The fire-fighting shaft shall not contain any cupboards or provide access to service shafts serving the remainder of the building.***

- 8.5.1 Having regard to the presented design of the extension and material alteration to a previously approved new hospital building and the accompanying technical compliance report, to the submissions made in connection with the Revised Fire Safety Certificate application and the appeal, and to the report and recommendation of the reporting Inspector, it is considered that it has been demonstrated by the first party appellant in the fire safety application and appeal that the level of risk to fire-fighting personnel arising from their use of the fire-fighting shaft (core 1) as proposed to be designed is commensurate with equivalent level of risk arising from design in accordance with HTM 05-02:2015 guidance. Therefore Condition No. 25 as originally attached by the Building Control Authority to the Revised Fire Safety Certificate is not necessary to demonstrate compliance with Part B5 of the Second Schedule to the Building Regulations 1997, as amended. The Board was satisfied that, subject to the attachment of the remaining conditions (excluding Condition No. 25 as removed by the Board), it has been demonstrated that the subject works, if constructed in accordance with the design presented with the application and appeal, would comply with the requirements of Part B of the Second Schedule to the Building Regulations 1997, as amended.

**8.6**      **Condition No. 27**

***A FD60S fire door-set shall be provided between the lift core lobby and stair core lobby serving stair core 4 to provide direct access for fire-fighting personnel to facilitate fire-fighting operations.***

- 8.6.1      Having regard to the presented design of the extension and material alteration to a previously approved new hospital building and the accompanying technical compliance report, to the submissions made in connection with the Revised Fire Safety Certificate application and the appeal, and to the report and recommendation of the reporting Inspector, it is considered that it has been demonstrated by the first party appellant in the fire safety application and appeal that the additional FD60S door-set is not required to meet the guidance contained in HTM 05-02:2015 or accordingly to demonstrate compliance with Part B5 of the Second Schedule to the Building Regulations 1997, as amended. The Board was satisfied that, subject to the attachment of the remaining conditions (excluding Condition No. 27 as removed by the Board), it has been demonstrated that the subject works, if constructed in accordance with the design presented with the application and appeal, would comply with the requirements of Part B of the Second Schedule to the Building Regulations 1997, as amended.



## 9 Conditions

9.1 My recommendation is that the 6

no. conditions subject of the current appear be addressed as follows:-

### Condition No. 4

*The atrium enclosure shall have a minimum period of fire resistance of 60 minutes (integrity and insulation and where applicable, load-bearing capacity) with the exception of fixed-shut glazing systems, which shall have a minimum period of fire resistance of 60 minutes (integrity only). This exception does not extend to glazing of the type referred to as "modified toughened".*

### Reason

*To comply with Part B of the Second Schedule to the Building Regulations 1997 to 2022.*

### Condition No. 10

~~*Single means of escape shall comply with section 3.30 of HTM 05-02:2015 and any enclosed escape routes that have a single direction of escape and exceed 4.5 metres in length shall be protected by 30 minutes fire-resisting construction in accordance with section 3.31 and section 3.32 of HTM 05-02:2015. In this regard, the fire-rated dead-end portions of a corridor exceeding 4.5 metres in length shall be separated by self-closing fire doors (together with any necessary associated screens) from any part of the corridor which: (a) provides two directions of escape; or (b) continues past one storey exit to another.*~~

### Reason

~~*To comply with Part B of the Second Schedule to the Building Regulations 1997 to 2022.*~~

### Condition No. 11

*Fire Hazard Rooms as defined in Appendix A of HTM 05-02:2015 shall be enclosed in not less than 30 minutes fire-resisting construction complete with FD30S fire door-sets.*

### Reason

*To comply with Part B of the Second Schedule to the Building Regulations 1997 to 2022.*

Condition No. 24

*The fire-fighting shaft shall be in accordance with HTM 05-02:2015 and Clause 20.2.2 and Figure 21 of BS 9999:2017.*

Reason

*To comply with Part B of the Second Schedule to the Building Regulations 1997 to 2022.*

Condition No. 25

~~*Only services associated with the fire-fighting shaft shall pass through or be contained within the fire-fighting shaft in accordance with HTM 05-02:2015 and Clause 20.2.3 of BS 9999:2017. The fire-fighting shaft shall not contain any cupboards or provide access to service shafts serving the remainder of the building.*~~

Reason

~~*To comply with Part B of the Second Schedule to the Building Regulations 1997 to 2022.*~~

Condition No. 27

~~*A FD60S fire door set shall be provided between the lift core lobby and stair core lobby serving stair core 4 to provide direct access for fire-fighting personnel to facilitate fire-fighting operations.*~~

Reason

~~*To comply with Part B of the Second Schedule to the Building Regulations 1997 to 2022.*~~

## 10 Sign off

- 10.1 I confirm that this report represents my professional assessment, judgement and opinion on the matter assigned to me and that no person has influenced or sought to influence, directly or indirectly, the exercise of my professional judgement in an improper or inappropriate way.

Dr. Raymond J. Connolly BE, PhD, CEng, MIEI, MIFireE, MSFPE (dated 8<sup>th</sup> January 2025)