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# Consultation Submission Form – Proposal to Publish New Edition of Acceptable Solution C/AS2

Amalgamating Current C/AS2 to C/AS7

For New Zealand Building Code Clauses C1–C6 Protection from Fire

**September 2018**

**SUBMISSION FORM**

## SUBMISSION FORM

This form sets out the consultation questions corresponding to the proposed *Consultation – proposal to publish new edition of Acceptable Solution C/AS2* (the consultation document).

### Instructions for use

Please refer to the consultation document for full details on making a submission.

The questions in this form are indicative only and are not intended to limit your response to the issues in the consultation document. You do not have to use this form to make your submission.

Please return your submission by one of the following methods:

- emailing your feedback [buildingfeedback@mbie.govt.nz](mailto:buildingfeedback@mbie.govt.nz), with subject line “Consultation – Proposal to publish new edition of Acceptable Solution C/AS2”
- posting or couriering your feedback to:  
Consultation – – Proposal to publish new edition of Acceptable Solution C/AS2  
Building Performance and Engineering  
Ministry of Business, Innovation and Employment  
15 Stout Street  
PO Box 1473  
Wellington 6140
- Please include your contact details.

If you are using this form to make your submission, please provide your contact details below:

<b>Name</b> (include name of organisation if you are submitting on behalf of an organisation)	<b>Contact details</b>
<b>Michael James</b> <b>Society of Fire Protection Engineers</b> <b>NZ Chapter</b>  <b>Ed Claridge</b> <b>Institution of Fire Engineers NZ Branch</b>	<a href="mailto:mike.j@originfire.co.nz">mike.j@originfire.co.nz</a> +64 21 708460  <a href="mailto:Secretary@ife.org.nz">Secretary@ife.org.nz</a> +64 21 722 714
<b>Additional information about your organisation (optional)</b>	

## Proposal 1: Publication of a new edition of Acceptable Solution C/AS2

**Question 1.1** Do you think the new edition of C/AS2 will be easier to use than the current Acceptable Solutions C/AS2 to C/AS7?

**No.** We do not anticipate that there will be a negative or positive benefit of the change to one document compared with keeping it a seven separate compliance documents. Our membership and industry will be able to manage either approach. However, some benefits should be realized by combing documents but need to be considered against the simplicity of the original intent of having individual document for individual risk groups.

**Question 1.2** Do you think the new edition of C/AS2 will lead to fewer differences of interpretation than with the current Acceptable Solutions C/AS2 to C/AS7?

**No.** *the same problems will continue but it is likely that they may increase as the issues need to be considered across all building types rather than the specific risk groups in which the previous C/AS1-7 dealt with.*

The process for keeping the new edition reviewed and up to date on a regular basis needs to be transparent and appropriate in the context. The new document is already out of date and retains many historical references that industry have struggled with for decades.

**Question 1.3** Do you think the new edition of C/AS2 will help speed up the building consenting process?

**No.**

**Question 1.4** Any other comments on Proposal 1?

There are benefits and negatives of having individual documents rather than a larger combined document. The benefit has been a simplified process for buildings with only one or two risk groups present and the straightforward nature of only having to consider the relevant requirements without needing to positively confirm that some requirements are not relevant to the situation being considered.

The benefit of having a combined document is having all information in one place when needing to consider multiple risks groups in one building.

## Proposal 2: Technical changes within the new edition of Acceptable Solution C/AS2

Question 2.1 Do you agree with the proposed change to Paragraph 5.2.2 a)?

“Provide a sprinkler system complying with NZS 4541 with a Class A water supply. This dispensation does not apply to parts of the *external wall* within 1.0 m of the relevant boundary, or where the external wall is of a *firecell* that is used for storage with a storage height greater than 3.0 m.”

Agree.

Question 2.2 Do you agree with the proposed new Paragraph 1.1.7?

“Justification of storage height

1.1.7 In a particular situation the floor area or the height to the apex of the *building* may meet the definition of *risk group WS*, while the *intended use* of the *building* or *firecell* is otherwise compatible with the definition of *risk group WB*. In order for the *building* or *firecell* to be classified as *risk group WB*, the basis of any proposal for storage of goods and other materials with a storage height of less than 3.0 m shall be substantiated to the *building consent authority*.”

