

An
Coimisiún
Pleanála

FSC Report ABP-322753-25

Appeal v Refusal or Appeal v Condition(s)

Appeal against Decision to Refuse

Development Description

Cavity Barrier Retrofit at Ballsbridge Gardens. The provision of an alternative cavity barrier solution to what was approved in Fire Safety Certificate 217/96, and which was granted on the 20th May 1996 in respect of the provision of 24 Apartments in a 5 storey block at Block 1, Ballsbridge Gardens, Crampton Avenue, Shelbourne Road, Ballsbridge, Dublin 4.

Building Control Authority Fire Safety Certificate application number:

Dublin City Council – Submission No. 3026724

Appellant

Ballsbridge Gardens Management Ltd

Appellant's Agent

R. E. Greene & Associates

Building Control Authority:

Dublin City Council

Inspector

Mr. Bryan Dunne

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1.0 Introduction

1.1. The application is for the provision of an alternative cavity barrier solution to what was approved in Fire Safety Certificate 217/96, and which was granted on the 20th May 1996 in respect of the provision of 24 Apartments in a 5 storey block at Block 1, Ballsbridge Gardens, Crampton Avenue, Shelbourne Road, Ballsbridge, Dublin 4.

1.2. The application made to the Building Control Authority (BCA) was for a Revised Fire Safety Certificate Application (RFSC).

1.3. A decision was made by the BCA to Refuse the RFSC on the following grounds:

Reason 1:

Failure to demonstrate the proposed works will comply with Part B3 of the Second Schedule to the Building Regulations, 1997 to 2024.

2.0 Information Considered

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

- An Coimisiún Pleanála Case No. ABP-322753-25
- A copy of the RFSC application documentation uploaded to the BCMS system on the 9th December 2024 which included the following supporting documents:
 - Indicative Fire Test Report EUI-23-S-000019 published by Efectis Uk/Ireland
 - European Technical Assessment ETA-21/0540 of 6th July 2021
 - BREEAM UK NC V6, BREEAM Goal and Credit Contribution published by Econ Building Products
 - BDA Agrément FIRETITE Cavity Wall Insulation (Injected Foam) published by Kiwa Ltd
 - Cavity insulation installed at Goswell Road, Barbican, London – FIRETITE Best Practice Case Study published by Econ Building Products

- FIRETITE cavity insulation installed at EUROSPAR, Newtown, Cobh, Co. Cork - FIRETITE Best Practice Case Study published by Econ Building Products
- FIRETITE Cavity Wall Insulation – Achieves 132 minute indicative fire resistance wall test published by Econ Polyurethanes
- Lime Street cavity wall installation Dublin South Docklands – FIRETITE Best Practice Case Study published by Econ Polyurethanes
- The first 3d construction printed social housing scheme in Ireland with clay foam cavity insulation - FIRETITE Best Practice Case Study published by Econ Building Products
- Clay Foam Insulation – The environmental solution for cavity walls published by Econ Building Products
- Previously approved Fire Safety Certificate Reg Ref F217/96
- Appeal submission letter by the Appellant to An Coimisiún Pleanála dated 10th June 2025
- A copy of the Fire Officers Report dated 7th July 2025
- Additional submission letter by the Appellant to An Coimisiún Pleanála received on the 7th August 2025

3.0 Relevant History/Cases

3.1. The previously approved Fire Safety Certificate for the development was provided as part of the 2024 RFSC application. The original application Reg Ref F217/96 was for 24 apartments in a 5 storey block at G&T Crampton Limited, Lands at Shelbourne Road, Ballsbridge Dublin 4 – Block 1 and was granted by Dublin City Council on the 20th May 1996 with no conditions.

4.0 Appellant's Case against the Refusal

4.1. It is the appellants view that the BCA failed to give adequate consideration to the proposal tendered for the retrofitting of an alternative cavity barrier solution in the external walls of a 28-year-old apartment development. In particular, the BCA failed to:

- a) Recognise the adequacy of the FIRETITE product, which has been proven with the results of independent testing as a material which is fit for purpose as a cavity barrier as set out in Table A1 of TGD B:

16. Cavity barrier	EI 15, E30	No provision	30	15	each side separately
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- b) Have regard for the provisions of section 0.1.4 of TGD B – Fire Safety Volume 2 which permits consideration of alternative methods of achieving compliance with the requirements of Part B of the Second Schedule of the Building Regulations.

