



File No. DOIA 1617-0784

09 FEB 2017

Ms Belinda Robinson
fyi-request-5144-c67b045e@requests.fyi.org.nz

Dear Ms Robinson

Thank you for your email of 27 December 2016, requesting under the Official Information Act 1982 (the Act), the following information:

The MBIE Fire Programme Update: March 2016 states that for Project 3: Material Group Numbers - Timber Linings, the first meeting was held at BRANZ where a full scale fire test was conducted. Please provide the following information:

- 1. The cost of the fire test to MBIE*
- 2. The contract between MBIE and BRANZ for the fire test*
- 3. The fire test report*
- 4. The set of problem statements and list of questions developed in the first meeting.*
- 5. The minutes of the first and second meeting for the Working Group*

You may not be aware that the full scale fire test mentioned in your request was carried out as part of a University of Canterbury student project. The Ministry of Business, Innovation and Employment (the Ministry) was made aware of the test being carried out and deemed it would be beneficial for the working group to attend and see a full scale fire test in operation. Each part of your request has been responded to below.

- 1. The cost of the fire test to MBIE*
- 2. The contract between MBIE and BRANZ for the fire test*

I can advise that the Ministry incurred no cost in the running of the fire test, and there was no contract between the Ministry and BRANZ in relation to the fire test. As such, parts one and two of your request are refused under section 18(e) of the Act, as the information you seek does not exist.

- 3. The fire test report*

The fire test report is not held by the Ministry. However, the final paper for the student project can be found on the University of Canterbury website at <https://ir.canterbury.ac.nz/bitstream/handle/10092/12934/Peel%20ME.pdf?sequence=1>. As such, part three of your request is refused under section 18(d) of the Act, as the information is publically available.

- 4. The set of problem statements and list of questions developed in the first meeting.*
- 5. The minutes of the first and second meeting for the Working Group*

The set of problem statements and list of questions developed in the first meeting can be found in the attached document, *Meeting Minutes: Meeting 2*. The minutes of the second meeting can be found in this document as well. Minutes were not taken for the first meeting, therefore this part of your request is partially refused under section 18(e) of the act, as some of the information you seek does not exist.

You have the right under section 28(3) of the Act to ask the Ombudsman to investigate and review my decision. The relevant contact details are:

The Ombudsman
Office of the Ombudsman
PO Box 10 162
WELLINGTON 6143
0800 802 602
www.ombudsman.parliament.nz

Yours sincerely

A handwritten signature in black ink, appearing to read 'Melanie Smith', with a long, sweeping horizontal line extending to the right.

Melanie Smith
Acting Manager, Engineering Design and Science
Building System Performance
Building, Resources and Markets

Working Group Attendees:

Christine Duncan, Cosgroves (Chair)
Mandy Drummond, EBOSS
Valentina Machina, Jasmex
Michael Belsham, MBIE
Mike Cox, MBIE
Jeff Parker, WPMA
Peter Whiting, BRANZ
Greg Barnes, Holmes Fire
Michelle Johansson, Johansson Group

A number of questions were generated at Working Group Meeting 1, 23 November 2015. These questions were interrogated during the Meeting 2 workshop to determine whether the questions raised should be formed into a Problem Statement.

The Problem Statements are framed to determine:

1. whether NZ Building Code Clause C3.4 should be altered
2. what changes to the Acceptable Solutions C/ASx Part 4 Paragraph 4.17 are required

The following summarises the discussion and conclusions from the workshop.

Problem Statements generated from Meeting 1 (23.11.15):

Problem Statement 1:

The NZBC definitions do not capture all technical terms referenced in the C-Clauses

Example definitions relating to surface finishes:

Furniture, Crowd, Walls, Surfaces, Finishes, Linings, Material, Flexible Fabrics, Non-combustible

Project 1.1: Establish definitions required to provide clarity to surface finish criteria

Project 1.2: Review additional NZBC definitions – Ref: Acceptable Solution Review Project

Goal 1: Achieve consistency and clarity of terminology across the suite of documents

Problem Statement 2:

The specifics referenced in the Performance Clause C3.4 preclude the ability to undertake performance-based design.

Project 2.1: Desk top summary of mathematical models / analysis methods currently available to answer the question: *“If the performance clause reverted back to a truly performance basis, can the engineers accurately predict the relative performance of materials.”*

Goal 2: Provide guidance to MBIE as to whether the Clause at Code Level should change and if the code changes what should performance be at code level.

