

CR

CN

Com

Ind

Out

Anc

# Quick reference guide: Improved Window Performance Requirements For Other Buildings Up To 300m<sup>2</sup>

*An overview of the recently updated H1 requirements, August 2022*



**window & glass**  
association nz

**Please note:** This document is intended as a convenient overview.  
Please refer to MBIE's official documentation for more detail.

# About this Guide

- This guide applies to 'Buildings up to 300m<sup>2</sup>'. This includes buildings classified as:
  - 'Communal residential' e.g. a hotel or rest home
  - 'Communal non-residential' e.g. a church or school
  - 'Commercial' e.g. a bank, police station, restaurant or shop
  - 'Industrial' e.g. factories or warehouses
  - 'Outbuildings' e.g. a garage, greenhouse or shed
  - 'Ancillary'
- The area (Up to 300m<sup>2</sup>) is based on the **occupied space** of the building.
- More information on how buildings are classified is available in Clause A1 of the Building Code [here](#).

CR	Communal residential
CN	Communal non-residential
Com	Commercial
Ind	Industrial
Out	Outbuildings
Anc	Ancillary

## Contents

- [Key background](#)
- [Key contextual changes & New Climate Zones](#)
- [Overview of construction R-values](#)
- [Zones 1 & 2 - From 3 November 2022 to 1 November 2023](#)
- [Zones 1 & 2 - From 2 November 2023](#)
- [Zones 3 & 4 - From 3 November 2022](#)
- [Zones 5 & 6 - From 3 November 2022](#)
- [Further resources, contact details and glossary of terms](#)



# Key background

- The H1 Clause of the Building Code regulates the energy efficiency of our built environment – covering wall, floor and roof insulation as well as the thermal performance of windows and doors.
- Proposed changes to the Clause were consulted on last year and published in November 2021. There are a range of requirements, and transition and implementation periods, depending on building type, construction element, and Climate Zone.
- **For windows and doors in 'Buildings up to 300m<sup>2</sup>', improved requirements come into effect from 3 November 2022, with a staged transition for Zones 1 & 2 only.**
- More information on H1 is available [here](#). Please note: Amended Fifth Editions of H1/AS1 and H1/VM1 (the compliance pathways that will reflect the new and requirements, as pictured) have now been published by MBIE in August 2022.
- **The new standards apply based on the date of the building consent application, however these higher standards can be used from now.**



# Key contextual changes

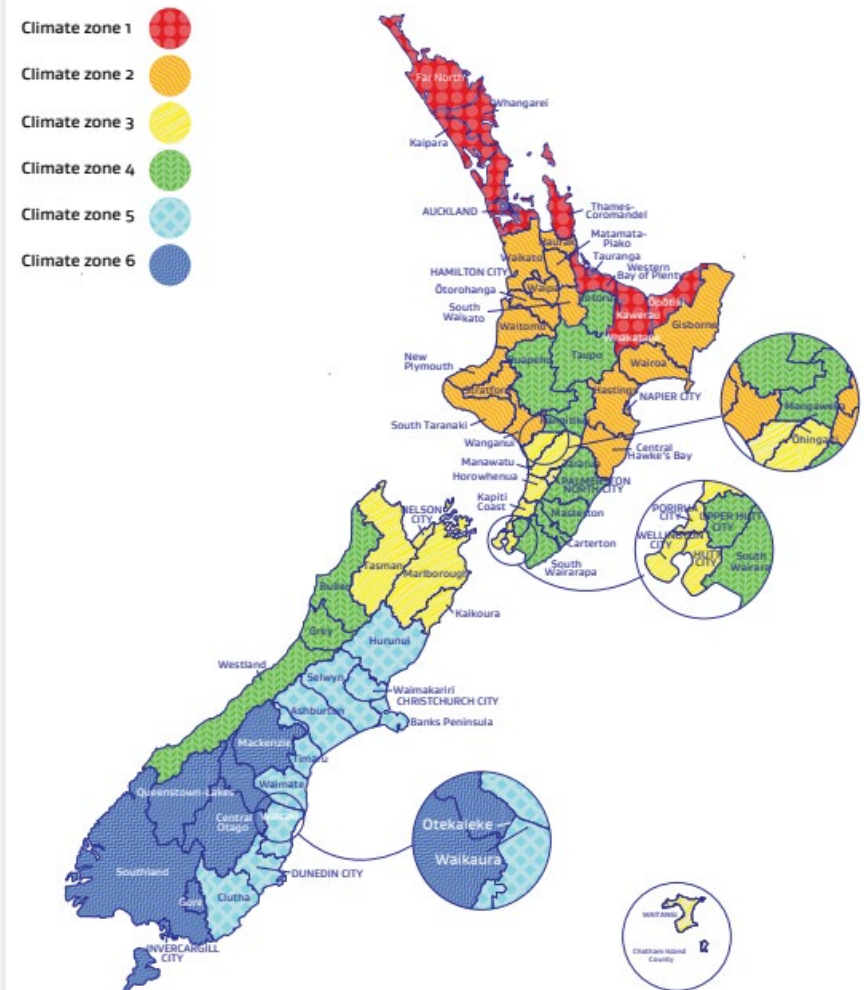
- Energy efficiency is top of mind, with the update being one of the first steps in the Government's Building for Climate Change programme.
- There are major increases in thermal performance requirements across the building envelope. Some of the most significant changes are to window frame and glass solutions.
- The introduction of new Climate Zones.

