

REPORT

ON

APPEAL AGAINST REFUSAL

FIRE SAFETY CERTIFICATE (REG REF FA/15/1488)

BY

DUBLIN CITY COUNCIL

FOR

**MATERIAL ALTERATIONS TO GROUND FLOOR LEVEL ONLY WITHIN THE EXISTING
PROTECTED STRUCTURE KNOWN AS ST ANDREW'S CHURCH, SUFFOLK STREET,
DUBLIN 2**

CLIENT	:	AN BORD PLEANALA
AN BORD PLEANALA REF NO	:	PL29B.FS0517
BCC REG REF	:	FA/15/1488
OUR REF.	:	16117_29B.FS0517_R01.
DATE	:	16 May 2016

1.0 INTRODUCTION

This report sets out my findings and recommendations on the appeal submitted by FCC Fire cert ltd [hereafter referenced as FCC] on behalf of Design & Crafts Council of Ireland, against a Refusal to Grant a Fire Safety Certificate (BCA Register Reference No. FA/15/1488) by Dublin City Council [hereafter referenced as DCC] in respect of an application identified in the application form as *“Material Alterations to Ground Floor Level only within the existing Protected Structure known as St Andrew’s Church, Suffolk Street, Dublin 2”*

1.1 SUBJECT MATTER OF APPEAL

1.1.1 An application for a Fire Safety Certificate under Part III of the Building Control Regulations 1997-2014 was made by FCC on behalf of the Design & Crafts Council of Ireland on 19.10.2015. The scope of the application was subsequently clarified in the FCC submission to DCC dated 17.11.2015 as applying to the ground floor works only and the application was deemed to be a valid application by DCC.

1.1.2 The Fire Safety Certificate was refused by DCC on 21.01.2016 with the stated reason for the Refusal being as follows:

Reason 1:

The report and drawings submitted failed to show compliance with the requirements of B1, B3 & B5 of the Second Schedule to the Building Regulations 2006-2013.

1.1.3 An appeal against the Refusal was lodged with An Bord Pleanala by FCC on 18.02.2016 requesting that the Refusal be overturned and the BCA be directed to grant the Fire Safety Certificate.

1.2 DOCUMENTS REVIEWED

1.2.1 Fire Safety Certificate Application and Supporting Documentation

- Completed application form for a Fire Safety Certificate to Dublin City Council dated 02.10.2015 as subsequently amended and resubmitted dated 17.11.2015

i.e. increased fee payable. The subject matter of the application remained unchanged in the amended application form i.e. *Material Alterations to Ground Floor Level only within the existing Protected Structure known as St Andrew's Church, Suffolk Street, Dublin*

- Fire Safety Certificate Application Documentation by FCC lodged in support of this application on 19.10.2015, 17.11.2015 and 11.01.2016.

1.2.2 Recommendation by the Fire Prevention Officer dealing with the file dated 19.01.2016 and subsequent Refusal Notice dated 21.01.2016.

1.2.3 Appeal submissions to An Bord Pleanala:

- Submissions dated 18.02.2016 and 31.03.2016 by FCC
- Fire Officer Observations on the appeal submission by cover letter dated 07.03.2016

2.0 REASONS FOR REFUSAL & CASE MADE BY APPELLANT

It is not clear from the Notice of Refusal as to the specific concerns which the BCA had which gave rise to the Refusal.

However, on review of the BCA submissions to An Bord, submitted by cover of letter dated 07.03.2016, it is clear that the BCA were of the view that the subject areas of the application were not adequately defined in the application documents and specifically the BCA has concerns with regard to:

1. Relocation of the café to ground floor level not supported by sufficient calculations to demonstrate that it would not affect the balcony escape routes overhead.
2. Change from café to library use at first floor level not adequately addressed by the Applicant
3. Stairwell 3 of inadequate fire resistance given the proposal to include a dry riser therein
4. The different Purpose Groups identified in the FCC Submissions not adequately addressed i.e. with regard to fire separation between areas in different purpose groups

5. The BCA are of the view that the entire of the ground floor should have been included in the scope of the application as the egress from the entire of the ground floor is considered in the FCC submissions and affected by the changes to escape routes at ground floor level.
6. The BCA note that the FCC Submission dealt with issues on all floors of the building whereas the scope of the application is identified by FCC as being in respect of part of the ground floor only

For their part the Appellant, FCC, refutes the reasons as set out above in their submission to ABP dated 31.03.2016 on the following basis:

1. In regard to the relocation of the café to ground floor level FCC contend that the impact of this on the escape routes overhead was demonstrated in their submission to BCA dated 11.01.2016. In this submission it is noted that FCC included a Smoke Filling v. Egress Time analysis utilising the CFAST Fire Zonal Model for the smoke filling analysis. In this analysis they model a growing fire at ground floor level and treat the “atrium space” (i.e. the main body of the chapel) as a single rectangular volume. The fire growth rate is assumed to be a “Slow” fire with a characteristic fire growth time of 600 secs i.e. time to reach 1MW output. They then compare the time which the model predicts for the smoke to drop to a height of 2m above the open balconies on first floor level with the likely egress time for the first floor occupants i.e. in particular the occupants of the 8 person office who must in the first instance exit onto a narrow open balcony. FCC estimate the time to egress the first floor office as 1 minute 16.7 seconds.