4.2. The appellant makes reference to Diagrams 16 and 17 of TGD B and notes that even though Diagram 17 was proposed as part of the granted Fire Safety Certificate Ref: FSC 217/96, the installation was compromised by (a) the failure to install cavity barriers around openings, (b) the failure to close the top of the cavity, (c) the failure to protect PVC ventilation pipe work within the cavity, and (d) by the installation of 'combustible' PVC windows/doors in external openings. The appellant emphasises that the only way to rectify these deficiencies and comply with Diagram 17 would be to totally remove/replace all windows and doors, to close the gap around each open and by the partial removal of the tiled roof coverings along eave level to close the cavity at the top the walls which they note would be prohibitively disruptive and expensive. It is for this reason that the appellant proposed an alternative solution as permitted by Section 0.1.4 of TGD B.

4.3. The appellant draws attention to the fact that this issue was brought to the BCA's attention over the course of numerous consultations with the BCA failing to offer any alternative practical solution to this issue.

4.4. They maintain that the solution put forward by them in the RFSC encompasses all of the technical fire resistance criteria in Diagram 17 and on that basis request ACP overturn the decision and grant the application.

5.0 Building Control Authority Case in favour of the Refusal

5.1. The BCA highlight that this existing apartment building was originally the subject of a previously approved FSC (Ref No. F217/96) granted on the 20th May 1996 with no conditions. As part of the original application the external cavity walls were required to

comply with the Diagram B3.7 of TGD B 1991, however it was later found that the walls neither complied with Diagram B3.7 nor had cavity barriers been installed as an alternative method of complying with TGD B 1991.

5.2. The scope of the RFSC application relates to a proposal to install a foam injected material into the existing external cavity wall as a means to full fill the cavity as an alternative means of complying with the original FSC. Following an assessment of the RFSC the BCA recommended the application be refused.

5.3. The BCA make reference to the following points from the RFSC:

- The appellant sought approval for a new method by which it was proposed to achieve compliance with Section 3 of Part B
- They pointed out that the original application made reference to Diagram B3.7 which has subsequently been replaced by Diagram 17 which the appellant wanted to avail of and in particular:
 - Close cavity at top of wall – response by appellant was that the cavity would be totally filled with insulation
 - Close cavity at top of openings - response by appellant was that catnic steel lintols be used over all window/door openings
 - Close cavity at cill – response by appellant was that precast concrete cills/threshold supports bridge window/door openings
 - Close cavity at jambs – response by appellant was that the cavity would be totally filled with insulation
- In the RFSC the windows and doors fitted in all opening in the external walls of the development are PVC which is deemed to be a combustible material placed in or exposed to the cavity.
- The appellant points out that the existing external walls are made up of:
 - 100mm brick/block external leaf
 - 100mm cavity containing 50mm polystyrene insulation against the inner leaf
 - 100mm concrete block with 90mm closer at jambs

and that the proposed method of achieving compliance with Section 3.3 of TGD B is by fully filling the concealed void on the outer side of the existing insulation layer with FIRETITE cavity wall insulation.

5.3.1. In response to the various technical documents put forward by the appellant (Blue text) the BCA make the following comments (Black text):

The Revised FSCA also included various *“technical documentation in support of the suitability of the FIRETITE product for the proposed usage”*, which is commented on in the table below:

Document Name	DFB Review Comments
BDA Agrément Cert issued by Kiwa Ltd.	<ul style="list-style-type: none"> ▪ The Scope of the Agrément Cert classifies the FIRETITE system as <i>“an in-situ injected thermal insulation system which contributes to the airtightness and watertightness of external masonry cavity walls”</i> and notes <i>“the system is for use in existing and new dwellings, and buildings other than dwellings up to an including 12m in height with cavity widths between 40mm and 150mm”</i>. The Agrément Cert further states <i>“the system may also be used in walls above 12m in height, where the building has been assessed as suitable by the Agrément holder”</i>. <p>However, Ballsbridge Gardens comprises five storeys (ground to fourth floor) with parts of the external cavity walls appearing to exceed 12m with no assessment provided by the Agrément holder in the Revised FSCA.</p> <ul style="list-style-type: none"> ▪ Section 2.2.8 states <i>“there are no height and/or boundary restrictions for the use of the system”</i> which is at odds with the possible building height limit referred to above. ▪ Section 3.2.5 regarding the Irish Building Regulations <i>“certifies that the System complies with the requirements of a recognised document and indicates it is suitable for its intended purpose and use”</i> – however, it does not specifically refer to Technical Guidance Document Part B (Fire Safety) which is the guidance document used in Ireland to prima facie indicated compliance with Part B of the Second Schedule of the Building Regulations. ▪ No NSAI Agrément Cert was provided to certify the proposed product.
Efectis Indicative Fire Test Report EUI-23-S-000019	<ul style="list-style-type: none"> ▪ This report relates to an <i>“indicative fire test”</i> which <i>“does not fall under UKAS accreditation”</i> whilst the test carried out relates to the proposed FIRETITE product being used as part of a stud partition wall system and not for the proposed application/use in an external cavity wall as a cavity barrier and accordingly, this fire test report is not considered applicable as also stated in Section 12 of the report.
European Technical Assessment ETA-21/0540	<ul style="list-style-type: none"> ▪ Section 3.1 refers to Standards relating to reaction to fire tests however, the referenced Standards have been superseded by the current Standards EN 13823: 2020 + A1: 2022 and EN ISO 1716: 2018. ▪ Section 3.1 states the fire performance of the product is <i>“valid for applications on or between substrates made of building materials classified as A1 or A2-s1,d0”</i>. <p>However, the proposal to install the FIRETITE product between the existing 50mm polystyrene insulation and the external leaf (refer to page 3 above) may not deem this product as being Class A2-s1,d0 in the proposed application given polystyrene insulation would not typically be classified as A1 or A2-s1,d0 as required for its application.</p>

FIRETITE Clay Foam Insulation Brochure	<ul style="list-style-type: none"> Same comments as per the European Technical Assessment ETA-21/0540 above. The typical specifications/diagrams show the FIRETITE insulation fully filling the cavity between the masonry inner and outer leafs however as per above, this will not be adhered to where the proposed FIRETITE injected foam insulation is installed between the existing 50mm polystyrene insulation and the external leaf to full-fill the cavity and to close the cavity at the top of the wall.
FIRETITE Cavity Wall Insulation Indicative Fire Resistance Wall Test	<ul style="list-style-type: none"> Same comments as per the Efectis Indicative Fire Test Report EUI-23-S-000019 above, i.e. based on an indicative fire test for a different application.
FIRETITE Case Studies	<ul style="list-style-type: none"> It appears the application of the FIRETITE Cavity Wall Insulation product in the case studies was moreso to upgrade the thermal performance of the cavity wall rather than being a means to retrofit a cavity barrier in the wall cavity (for the existing buildings) and to also meet thermal performance requirements in the case of the new buildings.

The Revised FSCA refers "the FIRETITE product has been tested in accordance with the method set out in EN 1363-1 & 1363-2 and has fulfilled the fire resistance criteria of BS EN 1364-1 in relation to Fire Integrity (E) and Insulation (I) for a period of 132 minutes". However, this is not considered to be correct given this statement is based on an "indicative fire test" in a stud partition wall system rather than in an external cavity wall for the purposes of being used as a cavity barrier.

In addition, the Revised FSCA further advises "the strategy for the retro fit of cavity barriers by the method of full fill injection with FIRETITE Cavity Wall Insulation is fit for purpose and is deemed compliant with the requirement for which the provisions of Diagram 17 of TGD B – Fire Safety 2006 may be applied". However, the proposal to inject the foam into the existing cavity void between the existing 50mm polystyrene insulation and the external leaf does not meet the application requirements set out in the European Technical Assessment ETA-21/0540 report or in the FIRETITE Clay Foam Insulation Brochure which both require the product to be installed as full-fill insulation between masonry inner and outer leafs.

Based on their review of the RFSC and the associated technical documentation provided in relation to the FIRETITE cavity wall insulation product the BCA decided to refuse the application for the following reasons:

- The BDA Agrément Cert did not clearly confirm the product can be used for apartment building over 12m in height.
- There was no formal fire test report provided for the proposed application.
- The reaction to fire test report is not tested in accordance with the latest Standards.

- Due to the presence of the existing 50mm of polystyrene in the cavity it would not be possible for the FIRETITE product to be installed between the masonry inner and outer leafs.
- No methodology specific to this building was provided for installing the product.

