

Consultation submission form

Building Code update 2021

Building Code operating protocols



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How to submit this form

How to submit this form

This form is used to provide feedback on proposals found within the consultation documents:

- › Building Code update 2021 – Issuing and amending acceptable solutions and verification methods
- › Building Code operating protocols – Referencing standards and a tier framework to support standards in the Building Code system

When completing this submission form, please provide comments and reasons explaining your choices. Your feedback provides valuable information and informs decisions about the proposals.

You can submit this form by 5pm, Friday 28 May 2021 by:

- › email: buildingfeedback@mbie.govt.nz, with subject line Building Code consultation 2021
- › post to: Ministry of Business, Innovation and Employment, 15 Stout Street, Wellington 6011
or: Ministry of Business, Innovation and Employment, PO Box 1473, Wellington 6140

Your feedback will contribute to further development of the Building Code. It will also become official information, which means it may be requested under the Official Information Act 1982 (OIA).

The OIA specifies that information is to be made available upon request unless there are sufficient grounds for withholding it. If we receive a request, we cannot guarantee that feedback you provide us will not be made public. Any decision to withhold information requested under the OIA is reviewable by the Ombudsman.

Submitter information

Submitter information

MBIE would appreciate if you would provide some information about yourself. If you choose to provide information in the “About you” section below it will be used to help MBIE understand the impact of our proposals on different occupational groups. Any information you provide will be stored securely.

A. About you

Name:

Email address:

B. Are you happy for MBIE to contact you if we have questions about your submission?

Yes No

C. Are you making this submission on behalf of a business or organisation??

Yes No

If yes, please tell us the title of your company/organisation.

D. The best way to describe your role is:

- | | |
|--|--|
| <input type="checkbox"/> Architect | <input type="checkbox"/> Engineer (please specify below) |
| <input type="checkbox"/> BCA/Building Consent Officer | <input type="checkbox"/> Residential building owner |
| <input type="checkbox"/> Builder or tradesperson (please specify below) | <input type="checkbox"/> Commercial building owner |
| <input type="checkbox"/> Building product manufacturer or supplier
(please specify the type of product below) | <input checked="" type="checkbox"/> Other (please specify below) |
| <input type="checkbox"/> Designer (please specify below) | <input type="checkbox"/> Prefer not to say |

Please specify here.

Proposal 1: Energy efficiency for housing and small buildings

Proposal 1. Energy efficiency for housing and small buildings

To make buildings warmer, drier, healthier and more energy efficient, we are considering options to increase the minimum insulation levels for roof, windows, walls and floors for new housing and small buildings. The options for minimum insulation levels vary across the country so that homes in the coldest parts of New Zealand will need more insulation than those in the warmest parts. As part of this, we are proposing to issue new editions of Acceptable Solution H1/AS1 and Verification Method H1/VM1 for housing and small buildings.

Questions for the consultation

1-1. Which option do you prefer? (Please select one)

- Status quo
- Option 1. Halfway to international standards
- Option 2. Comparable to international standards
- Option 3. Going further than international standards

Is there anything you would like to tell us about the reason(s) for your choice?

The current requirements of the Building Code fall well below other comparable international jurisdictions and will not be sufficient to ensure NZ meets our climate change targets.

Of the options above, NZCIC favours moving to Option 2 with additional graduated improvements over time if needed. We have significant concerns, however, that the proposed changes to insulation requirements should be treated as part of broader building design/system and should align closely with the objectives of MBIE's Building for Climate Change Programme. Specifically:

- the proposed changes to prescribed R values do not come with an explanation of how these will meet the target reductions in operational energy/carbon.
- requirements for thermal insulation to control inside temperature should be considered in combination with relative humidity and ventilation (air change).
- Increasing minimum R values without consideration of other design elements such as shading and orientation may lead to overheating as temperatures rise.

1-2. For your preferred option, how quickly should this change come into effect?

(Please select one)

- 12 months 24 months 36 months or more Not sure/No preference

Is there anything you would like to tell us about the reason(s) for your choice?

