

## **Building Amendment Regulations (No 2) 2007**

### **Preamble**

At Wellington this 13th day of August 2007

Pursuant to section 400 of the Building Act 2004, Her Excellency the Administrator of the Government, acting on the advice and with the consent of the Executive Council, and on the recommendation of the Minister (as defined by section 7 of that Act) made, as required by section 403(2) of that Act, after he or she became satisfied that the chief executive (as so defined) has consulted in accordance with section 403(3) and (4) of that Act, makes the following regulations.

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- 1 Title**  
These regulations are the Building Amendment Regulations (No 2) 2007.

**2 Commencement**

- (1) These regulations (other than regulations 6 and 7) come into force on 31 October 2007.
- (2) Regulation 6 comes into force on 30 June 2008.
- (3) Regulation 7 comes into force on 30 September 2008.

**3 Principal regulations amended**

These regulations amend the Building Regulations 1992, regulation 3 and Schedule 1 of which continue in force in accordance with—

- (a) section 415(2)(a) of the Building Act 2004; and
- (b) regulation 8(2)(a) of the Building (Forms) Regulations 2004.

**4 Interpretation**

- (1) Clause A2 of Schedule 1 is amended by revoking the definition of **building performance index** and substituting the following definition:

“**building performance index (BPI)**, in relation to a *building*, means the *heating energy* of the *building* divided by the product of the *heating degrees total* and the sum of the *floor area* and the *total wall area*, and so is calculated in accordance with the following formula”

$$\text{BPI} = \frac{\text{heating energy}}{\text{heating degrees total} \times (\text{floor area} + \text{total wall area})}$$

- (2) Clause A2 of Schedule 1 is amended by inserting the following definitions in their appropriate alphabetical order:

“**approved temperature data** means the temperature data contained in A I Tomlinson and J Sansom, *Temperature Normals for New Zealand for the period 1961 to 1990* (NIWA, ISBN 0478083343)

“**climate zone 1** means—

- “(a) all areas that at the close of 30 October 2007 were within the district of one of the following territorial authorities:
  - “(i) Far North District Council:
  - “(ii) Whangarei District Council:
  - “(iii) Kaipara District Council:
  - “(iv) Rodney District Council:
  - “(v) Auckland City Council:

- “(vi) North Shore City Council:
  - “(vii) Waitakere City Council:
  - “(viii) Manukau City Council:
  - “(ix) Papakura District Council:
  - “(x) Franklin District Council:
  - “(xi) Thames-Coromandel District Council; and
  - “(b) all areas in those islands situated in the South Pacific Ocean lying between the 177th and 180th degrees of west longitude and between the 29th and 32nd parallels of south latitude, commonly known as the Kermadec Group; and
  - “(c) all areas in other land territories, islands, and islets lying north of the 42nd parallel of south latitude and within the internal waters of New Zealand (as defined by section 4 of the Territorial Sea, Contiguous Zone, and Exclusive Economic Zone Act 1977)
- “**climate zone 2** means all areas that at the close of 30 October 2007—
- “(a) were in any land territories, islands, and islets lying within the internal waters of New Zealand (as defined by section 4 of the Territorial Sea, Contiguous Zone, and Exclusive Economic Zone Act 1977); and
  - “(b) did not fall within *climate zone 1* or *climate zone 3*
- “**climate zone 3** means—
- “(a) all areas in the North Island that at the close of 30 October 2007 were within the districts of one of the following territorial authorities:
    - “(i) Taupo District Council:
    - “(ii) Ruapehu District Council; and
  - “(b) all areas north of 39°50' south latitude that at the close of 30 October 2007 were within the district of the Rangitikei District Council; and
  - “(c) all areas in the South Island; and
  - “(d) the Chatham Islands, Stewart Island, and all other land territories, islands, and islets lying between the 162nd degree of east longitude and the 173rd degree of west longitude and between the 42nd and 53rd parallels of south latitude
- “**floor area**, in relation to a *building*, means the floor area (expressed in square metres) of all interior spaces used for activities normally associated with domestic living