6.0 Response by the Appellant to the Building Control Authority Report

In their rebuttal dated the 7th July 2025 the BCA identify 5 key reasons why the application was refused. The appellant critic each in turn:

1. BCA comment – *The BDA Agrément Cert does not clearly confirm the product can be used for apartment buildings over 12 meters in height while no assessments to confirm same has been provided by the Agrément holder*

Here the appellant argues that as the penthouse apartment at 5th floor level is contained within the hipped roof structure the proposed product is only being used in a wall which is 10.8m which is under the 12m limit set Section 2.2.1.3 of the BDA Agrément Cert

2. BCA comment - *No formal fire test report has been provided for the proposed application/use of the product*

The appellant draws attention to the Manufacturers of the FIRETITE product have persisted in testing it for resistance to fire and for suitability as a cavity barrier solution since the product was developed stating that recent testing by Efectis found the product achieved an E30 & I30 rating which exceeds the typical E30 & I15 rating specified in TGD B

3. BCA comment - *The reaction to fire of the product is not tested in accordance with the latest Standards*

The appellant emphasises that FIRETITE product was tested to a standard that was current at the time and that while the ETA is currently valid it is due for renewal later this year and they maintain that the product is expected to remain Class A2-s1-d0

4. BCA comment - *The proposed full fill of the existing external cavity walls containing the existing 50mm polystyrene installation will not have not (sic) The proposed*

injected foam product installed between the masonry inner and outer leaves as required by the installation set out in technical documentation

The appellant reiterates that the performance of the FIRETITE product is Class A2-s1-d0 and is typically designed to be used in cavity wall construction. The product being a liquid, has the ability to get into every crack and gap and fully fill every cavity/void. The function of the product they contend is not to constitute a cavity barrier in the usual sense of the term but rather to facilitate a retrofit solution which will ensure gaps around all openings, on or adjacent to the inner face of the external leaf will be fully sealed to the passage of fire or smoke. They claim that the products performance will not be affected when installed in a cavity with other materials.

5. BCA comment - *No methodology specific to the existing building has been provided when installing the product and in particular how to ensure 10mm gaps at the jams are fully filled/sealed to ensure the cavity insulation is fulfilled to close the cavity at the top of the wall*

The appellant draws attention to the fact that the product will be installed by approved and certified installers to manufacturer's instructions.

In their conclusion the appellant states that having regard to the latest testing of FIRETITE for compliance with the performance standards for cavity partiers set out in TGD B they have shown that the fitness for purpose of the proposed product has been proved beyond all reasonable doubt and on this basis the refusal of the RFSC should be overturned.

7.0 Assessment

7.1. De Novo assessment/appeal v conditions

A full review of the application (covering B1 to B5) was undertaken on the basis that the application was refused by the BCA.

7.2. Content of Assessment

BACKGROUND TO RFSC APPLICATION

Under Section 2 of their RFSC application the appellant notes that issues relating to fire safety were identified on this premises in 2015 while remodelling works were being carried out in an apartment. Following this Scott Murphy Chartered Building Surveyors were commissioned to carry out a fire safety audit of the building. The main fire safety deficiencies found included:

- Breaches in compartmentation at roof level
- Breaches in compartmentation within the service shafts and ceiling voids of common areas
- Breaches in fire resistance of the entrance hallways within apartments
- The absence of cavity barriers

Subsequently, the appellant was hired to carry out further fire safety investigation works. A programme of upgrade works was initiated and completed between 2017-2019 and an interim report was submitted to the Fire Officer. This report identified upgrade works carried out to both active and passive fire safety systems but highlighted the fact that *“the matter of the retrofitting of cavity barriers in the external walls is still outstanding....”*

The appellant emphasises that various submissions/meetings were held with the BCA in an attempt to find a solution for retrofitting cavity barriers, but to no avail. Following this the appellant applied for a RFSC proposing the use of the FIRETITE product.

There are no comments to be made on Sections B1, B2, B4 or B5 of the RFSC application on the basis that the appellant confirmed that *“The provisions as set out in the compliance Report submitted with Fire Safety Certificate Ref No. F217/96 have been applied in the approved development at the time of construction”*. For this reason, this assessment concentrated on achieving compliance with Section B3 and in particular the Concealed Spaces section of the original FSC application only.