Proposal 1: Energy efficiency for housing and small buildings

Industry and consumers will need time to adjust and plan for changes and time will be required to establish supply chains for new materials and systems. Longer transition periods will reduce the likelihood of NZ meeting climate change targets, however, targeted consultation will be required to ensure the supply chain will be able to meet demand in the required timeframe without negative impact on supply and/or price.

Proposal 1: Energy efficiency for housing and small buildings

1-3. If there are factors we should consider to progressively phase in your preferred option, please tell us below.

These factors may include material availability or affordability, regional differences in the requirements, different building typologies or other considerations.

Early education of the sector and consumers will be vital for a smooth transition. The sector will need to adjust designs and, in some cases, seek alternative/new supply chains. This will take time and may need new skills which are not currently recognised.

Consumers will need education on the benefits of the changes, especially in those areas which will face the greatest lift in standards.

The construction supply chain may come under additional stress and there may be cost increases as suppliers will need to develop / stock a broader range of solutions to meet differing requirements of increased performance levels across the six climate zones. This will affect products across framing, windows, and insulation.

1-4. Do you support issuing the new editions of H1/AS1 and H1/VM1 as proposed?

H1/AS1: Yes, I support it No, I don't support it Not sure/no preference

H1/VM1: Yes, I support it No, I don't support it Not sure/no preference

Is there anything you would like to tell us about the reason(s) for your choice?

The current requirements of the Building Code fall well below other comparable international jurisdictions and will not be sufficient to ensure NZ meets our climate change targets. Improving standards to provide warmer, drier homes will benefit occupants and all of NZ through improved health outcomes, energy savings and potentially lower occupancy costs.

1-5. What impacts would you expect on you or your business from the proposed options?

These impacts may be economic/financial, environmental, health and wellbeing, or other areas.

Early education of changes will enable industry to transition smoothly, developing appropriate designs, products and skills needed to meet the updated requirements of the code.

Proposed levels of wall insulation will require the review of technical literature, along with:

- the development and testing of design solutions.
- framing / insulation solutions to meet R values in Climate zones 4,5 & 6 requiring significantly greater framing sizes or double frames which will impact supply and cost.
- design of wall structures to incorporate triple glazed windows which may be up to be 50% heavier than double glazed units.
- updated design documentation for architects and engineers.

Window fabricators servicing the market in proposed climate zones 4, 5 & 6 may need to invest in new fabricating equipment and may require additional factory space.

Proposal 1: Energy efficiency for housing and small buildings

1-6. Is there any support that you or your business would need to implement the proposed changes if introduced?

Yes

No

Not sure/no preference

Is there anything you would like to tell us about the reason(s) for your choice?

Education, as per answer 1.5

Proposal 2: Energy efficiency for large buildings

Proposal 2. Energy efficiency for large buildings

To make buildings warmer, drier, healthier and more energy efficient, we are proposing to increase the minimum insulation levels for roof, windows, walls and floors for large buildings. The proposed minimum insulation levels will vary so that buildings in the coldest parts of New Zealand will need more insulation than those in the warmest parts. As part of this, we are proposing to issue a new Acceptable Solution H1/AS2 and Verification Method H1/VM2 for large buildings.

Questions for the consultation

2-1. Which option do you prefer? (Please select one)

- Status quo
- Option 1. 10% reduction in energy use for heating and cooling
- Option 2. 20% reduction in energy use for heating and cooling
- Option 3. 25% reduction in energy use for heating and cooling
- Is there anything you would like to tell us about the reason(s) for your choice?

Using the modelling in the discussion document, this would leave considerable variance with international standards with Zones 1 and 2 consistently falling below international standards.

Whilst we agree the geographical zones should be maintained for small and large buildings, it would make sense to lift the requirements in Zones 1 and 3 more and for Zones 4 and 5 less to align with international standards.

Lifting standards in Zone 1 will have a greater overall impact on energy use as it will include a larger proportion of population and building numbers. Reducing the levels for Zones 4 and 5 will have less impact on energy use due to population size and number of buildings and reduce the cost implications on buildings in these areas.

