

Report for An Bord Pleanála

on

Appeal against Condition 6 to the 7 Day Notice Fire Safety Certificate

for

Conversion of Vacant Offices to Apartments

at

Cearnog Nua, Moycullen, Co. Galway

Client: An Bord Pleanála
An Bord Pleanála Ref: 307036-20
Our Ref: ABP_R008_Issue 1
Date: 8th September 2020

1.0 Introduction

This report sets out my findings and recommendations on the appeal submitted by Jeremy Gardner Associates Ltd., acting on behalf of Pierott Investments Ltd, against Condition 6 to the 7 Day Notice Fire Safety Certificate (FS 98/2019) by Galway County Council in respect of an application for works related to the conversion of vacant offices to apartments at Cearnog Nua, Moycullen, Co. Galway.

It is noted that having regard to the nature of the Conditions under appeal, it is considered that the appeal can be adjudicated upon without consideration of the entire of the application.

1.1 Subject of Appeal

Condition 6 of the granted Regularisation Fire Safety Certificate (FS 98/2019) by Galway County Council is as follows: -

Condition 6:

A Dry Falling Mains is to be provided in Stairs 2 going up to all new flats levels so that all parts of the new flats are no more than 45m from the nearest dry riser outlet along a route suitable for laying hose in accordance with Section 5.2.2 of BS9991 and a dry falling mains is to be provided in Stairs 2 leading to all lower levels in accordance with Section 5.1.2 and Section 5.1.4 of Technical Guidance Document B 2006. The internal fire mains are to comply with BS 5306: Part 1: 1998

Reason:

To order to comply with Part B5 of the Building Regulations 2006.

2.0 Documentation Reviewed

- 2.1 7 Day Notice Fire Safety Certificate Application (application form, compliance report and fire safety drawings) submitted by Jeremy Gardner Associates, acting on behalf of Pierott Investments Ltd, on 26th July 2019.
- 2.2 Letter from Galway County Council to Pierott Investments Ltd confirming receipt of application dated 29th July 2019.
- 2.3 Email and letter correspondence between Galway County Council and Jeremy Gardner Associates with respect to Extension of Times.
- 2.4 Further Information from Jeremy Gardner Associates received by Galway County Council on 26th February 2020.
- 2.5 Report on Assessment of 7 Day Notice Fire Safety Certificate Application recommending that a Fire Safety Certificate is granted with 10 conditions attached dated 5^h March 2020.
- 2.6 Granted Fire Safety Certificate No. FS 98/2019 from Galway County Council dated 12th March 2020.
- 2.7 Letter of Appeal from Jeremy Gardner Associates, acting on behalf of Pierott Investments Ltd, received by An Bord Pleanála on 6th April 2020.
- 2.8 Letter from Galway County Council Fire Services to An Bord Pleanála dated 22nd June 2020.

3.0 Building Control Authority's Case

The original Fire Safety Certificate was 75/2006. There was an unauthorised increase of one floor level in 2 parts of the building for office use. A Regularisation Fire Safety Certificate was lodged to address this unauthorised development. Concurrently there was a 7 Day Notice Fire Safety Certificate application for change of use of two floors of offices (in two parts of the building) to flats to which this appeal is applicable to.

The application for the previously unauthorised additional floor level resulted in a review of the original Fire Safety Certificate to assess the impact of the changes made /proposed. The existing building is large (6 levels) and multi occupancy. A fully engaged basement carpark fire may threaten the means of escape and increase the risk to Fire Fighters.

Technical Guidance Document B 2006 (TGD-B 2006) Section 5.0.3 states in case of a material alteration of an existing building, the requirements of B5 of the Second Schedule of the Building Regulations may be met:

1. If the access and facilities for the fire service are not altered in such a way as to reduce the extent of performance of those that existed before the material alteration; and
2. If the building is not extended or altered by the addition of floor area at any level or subject to a material change of use.

It is noted that recent fire (Liverpool Waterfront and Douglas Shopping Centre) occurring since the original Fire Safety Certificate was granted have shown that the potential for fire spread within a car park should not be underestimated as cars (and their associated fuel load) have evolved. Prior to this, in 2004, 7 Firefighters were killed in an underground car park in Gretzenbach, Belgium when there was a fire related floor collapse. Whilst not identical situations they may indicate that previous assumptions in relation to fire spread may no longer be valid.

Compliance with TGD-B 2006 is prima facia compliance, i.e. is considered to demonstrate compliance with Part B of the Building Regulations (unless there is an alternative argument).

The depth of the basement level is defined as the deepest depth in TGD-B 2006 Diagram 38. So, the depth of the basement is 11.98m (from drawing 210/3-09). The depth of the building would normally require a dry falling main in a protected firefighting shaft.

There is a smaller (higher) split level near stairs 2, but the majority is lower and is accessed from stair 2 by vehicle ramps. Ground level is lower on other sides of the building (due to a sloped site) so the relative depth is less.

