

REPORT TO AN BORD PLEANÁLA

ON

APPEAL AGAINST A CONDITION ON A FIRE SAFETY CERTIFICATE

ISSUED BY GALWAY CITY COUNCIL

FOR

**OMISSION OF FIRE RATED SEPARATION BETWEEN EXISTING MALL AND ANCHOR RETAIL
UNIT AT EYRE SQUARE SHOPPING CENTRE, GALWAY**

Client: An Bord Pleanála
An Bord Pleanála Ref: FS 0552
Our Ref: CTA 1728
Date: APRIL 2017

1.0 BACKGROUND

This Report sets out my findings and recommendations on the appeal submitted by Jeremy Gardner Associates, Fire Engineering Consultants (JGA) against Condition 1 on a granted Fire Safety Certificate (Register Ref. No: FS 138/16) dated 20th December 2016, issued by Galway City Council (GCC) in respect of an application for *omission of fire rated separation between existing mall and anchor retail unit at Eyre Square Shopping Centre, Galway.*

Condition 1: *The separations between the mall and the major shop unit (which consist of solid construction walls and glazing and motorised shutters) currently occupied by Dunnes Stores shall be fire rated to at least 120m minutes when tested in accordance with relevant parts of BS476: Part 20-24: 1987.*

Reason: *In order to comply with B1 and B3 to the Building Regulations 2006.*

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

1.1 SUBJECT MATTER OF THE APPEAL

- The application for a Fire Safety Certificate was lodged by JGA 29th September 2016.
- The Fire Safety Certificate, with 1 condition, was issued by GCC dated 20th December 2016.
- An appeal against the condition was submitted by JGA on 19th January 2016.

1.2 DOCUMENTS REVIEWED

- Application for Fire Safety Certificate lodged by JGA, with compliance report and drawings, and details of previous Fire Safety Certificate application for extension to the shopping centre (FSC 98/15).
- Appeal submission by JGA to An Bord Pleanala, dated 19th January 2017
- Submission to An Bord Pleanala by GCC with fire officers report, dated 22nd February 2017
- Appeal submission to An Bord Pleanala by JGA dated 27th March 2017

- History file FS0515, relating to previous applications for fire safety upgrade works at the centre

2.0 FINDINGS

The case made by the building control authority is summarised as follows:

- Following the upgrade of smoke ventilation systems in the Eyre Square Centre, a clear layer will not be maintained along the entire mall at each level, with visibility of at least 10m not maintained along all of the mall.
- The upgrades to the shopping centre are an improvement on the existing fire safety design but do not reach the design goals of BRE Report 368.
- The CFD analysis is based on the assumption that uncontrollable fire spread will not occur from one unit to another, which is not, in the view of GCC, a valid assumption based on the recommendations of BS5588: 10: 1991, which states *“it is necessary to provide a structural fire barrier between individual units and to separate large units from malls”*. BS5588: 10 recommends separation of large units from the mall where *“any upper storey of a unit which has open connections with a lower storey in the unit which has also access to the mall (ref. clause 14.3 of BS5588: 10)”*. This describes the arrangement Dunnes Stores large unit has with the Eyre Square centre, where there is no separation. Two other large units do have fire separation from the mall.
- Separation is a key requirement of BS5588: 10, which was in play when this unit was designed and built and added to the existing shopping centre in 1998.
- There is a concern that the smoke and heat exhaust ventilation system in the Dunnes Stores unit may be undersized in terms of extraction rate. The extraction rate is based on the assumption of extensive cooling of the smoke layer temperature through local cooling by the sprinkler system. If this does not occur, smoke containment within the anchor unit will not happen and spills will take place into the mall.

The case made by the Appellant is summarised as follows:

- The building (The Eyre Square Centre) was designed and built in the late 1980's, before the advent of building regulations and prior to publication of BS5588: 10.
- A Fire Safety Certificate was previously granted (FS 99/11) for certain fire safety upgrade works (improvements to means of escape and compartmentation) in 1999.