Again, standards should continue to be lifted above those in Option 2 in a graduated way over time.

2-2. For your preferred option, how quickly should this change come into effect?

(Please select one)

- 12 months 24 months 36 months or more No preference

Is there anything you would like to tell us about the reason(s) for your choice?

24 months will allow time for planning and education while moving quickly enough to meet climate change targets.

Further graduated improvements to standards can be made over time.

Proposal 2: Energy efficiency for large buildings

2-3. If there are factors we should consider to progressively phase in your preferred option, please tell us below.

These factors may include material availability or affordability, regional differences in the requirements, different building typologies or other considerations.

Early education of the sector and consumers will be vital for a smooth transition. The sector will need to adjust designs and, in some cases, seek alternative/new supply chains. This will take time and may need new skills which are not currently recognised.

As per answer 2.1, we suggest varying the level of improvements across the Zones to provide greater energy savings and reduce negative impacts on Zones 4 and 5.

2-4. Do you support issuing the new editions of H1/AS2 and H1/VM2 as proposed?

H1/AS2: Yes, I support it

No, I don't support it

Not sure/no preference

H1/VM2: Yes, I support it

No, I don't support it

Not sure/no preference

Is there anything you would like to tell us about the reason(s) for your choice?

Subject to varying levels of improvement across the Zones.

2-5. What impacts would you expect on you or your business from the proposed options?

These impacts may be economic/financial, environmental, health and wellbeing, or other areas.

Without adjustment to the requirements across the geographical Zones, the changes may inhibit investment/ development in Zones 4 and 5 and miss opportunities for greater savings in Zones 1 and 2.

This could amplify existing disparities for investment and growth for the regions outside the "golden triangle" for minimal energy savings from buildings.

Proposal 2: Energy efficiency for large buildings

2-6. Is there any support that you or your business would need to implement the proposed changes if introduced?

Yes

No

Not sure/no preference

Is there anything you would like to tell us about the reason(s) for your choice?

Early education of changes will enable industry to transition smoothly, developing appropriate designs, products and skills needed to meet the updated requirements of the code.

Proposal 3: Energy efficiency for HVAC systems in commercial buildings

Proposal 3. Energy efficiency for heating, ventilation, and air conditioning (HVAC) systems in commercial buildings

Currently, there is no acceptable solution or verification method issued for the energy efficiency of heating, ventilation and air conditioning (HVAC) systems in commercial buildings (Clause H1.3.6 of the Building Code). We are proposing to issue a new Verification Method H1/VM3 will establish a baseline and standardised procedures that will help building designers and building consent authorities demonstrate and verify the compliance of this clause.

Questions for the consultation

3-1. Do you support issuing the new edition of H1/VM3 as proposed?

Yes, I support it No, I don't support it Not sure/no preference

Is there anything you would like to tell us about the reason(s) for your choice?

Removing the Guidance document and establishing a VM is a step forward in providing a standard for assessing the design and operation in the HVAC industry of energy efficient solutions.

3-2. Do you think the proposed Verification Method H1/VM3 covers all important aspects of energy efficiency of HVAC systems in commercial buildings?

Yes No Not sure/no preference

If there are aspects that you think should be included, please tell us below.

For commercial buildings, additional information on heating using fossil fuels, e.g., natural gas, and their replacements, e.g., hydrogen.

Requirements for HVAC in high rise apartments should be included.

Proposal 3: Energy efficiency for HVAC systems in commercial buildings

3-3. What impacts would you expect on you or your business from the new H1/VM3?
These impacts may be economic/financial, environmental, health and wellbeing, or other areas.

The costs of compliance will increase for HVAC contractors.

Design costs (specification and verification) will increase.

Capital cost to the consumer will increase due to the increased sophistication of plant and controls.

Maintenance costs will also increase due to increased Building Warrant Of Fitness inspection and maintenance.

Energy costs for the occupant should decrease, and overtime may offset the above increases.