There are a number of aspects of this analysis which may lead to significantly un-conservative results including the following:

- a. The assumption of a Slow fire growth rate may significantly underestimate the growth rate which could occur in the stated new use of the ground floor comprising “Craft Concessions/stalls displaying Irish Crafts” (quoting from the FCC Ground Floor fire drawing). It is noted for instance that the recommended fire growth rate for “shops” (which in my opinion could be deemed to correlate with the proposed use as Craft Concession/stalls) is Fast which has a characteristic growth time of 150 seconds compared with 600 seconds as has been assumed in the CFAST model
- b. The CFAST model does not calculate the filling time for fires which occur under the first floor balconies where the fire will generate a balcony spill plume as opposed to an asymmetric plume which is assumed in the CFAST model i.e. CFAST does not model spill plumes. The fill times for a balcony spill plume will be significantly shorter than for a plume emanating from a fire on the atrium floor - i.e. directly under the void – as

has been assumed in the FCC model. A CFD model would have been more appropriate to model the spill plume condition.

Whilst it might be argued that there is no need for the Applicant to consider the filling time on the basis that the balcony escape on the upper floors is not being altered, the proposal to change from a Tourist Information office to a Designer/Craft display area could, in my opinion, give rise to a significantly increased fire load and increased fire growth rates and therefore it is incumbent on the Applicant to demonstrate that these changes in use are not giving rise to any new or greater contravention of Part B in respect of existing upper levels even if those upper levels are not otherwise being altered. Specifically the proposal to change the use of the area under the footprint of the first floor 8 person office from information counter to exhibition area does in my opinion potentially give rise to a new or greater contravention of means of escape from the 8 person office overhead i.e. it being noted that the codes recommend against exiting towards a void edge which is the case for the first floor 8 person office.

2. FCC contend that they dealt with the impacts of the relocation of the café in their submission to the BCA dated 11.01.2016. On review of this submission however the logic of the FCC arguments are somewhat confused. They refer to the upper floors being in Purpose Group 3 (Office) usage whereas clearly the cafe area formed part of the public facilities in the former Tourism Office and therefore by FCC's own analysis this area ought to have been denoted as having been subject to a "*material change of use*" from Assembly - Purpose Group 5 to Office - Purpose Group 3. Furthermore, though not entirely clear from the FCC submissions as there are no "Existing Plans" included, it appears that a stairs which previously provided access to the café from the ground floor is being removed in the works and therefore the egress routes from this section of floor is being altered and should have been dealt with in the application in my opinion.

In my view therefore I consider that the subject areas of the application ought to have included the proposed library area and compliance in relation to this area ought to have been demonstrated in the application.

3. FCC point out that the provision of the dry riser in stairwell 3 is an enhancement to the existing fire service facilities and on that basis there ought not to be a requirement to upgrade the fire protection of the stairs to 60 minutes. I would concur with their arguments in this regard.

4. FCC note that they have difficulty in responding to the BCA comments with regard to the different purpose Groups and B3 compliance in the absence of more specific commentary on the part of the BCA. As noted in 2 above, however, the change of use of the first floor public café area to Library/office use and the removal of a stairs which provide access to this area ought to have been included in the scope of the FCC application in my view and ought to have been dealt with under all aspects of B1 to B5 i.e. insofar as FCC identify that the purpose Group in this area is in their view PG3 Offices whereas clearly it was PG5 Assembly and Recreation when the premises was used as the Tourist Office.

5. In their appeal submission to ABP, FCC do not specifically address the BCA contention that the entire of the ground floor ought to have been included in the scope of the application. I note in this regard that the Building Control Regulations, in Article 25(1)(a), identify the *“Relevant Floor area”* for fee purposes to be the *“floor area of the works or the building to which the application relates which is affected by the works”*. I would concur with the BCA that the entire of the ground floor is affected by the works and ought therefore to have been included in the Relevant Floor Area and not excluded from the scope of the application. Also, as noted above, I am of the opinion that the first floor former public café area ought also to have been included in the scope of the application.

6. In regard to the upper floors, FCC contend that the information they included in their various submissions to the BCA in relation to the upper floors was for information purposes only and did not form part of the scope of the application. I note however that the FCC Written Submission which accompanied their original application deals with several issues on the upper floors including for instance the fire rating of structure/floors. It is understandable therefore in my view that the BCA formed the view that the scope of the application ought to have included all matters which were addressed in the FCC submission as the obligation under the Building Control Regulations would otherwise have been solely to demonstrate that the works were not causing any *“new or greater”* contravention of Part B in relation to the upper floors.

3. CONCLUSIONS & RECOMMENDATIONS

In conclusion therefore, having considered the submissions made by the Applicant and the BCA I conclude that the decision of the BCA to Refuse the application should be upheld for the following reasons:

REASONS

- I. The Applicant has not adequately identified, by submitting existing floor plans, the scope of the works falling within the scope of the application*

- II. The Applicant has not adequately addressed the material change of use from public café to library, which the Applicant identifies as an Office usage, at first floor level or the proposals to remove the existing stairs providing access from ground floor to this area*

- III. The Applicant has not adequately demonstrated that the proposed new uses at ground floor level do not give rise to a new or greater contravention of Requirement B1 in respect of the open balcony escape from the 8 person office at first floor level.*

MAURICE JOHNSON

Managing Director | Chartered Engineer | BE(Hons), CEng., MStructE, MIEI, MSFPE

Date : _____