## New Climate Zones:

- There are now six Climate Zones based on the average climate of each area.
- **Zones are paired for windows and doors into Zones 1 & 2, Zones 3 & 4 and Zones 5 & 6.**
- **A building's Zone is dictated by the building's site address** (not the client's base or supply area).
- More detailed information is available [here](#)\* – you can find a **Table of Zones by Territorial Authority** in Appendix C on page 23 and the **map** on page 24.

**FIGURE C.1.1.2: Map of New Zealand climate zones**

[Paragraph C.1.1.2](#)



# Overview of construction R-values

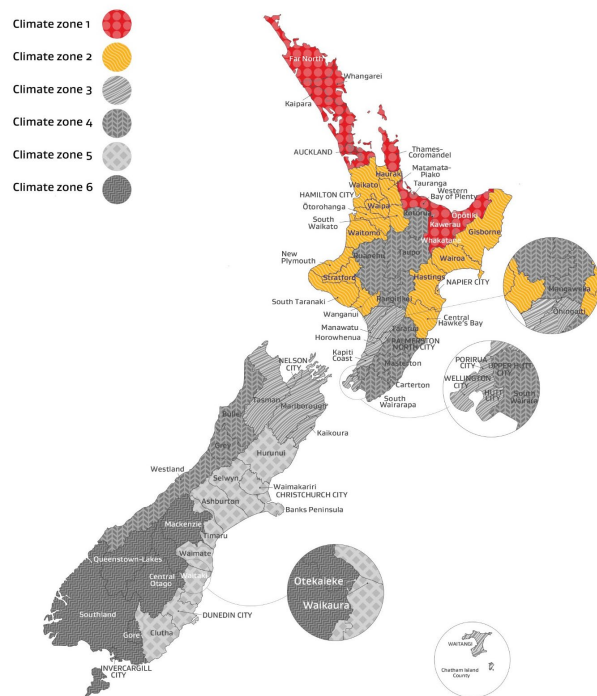
- This table from H1/AS1 shows the R-values required for windows and doors (glazed), and for skylights, effective from 3 November 2022, by Climate Zone.

**TABLE 2.1.2.2B: Minimum construction R-values for building elements that do not contain embedded heating systems**

Paragraph 2.1.2.2 b)

Building element	Construction R-values (m <sup>2</sup> ·K/W) <sup>(1)</sup>					
	Climate zone 1	Climate zone 2	Climate zone 3	Climate zone 4	Climate zone 5	Climate zone 6
Roof <sup>(2)</sup>	R6.6	R6.6	R6.6	R6.6	R6.6	R6.6
Wall	R2.0	R2.0	R2.0	R2.0	R2.0	R2.0
Floor						
Slab-on-ground floors	R1.5	R1.5	R1.5	R1.5	R1.6	R1.7
Floors other than slab-on-ground	R2.5	R2.5	R2.5	R2.8	R3.0	R3.0
Windows and doors	R0.46 <sup>(3)</sup>	R0.46 <sup>(3)</sup>	R0.46	R0.46	R0.50	R0.50
Skylights	R0.46	R0.46	R0.54	R0.54	R0.62	R0.62

# Zones 1 & 2, from 3 Nov 2022 to 1 Nov 2023



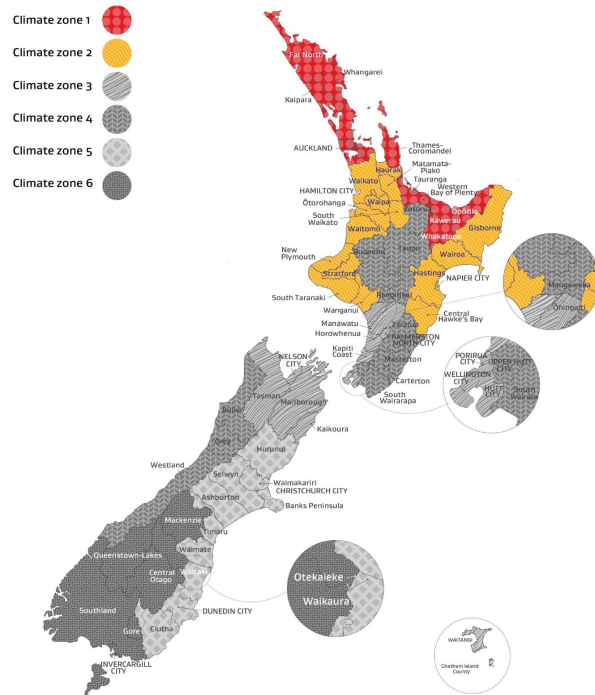
**TABLE 2.1.2.2B: Minimum construction R-values for building elements that do not contain embedded heating systems**

Paragraph 2.1.2.2 b)

Building element	Construction R-values ( $\text{m}^2 \cdot \text{K}/\text{W}$ ) <sup>(1)</sup>	
	Climate zone 1	Climate zone 2
Ground		
Windows and doors <sup>1</sup>	<b>R0.37</b>	<b>R0.37</b>
Skylights	R0.46	R0.46

- H1/AS1 Table E.1.1.1 **does not apply** in this situation.
- Performance values for the windows and doors element of these buildings **must be calculated**.

# Zones 1 & 2, from 2 Nov 2023



**TABLE 2.1.2.2B: Minimum construction R-values for building elements that do not contain embedded heating systems**

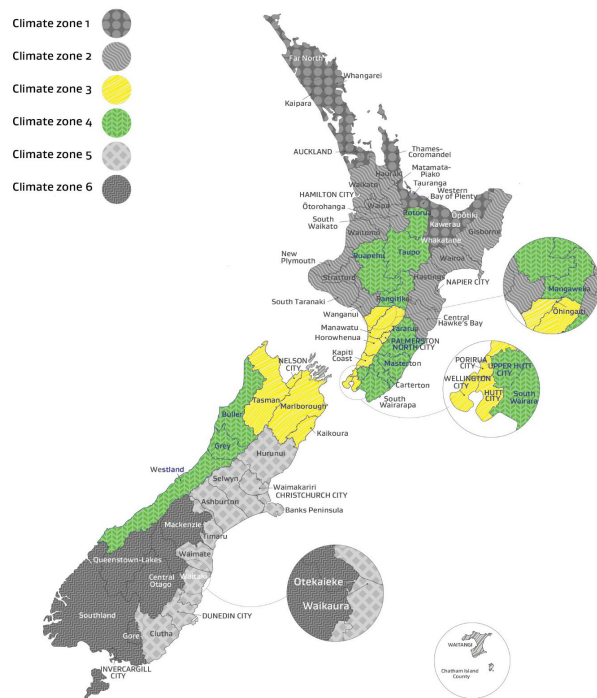
Paragraph 2.1.2.2 b)