The reasons and advantages associated with the proposed changes will need to be clearly communicated to the consumer and the supply chain to promote uptake and minimise avoidance.

3-4. Do you agree with the proposed transition time of 12 months for the new Verification Method H1/VM3 to take effect?

- Yes, it is about right No, it should be shorter (less than 12 months)
 No, it should be longer (24 months or more) Not sure/no preference

Is there anything you would like to tell us about the reason(s) for your choice?

12 months should provide enough time to communicate the changes and have them implemented in new design.

Proposal 4: Natural light for higher-density housing

Proposal 4. Natural light for higher-density housing

We are proposing to issue new acceptable solutions and verification methods for G7 Natural Light to adopt new compliance pathways for higher-density housing. The new pathways are more suitable for these types of buildings. As a consequence of the change, the scope of the existing documents are proposed to be limited.

Questions

4-1. Do you support issuing the new G7/AS1, G7/AS2, G7/VM2 as proposed?

- | | | |
|--|---|--|
| G7/AS1: <input type="checkbox"/> Yes, I support it | <input type="checkbox"/> No, I don't support it | <input checked="" type="checkbox"/> Not sure/no preference |
| G7/AS2: <input type="checkbox"/> Yes, I support it | <input type="checkbox"/> No, I don't support it | <input checked="" type="checkbox"/> Not sure/no preference |
| G7/VM2: <input type="checkbox"/> Yes, I support it | <input type="checkbox"/> No, I don't support it | <input checked="" type="checkbox"/> Not sure/no preference |

Is there anything you would like to tell us about the reason(s) for your choice?

4-2. What approach do you think we should take for G7/VM1?

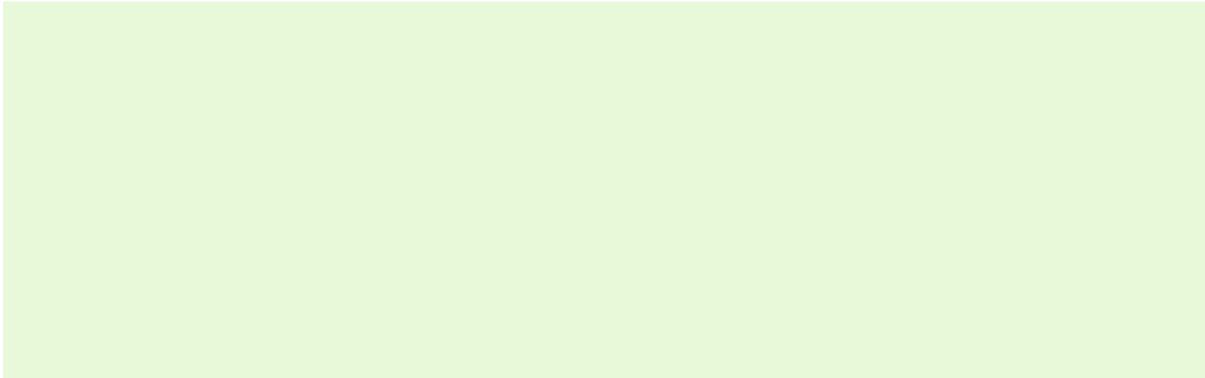
- | | |
|---|--|
| <input type="checkbox"/> It should be revoked | <input type="checkbox"/> It should remain as is |
| <input type="checkbox"/> It should be amended | <input checked="" type="checkbox"/> Not sure/no preference |

Is there anything you would like to tell us about the reason(s) for your choice?

Proposal 4: Natural light for higher-density housing

4-3. What impacts would you expect on you or your business from the new editions of G7/AS1, G7/AS2, G7/VM1, and G7/VM2?

