

Hamilton City Council – Staff Feedback

Building Code Update – Insulation Requirements in Housing and Other Buildings

Ministry of Business, Innovation and Employment

6 March 2025



Improving the Wellbeing of Hamiltonians

Hamilton City Council is focused on improving the wellbeing of Hamiltonians through delivering to our five priorities of shaping:

- A city that's easy to live in
- A city where our people thrive
- A central city where our people love to be
- A fun city with lots to do
- A green city

The topic of this staff feedback is primarily aligned with the priority of A green city.

Council Approval and Reference

This staff feedback was approved by Hamilton City Council's Chief Executive on 6 March 2025.

Feedback # 789

It should be noted that the following feedback is from staff at Hamilton City Council and does not therefore necessarily represent the views of the Council itself.

Introduction

- Hamilton City Council staff welcome the opportunity to provide feedback to the Ministry of Business, Innovation and Employment on its December 2024 Consultation Document Building Code Update – Insulation Requirements in Housing and Other Buildings – Amending Acceptable Solutions H1/AS1 and H1/AS2 and Verification Methods H1/VM1 and H1/VM2.
- 2. The feedback from Hamilton City Council staff is outlined in the Ministry of Business, Innovation and Employment's official submission form copy attached.

Further Information and Opportunity to Discuss our Feedback

- 3. Should the Ministry of Business, Innovation and Employment require clarification of the feedback from Hamilton City Council staff, or additional information, please contact **Alister Arcus** (Principal Building Advisor Regulatory Services) on **07 838 6681** or email <u>Alister.Arcus@hcc.govt.nz</u> in the first instance.
- **4.** Hamilton City Council representatives would welcome the opportunity to discuss the content of this feedback in more detail with the Ministry of Business, Innovation and Employment.

Yours faithfully

Lance Vervoort
CHIEF EXECUTIVE

FURTHER INFORMATION

Hamilton City Council Garden Place, Private Bag 3010, Hamilton

- /hamiltoncitycouncil
- @hamiltoncitycouncil
- **9** 07 838 6699

hamilton.govt.nz





Insulation requirements in housing and other buildings

Amending Acceptable Solutions H1/AS1 and H1/AS2 and Verification Methods H1/VM1 and H1/VM2 5 December 2024

Contents

Contents	2
Seeking feedback	3
Your information	5
Insulation in housing and small buildings	7
Insulation in large buildings	13
Thank you	18

Seeking feedback

How to submit this form

This form is used to give feedback on the proposed changes to insulation and energy efficiency requirements.

When completing this submission form, it helps if you add comments and reasons explaining your choices. Your feedback is valuable as it informs decisions about insulation and energy efficiency proposals for the Building Code

MBIE needs your feedback on the H1 insulation settings review by 5:00 pm on Friday, 28 February 2025.

- Email: building@mbie.govt.nz, with subject line Building Code consultation H1 insulation settings
- Post:

Building Code consultation H1 insulation settings Building System Performance Ministry of Business, Innovation and Employment PO Box 1473 Wellington 6140

Next steps

Your feedback on this document will be collated and analysed along with all the other responses.

Following consideration of the submissions, MBIE will make decisions on the proposals to amend the acceptable solutions and verification methods for compliance with the Building Code.

Use of information

Release of information on MBIE website

MBIE may publish copies or excerpts of submissions. MBIE will consider you have consented to this when you submitted your feedback unless you clearly specify otherwise in your submission.

If your submission contains any information that is confidential or you otherwise wish us not to publish, please:

- state this at the start of your submission, with any confidential information clearly marked within the feedback text
- provide a separate version, with your confidential information removed, for publication on the MBIE website.

Release of information under the Official Information Act

Once submitted, your feedback becomes official information and can be requested under the Official Information Act 1982 (OIA).

An OIA request asks for information to be made available unless there are sufficient grounds for withholding it. If some or all of your submission falls within the scope of any request for information received by MBIE, they cannot guarantee that your feedback will not be made public. Any decision to withhold information requested under the OIA is reviewable by the Ombudsman.