Disagree.

***This is step backwards and will likely result in the previous design problems re-occurring with base building designs being based on low storage limits and buildings undergoing changes in storage and risk over time. The MBIE FAQ dealt with this issue by accepting signage and other provisions to be provided to manage the storage height limitation. We see this as a better means to resolve the current challenges.***

***If implemented guidance needs to be given on what a BCA might consider as substantiation. There are lots of so called warehouses built around the country for a fire hazard category of 1 or 2 and mezzanine levels. From a potential owner or tenant they are a compliance nightmare. It is built like a warehouse but the external precast walls are not thick enough for storage occupancies and the mezzanine floors need to be fire separated off from the storage areas.***

**Question 2.3** Do you agree with the proposal that specific replication of details from D1/AS1 is removed from the new edition of Acceptable Solution C2/AS2?

Refer to edited Paragraphs 3.3.1, 3.3.2, and Table 3.1 a)

**No. Our consensus view is that people do not use D1/AS1 very well and it is often ignored. 3.3.1 refers to D1/AS1. 3.3.2 on escape route widths does not even allude to the fact that there may be increased width requirements in D1/AS1. We would prefer if additional guidance and a note stating for example that “the following widths are for compliance with this Acceptable Solution. Acceptable Solution D1/AS1 may have increased escape route width requirements in some circumstances”.**

**Reference should still be made to D1/AS1, and commentary provided that D1/AS1 has to be taken into account.**

**Question 2.4** Do you have any feedback on the proposed new Table 2.1?

**Bringing the table back is generally supported.**

**It is unclear if the note in the current C/AS3 and requirement to consider total building population not just the firecell population remains applicable to Table 2.1a.**

**Table 2.1a education does not have type 15 till greater than 25m, previously it was 10m.**

**Question 2.5** Do you agree with the proposal to align the demarcation heights within the new edition of C/AS2 to those within C/AS1, and the NZ Building Code clause C3.2?

Refer to new Table 5.5.

**Agree.**

**However, Risk Group WS did not have any restrictions below 25m and greater than 1m from the boundary. Is this a mistake or an intentional change? The change may result in increased costs.**

**We note that the cladding guidance currently being worked on should be incorporated into this acceptable solution. In its current state the acceptable solution appears to be saying that an ISO5660 test remains the primary means of determining cladding compliance. This is not the case.**

**Question 2.6** Removal of requirement for 400 mm high openings/part height partitions. This requirement was originally contained within C/AS1 Amendment 9 October 2011 and

does not reflect current construction practices in Risk Group SI (and is not compatible with the design requirements for sprinkler systems), in Risk Group SM (particularly where not sprinkler protected) there will be a higher density of smoke detection coverage for partitioned spaces and better containment of smoke resulting in reduced exposure to occupants in the remainder of the firecell.

It is proposed to remove the requirement for the 400 mm high openings to the top of partitions.

**Agree. However, consideration needs to be given to the definition of to what extent subdividing the space triggers the need for full High smoke separations. i.e. is a hospital curtain or a 1.5m high partition classed as subdividing the space?**

**Question 2.7** Smoke control in air handling systems is called up in Table 2.1. An additional requirement was included in paragraph 4.18.1 whereby “When any smoke detection system is activated, it shall automatically turn off all air-conditioning and mechanical ventilation plant which is not required or designed for fire safety”, with a comment “does not apply to non-distributed ventilation and air-conditioning such as typical domestic/commercial heat pump units.”

However, the clause requires a Type 9 fire safety precaution, without referring to AS 1668.1. This could be interpreted to require shut down of secondary systems such as toilet extract, kitchen extract systems, and laboratory fume hood extracts, which is not intended or desirable.

It is proposed to delete the requirement for “When any smoke detection system is activated, it shall automatically turn off all air-conditioning and mechanical ventilation plant which is not required or designed for fire safety”, and for Type 9 to be as required in Table 2.1a, b and c.

**Agree. However, 4.18.1 has not been changed to reflect the statements above.**

**Reference to AS 1668 should be to the most recent version not the 1998 version.**

**Question 2.8** Figure 3.18 permitted a maximum 1100 high solid balustrade. This places a restriction on providing a continuous barrier of a greater height that may be desirable for improved safety from falling. The requirement to provide 50% open area above the solid balustrade is retained to allow for smoke venting out from the balcony, while a higher solid balustrade can assist in reducing smoke movement back on to higher balconies.