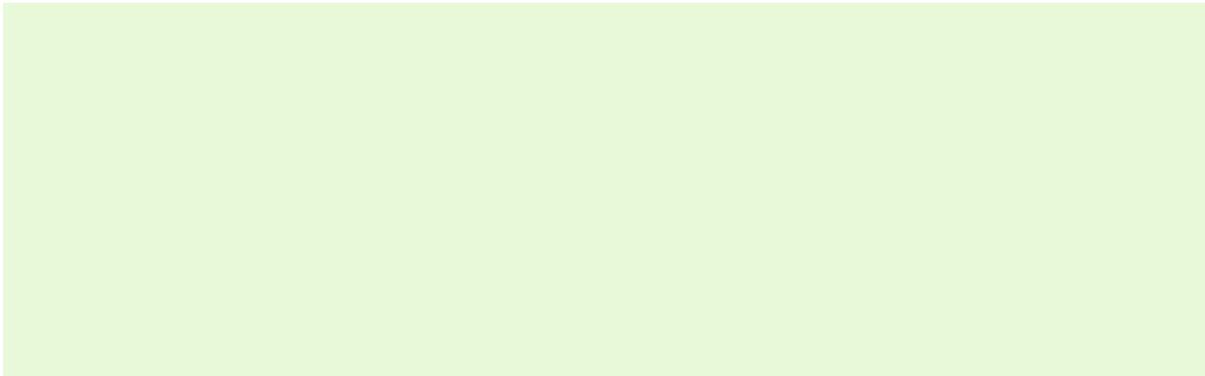
These impacts may be economic/financial, environmental, health and wellbeing, or other areas.



4-4. Do you agree with the proposed transition time of 12 months for the new G7/AS1, G7/AS2, G7/VM1, and G7/VM2 to take effect?

- Yes, it is about right No, it should be shorter (less than 12 months)
 No, it should be longer (24 months or more) Not sure/no preference

Is there anything you would like to tell us about the reason(s) for your choice?



Proposal 5: Weathertightness testing for higher-density housing

Proposal 5. Weathertightness testing for higher-density housing

We are proposing to issue a new edition of E2/VM2 to reference BRANZ Evaluation Method EM7 Performance of mid-rise cladding systems (version 3, June 2020). This update version of EM7 is easier for test laboratories, cladding system suppliers, and building designers to use than the previous version. The new version does not significantly change the minimum performance requirements of the test method, and existing tested cladding systems will not need to be retested.

Questions for the consultation

5-1. Do you support issuing the new edition of E2/VM2 as proposed to cite BRANZ EM7 version 3?

Yes, I support it No, I don't support it Not sure/no preference

Is there anything you would like to tell us about the reason(s) for your choice?

All systems verified to comply, need to be backed by a quality management system which includes third party verification on a periodic basis to ensure compliance.

Historically there are many instances of appraisals being approved and then manufacturers make minor changes that have very severe consequences. Sometimes it takes years before these consequences become apparent.

As this is a verification method to prove compliance with the NZBC all suppliers should be happy to undergo third part independent testing/analysis to have their product and systems approved.

5-2. What impacts would you expect on you or your business from the new edition of E2/VM2?

These impacts may be economic/financial, environmental, health and wellbeing, or other areas.

These changes may reduce consenting time and cost.

Proposal 6: Standards for citation in B1 Structure

Proposal 6. Standards referenced in B1 Structure

We are proposing to amend referenced standards in the acceptable solutions and verification methods for clause B1 Structure. The amended references include new versions of AS/NZS 4671, AS/NZS 5131, AS/NZS 2327, the NZGS document “Field Description of Soil and Rock – Guideline for the field descriptions of soils and rocks in engineering purposes”. Previous versions of these documents are currently referenced by the acceptable solutions and verification methods.

Questions for the consultation

6-1. Do you support the amendment of B1/AS1, B1/AS3 and B1/VM1 as proposed to include the following referenced standards and document?

AS/NZS 4671: 2019 Steel for the reinforcement of concrete:

- Yes, I support it
- No, I don't support it
- Not sure/no preference

AS/NZS 5131: 2016 Structural Steelwork – Fabrication and Erection:

- Yes, I support it
- No, I don't support it
- Not sure/no preference

AS/NZS 2327: 2017 Composite structures – Composite steel-concrete construction in buildings Amendment 1:

- Yes, I support it
- No, I don't support it
- Not sure/no preference

Field Description of Soil and Rock – Guideline for the field descriptions of soils and rocks in engineering purposes, New Zealand Geotechnical Society Inc., December 2005:

- Yes, I support it
- No, I don't support it
- Not sure/no preference

Is there anything you would like to tell us about the reason(s) for your choice?