Get help from the ombudsman - Ombudsman New Zealand

If you do not want your submission feedback released as part of an OIA request, please say so in your submission feedback together with the reasons why (for example, privacy or commercial sensitivity).

MBIE will take your reasons into account when responding to OIA requests.

Seeking feedback

Personal information

<u>The Privacy Act 2020</u> contains principles on how various agencies, including MBIE, collect, use and disclose information provided by individuals.

Any personal information you supply to MBIE in the course of providing your submission feedback is only:

- used for the purpose of assisting in the development of advice in relation to this consultation, or
- for contacting you about your submission.

MBIE may also use your personal information for other reasons permitted under the Privacy Act 2020 (for example, with your consent, for a directly related purpose, or where the law permits or requires it).

Please state clearly in your submission feedback if you do not want your name, or other personal information, included in any summary of submissions that MBIE may publish.

MBIE will only keep your personal information for as long as it is needed for the purposes for which the information may lawfully be used.

Where any information provided (which may include personal information) constitutes public records, it will be kept to the extent required by the Public Records Act 2005.

MBIE may also be required to disclose information under the Official Information Act 1982, to a Parliamentary Select Committee or Parliament in response to a Parliamentary Question.

You have rights of access to, and correction of, your personal information. For more information, go to the MBIE website www.mbie.govt.nz.

Your information

MBIE would appreciate it if you would provide some information about yourself. This helps MBIE understand the impact their proposals may have on different occupational groups. Any information you provide will be stored securely.

A.	About you		
Nam	e:	Alister Arcus	
Emai	l address:	alister.arcus@hcc.govt.nz	
В.	Can MBIE co	ntact you if they have que	estions about your submission?
✓ Yes			\square No
C.	Are you mak	ing this submission on be	half of a business or organisation?
✓ Yes			□ No
If yes,	please add the r	name of your company or orga	nisation.
Ham	ilton City Counci	I	
D.	Select your re	ole or the best way to de	scribe your organisation:
□ Aı	rchitect		☐ Designer (please specify below)
☑ B0	CA/Building Cons	sent Officer	☐ Engineer (please specify below)
□ В	uilder or tradesp	erson (please specify below)	☐ Residential building owner
		nanufacturer or supplier pe of product below)	☐ Other (please specify below)
	uilding resident, fy below)	occupant or user (please	☐ Prefer not to say
□ Co	ommercial buildi	ng owner	
[Plea	se specify here]		

Your information

Ε.	Personal information
The Pr	ivacy Act 2020 applies to feedback provided in all submissions.
	Please tick the box if you do <u>not</u> want your name or other personal information included in any information that MBIE may publish.
F.	Publishing information
	MBIE may upload submissions, parts of submissions, or a summary of submissions received to its website. If you do <u>not</u> want part or all of your submission uploaded, please tick the box and say what you do not want uploaded and why below.
•	have ticked this box, please tell us what part(s) of your submission you do not want uploaded on MBIE's see and why.
[Plea	se insert comments here]
G.	Official information
The Of	fficial Information Act 1982 applies to all submissions received by MBIE.
	If you would like your submission (or parts of your submission) kept confidential please tick the box and <u>state</u> your reasons and ground(s) under sections 6, 7 and/or 9 of the Official Information Act that you believe apply, for consideration by MBIE.
-	have ticked this box, please tell us what parts of your submission you would like to be kept confidential, easons for this, and any grounds under the Official Information Act that you believe apply.
[Plea	se insert comments here]

This section covers housing and small buildings. The proposals relate to ways to amend the acceptable solutions and verification methods for energy efficiency to:

- Optimise insulation to better balance upfront building costs and longer-term benefits
- Improve the consistency and certainty of compliance and consenting

Optimising insulation to better balance upfront building costs and longer-term benefits

Questions for the consultation

Topic	Questions	Response
1	The schedule method may lead to higher upfront costs and less cost-effective construction than the more flexible calculation and modelling methods	
1-1	Do you support amending Acceptable Solution H1/AS1 as proposed to remove the schedule method?	✓ Yes, I support it ☐ Yes, with changes ☐ No, I don't support it ☐ Not sure/no preference
1-2	We are finding that virtually no one uses the schedule method when lodging building consents. The vast majority are made using the calculation method.	