“**heating degrees**, in relation to a location and a heating month, means the degrees obtained by subtracting from a base temperature of 14°C the mean (calculated using the approved temperature data) of the outdoor temperatures at that location during that month

“**heating degrees total**, in relation to a location and a year, means whichever is the greater of the following

“(a) the value of 12; and

“(b) the sum of all the heating degrees (calculated using the approved temperature data) for all of the heating months of the year

“**heating energy**, in relation to a *building*, means the energy from a *network utility operator* or a depletable resource (expressed in kilowatt-hours, and calculated using the Building Research Association of New Zealand’s *ALF 3*, The ‘Annual Loss Factor Method’, A design tool for energy efficient houses (3rd edition, April 2000) or some other method that can be correlated with that manual) needed to maintain the building at all times within a year at a constant internal temperature under the following standard conditions

“(a) a continuous temperature of 20°C throughout the building:

“(b) an air change rate of 1 change per hour or the actual air leakage rate, whichever is the greater:

“(c) a heat emission contribution arising from internal heat sources for any period in the year of 1000 kilowatt-hours for the first 50 m<sup>2</sup> of *floor area*, and 10 kilowatt-hours for every additional square metre of *floor area*:

“(d) no allowance for—

“(i) carpets; or

“(ii) blinds, curtains, or drapes, on windows:

“(e) windows to have a shading coefficient of 0.6 (made up of 0.8 for windows and recesses and 0.75 for site shading)

“**heating month**, in relation to a location, means a month in which a base temperature of 14°C is greater than the mean (calculated using the approved temperature data) of the outdoor temperatures at that location during that month

“**old measure building performance index**, in relation to a *building*, means the energy from a *network utility operator* or a depletable resource (measured in kilowatt-hours per square metre of *floor area* and per *degree-day*, and calculated using the Building Research Association of New Zealand’s Annual Loss Factor Design Manual 1990 or

some other method that can be correlated with that manual) needed to maintain the *building* at a constant internal temperature for the period from 1 May to the close of 31 August under the following standard conditions

- “(a) a continuous temperature of 20°C throughout the *building*;
- “(b) an air change rate of 1 change per hour or the actual air leakage rate, whichever is the greater;
- “(c) a heat emission contribution arising from internal heat sources for that period of 1000 kilowatt-hours for the first 50 m<sup>2</sup> of *floor area*, and 10 kilowatt-hours for every additional square metre of *floor area*;
- “(d) no allowance for—
  - “(i) carpets; or
  - “(ii) blinds, curtains, or drapes, on windows;
- “(e) windows to have a shading coefficient of 0.6 (made up of 0.8 for windows and recesses and 0.75 for site shading)

“**total wall area**, in relation to a *building*, means the sum (expressed in square metres) of the following

- “(a) the *wall area* of the *building*; and
- “(b) the area (expressed in square metres) of all vertical glazing in *external walls* of the *building*

“**wall area**, in relation to a *building*, means the area (expressed in square metres) of internally exposed external walls, including any door openings, of the *building*”

## 5 New clauses H1.3.2A and H1.3.2B of Schedule 1 substituted

Clause H1.3.2 of Schedule 1 and the related limit on application are revoked and the following clauses and limit on application substituted:

**H1.3.2A** *Buildings* must be constructed to ensure that,— Performance H1.3.2A applies only to *Housing*.

- (a) if they are *buildings* in *climate zone 3*, their *building performance index* does not exceed 1.55; and

(b) if they are *buildings* in *climate zone 1* or in *climate zone 2* and are in a warm location, their old measure *building performance index* does not exceed 0.13; and

(c) if they are *buildings* in *climate zone 1* or *climate zone 2* and are in a *cool location*, their *old measure building performance index* does not exceed 0.12.