LITERARY REVIEW

Title 1: BDA Agrément FIRETITE Cavity Wall Insulation (Injected Foam) published by Kiwa Ltd (Ref BAW-21-227-S-A-UK)

Scope: An in-situ injected Thermal insulation system which contributes to the air tightness and water tightness of external masonry cavity walls

Summary of Points to Note:

- The product is classified as Class A2-s1 d0 in accordance with BS EN 13501-1
- Is suitable for use in both existing and new dwellings and buildings other than dwellings
- Is suitable for use in cavity walls up to and including 12m in height and can be used in walls over 12m in height once the building has been assessed as suitable by the Agrément holder
- Can fully fill cavities
- The minimum cavity width that can be filled should not be less than 40mm

Inspectors Comments:

The cert specifically emphasises the suitability of the FIRETITE product for use in external masonry walls which include clay and calcium silicate bricks, concrete blocks and natural and reconstructed stone blocks. There is no mention of it being suitable for use between brick/block and polystyrene as proposed in the RFSC and as such this document is not relevant in this instance.

Title 2: Indicative Fire Test Report EUI-23-S-000019, according to BS EN 1363-1 and BS EN 1364-1: 2015 by Efectis Uk/Ireland

Inspectors Comments:

Under Section 2 of this report, it is noted that the test was an indicative test only and it does not fall under UKAS accreditation. In addition, the test carried out was for use in a plasterboard wall system and not an external masonry wall, as such this document is not relevant in this instance.

Title 3: Cavity insulation installed at Goswell Road, Barbican, London – FIRETITE Best Practice Case Study published by Econ Building Products

Scope: A former dance studio underwent a refurbishment to convert the building to office space. The refurbishment of the cavity wall required a minimum of Class A2 product and FIRETITE was used to achieve this.

Inspectors Comments:

No evidence provided that the external cavity wall make up was the same as that for this development and as such this document is not relevant in this instance.

Title 4: FIRETITE cavity insulation installed at EUROSPAR, Newtown, Cobh, Co. Cork - FIRETITE Best Practice Case Study published by Econ Building Products

Scope: Upgrade works carried out to the existing EUROSPAR building including the upgrading of the cavity wall

Solution: FIRETITE was chosen to fill the external wall cavity due to its fire/air tightness and thermal properties

Inspectors Comments:

In this instance the FIRETITE product was used to fill an empty 100mm cavity. However, as the proposal is to infill this product in a cavity that is not empty and has polystyrene insulation in it this document is not relevant in this instance.

Title 5: FIRETITE Cavity Wall Insulation – Achieves 132 minute indicative fire resistance wall test published by Econ Polyurethanes

Scope: To test the performance and integrity of FIRETITE cavity wall insulation when subjected to continuous controlled fire test furnace over a 2 hour period

Test: Indicative non-loadbearing wall test to determine the resistance to fire of FIRETITE

Conclusion: FIRETITE successfully passed the fire resistance criteria according to the general requirements of BS EN 1364-1: 2015. The product is classified as being of limited combustibility achieving a Class A2-s1 d0 classification

Inspectors Comments:

The makeup of the wall tested in this instance doesn't match the existing wall on the Shelbourne Road site and as such this document is not relevant in this instance.

Title 6: Lime Street cavity wall installation Dublin South Docklands – FIRETITE Best Practice Case Study published by Econ Polyurethanes

Project Description: A new residential scheme featuring 216 apartments with private balconies and terraces situated in Dublin Docklands

Scope of Works: FIRETITE was installed along the main masonry cavity wall between the basement and ground floors

Solution Proposed: FIRETITE was used to fill the main masonry wall cavity which varied in thickness between the basement and ground floor of this newly constructed building

Inspectors Comments:

Reference to this document is not relevant in this instance as the cavity being filled is different to that in the proposed development i.e. masonry wall cavity as opposed to the cavity between a brick/block outer leaf and polystyrene against the inner leaf.

Title 7: The first 3d construction printed social housing scheme in Ireland with clay foam cavity insulation - FIRETITE Best Practice Case Study published by Econ Building Products

- Project Description:** The utilization of 3D construction printing technology to provide new 3 bedroom terrace units at Grange Close Dundalk
- Scope of Works:** The use of FIRETITE to fill the 150mm cavity between the solid concrete walls formed by the 3D construction printing technology
- Solution Proposed:** FIRETITE Clay Foam Cavity Wall Insulation which achieves a Class A2-s1 d0 fire rating was used in lieu of traditional cavity barriers in the external elevation of this newly constructed building

Inspectors Comments:

The makeup of the wall in this instance doesn't match the existing wall on the Shelbourne Road site and as such this document is not relevant in this instance.