TGD-B 2006 requires a fire fighting shaft (or dry falling mains) where basement is deeper than 10m. Section 5.1.3; where mains are required without fire fighting shafts apply section 5.3.3; every part of every storey is to be no more than 60m from the entrance of the fire fighting lobby on a route suitable for laying a hose.

BS 5588 Part 11 Clause 40.4.2 and figure 19 recommends a fire fighting shaft where it is deeper than 9m (with appliance to within 18m of the inlet) and every part of the storey is no more than 60m along a route suitable for laying a hose from outlet valve (and comply with BS 5588 Part 5).

BS 5588 Part 5 Clause 7.1.2 says where there is a shaft, the maximum distance along a route suitable for laying hose should be 60m from the door of the shaft (40m for design purposes where layout is unknown).

BS 9999: 2017 Figure 18 says 60m to furthest part from fire main in a fire fighting shaft and 45m from any riser outlet along a route suitable for laying hose.

Approved Document B 2010 (2019) Section 17.8 says in any building, the hose laying distance should meet all of the following conditions:

1. A maximum of 60m from the fire main outlet in a fire fighting shaft (see Diagram 17.3)
2. Additionally, where sprinklers have not been provided in accordance with Appendix E, the hose laying distance should be a maximum of 45m from a fire main outlet in a protected shaft.

The change of use led to a reassessment of the parts of the building interacting with the stairs serving the floors added. The change of use to flats required additional measures to stairs at lower levels in accordance with BS 9991 (45m may be appropriate).

The recent car park fires have highlighted possible issues with assumptions made previously. We should not underestimate the potential for fire spread and the consequences thereof.

In light of the potential for a fully engaged fire in the car park impacting on escape routes from the new flats (as well as existing flats) all measures required to facilitate effective fire fighting should be provided. Additional lobbies and/or separation of single stairs serving flats and basement were provided in the Fire Safety Certificate applications.

However, the absence of the dry falling main in stair 2 may not meet the requirements for fire service access to the lower basement level if the other stairs don't provide 60m hose laying requirements (or 45m). Newer guidance has requirement for fire service access and laying hose along a route suitable for laying hose of 45m in an unsprinklered building.

The mechanical ventilation system is not a compensating feature and doesn't offset a need for a dry falling main.

The provision of high-pressure hose reels whilst required the fire service tend not to enter a building or compartment without their own fire fighting equipment and may not use the hose reels provided.

It could be argued that as the depth of the basement is 11.96 then other stairs should be shafts with dry risers as per section 5.3.3. i.e. every part of every storey other than access level is no more than 60m from the entrance route to a firefighting lobby measured along a route suitable for laying a hose. That seems excessive, but if a particular stair is over 10m

deep, it should have a dry falling mains if necessary, to meet the hose laying requirement. In the event that a fire is extensive, then more than 1 stairs may be required for firefighting.

The furthest part of the existing flats should be 60m from the nearest outlet regardless of height. The furthest part of the new flats should be 45m from the nearest outlet regardless of height. Provision of a dry rising mains in stairs 2 would satisfy both requirements. The appellant has stated provision of a dry rising main from the podium to balcony would serve both new and existing flats, this should be satisfactory.

4.0 Appellant's Case

The 7 Day Notice Fire Safety Certificate deals solely with the change of use of the offices at Levels 4-6 to apartments. No changes to the lower levels (i.e. Level 1-3) were proposed as part of the works. The only alterations to the lower levels involved the provision of additional protection to the escape stairs, by way of additional protected lobbies, as requested by Galway Fire Service during their assessment of the FSC application.

The previously agreed Fire Safety Strategy for the lower levels (i.e. Levels 1-3) as detailed in the previously granted Fire Safety Certificate (Ref. FS 75/06), did not require the provision of dry falling mains within the escape stairs descending to serve the lower level car parks.

Therefore, as the existing standard of fire safety at lower levels, as agreed with Galway Fire Service under the previously approved Fire Safety Certificate for the development (Ref. FS 75/06) is not reduced by the change of use of the upper floor offices to apartments, it is considered onerous to attach the condition which relates to the existing building for which the fire strategy was previously agreed.

Sections 5.1.2 and 5.1.4 of TGD-B 2006 recommends that in buildings with a basement at more than 10m below ground level, basement storeys should be equipped with dry fire main, which may be sited in a protected stairway.

It is noted that the existing section of the car park at Level 1, which is located towards the front part of the building and is accessed via Stair 2 is 10.7m below ground level at the front of the building above. This only slightly exceeds the code recommended 10m below which a dry riser would be provided.

The floor level of Level 1 car park is split level and drops down by 1.5m (i.e. from 22.9 to 21.4m) as the car park extends towards the rear elevation of the building. However, this lowest section of Level 1 is accessible via a series of stairs (i.e. 4 no. stairs in total) which are all accessible by the Fire Services from external at either Levels 2 or 3 above – therefore the access point to any of these stairs is not more than 10m above the floor level of the Level 1 car park and therefore would not require dry falling mains.

For instance, the access door to the central stair is in the open courtyard at Level 3, at a vertical height of approx. 6.5m above the Level 1 floor. All other stairs serving the lower section of Level 1 are accessed from outside at Level 2, at an average vertical height of 3.1m above the floor of Level 1.