It is proposed to align with F4/AS1 to provide a minimum solid balustrade of 1100 mm.

**Agree**

## Proposal 3: General changes within the new edition of Acceptable Solution C/AS2

**Question 3.1** Do you have any feedback on the proposed new risk group icons, that are provided to assist in using the document?

*Looks like a good idea.*

Further discussion on the ICON use and intent is desirable. For example, not having an icon infers that the paragraph is relevant to every risk group.

**Question 3.2** Do you have any feedback on any general editorial matters to assist in reducing the likelihood of different interpretations being made as to the intent of a paragraph?

Why are the figures now informative only? Previously they were not. This has the potential to cause significant problems given that industry has relied on some of the details contained within the figures to provide compliant design solutions and design certainty.

Going through and looking at the specific clauses and tables that comment has been requested on, it would appear that there are editorial errors.

We recommend that a thorough review be carried out to ensure that there are not any additional unintended changes. Possibly some test case buildings need to be examined to see if there are any unintended consequences or loopholes in the document.

One example is Scope clause 1.1.2d, *The wording of this clause has been changed from C/AS4 and now reads that tiered seating with a capacity less than 2000 people is out of scope but greater than 2000 people is within scope.*

## Feedback and impact questions

**Question 4.1 Do you anticipate any impact of the changes on your organisation?**

**The changes will most likely have a neutral impact on consulting fire engineers in the long term.**

**Going forward when the Acceptable Solution is updated it is likely to be more consistent across the Risk Groups which will be beneficial for consulting engineers.**

**Question 4.2 Do you anticipate any impact due to the proposed transition period of 3 months, considering the proposed Effective Date?**

***The types of buildings that may be affected by the change to require fire rating of walls within 1m of the boundary when a Class A water supply is provided generally have a design period of 12 months or longer. A 3 month transition period would be too short. There would need to be a 12 month transition period for this change to minimize the design impact on these buildings.***

**We also note that the consultation document infers that when published the out of date acceptable solution can continue to be used as an 'alternative solution'. It would be preferable to delete this statement and simply refer to the use of alternative solutions' as a means of compliance with the Code in their own right.**

**Question 4.3 What benefits can you see with regards to the changes?**

***A single Acceptable Solution should be easier for MBIE to manage and update as necessary.***

**Question 4.4 How do you think the changes will impact on other stakeholders / users?**

***From an amalgamation perspective there should be minimal impact. However, the technical and editorial changes may impact some parties in the industry and create a level of uncertainty for some period of time.***

**Question 4.5 What do you think needs be put in place to support the changes e.g. training etc?**

***Ongoing and continuous training for existing and new people entering the industry, inclusive of the various parties i.e. by MBIE in conjunction with industry users.***

**Question 4.6 Are there any other matters MBIE should have considered?**

**References to standards and generic details such as firestopping details are out of date.**

**Refer also to comments provided under 5.3.**

## Feedback on this consultation process

Question 5.1 What worked or didn't work for you; what did you like or not like ?

*The process is ok.*

The feedback template had missing question boxes and may have driven a number of respondents to overlook all of the questions.

Question 5.2 Do you anticipate any impact due to the proposed transition period of 3 months, considering the proposed Effective Date?

*The types of buildings that may be affected by the change to require fire rating of walls within 1m of the boundary when a Class A water supply is provided generally have a design period of 12 months or longer. A 3 month transition period would be too short. There would need to be a 12 month transition period for this change to minimize the design impact on these buildings.*

Question 5.3 Any other comments?

*Please note that these comments do not reflect a detailed and thorough review of the document. A number of our members have undertaken a more in-depth review and will be providing comments separately.*

*It would appear that there remain a number of editorial and technical issues within the documents and many historic references that are no longer applicable. We suggest that the document undergo a clause by clause check to confirm that the individual existing compliance documents have been accurately transferred into this single document.*

*We recommended that a complete technical review of the proposed document is undertaken in the near future following its publication to modernize it to reflect current and future construction practices and technical advancements in knowledge and understanding of fire.*