2	The calculation method contains restrictions to the flexibility of roof, wall and floor R-values that can lead to unnecessarily costly and complex construction in some buildings		
2-1	Do you support amending Acceptable Solution H1/AS1 to adjust the minimum possible R values in the calculation method as proposed?	☐ Yes, I support it☑ Yes, with changes☐ No, I don't support it☐ Not sure/no preference	
2-2	We support the lowering of the roof R values as proposed with the following changes to:		
	 Walls: Lift this to a minimum R1.4 to reflect 50% of blanket insulation for 90mm framing and; Floors: Status quo – not reasonable to have no minimum R values. The reason for this is to offset the lower roof areas to reflect design/cost difficulties without compromising overall insulation. 		

Topic	Questions	Response
3	Where underfloor heating is only used in bathrooms, the minimum R-values for heated floors may cause unreasonable upfront costs	
3-1	Do you support amending Acceptable Solution H1/AS1 and Verification Method H1/VM1 as proposed to reduce upfront costs and improve the cost-effectiveness of insulation by exempting building elements with embedded heating from higher minimum R-values where embedded heating systems are solely used in bathrooms?	✓ Yes, I support it ☐ Yes, with changes ☐ No, I don't support it ☐ Not sure/no preference
3-2	As per topic 2 above, provided slab insulation is maintained, we would accept the premise of reducing embedded floor to the rest of the floor slab for small areas such as bathrooms.	

SQ1. What impacts from the proposals for topics 1 to 3 do you expect? These may be economic/financial, environmental, health and wellbeing, or other areas.

Certain aspects of this proposal may need further consideration, as they could potentially impact long-term health improvements and energy cost savings for buildings.

We believe that there are always improvements and modifications that should be made to any codes, and these need to retain a focus on health and energy improvements while also being considerate of economic cost. Any changes should be based on scientific research and overseas experience where appropriate.

SQ2. Is there any support that you or your business would need to implement the proposed changes for topics 1 to 3 if introduced?

Education to assist in understanding the changes.	

SQ3. If there are other issues MBIE should consider to better balance upfront building costs and longer-term benefits of insulation in housing and small buildings, please tell us.

More consideration of the following:

- Mandating building design to reduce heating and improve energy efficiency e.g. glazing sizing, and window shading.
- Internal moisture design to reduce health issues from uncontrolled internal moisture see below.
- Mandating heat recovery heating/cooling/moisture control.

Consistency and certainty of compliance and consenting

Questions for the consultation

Topic	Questions	Response
4	The modelling method includes requirements that are unclear or outdated	
4-1	Do you support amending Verification Method H1/VM1 as proposed to	✓ Yes, I support it
	clarify and update requirements for the modelling method?	☐ Yes, with changes
		☐ No, I don't support it
		☐ Not sure/no preference
4-2	Using the most up-to-date information and data is vital to provide the most accurate designs and outcomes for buildings.	
	Agree that the ongoing data and information improvements should be part of any future changes to the code.	
5	Thermal bridging from framing in walls is not adequately considered	
5-1	Do you support amending Acceptable Solution H1/AS1 and Verification	☐ Yes, I support it
	Method H1/VM1 as proposed to better consider thermal bridging in framed walls?	✓ Yes, with changes
		☐ No, I don't support it
		☐ Not sure/no preference
5-2	Partially agree with the proposal: The 38% for framing seems high. We see many examples where the pre-framing companies will "load up" a wall with solid stick framing. If there is a window and the door is a wall	

frame, with a gap of up to 400mm or more, the framing company will often fill the gap with solid studs rather than double studs to each opening with nogs to allow insulation to be installed in this gap. There should be consideration given to more stringent requirements to reduce the volume of framing in walls and a lower % may be more

desirable.