See question 4 Building Code Operating Protocols

Proposal 7: Editorial changes to Acceptable Solution B1/AS1

Proposal 7. Editorial changes to Acceptable Solution B1/AS1

We are proposing to amend text within Acceptable Solution B1/AS1 to make editorial changes in regards to geotechnical requirements. Editorial changes may include obvious errors in the text, typos, spelling mistakes, incorrect cross-references, changes in the formatting, minor clarifications of text with minor to no impact, or other items related to current document drafting practices.

Questions for the consultation

7-1. Do you support the amendment of B1/AS1 to address the editorial changes to geotechnical requirements as proposed?

Yes, I support it No, I don't support it Not sure/no preference

Is there anything you would like to tell us about the reason(s) for your choice?

Building Code operating protocols

Building Code operating protocols

We are seeking feedback on two draft operating protocols that are intended to provide transparency and certainty around the work MBIE does as the building and construction regulator. The two operating protocols for this consultation are:

- › Referencing standards in the Building Code system
- › Tier framework to support standards in the Building Code system

Questions for the consultation

1. Do you agree with the proposed criteria for referencing a standard in the Building Code system?

These proposed criteria include: alignment to the Building Code, in scope, clear, specific, implementable in New Zealand and available.

Yes, I support them No, I don't support them Not sure/no preference

Is there anything you would like to tell us about the reason(s) for your choice?

See question 4

2. Do you agree with the proposed criteria for deciding the tier status of standards?

Risk severity: Yes, I agree with the criteria No, I don't agree Not sure/no preference

Contribution to the Building Code: Yes, I agree with the criteria No, I don't agree Not sure/no preference

Design focus: Yes, I agree with the criteria No, I don't agree Not sure/no preference

Is there anything you would like to tell us about the reason(s) for your choice?

See question 4

Building Code operating protocols

3. Which standard(s) and their proposed tier status particularly impact you and why?

4. Is there anything else you would like to tell us about these protocols for the use of standards in the Building Code system?

The proposed Tiered System is far too narrow in scope to have meaningful benefit to industry or the sector. There are significant long standing issues with the development and maintenance of construction related Standards in NZ. An industry focus group has recently identified the following issues:

1. There is no overall strategy for Standards development and maintenance across the construction sector.
2. There is an unfair burden on industry (Associations) to fund the maintenance of Standards.
3. There is no clarity around which Standards may be funded by the Building Levy.
4. Participation in Standards committees is unpaid, sometimes making it difficult to attract the appropriate expertise for the Standards process.
5. There are problems with copyright of information provided by industry being captured by Standards copyright, and Standards breaching copyright on industry information.
6. Poor communications between Standards Australia and Standards New Zealand has led to added difficulties for New Zealand industry groups who participate in joint Standards procedures.
7. There is no visibility of forward work/cost of NZ and Joint AS/NZS Standards to participating organisations resulting in short notice for requests for funding of joint AS/NZS Standards and difficulties for those organisations to allocate budget.
8. There is no transparent mechanism to opt-in to notification of request for funding for Standards projects.
9. The fee structure for amending joint AS/NZS Standards is expensive and beyond the means of many industry bodies.
10. Joint AS/NZS Standards are being permanently de-jointed if a NZ funder is not available. There is no obligation to re-joint and with no NZ influence the resulting AS Standard may not be fit for application in NZ.
11. The user-pays model currently operating does not give due regard to the value of intellectual property from industry and does not adequately consider public good.

