

Construction of new Community Nursing Unit (CNU) at St Finbar's Hospital, Douglas Road, Ballinlough, Cork

Consideration of Appeal against Condition attached to Fire Safety Certificate (Reg Ref: FSCA/5204/20)

MSA Reference > 21000

ABP Reference > FSCA/5204/20

For An Bord Pleanála

MMS

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1 INTRODUCTION

This report sets out my findings and recommendations on the appeal submitted by FCC Fire Safety Engineers against the Condition attached to the Fire Safety Certificate (Reg Ref No. FSCA/5204/20) granted by Cork City Council on 9th October 2020 for the construction of a new Community Nursing Unit (CNU) at St Finbar's Hospital, Ballinlough, Cork.

1.1 Subject of Appeal

A Fire Safety Certificate application was made on 30/01/2020 to Cork City Council for the construction of a new Community Nursing Unit (CNU) at St Finbar's Hospital, Ballinlough, Cork.

The Fire Safety Certificate granted on 9th October 2020 which had 1No. condition attached, as follows:

Condition:

Provide a sprinkler system in accordance with IS EN 12845:2015+A1:2019. Fixed firefighting systems – Automatic sprinkler systems – Design, installation and maintenance including Annex F additional measures to improve system reliability and availability, incorporating at least one single superior water supply.

Or

Provide a Category 3 sprinkler system in accordance with BS9251:2014 Fire sprinkler systems for domestic and residential occupancies – Code of practice, including the design philosophy of Annex F of IS EN 12845, incorporating at least one single superior water supply. The minimum duration of supply for the stored water capacity for the system shall be 60-minutes.

Reason:

To comply with Part B1 of the Second Schedule to the Building Regulations 1997 to 2018, and to enable progressive horizontal evacuation in the nursing home.

1.2 Documents Reviewed

- Application for a Fire Safety Certificate to Cork City Council submitted on 30th January 2020 comprising of;
 - Fire Safety Certificate Compliance Report; prepared by FCC Fire Safety Engineers
 - Plans, Sections and Elevations; by FCC Fire Safety Engineers.
 - Supplementary submissions on 31/03/2020 and 17/06/2020 by the Applicant to Cork City Council with revised drawings which addressed the list of items/concerns raised by Cork City Council in a further information report.
 - Further submissions on 28/07/2020 and 14/09/2020 by the Applicant to Cork City Council including Effectis Report "CFD Analysis of a Sprinkler System in a CNU".
- Appeal submissions to An Bord Pleanala
 - Submission dated 27/10/2020 by FCC Fire Safety Engineers

- Submission dated 22/12/2020 by Cork City Council Chief Fire Officer with attached CFD Technical Review Report prepared by B-Fluid Ltd on behalf of Cork City Fire Department
- Submission dated 12/01/2021 by FCC Fire Safety Engineers

12 FINDINGS

2.1 Case made by the Building Control Authority

In their response to the Appeal Submission the Building Control Authority make the following observations:

- While TGD-B gives prima facie evidence of compliance they have concerns about its adequacy in this instance as a means to demonstrate compliance with B1 of the Building Regulations
- They refer to a Chief Fire Officers Association Subcommittee review of TGD-B and submissions made to the National Directorate for Fire and Emergency Management in 2012 that sprinkler protection be made mandatory in all new nursing homes following the Scottish approach in the wake of the Rosepark Nursing Home fire in Scotland.
- They refer to the Effectis Computational Fluid Dynamics analysis submitted in the Fire Safety Certificate application and note that they had this critiqued by B-Fluid Ltd who raised some fundamental questions on the input (design fire) and findings from this analysis.
- They question the applicability of the guidance in TGD-B given the variation in patient type (from patients with mobility and dementia issues to very high dependent patients including bariatric patients)
- Cork City Fire and Building Control Department firmly believe without a sprinkler system, compliance with B1 of the Building Regulations has not been demonstrated.

2.2 Case Made by the Appellant

The fire strategy proposed in the Fire Safety Certificate application was based on Technical Guidance Document B 2006 and the Appellant in the appeal submission notes that there is no requirement under TGD-B for sprinkler protection particularly given that the building is only 2 storeys in height and well below the 30 m height threshold above which sprinklers (Clause 1.3.5.1 (c) of TGD-B cited).

The Appellant also noted that a similar sprinkler condition has been previously adjudicated on by An Bord Pleanála in a number of appeals where the Board ruled in favour of the appellant.

The Appellant in their response to the Cork City Council submission of 27/10/2020 to the Board

- Note in response to the Cork City Council comments, that the Effectis CFD analysis submitted with the application is robust in terms of the fire size selected but that in any case the analysis was not relied on as a key element in demonstrating compliance with TGD-B and hence with regulation B1.
- Reiterate their previously stated position that TGD-B gives prima facie evidence of compliance with the Building Regulations.
- Refer to results of BRE (UK) research which indicated that the use of sprinklers may be of benefit in new nursing homes but that this is based on the calculated cost benefit to the nursing home as a business (business continuity) rather than as a life safety benefit.

- Note that while Wales and Scotland have recently mandated sprinklers in care homes, the same requirements have not been made mandatory in England and Northern Ireland

/3 FINDINGS AND CONCLUSIONS

The Appellants are in my opinion correct in their assertion that TGD-B is an acceptable source of guidance to demonstrate prima facie guidance with Part B of the Building Regulations with particular reference to the requirements for progressive horizontal evacuation of patients.

In regard to the concerns being raised by the Building Control Authority relating to evacuation of patients with respect to their level of dependence etc., the Applicant (FCC) in their submission to Cork City Council Fire Department (24/03/2020) confirm that the Community Nursing Unit will be run by the HSE in accordance with National Fire Safety Procedures with a well-defined evacuation plan with supporting evacuation equipment (for programme horizontal evacuation) in place.

In so far as reference has been made to the UK BRE Report "Cost Benefit Analysis of residential sprinklers", commissioned by the Environment and Sustainability Directorate, Welsh government (2013), I have reviewed the findings of this Report applicable to care homes. This shows that sprinklers are cost effective in new care homes noting that this is mainly due to the financial losses from damage to the building, its contents and business interruption rather than life safety. From a review of the detailed findings and conclusions in this report it is evident that over the whole life of the residential sprinkler system if installed in care homes, the present value cost in lives saved is actually less than the present value total sprinkler costs.

On the other hand, the present value total benefits (life safety and property/business protection) exceeds the present value total benefits figure. It is evident therefore that in life safety terms alone the BRE Report does not justify the provision of sprinkler protection.

I have also considered recent developments in UK Guidance in so far as this has been raised by the Building Control Authority and find that while the Regulatory Authorities in Wales and Scotland have introduced in their regulations/guidance a requirement for sprinklers in care homes, no such requirement has been introduced in Approved Document B (England, 2018 amended 2020), or Technical Booklet E (Northern Ireland, 2012).

Accordingly on the basis of the foregoing findings and considerations there is in my opinion no requirement for sprinkler protection in the building to achieve compliance with Part B (Fire) of the Building Regulations with particular reference to B1 Means of Escape in case of fire.

/4 REASONS AND CONSIDERATIONS

Having regard to the foregoing findings, the scale of the proposed development and noting that Technical Guidance Document B 2006/2020 or other guidance cited in the document, does not recommend provision of sprinkler protection in health care facilities at this scale, the provision of sprinkler protection to achieve compliance with Part B (Fire) of the Building Regulations (1997-2017) is not a requirement in my opinion.

/5 RECOMMENDATIONS

I recommend that An Bord Pleanala direct the Building Control Authority to grant the Fire Safety Certificate without any condition.

Signed:



Michael Slattery, BE MSc (Fire Eng) CEng FIEI MSFPE EUR ING
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