Topic	Questions	Response	
6	How the areas of roofs, walls and floors should be measured is unclear		
6-1	Do you support amending Acceptable Solution H1/AS1 and Verification Method H1/VM1 as proposed to improve certainty and consistency of compliance by requiring the areas of roofs, walls, and floors to be measured using overall internal dimensions? Agree for smaller buildings that this proposal will have no effect on H1	✓ Yes, I support it ☐ Yes, with changes ☐ No, I don't support it ☐ Not sure/no preference	
	compliance.		
7	NZS 4214 includes ambiguous instructions for determining the R-values floors	of roofs, walls and some	
7-1	Do you support amending Acceptable Solution H1/AS1 and Verification Method H1/VM1 as proposed to improve certainty and consistency of compliance by providing clearer requirements for defining the boundaries of the bridged portion of a building element when calculating its R-value using NZS 4214?	✓ Yes, I support it ☐ Yes, with changes ☐ No, I don't support it ☐ Not sure/no preference	
7-2	No comment.		
8	For some mixed-use buildings it is unclear whether H1/AS1 and H1/VM and H1/VM2	1 can be used, or H1/AS2	
8-1	Do you support amending Acceptable Solution H1/AS1 and Verification Method H1/VM1 as proposed to improve certainty and consistency of compliance by providing clearer requirements for determining which compliance pathways can be used for a mixed-use building?	✓ Yes, I support it ☐ Yes, with changes ☐ No, I don't support it ☐ Not sure/no preference	
8-2	No comment.		
9	The look-up tables with R-values for slab-on-ground floors do not cater situations	for some common	
9-1	Do you support amending Acceptable Solution H1/AS1 as proposed to make it easier for designers and Building Consent Authorities to establish whether a building complies with the H1 energy efficiency insulation provisions by enabling the use of the look-up tables for slab-on-ground floor R-values for more situations?	✓ Yes, I support it ☐ Yes, with changes ☐ No, I don't support it ☐ Not sure/no preference	
9-2	No comment.		

Topic	Questions	Response	
10	The look-up table with R-values for vertical windows and doors in housing misses some common glazing types		
10-1	Do you support amending Acceptable Solution H1/AS1 as proposed to make it easier for designers and Building Consent Authorities to establish whether a building complies with the H1 energy efficiency insulation provisions by enabling the use of the look-up table for vertical windows and doors in housing for more common types of glazing?	✓ Yes, I support it ☐ Yes, with changes ☐ No, I don't support it ☐ Not sure/no preference	
10-2	Include solid core and aluminium entrance and other external doors.		
11	Acceptable Solution H1/AS1 and Verification Method H1/VM1 include of definitions, and outdated references to documents and tools	obsolete provisions and	
11-1	Do you support amending Acceptable Solution H1/AS1 and Verification Method H1/VM1 as proposed to make these documents more user-friendly and reduce the risk of misinterpretations that can create uncertainty and inconsistency of compliance?	✓ Yes, I support it ☐ Yes, with changes ☐ No, I don't support it ☐ Not sure/no preference	
11-2	No comment.		
SQ4. What impacts from the proposals for topics 4 to 11 do you expect? These may be economic/financial, environmental, health and wellbeing, or other areas. Minimal impacts from a positive or negative perspective.			
SQ5. Is there any support that you or your business would need to implement the proposed changes for topics 4 to 11 if introduced?			
Educatio	Education to assist in understanding the changes.		

SQ6. If there are other issues MBIE should consider to better support consistency and

certainty of compliance and consenting for insulation in housing and small buildings, please

tell us.

No comment.
Transition period for residential and small buildings H1/AS1 & H1/VM1
SQ7. Do you agree with the proposed transition time of 12 months for the proposed changes to take effect?
☐ Yes, it is about right
\square No, it should be longer (24 months or more)
☑ No, it should be shorter (6 months or less)
☐ Not sure/no preference
Please explain your views.
Minor changes should be able to be implemented earlier in our view.

Managing overheating and internal moisture in homes

SQ8. If you think MBIE should support building designers with designing homes that safeguard building occupants from high indoor temperatures in summer (overheating) and other potential internal moisture risks, what approach should MBIE take?