The proposal in this consultation does not cover any of these issues for the vast majority of Standards. Without a broader review of how Standards are managed for the sector, the proposal being consulted will have minimal value and lack support from the majority of industry. We suggest an initial objective could be

Building Code operating protocols

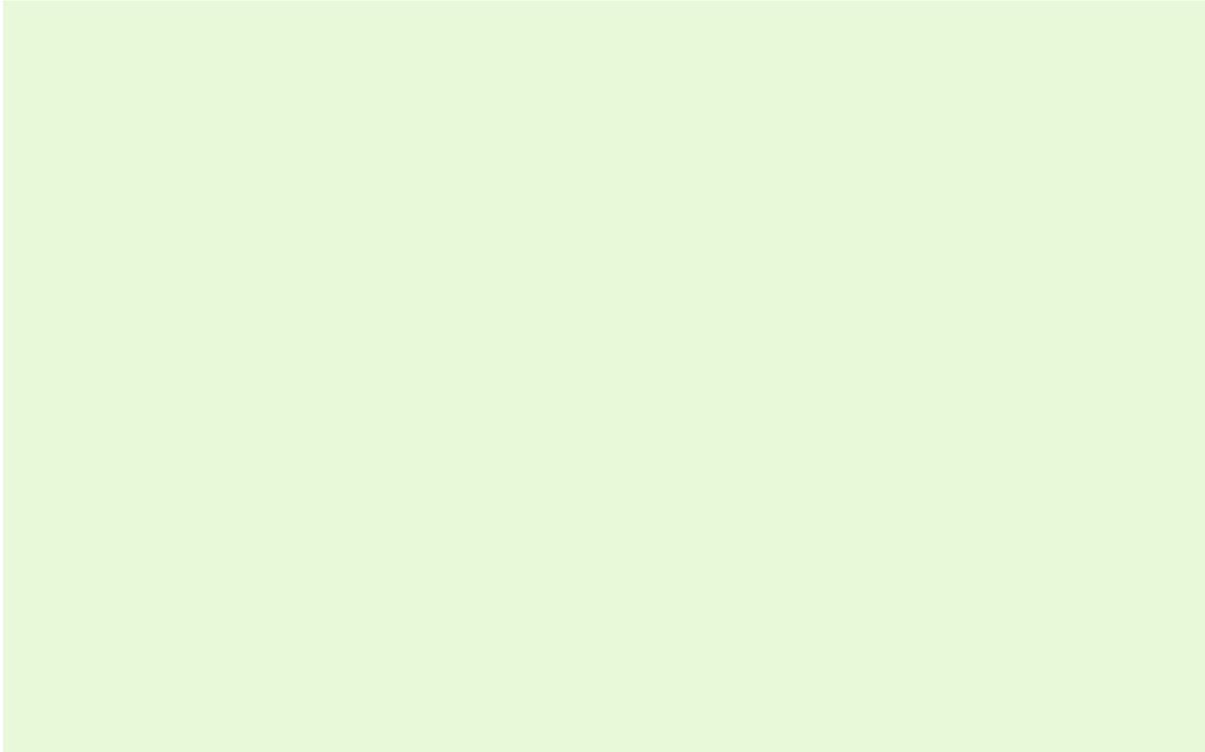
a MOU between BSP, SNZ and industry (represented by NZCIC as the group linking the majority of construction industry organisations) covering:

1. Standards strategy for construction sector including a scope of industry coverage.
2. Clear funding guidelines including:
 - a. What is in or out of scope for funding from the Building Levy.
 - b. What is a reasonable industry contribution.
 - c. Possible alternative means of recognising industry guidance.
3. Annual plan/forecast of work and industry funding requirements covering both NZS and AS/NZS Standards.

New look for Building Code documents

New look for Building Code documents

1. Is there anything you would like to tell us about the new look of acceptable solution and verification methods?



Thank you

Thank you

Thanks for your feedback, we really appreciate your insight because it helps us keep pace with modern construction methods, the needs of New Zealanders and ensure buildings are safe, warm, dry, healthy and durable.

To help us continue to improve our Building Code update programme, we would appreciate any suggestions or comments you may have on what's working and how we can do better.

Please leave your feedback below:

