



# Submission Form

## Building for Climate Change

### 1. Contact details (optional)

Name: Kirsty Peel

Company/organisation: Canterbury District Health Board

Email address: Kirsty.peel@cdhb.health.nz

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

- No
- Yes (please tell us which Company/Organisation you are making this submission on behalf of)

Canterbury District Health Board – Community and Public Health. The focus of this submission is on the public health impacts of this programme, not on impacts for CDHB as an organisation building new buildings.

### 3. Would you like to:

- Remain anonymous in the published consultation summary report  No  Yes
- Receive a copy of your own submission  No  Yes
- Receive future updates on Building for Climate Change programme  No  Yes

### 4. Are you willing to be contacted in relation to your submission if MBIE has questions about your response?

- No  Yes

### 5. The best way to describe your role is:

- Architect  Building owner  Geotechnical Engineer
- Building Consent Authority/Officer  Electrician  Structural Engineer
- Builder  Engineer – other  Plumber/Gasfitter/Drainlayer
- Building product/material supplier  Fire Engineer
- Other: District Health Board

**To submit this form via email:**

Once you have completed the form, you can email it to [BfCC@mbie.govt.nz](mailto:BfCC@mbie.govt.nz), with “Submission” in the subject line.

**To submit a print copy of this form:**

You can post or courier your submission to:

Via Courier:

Building System Performance  
Ministry of Business, Innovation and Employment  
Building for Climate Change Submission  
15 Stout Street,  
Wellington 6011

Via Post:

Building System Performance  
Ministry of Business, Innovation and  
Employment  
Building for Climate Change Submission  
PO Box 1473  
Wellington 6140

# Overarching approach of the Building for Climate Change programme

6. Do you agree or disagree that the Building and Construction Sector needs to take action to reduce emissions?

- Strongly disagree     Disagree     Neither     Agree     Strongly agree

Please tell us why.

The Canterbury District Health Board concurs with the World Health Organisation assessment that “climate change is impacting human lives and health in a variety of ways. It threatens the essential ingredients of good health - clean air, safe drinking water, nutritious food supply, and safe shelter - and has the potential to undermine decades of progress in global health.” It is important that all sectors of society contribute to mitigating the impacts of climate change to ensure health and wellbeing impacts on people are minimised. As the building sector accounts for around 20% of New Zealand’s carbon emissions through energy and materials used in buildings, it is important that this sector makes appropriate changes.

It is also important to consider the co-benefits of these climate change mitigation strategies. Improvements to new buildings to meet operational efficiency requirements have the potential to improve health outcomes via improved living and working environments (with good temperature control, good air quality, dry with no mould, reduction in indoor noise) and reduced impacts of fuel poverty. These benefits should be strongly promoted as part of this work programme.

7. What support do you think you or your business would need to deliver the changes proposed in the frameworks?

The Canterbury District Health Board would promote the positive impacts of the Building for Climate Change programme as part of our public health work.

The Canterbury District Health Board would also require certainty that funding for new building developments took into account the costs of meeting any new requirements for operational efficiency or reducing embodied carbon.

8. Are there any barriers that are currently preventing (or discouraging) you, or your business, taking action to reduce emissions?

- No     Yes

Please identify the main challenges.

Funding constraints currently affect our ability to build the most energy efficient new hospital buildings.

9. Do you think the Building for Climate Change work programme should include the following building classifications?

	No	Yes
Housing	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Communal Residential	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Communal Non-Residential	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Commercial

Industrial

If you have indicated that you believe one, or more, building classifications **should not** be included, please tell us why

## Framework: Transforming Operational Efficiency

10. Do you agree or disagree that the Building for Climate Change work programme should include measures to improve the operational efficiency of buildings in New Zealand?

Strongly disagree

Disagree

Neither

Agree

Strongly agree

Please tell us why.

As outlined above, increasing the operational efficiency of buildings to deliver climate mitigation impacts will also serve to improve the indoor environmental quality of buildings which will have positive health implications.

A recent 2019 study by Motu Public Policy and the University of Otago attributed over 42,000 hospital bed nights to housing-related hospital admissions, most of these from damp and mouldy houses contributing to respiratory conditions. Over 6000 children a year are admitted to hospital for housing sensitive hospitalisations.

As global temperatures and frequency and intensity of heatwaves increase there is even more need for well insulated homes. An average of 14 high heat-related deaths occur per year in people aged over 65 years in Auckland and Christchurch (McMichael et al., 2003). Mortality from all causes increased by 1% per degree Celsius on hot days in Christchurch (Hales et al., 2000).