- As per SQ3 above, appropriate design, especially multi-story units with large west-facing, non-shaded windows, causes a lot of overheating. Consideration of mandating shading/shuttering or sizing to reduce overheating.
- Review of building codes E3 Moisture control, E2 Claddings (roof ventilation), G4 -Ventilation & G5
 Interior Environment should be undertaken under urgency to coordinate improvements to internal living.

Insulation in large buildings

This section covers large buildings (other than housing). These are covered by the Acceptable Solution H1/AS2 and Verification Method H1/VM2. The proposals relate to ways to amend the acceptable solutions and verification methods for energy efficiency to

- Optimise insulation to better balance upfront building costs and longer-term benefits.
- Improve the consistency and certainty of compliance and consenting of buildings regarding insulation requirements and energy efficiency.

Optimising insulation to better balance upfront building costs and longerterm benefits

Questions for the consultation

Topic	Questions	Response	
12	The schedule method may lead to less cost-effective construction than the more flexible calculation and modelling methods		
12-1	Do you support amending Acceptable Solution H1/AS2 as proposed to remove the schedule method?	✓ Yes, I support it ☐ Yes, with changes ☐ No, I don't support it ☐ Not sure/no preference	
12-2	As per 1.2 above.		
13	The calculation method for large buildings does not provide flexibility for roof, skylight and floor R-values, limiting opportunities for optimising insulation		
13-1	Do you support amending Acceptable Solution H1/AS2 to allow flexibility for the R-values of all building elements in the calculation method as proposed?	✓ Yes, I support it ☐ Yes, with changes ☐ No, I don't support it ☐ Not sure/no preference	
13-2	More flexibility to allow for those minor parts of a large commercial building to be designed quickly and effectively.		
14	Where underfloor heating is only used in bathrooms, the minimum R-va may cause unreasonable upfront costs	lues for heated floors	
14-1	Do you support amending Acceptable Solution H1/AS2 and Verification Method H1/VM2 as proposed to reduce upfront costs and improve the cost-effectiveness of insulation by exempting building elements with	✓ Yes, I support it ☐ Yes, with changes	

Insulation in large buildings

Topic	Questions	Response			
	embedded heating from higher minimum R-values where embedded heating systems are solely used in bathrooms?	☐ No, I don't support it☐ Not sure/nopreference			
14-2	As per 3-2 above.				
SQ9. What impacts from the proposals for topics 12 to 14 do you expect? These may be economical/financial, environmental, health and wellbeing, or other areas.					
In our view, there is minimal impact either way, but improving/easing compliance methods is always desirable.					
SQ10. Is there any support that you or your business would need to implement the proposed changes for topics 12 to 14 if introduced?					
Education to assist in understanding the changes.					
SQ11. If there are other issues MBIE should consider to better balance upfront building costs and longer-term benefits of insulation in large buildings other than housing, please tell us.					
No com	ment.				

Consistency and certainty of compliance and consenting

Questions for the consultation

Topic	Questions	Response				
15	The modelling method includes requirements that are unclear or outdated					
15-1	Do you support amending Verification Method H1/VM2 as proposed to clarify and simplify requirements for the modelling method? As per 4-2 above.	✓ Yes, I support it ☐ Yes, with changes ☐ No, I don't support it ☐ Not sure/no preference				
16	The schedule method does not adequately limit heat losses and gains from skylights in large buildings					
16-1	Do you support amending Acceptable Solution H1/AS2 to introduce a limit on the skylight area in the schedule method in H1/AS2 (in case MBIE does not proceed with the proposed removal of the schedule method from H1/AS2)?	✓ Yes, I support it ☐ Yes, with changes ☐ No, I don't support it ☐ Not sure/no preference				
16-2	Limiting skylight areas is desirable to maintain a reasonable level of thermal performance in the roof.					
17	Thermal bridging from framing in walls is not adequately considered					
17-1	Do you support amending Acceptable Solution H1/AS2 and Verification Method H1/VM2 as proposed to better consider thermal bridging in framed walls?	 ☐ Yes, I support it ☑ Yes, with changes ☐ No, I don't support it ☐ Not sure/no preference 				
17-2	As per topic 5 above – the same considerations for this topic.					
18	How the areas of roofs, walls and floors should be measured is uncle	ar				
18-1	Do you support amending Acceptable Solution H1/AS2 and Verification Method H1/VM2 as proposed to improve certainty and consistency of compliance by requiring the areas of roofs, walls, and floors to be measured using overall internal dimensions?	✓ Yes, I support it ☐ Yes, with changes ☐ No, I don't support it ☐ Not sure/no preference				
18-2	As per topic 6 above – the same considerations for this topic.					

Insulation in large buildings

Topic	Questions	Response				
19	NZS 4214 includes ambiguous instructions for determining the R-values of roofs, walls, and some floors					
19-1	Do you support amending Acceptable Solution H1/AS2 and Verification Method H1/VM2 as proposed to improve certainty and consistency of compliance by providing clearer requirements for defining the boundaries of the bridged portion of a building element when calculating its R-value using NZS 4214?	✓ Yes, I support it ☐ Yes, with changes ☐ No, I don't support it ☐ Not sure/no preference				
19-2	As per topic 7 above.					
20	For some mixed-use buildings it is unclear whether H1/AS1 and H1/VM1 can be used, or H1/AS2 and H1/VM2					
20-1	Do you support amending Acceptable Solution H1/AS2 and Verification Method H1/VM2 as proposed to improve certainty and consistency of compliance by providing clearer requirements for determining which compliance pathways can be used for a mixed-use building?	✓ Yes, I support it ☐ Yes, with changes ☐ No, I don't support it ☐ Not sure/no preference				
20-2	As per topic 8 above – the same considerations for this topic.					
21	The look-up tables with R-values for slab-on-ground floors do not car situations	ter for some common				
21-1	Do you support amending Acceptable Solution H1/AS2 as proposed to make it easier for designers and Building Consent Authorities to establish whether a building complies with the H1 energy efficiency insulation provisions by enabling the use of the look-up tables for slab-on-ground floor R-values for more situations?	✓ Yes, I support it ☐ Yes, with changes ☐ No, I don't support it ☐ Not sure/no preference				
21-2	As per topic 9 above – the same considerations for this topic.					
22	Acceptable Solution H1/AS2 and Verification Method H1/VM2 include obsolete provisions and definitions, and outdated references to documents and tools					
22-1	Do you support amending Acceptable Solution H1/AS2 and Verification Method H1/VM2 as proposed to make these documents more user-friendly and reduce the risk of misinterpretations that can create uncertainty and inconsistency of compliance?	✓ Yes, I support it ☐ Yes, with changes ☐ No, I don't support it ☐ Not sure/no preference				
22-2	As per topic 11 above – the same considerations for this topic.					

Insulation in large buildings

SQ12. What impacts from the proposals for topics 15 to 22 do you expect? These may be economical/financial, environmental, health and wellbeing, or other areas.					
Minimal impacts from a positive or negative perspective.					
SQ13. Is there any support that you or your business would need to implement the proposed change if introduced?					
Education to assist in understanding the changes.					
SQ14. If there are other issues MBIE should consider to better support consistency and certainty of compliance for insulation in large buildings other than housing, please tell us. No comment.					
Transition period for large buildings H1/AS2 & H1/VM2					
SQ15. Do you agree with the proposed transition time of 12 months for the proposed changes to take effect? ☐ Yes, it is about right ☐ No, it should be longer (24 months or more) ☑ No, it should be shorter (6 months or less) ☐ Not sure/no preference					
Please explain your views.					
In our view, minor changes should be able to be implemented earlier.					

Thank you

Thank you for your feedback. MBIE really appreciates your insight because it helps us identify the needs of New Zealanders and your thoughts on energy efficiency and insulation in buildings.

If you have anything else you would like to tell MBIE about energy efficiency in the Building Code, please leave your feedback below.

No comment.			

