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Kia ora koutou

## **RE BUILDING CODE CONSULTATION 2022**

Thank you for the opportunity to submit on the Building Code update 2022. This letter is to support the submissions of the Structural Engineering Society of New Zealand (SESOC) and the Society of Fire Protection Engineers New Zealand (SFPE). SESOC has submitted on the structural stability of hollow-core floors, while SFPE has submitted on the protection from fire sections of the proposed update.

In this letter we highlight the key points of each submission and make brief comment about a possible omission to the plumbing and drainage section of the consultation.

### **Structural stability of hollow-core floors**

Engineering New Zealand strongly supports MBIE's proposals to change the compliance pathway for hollow-core floors to make new buildings safer in the event of earthquakes. We support the removal of a 'deemed to comply' solution for the support of hollow-core floors from Verification Method B1/VM1.

Hollow-core floor systems are vulnerable to earthquake damage. In 2021, Engineering New Zealand, SESOC and the New Zealand Society for Earthquake Engineering (NZSEE) issued [Advice on Hollow-Core Floors](#). This advice stated that the use of hollow-core floors in "new buildings is not considered to be good structural engineering practice and is not recommended". MBIE's proposal endorses our recommendation, outlining that any design that seeks to implement a hollow-core floor system will need to follow robust processes to demonstrate compliance with the Building Code.

### **Protection from fire**

Engineering New Zealand support SFPE's submission to MBIE that further work is needed on the protection from fire proposals.

Regarding increases in Fire Resistant Ratings (FRR) in building materials, we cannot understand the justification for increasing FRR to 60 minutes for many residential buildings (stand-alone houses close to a boundary, terrace houses, etc). It is our view that MBIE has not supplied enough evidence

on risks to justify the costs associated with the changes. Our advice is that the cost implications quoted by MBIE are under-estimates.

Regarding references to the current fire hydrant systems standard, we ask MBIE not to cite NZS4510:2022 in any current or future changes to C/AS2. NZS4510:2022 appears to have been rushed to publication without sufficient time to elicit and collate relevant feedback from industry for the standards committee to consider more fully. As noted in their submission, SFPE are intending to gather membership feedback on possible NZS4510:2022 changes and work with MBIE on this later in the year.

Finally, we note SFPE's concern that there are significant issues with MBIE's proposals for external fire separation requirements. We ask that MBIE review section 5.3.3 in its entirety, noting that SFPE have volunteered their expertise to support this process.

Before MBIE finalises any changes to the fire protection compliance documents, we ask that you address the detailed feedback provided by SFPE. Engineering New Zealand is available to support this conversation.

### **Plumbing and drainage**

Engineering New Zealand does not have specific feedback on the proposed plumbing and drainage changes. Instead, we note that change is also needed to E1 Section 9 (soak pits). It is our view that this section has errors that require amendment, including flawed design parameters and missing components (for example missing drawdown times and requirements around pre-treatment devices). We would value the opportunity to discuss these issues with MBIE.

### **Conclusion**

Engineering New Zealand are very supportive of MBIE's changes to Verification Method B1/VM1 regarding the structural stability of hollow-core floors, but we have significant concerns regarding the proposed fire protection changes. We also consider the proposed plumbing and drainage changes miss an opportunity to review section 9 of E1.

Engineering New Zealand is available at your convenience to discuss any of the contents of this letter or to support work with our technical groups. Finally, as per SESOC's submission, Engineering New Zealand is also available to support MBIE to communicate the results of changes to Verification Method B1/VM1 with the profession.

Ngā mihi



**Dr Richard Templer**  
Chief Executive