Increasing the operational efficiency of new buildings (especially publicly owned social housing) will also serve to reduce fuel poverty and functional overcrowding which will also have positive health impacts.

11. The Framework proposes that operational efficiency requirements tighten in a series of steps to reduce emissions in the Building and Construction Sector, with the requirements for each step published at the outset and the final step being reached by 2035.

Do you support a gradual introduction of operational efficiency requirements, using a stepped approach?

No

Yes

12. Do you think the timeframe is appropriate?

Yes

No, it's too short

No, it's too long

Please tell us your ideal timeframe if it's not by 2035.

A number of significant public sector projects will have been completed in 15 years, including significant hospital developments and other "shovel ready" projects.

13. The Framework proposes that a number of building types will be exempt from operational emission reduction requirements.

Do you agree or disagree with the proposal to exclude the following from operational efficiency emission reduction requirements?

	No	Yes
Outbuildings	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Ancillary buildings	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Please tell us why.

The Canterbury District Health Board is aware that many out buildings such as sleep outs do not require a permit to build and are being built to ease housing pressure. We would want to ensure that these buildings were not excluded from the operational efficiency framework.

## Approach

14. The Framework proposes that operational efficiency requirements will only apply to new buildings initially with further work to look at requirements for existing buildings being undertaken at a later date.

Do you support this approach?

No

Yes

Please tell us why.

Improvements in transforming operational efficiency of existing residential buildings will positively impact the health and wellbeing of occupants. Most rental housing is older housing stock and is more likely to be colder, damp and mouldy. There is an equity issue that needs to be considered. Many people on low incomes live in older rental accommodation and many older people live in older owner-occupied houses and neither group will benefit from the health gains related to operational efficiency caps being put on new buildings.

At the same time, the financial implications of any changes required to modify existing non-residential buildings (such as hospital buildings) would need to be considered carefully.

15. Do you support a limit on emissions from fossil fuel combustion to operate buildings (e.g. for space and water heating)?

No

Yes

Please tell us why.

The Canterbury DHB supports replacing fossil fuels with more environmentally sustainable options.

16. Do you think that new Thermal Performance requirements based on heating and cooling demand should be introduced to support increased operational efficiency of buildings?

No

Yes

Please tell us why.

Thermal performance is a key determinant of comfort levels and energy use in homes and will contribute to reducing the costs of heating.

17. Detailed requirements for the efficiency of fixed services (such as heating and cooling systems, artificial lighting, hot water systems and appliances, ventilation systems etc) are not currently set out in the Building Code.

Do you think that Services Efficiency performance requirements should be introduced to support increased operational efficiency of buildings?

No

Yes

Please tell us why.

Fuel Poverty is often described as spending more than 10% of household income on fuel and affects more than 25% of New Zealand households. In this situation people tend to cut down on basic necessities, including food. It also results in functional overcrowding when people huddle into one room to keep warm, or otherwise live in cold rooms. Performance requirements for services efficiency could be expected to help improve health outcomes by reducing fuel poverty.

18. The framework proposes that there are requirements for the plug loads for large buildings\*, but not small buildings. Do you support this approach?

(\*Large and small buildings as defined in the framework scope section)

No

Yes

Please tell us why.

We would support continued education about EECA E3 Programme and Genless.

19. The Framework proposes that new buildings will not be required to include onsite renewable energy generation or energy storage capacity. Do you agree or disagree with this proposal?

Strongly disagree       Disagree       Neither       Agree       Strongly agree

Please tell us why.

No comment

20. The Framework currently proposes to exclude the following elements from the Building for Climate Change work programme. Which do you think should be included or excluded?

	Should be included	Should be excluded
Electrical appliance efficiency	<input checked="" type="checkbox"/>	<input type="checkbox"/>
On-site collection and storage of water	<input checked="" type="checkbox"/>	<input type="checkbox"/>
On-site waste water treatment	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Please tell us why.

More efficient appliances will help reduce the incidence of fuel poverty and its associated poor health outcomes in New Zealand

We would support on-site collection and storage of water in residential buildings for garden use and emergency preparedness.

21. Buildings need to provide suitable indoor environmental quality (IEQ) for good occupant health and wellbeing outcomes. The Framework identifies the following critical IEQ parameters:

- Air temperature
- Relative or absolute humidity
- Ventilation rates
- Surface temperature
- Hygienic surface temperature (avoidance of mould)
- Daylight provision

If there are any additional elements that you think should be considered, please record them in the comment box below.