Questions Generated from Meeting 1 (23.11.15):

The following summarises the workshop conclusion for each question (Blue Text = Problem Statement; Red Text = Conclusion)

Q #	Question	Points
1	Are surface finishes dealt with by other Standards?	<ul style="list-style-type: none"> Does the Sprinkler Standard NZS4541 cover the limitations of combustibles, including review in the Compliance Schedule? Are there interconnected standards (e.g. HASNO, Voc, toxicity, hospital / hygiene) that cover limitations to surface finishes?

Problem Statement: Not Required

Conclusion: No; surface finishes are not captured by other Standards. Other Standards have different objectives (e.g. hygiene, acoustic). The sprinkler standard only covers height, type and volume of storage. Ministry of Education guidelines for schools have minimum standards, however they have additional considerations such as acoustics and durability.

Q #	Question	Points
2	Can equivalency to other Standards be easily achieved or demonstrated?	<ul style="list-style-type: none"> • Can a comparison table or chart be easily established to compare test results between NZ and Australian Standards? • Can a simple matrix be drawn up to compare results from international Standards to NZ Group Numbers?

Problem Statement 3:

The testing methods prescribed by the NZ Building Code to test surface finishes are not extended to include an equivalency to International Standards.

Project 3.1: Determine whether there is a matrix approach for taking classifications from other Standards and demonstrating equivalency to NZ Standards.

Goal 3: Provide a regime for demonstrating equivalency to NZ cited standards.

Q #	Question	Points
3	How do we define <i>Crowd</i> ?	<ul style="list-style-type: none"> • Is the CA Risk Group, requiring a Group 2 surface finish, too broad? • How does CA Risk Group align with Building Code Purpose Group CS and CL? <p>Sectors affected: Hospitality, Civic, Public, Common Lobbies, School, Tertiary, "small" tenancies (e.g. corner dairy)</p>

Problem Statement 4:

The term *Crowd* is not defined.

Project 4.1: Undertake a desktop study to review the defined term crowd across the suite of documents and regulations. Determine whether there is alignment with the use of pre-existing terminology i.e. current C/AS4 to develop a more course break-down of CA Classification based on occupancy profile and risk (e.g. Crowd Activity and Crowd Service) or proposed removing the term.

Goal 4: Provide a recommendation as to how the term Crowd is defined with reference to the occupancy risk group profile or recommend removing the term

Q #	Question	Points
4	Should the Acceptable Solution look different?	<ul style="list-style-type: none"> • Would the problem go away if the concession to Group 3 for sprinkler protection is applied? • Does the problem just relate to Crowd CA Risk Group buildings? • The current maximum area of non-compliant surface finishes is limited to 5m². Should this change to for example a ratio of the area to volume – what would the ratio be...5:1? • Are all the current C-Clause exempt surfaces accurate and all inclusive? • If there are relaxations around the Acceptable Solution does the Group Number Table 4.1 look like the Building Code of Australia?

Problem Statement 5:

Exemptions within the Acceptable Solution Internal Spread of Flame are not clear and exhaustive.

Project 5.1: Review existing exemptions for surface finishes. Test whether they remain appropriate for all risk group classifications. Review and incorporate additional exemptions that may be included for specific risk group profiles. Consider whether exemptions should be included at Code Level.

Project 5.2: Aligns with Project 9.1 and 9.2

Goal 5: Reformat the Acceptable Solution C/ASx and provide guidance on whether exemptions are appropriate and /or should be included at Code Level

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Q #	Question	Points
5	Could a Risk Assessment approach be adopted for determining the appropriateness of a Surface Finish?	<ul style="list-style-type: none"> • What performance standard / measurable would be applied to determine an acceptable level of risk? • Where would appropriate data and statistics be sourced from? • How does this align with Question 4?

Problem Statement 6:

Risk Assessments and quantifiable exceptions are not a possible method to determine the appropriateness of the use of a Surface Finish.

Project 6.1: Review outcomes of Project 2.1

Project 6.2: Summarise building specific design parameters that would be necessary to base an alternative assessment – e.g Occupancy Risk Profile (population, ability, distribution, familiarity); Surface Finishes (location, distribution, area to volume ratio); Design Fire (more aggressive than VM).

Goal 6: (Aligns with Goal 4.) Provide guidance to MBIE on a verification method to determining the appropriateness of a Surface Finish.

Q #	Question	Points
6	What is the definition of a surface finish that needs a 'test'?	Ideas for exempt include: <ul style="list-style-type: none"> • Non continuous • Small firecells (e.g. 35m²) • Tiles • Fabric and Furniture (Reference also Questions 4 & 5)

Problem Statement: Not Required

Conclusion: Covered by Problem Statements 4 and 9.

Q #	Question	Points
7	What is a Compliance Schedule item?	<p>Currently surface finishes are not captured in the Building Compliance Schedule. Exempt work can be undertaken and the Building Act has the mechanism for a discretionary exemption to Building Consent. There is no legal trigger to check the change to a surface finish (e.g. wallpaper does not comply for non sprinklered CA risk group but can be installed by a tenant)</p> <ul style="list-style-type: none"> • Should Surface Finishes be registered on the Compliance Schedule? • Is this item concluded through a clear definition – What is a building element e.g. can the building function to code compliance level without the S.F.

Problem Statement 7:

Controlled surface finishes are not currently captured in the Building Compliance Schedule.

Project 7.1: Desk top review of building & occupancy risk to summarise for which areas and risk profiles surface finishes should be captured in the Compliance Schedule (e.g. Intumescent coatings, Exitways, Group 1 areas, Sleeping Risk areas)

Goal 7: Provide recommendations for amendments to the Compliance Schedule to include for controlled surface finishes and a method of assessment

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Q #	Question	Points
8	What information does the industry need?	<p>Suppliers, Architects etc. generally have a lack of understanding of how to interpret Group Number requirements, do not appreciate the differences in the testing methods (benchmarking), and do not understand why surface finishes need to be limited.</p> <ul style="list-style-type: none"> • Has this lack of understanding caused the concern around the changes to the code? • Does the industry understand the difference between fire resistance and surface spread of flame? • What education is required in order for industry to understand surface spread of flame? • Is a seminar series required? • Do MBIE need to provide specific messages?

Problem Statement: Not Required

Conclusion: MBIE by review of NZBC Part C via the Fire Review Programme will provide more clarity and consistency in the information and application of the Code and C/ASx. Definitions will be of value. MBIE messaging to interest groups will be important during and at the conclusion of the Programme.

Q #	Question	Points
9	Could design accommodate more flexibility in the case for latitude in use of Surface Finishes?	<p>A message from Architects and Designers</p> <ul style="list-style-type: none"> • Is this a Surface Finish issue? • Can it be dealt with through Fire Engineering design and an industry wide understanding to appoint a Fire Engineer at an early stage of the project (e.g. design an anchor stair & a separate lobby)

Problem Statement 8:

The need to provide flame spread limitations to Surface Finishes is not recognised by Architects / Designers.

Project/Goal 8.1: Education to Architects / Designers / Project managers on the need to consider fire properties of surface finishes early in the design stage of the project

Q #	Question	Points
10	What standard/everyday products are precluded and how can these be incorporated without cost?	Standard products include: <ul style="list-style-type: none"> • Coated Hardboard • Coated Fibre Cement • Wall Vinyl Floor Grade • Timber • Powder Coated Timber • Aluminium Composite • Polycarbonate Panels • MDF • Oriented Strand Board • Bamboo • Wallpaper • Wall Vinyls • Specialist Paints – Yints, Oils, Polys • Tiles • Lvl • CLT • Acoustic Panels

Problem Statement: Not Required

Conclusion: Let products be self-regulating by getting tested for their use

Q #	Question	Points
11	Are the criteria for internal surface finishes (Group Number) appropriate?	<ul style="list-style-type: none"> • Is there consensus that the right testing methods and have been adopted in the NZBC? • Are there other criteria or testing methods that may be more appropriate?

Problem Statement: Not Required

Conclusion: Testing methods are appropriate and align with international Standards

Q #	Question	Points
12	Is the Surface Finishes Table 4.1 clear for interpretation?	Example C/AS2 Table 4.1 exclusion of surface finishes for household units then reference to Group 3 for “all other areas” Reference: Acceptable Solution Review Working Group

Problem Statement 9:

The Surface Finishes summary Table 4.1 in C/ASx is ambiguous and open to interpretation.

Project 9.1: Desk top summary of Codes & Standards (e.g. Building Code of Australia) to compare and contrast exemplar models of presenting Surface Finish criteria. Propose a sample option/s for recommended upgrade of Table 4.1.

Project 9.2: Provide a summary of definitions which need to be read in conjunction with the table (e.g. *exitway, common spaces*)

Goal 9: Present a revised Table 4.1 for inclusion in the Acceptable Solution C/ASx

Additional Notes:

Consider Risk Matrix as part of the Acceptable Solutions that is similar to the E2/AS1 approach

Living Building Challenge & Sustainability – technologies and treatments to render timber Fire Resistant without the use of external products e.g. CAP800

The CIC guidelines for Architecture could be a mechanism for prompting Architects / Designers to consider surface finishes.

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