Building element	Construction R-values ( $\text{m}^2 \cdot \text{K}/\text{W}$ ) <sup>(1)</sup>	
	Climate zone 1	Climate zone 2
Ground		
Windows and doors <sup>1</sup>	R0.46 <sup>(3)</sup>	R0.46 <sup>(3)</sup>
Skylights	R0.46	R0.46

- H1/AS1 Table E.1.1.1 **does not apply** in this situation.
- Performance values for the windows and doors element of these buildings **must be calculated**.



# Zones 3 & 4, from 3 Nov 2022



**TABLE 2.1.2.2B: Minimum construction R-values for building elements that do not contain embedded heating systems**

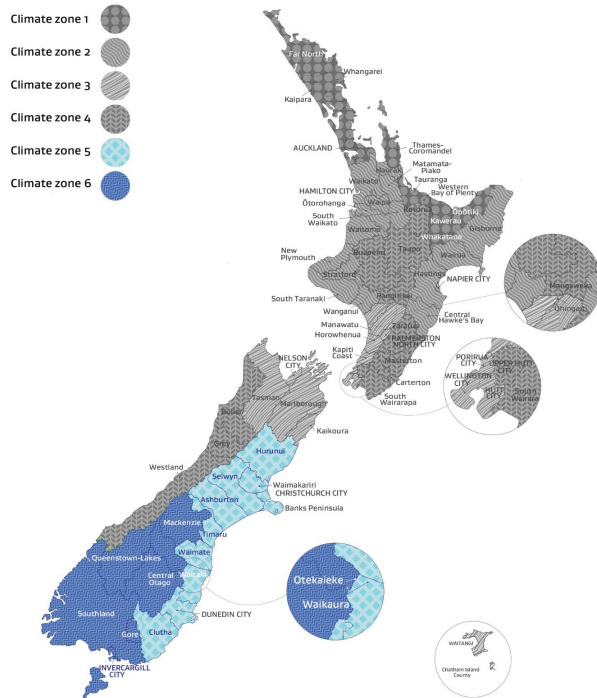
Paragraph 2.1.2.2 b)

Building element	Construction R-values ( $\text{m}^2 \cdot \text{K/W}$ ) <sup>(1)</sup>	
	Climate zone 3	Climate zone 4
Ground		
Windows and doors <sup>1</sup>	R0.46	R0.46
Skylights	R0.54	R0.54

- H1/AS1 Table E.1.1.1 **does not apply** in this situation.
- Performance values for the windows and doors element of these buildings **must be calculated**.



# Zones 5 & 6, from 3 Nov 2022



**TABLE 2.1.2.2B: Minimum construction R-values for building elements that do not contain embedded heating systems**

Paragraph 2.1.2.2 b)

Building element	Construction R-values ( $\text{m}^2 \cdot \text{K/W}$ ) <sup>(1)</sup>	
	Climate zone 5	Climate zone 6
Ground		
Windows and doors <sup>1</sup>	R0.50	R0.50
Skylights	R0.62	R0.62

- H1/AS1 Table E.1.1.1 **does not apply** in this situation.
- Performance values for the windows and doors element of these buildings **must be calculated**.

# Further resources

- If you'd like further information or support from the Window & Glass Association, please [contact us](#).
- Or find more resources on the [Association's website](#). The *Industry Resources and Standards page* will be regularly updated over the coming months.
- All official documentation relating to H1 can be found at MBIE's website [here](#).

## Glossary of terms

- **Climate Zone** – One of six climate zones in New Zealand (as identified in the requirements) that dictate when and what R-values are required based on a building's physical address.
- **H1** – The Clause of the Building Code covering energy efficiency of buildings, specifically insulation requirements.
- **H1/AS1 and H1/VM1** – These documents cover the compliance pathways via either Acceptable Solutions or a Verification Method.
- **Table E.1.1.1** – provides thermal performance information on window and glazing combinations for the Schedule Method