No, the above are all important.

22. The Framework proposes that the Thermal Performance energy use intensity and services energy use intensity are considered during the consent application process, and when a Code Compliance Certificate is applied for.

Do you think this would impact you or your business/organisation?

No

Yes

Please tell us why.

N/A – we are not a construction organisation

23. If there are any additional tools or support that you think you would need to implement this requirement, please tell us in the comment box below.

N/A – we are not a construction organisation



## Framework: Whole of Life Embodied Carbon Emissions Reduction

24. Do you agree or disagree that the Building for Climate Change work programme should include initiatives to reduce whole-of-life embodied carbon in New Zealand buildings?

Strongly disagree

Disagree

Neither

Agree

Strongly agree

Please tell us why.

We agree that the Building for Climate Change programme should include initiatives to reduce whole-of-life embodied carbon in New Zealand buildings for the same reasons as mentioned earlier.

**To meet our emission reduction goals, a key objective of the framework is to increase building material efficiency, and reduce construction waste.**

25. What measures, if any, do you think should be put in place to increase building material efficiency? (Select all that apply)

Update regulatory performance requirements to ensure they are appropriate

Incentivise 'lean design'

Remove barriers to the reuse of construction materials

Other (please specify)

We would suggest making recycle bins compulsory on building sites.

26. What measures, if any, do you think should be put in place to reduce construction waste?

Work with manufacturers to reduce and remove soft plastic wrap or polystyrene packaging waste.

27. Using low carbon construction materials and products is identified as another option to reduce whole-of-life embodied carbon emissions.

How could we encourage the use of low carbon construction materials?

Educate the building sector about low carbon products to make informed decisions and encourage their use.

**The Framework proposes introducing reporting requirements for whole-of-life embodied carbon in buildings, followed by a cap on whole-of-life embodied carbon for new building projects.**

28. Would you support a cap on whole-of-life embodied carbon for new building projects?

Yes  No

Please tell us why.

Specific targets are likely to be most effective in changing behaviours and outcomes.

29. Do you think a data repository of embodied carbon from buildings should be established?

Yes  No

Please tell us why.

No comment

30. If a data repository was established, do you think this information should be able to be accessed by the public?

Yes  No

Please tell us why.

It would be important that the public could see the positive outcomes and feel like we are moving towards the net zero carbon emissions. It will make us accountable to New Zealand's climate change goals.

31. Which, if any, of the following factors would make it difficult for people to report the whole-of-life embodied carbon of new buildings, and why?

- Lack of an agreed methodology  Inadequate data quality and availability  
 Lack of appropriate tools or software  Administrative burden on businesses  
 Other (please specify)

No comment

32. What support, if any, do you think will be needed to make reporting embodied carbon a standard part of the design and construction process for every new building project in New Zealand?

No comment

**The framework proposes that reporting of whole-of-life embodied carbon for buildings would be carried out as part of the building consent application process.**

33. What impact do you think this proposal will have on the Building and Construction sector?

No comment

34. What additional tools or support would be needed to implement this requirement?

No comment

35. Do you think that requirements for embodied carbon calculations should only include the initial building life cycle stages (product and construction stage)?

No

Yes

Please tell us why.

The lifecycle stages of a building also impact embodied carbon including disposal, if this is not calculated then we may see less sorting and more items being returned to landfill rather than being repurposed and recycled.

36. The Framework proposes limiting the type of building components that would be included in an embodied carbon assessment, excluding components with lower emissions (such as internal fittings).

Do you agree with this proposal?

No

Yes

Please tell us why.

In an effort to reduce Carbon emissions we should calculate all building components including internal fittings. Some of these internal items are high- impact materials i.e Carpet.

37. Do you think that reporting on, and ultimately capping, embodied carbon should apply to new building projects only, not refurbishment or demolition projects?

No

Yes

Please tell us why.

In an environment where building costs are set to increase and the use of existing buildings may change – i.e. conversion from office block to apartments, we should consider embodied carbon as this may encourage redeveloping existing properties and avoiding demolition of existing buildings.

38. The Framework proposes that a simplified embodied carbon calculation tool could be used for small buildings but more detailed calculations would need to be provided for large buildings\*.

(\* Large and small buildings as defined in the framework scope section)

Do you agree with this proposal?

No

Yes

Please tell us why.

No comment

39. Any other comments on the proposed frameworks?

No