- A further Fire Safety Certificate (FS 65/13) was granted in 2013 for other fire safety upgrades, agreed with GCC, including:
 - Smoke containment measures between mall levels
 - Upgrade of the smoke extraction system
 - Replacement of sprinkler heads with quick response heads
 - Widening of mall exits
 - Additional exit from ground floor mall
 - Improvement in wayfinding and exit signage
 - Improvements to the fire detection and alarm system and to evacuation procedures
- The Fire Safety Certificate granted in respect of the above upgrade works in the Eyre Square mall contained a condition that the Dunnes Stores unit in the adjacent Edward Square mall be fire separated from the Eyre Square mall in 120 minute fire resisting construction. That application dealt specifically with fire upgrade works within the existing Eyre Square centre and therefore the attachment of a condition relating to the existing construction of a separate, albeit adjoining, development (Edward Square) to the Fire Safety Certificate for the Eyre Square centre is particularly onerous.
- The adjacent Edward Square Centre was constructed in 1998 on foot of a separate Fire Safety Certificate ((FSC 98/15), which was granted without a requirement to provide fire resisting separation between the new Dunnes Stores unit (part of the new development) and the existing Eyre Square mall. The issues dealing with fire protection of the mall areas vis-à-vis this unit were specifically addressed in the application. In order to prevent cool smoke from the unit entering the mall, as an alternative to providing compartmentation between the store and the mall, the unit was provided with an engineered powered extract system.
- The footprint of the unit at 1800sqm is well within the limit of 3700sqm recommended in BS5588: 10, below which compartmentation from the mall is not required.
- As per the design in the granted Fire Safety Certificate for the unit, smoke spread from the unit to the mall and between levels within the unit is prevented by the provision of automatic smoke curtains/shutters at the mall openings and around the escalator which will descend to 2.5m above floor level on detection of smoke in the unit.

- The MSA fire engineering report (submitted with the original Fire Safety Certificate application for the unit) takes account of the effects of sprinkler cooling on the smoke layer temperature. The additional life safety elements of the system minimise the risk of non-operation of the sprinkler system.
- The performance of the mechanical smoke extraction system with the Eyre Square mall is not considered relevant to the issue regarding the interface of the Dunnes Stores unit and the Eyre Square centre. The agreed fire engineering approach for the Dunnes Stores unit (as reflected in the granted Fire Safety Certificate FSC 98/15) involves the containment of smoke/fire within the unit itself so the smoke extraction system in the Eyre Square mall would not be required.
- This application seeks to remove the requirement to separate the Dunnes Store unit (as specified in the condition on Fire Safety Certificate FS 65/13) as the construction of the unit had previously been approved by GCC per Fire Safety Certificate FSC 98/15, and there has been no change in the interface of the unit and the mall since the Fire Safety Certificate was granted.

3.0 CONSIDERATIONS:

The subject site consists of two main elements:

- The Eyre Square Shopping Centre, a multi-level mall constructed in the late 1980's and
- A newer adjacent mixed-use development that includes a shopping element, constructed in the late 1990's, and which includes the Dunnes Stores anchor unit with openings on two levels onto the Eyre Square centre.

The Eyre Square centre was constructed prior to the introduction of building control regulations so was not the subject of a Fire Safety Certificate application. It was also constructed prior to the publication of BS5588: 10, referenced in Technical Guidance Document B (TGDB) as suitable guidance for compliance with the functional requirements of Part B (Fire) of the building regulations.

The construction of the Edward Square centre was the subject of a Fire Safety Certificate (Ref. FSC 98/15) granted with a number of conditions, but none relating to the openings between the anchor unit and the Eyre Square mall.

Two programmes of fire safety upgrade works were undertaken at the Eyre Square centre, in 2011 and 2013, on foot of representations from GCC. Although there was no requirement per se under building regulations to carry out those works (they were presumably sought by GCC as the fire authority under

the auspices of the Fire Services Act), the fact of carrying out certain elements of the works constituted 'material alterations', which required an application to be made for a Fire Safety Certificate. Two such applications were made.

Application Ref. FS 99/11 related to improvements to means of escape and compartmentation, and was granted without conditions. Application Ref. FS 65/13 related to more extensive improvements to the smoke control and sprinkler systems, but was granted with a condition to compartment the anchor unit in the Edward Square development from the Eyre Square mall. This condition does not appear to have been appealed at the time, so the current subject application was made to seek, in effect, to have the condition removed. The re-imposition of the same condition in the latest application (Ref. FS 138/16) is the subject matter of this appeal.

The appellant considers that the condition is unwarranted, as it seeks to impose an element of fire separation that was explicitly argued against (as an alternative fire engineered smoke extract system was proposed), and accepted by GCC at the time (by virtue of granting a Fire Safety Certificate for a fire safety design that did not include such compartmentation).

In carrying out the previous upgrade works in the Eyre Square centre, the owners were not obliged (under building regulations) to do so. The only requirement in that regard was not to introduce or cause any new or greater contravention of the building regulations. The fact of carrying out upgrade works would be unlikely to result in such an outcome. The Fire Safety Certificate applications made in respect of the material alterations sought approval for the specific works being carried out, which included widening of mall exits, construction of lobbies and an additional exit, construction of smoke containment etc. It could be considered that upgrade of the sprinkler, smoke extract, fire alarm and emergency lighting systems constituted works to 'fixtures and fittings' and/or 'repair or renewal' not requiring approval as 'material alterations'.

The building control authority is obliged (in an application) to consider only the matters that are the subject per se of the application, and not to consider the standard of fire safety of the building overall (except insofar as the proposed material alterations may cause a new or greater contravention of the regulations). In other words, the obligation is to assess whether the proposed works comply, rather than whether the whole building complies.

In this case, they appear (in assessing the application for the upgrade works) to have concluded that the overall level of safety in the Eyre Square centre would be compromised by (a) a less than optimum smoke

clearance system within the Eyre Square centre (even after upgrading) and (b) failure of the smoke control system in the Dunnes Stores unit to work effectively. It is considered that taking such matters into account would go beyond assessment of the specific works that were the subject of that particular application.

Notwithstanding the above, GCC are also of the view that the guidance in BS5588: 10 calls in this case for fire separation of the anchor unit from the Eyre Square mall. However, that issue was already adjudicated on by the granting of the Fire Safety Certificate that included the new Dunnes Stores unit.

GCC make reference to clause 14.3 of BS5588: 10 which recommends (at 14.3.2(b)(3)) that, where a unit has upper and lower storeys that connect to the mall and there are openings internally between those storeys, the upper storey should be compartmented from the mall. The condition attached to the granted Fire Safety Certificate requires compartmentation between the unit and the mall at both levels, which is in excess of the recommendation.

The appellant makes the case that, while the unit has access to the mall at two levels, the interconnection internally between floors (escalator) and between the unit and the mall are protected by automatic shutters/curtains that will descend around the openings on smoke detection, to a height of 2.5m above floor level. This will prevent flow of smoke into the mall and between floors for a designed period. This was the previously agreed strategy as reflected in the granted Fire Safety Certificate.

Under BS5588: 10, a 1300sqm portion of a larger unit, adjacent to the mall, may discharge smoke directly into the mall (for a powered extract system), while the remainder is extracted internally. In this case, the overall unit floor area is 1800sqm, which is not majorly in excess of the 1300sqm limit. However, in the system as provided, this relaxation has not been availed of and the fire engineered design provides for all smoke from the unit to be extracted internally. The principal element of the case made in the application (for the anchor unit) was that smoke flow from the lower level via the escalator opening to the upper level would be restricted, thus eliminating the need to compartment the upper level from the mall. This approach was accepted by GCC in granting the Fire Safety Certificate.

3.1 CONCLUSIONS:

The appeal against the condition should be allowed and the condition removed for the following reasons:

- In considering the previous application (Ref. FS 65/13) where the condition to compartment the unit from the mall was first imposed, GCC were limited to considering only the extent to which the design of the works (to which the application specifically related) complied with the requirements of Part B

of the Second Schedule to the Building Regulations. In applying the condition, it is considered that GCC went beyond the scope of what should have been assessed. However, the condition was not appealed, so technically still applies. In an attempt to rectify this, the current application and appeal have been submitted, and it is considered that the appeal should be allowed in line with the above assessment.

- Notwithstanding the above, the fire safety design of the new Edward Square development explicitly took account of the interface of the Dunnes Stores unit with the existing Eyre Square centre, including specific provisions relating to the potential for smoke flow between the unit and the mall via openings to the mall at two levels, making provision for a sprinkler system and a mechanical smoke extract system with automatic curtains/shutters that were designed to protect openings to the mall and internally between floor levels in the unit, all of which was agreed by GCC by virtue of the Fire Safety Certificate granted for the development.

4.0 REASONS and CONSIDERATIONS:

Having regard to:

- The submissions made in connection with the Fire Safety Certificate application and the appeal
- The type of use and layout of the building (as a multi-level shopping mall with a large anchor unit opening to the mall at two levels)
- The extent of provision with regard to active fire/smoke protection systems (sprinkler system, mechanical smoke extract system and automatic smoke curtains/shutters) within the Dunnes Stores unit
- The fact that these provisions were previously regarded by GCC as compliant with the requirements of Part B of the Second Schedule to the Building Regulations 1997 to 2014 without the need to further compartment the unit from the mall (by virtue of granting Fire Safety Certificate FSC 98/15) and the fact that there have been no further material alterations in the interim that would be considered as having a material effect on that decision and
- The requirement to have consideration (in an application for a Fire Safety Certificate) only to the specific works that are the subject of the application

it is considered that the appeal should be allowed and Condition No. 1 be deleted.

Signed by:

COLM TRAYNOR BE FIEI Chartered Engineer

Date: 20th April 2017