Title 8: Clay Foam Insulation – The environmental solution for cavity walls published by Econ Building Products

Product Description: FIRETITE is a Class A2 fire rated mineral based insulation material ideal for new and refurbished cavity wall insulation.

Technical Points to Note:

Product has achieved European Technical Approval and KIWA Cert for use in double wall masonry construction
Wall details provided in this publication show the product injected between masonry inner and outer leafs

Inspectors Comments:

While the data sheet identifies that the FIRETITE product achieves a Class A2 fire classification it clearly shows it installed in double wall masonry construction (Figure 1) which is not the arrangement on site.

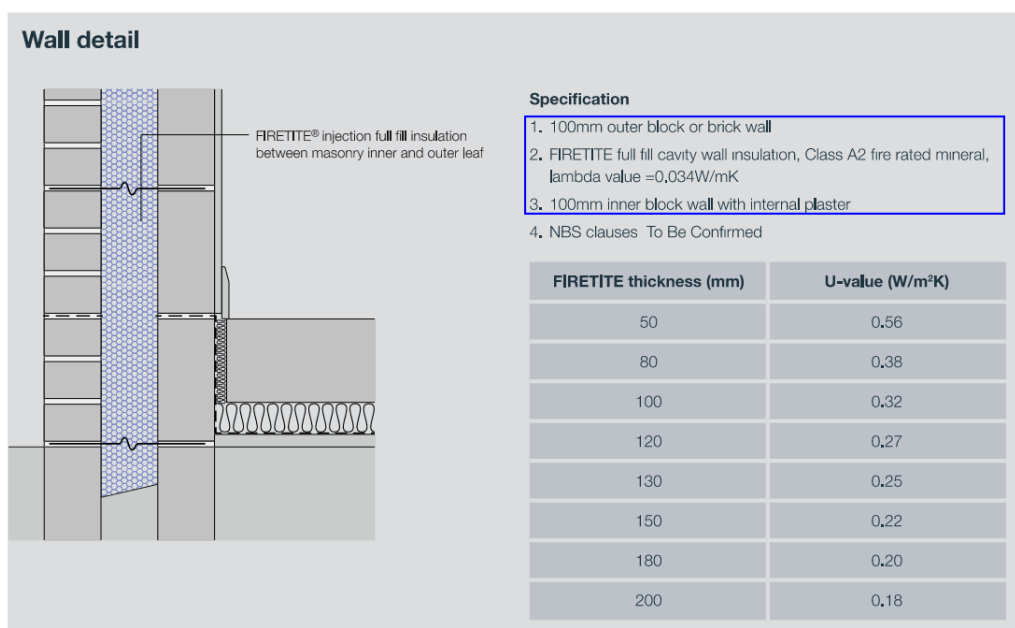


FIGURE 1 (shows outer and inner block walls with FIRETITE full fill cavity wall insulation)

ASSESSMENT

Having reviewed the documentation lodged by both parties as part of this appeal, I am of the opinion that the appellant has not demonstrated that the use of the FIRETITE cavity wall insulation product, is suitable for achieving compliance with Section B3 in this instance. The proposal being put forward by the appellant is to infill the existing cavity formed between the external leaf and the polystyrene insulation against the inner leaf with FIRETITE but has provided:

- No fire test report for use of this product in the actual arrangement on site
- No installation set out detailing the actual arrangement on site
- No technical literature supporting the use of the product in this arrangement on site

8.0 Recommendations

On the basis of my assessment, I recommend that An Coimisiún Pleanála uphold the decision made by the BCA to refuse the application.

9.0 Reasons and Considerations

Having regard to the RFSC application and the reports submitted by both the appellant and the BCA as part of the appeal process, I am of the opinion that the appellant has not demonstrated that the use of the FIRETITE cavity wall insulation product, in this instance, would comply with Regulation B3 of the Second Schedule of the Building Regulations.

10.0 Sign off

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.

Bryan Dunne

MSc, BSc, Dip (Eng), CEng, MIEI, Eur Ing

30th October 2025