In addition, the following measures, as detailed in the original Fire Safety Certificate for the development (Ref. FS 75/05), have been provided to aid fire fighting at lower levels: -

- Mechanical smoke venting system in the lower level car parks, including independent power supply (to operate in the event of main supply failure)
- Hose reels to be provided in the car park at a rate of 1 no. reel per 800m²

Whereas Condition 6 references the recommendations of TGD-B 2006 regarding the provision of the dry falling main to the lower levels, it references the recommendations of

different code guidance (i.e. BS 9991: 2015) for the provision of a dry riser to the upper floors (i.e. Levels 5 & 6).

It is noted that as the top floor level of the building is less than 20m above ground level and fire tender access is available to both external elevations of the Level 5 & 6 apartments, then the existing extent of Fire Tender Access and Facilities would comply with the recommendations of TGD-B 2006, without the provision of a dry riser to Stair 2.

It is proposed as an alternative to providing a dry riser in Stair 2, as per Condition 6 of the granted Fire Safety Certificate, to provide a dry rising main along the external courtyard elevation of the building, with a dry riser outlet valve on the open external balcony overlooking the courtyard at Level 5. From this location all areas within each apartment at Level 5 & 6 will be reachable within 45m based on a route suitable for hose layout.

5.0 Consideration

The proposal to provide a dry rising main along the external courtyard elevation of the building, with a dry riser outlet valve on the open external balcony overlooking the courtyard at Level 5 in lieu of in Stairs 2 going up to all new flats levels is considered by the Appellant and the Building Control Authority to be a satisfactory solution for the upper levels.

The rest of the Condition 6, i.e. the requirement to provide a dry rising main to Stair 2 leading to all lower levels in the building is the key issue with respect to this appeal.

The appeal may be reduced to the question as to the scope of the Building Regulations and more specifically whether a change of use on the upper level should impact the previously approved design on the lower levels.

The Local Authority have referred to section 5.0.3 of TGD-B 2006 with respect to Existing Buildings. In their view as a material change of use has occurred then they are fully within their rights to review the entire building as part of this application. It is on this basis they have relooked at the basement car park levels. However this approach is only reasonable if the proposed change of use causes a new or greater contravention of the Building Control Regulations, for example if a section of the basement car park was being converted into another use then it is clear that a new or greater contravention could have occurred and it would be reasonable to revisit the facilities and access provided to these levels. However, in this case the Material Change of Use has occurred on an upper level. It is not clear how a fire within the upper level would adversely impact on the basement car park. In addition, if a fire was to occur in the basement level whether or not the basement has a dry riser has little bearing on the means of escape of the occupants of the upper levels. For example, if the basement levels were 9m deep rather than >10m there would be no requirement for dry risers to the lower levels but the level of risk from the basement / lower levels to the upper levels would be the same.

The purpose of the dry risers / fire fighting shafts to levels below 10m is to facilitate fire fighting to this level. Other measures (compartmentation, ventilation etc) are provided to protect the upper levels from a fire in the basement regardless of its depth.

It is noted that since the Gretzenbach Car Park Fire Nov 2004, the Liverpool Waterfront Car Park Fire Dec 2017, and the Douglas Shopping Centre Car Park Fire Aug 2019 there have been no amendments made to the requirements with respect to car parks in Technical Guidance Document B 2006 (recently amended in 2020) nor has there been any additional guidance provided by the Department of Housing, Local Government and Heritage. The prima facie compliance in 2006 when the original Fire Safety Certificate was granted is the same as it is day.

It is unclear from the reference to the previously approved Fire Safety Certificate (75/2006) whether in that application a case was made for not having a fire fighting shaft and dry rising main to a basement car park that was greater than 10m deep or if the issue was not addressed / was over looked. It is noted that if a case was not made for having a basement deeper than 10m with no fire fighting shaft and dry rising main or if the basement was stated as not being 10m deep or if this issue just was not addressed then the Local Authority have a range of statutory powers that would permit them to pursue their concerns about the

potential absence of the dry rising main to Stair 2 serving the basement levels e.g. they could determine that the development is a potentially dangerous building under the Fire Service Act. However, putting a Condition on a Fire Safety Certificate that does not have alterations that pose new or greater contravention to the lower levels is not in my opinion the correct course to pursue.

6.0 Recommendation

On the basis of my findings and conclusions I recommend that An Bord Pleanala alter Condition 6 to as follows: -

Condition 6:

A Dry Falling Mains is to be provided along the external courtyard elevation of the building, with a dry riser outlet valve on the open external balcony overlooking the courtyard at Level 5 so that all parts of the new flats are no more than 45m from the nearest dry riser outlet along a route suitable for laying hose. The fire main is to comply with BS 5306: Part 1: 1998

Reason:

To order to comply with Part B5 of the Building Regulations 2006.

Signed by:

Des Fortune
MSc(Fire Eng), BSc(Eng), CEng MIEI, MIFireE

Date: **8th September 2020**