**H1.3.2B** For the purposes of performance H1.3.2A, a *building* partly in *climate zone 3* and partly in *climate zone 2* must be treated as if it were a building in *climate zone 2*.

**6 New clauses H1.3.2C and H1.3.2D of Schedule 1 substituted**

Clauses H1.3.2A and H1.3.2B of Schedule 1 and the related limit on application are revoked and the following clauses and limit on application substituted:

**H1.3.2C** *Buildings* must be constructed to ensure that,— Performance H1.3.2C applies only to *Housing*.

(a) if they are *buildings* in *climate zone 2* or *climate zone 3*, their *building performance index* does not exceed 1.55; and

(b) if they are *buildings* in *climate zone 1* and are in a *warm location*, their *old measure building performance index* does not exceed 0.13; and

(c) if they are *buildings* in *climate zone 1* and are in a *cool location*, their *old measure building performance index* does not exceed 0.12.

**H1.3.2D** For the purpose of performance H1.3.2C, a *building* partly in *climate zone 2* and partly in *climate zone 1* must be treated as if it were a building in *climate zone 1*.

**7 New clause H1.3.2E of Schedule 1 substituted**

- (1) Clause H1.3.2C and H1.3.2D of Schedule 1 and the related limit on application are revoked and the following clause and limit on application substituted:

**H1.3.2E** *Buildings* must be constructed to ensure that their *building performance index* does not exceed 1.55. Performance H1.3.2E applies only to *Housing*.

- (2) Clause A2 is consequentially amended by revoking the definitions of **climate zone 1**, **climate zone 2**, **climate zone 3**, **cool location**, **degree-day**, **degree-day total**, **old measure building performance index**, and **warm location**.

**8 Saving: building work not affected by amendments**

- (1) The building code set out in Schedule 1 of the principal regulations applies to the following building work as if these regulations had not been made:
- (a) building work that is in climate zone 1, climate zone 2, or climate zone 3, is building work for which a building consent is required, and is covered by an application—
    - (i) for a building consent or a certificate of acceptance; and
    - (ii) made before the close of 30 October 2007:
  - (b) building work that is in climate zone 1 or climate zone 2, is building work for which a building consent is required, and is covered by an application—
    - (i) for a building consent or a certificate of acceptance; and
    - (ii) made after the close of 30 October 2007 and before the close of 29 June 2008:
  - (c) building work that is in climate zone 1, is building work for which a building consent is required, and is covered by an application—
    - (i) for a building consent or a certificate of acceptance; and
    - (ii) made after the close of 29 June 2008 and before the close of 29 September 2008.
- (2) For the purpose of subclause (1)(b), building work partly in climate zone 3 and partly in climate zone 2 must be treated as if it were building work in climate zone 2.
- (3) For the purpose of subclause (1)(c), building work partly in climate zone 2 and partly in climate zone 1 must be treated as if it were building work in climate zone 1.

Diane Morcom,  
Clerk of the Executive Council.

**Explanatory note**

*This note is not part of the regulations, but is intended to indicate their general effect.*

These regulations, most of which come into force on 31 October 2007, amend the Building Code set out in Schedule 1 of the Building

Regulations 1992 to increase the thermal resistance (insulation) performance requirements for housing. The objective of those requirements is to facilitate efficient use of energy. The new requirements are introduced in stages, and apply to the following climate zones on and after the following dates:

- 31 October 2007—climate zone 3 (the South Island, the Taupo and Ruapehu Districts, the Rangitikei District from just north of the 40th parallel, the Chatham Islands, Stewart Island, and other land territories, islands, and islets south of the 42nd parallel):
- 30 June 2008—climate zone 2 (land territories, islands, and islets within the internal waters of New Zealand but not in climate zone 3 or climate zone 1):
- 30 September 2008—climate zone 1 (specified Northland, Auckland, and Thames-Coromandel districts in the North Island, the Kermadec Group of Islands, and other land territories, islands, and islets north of the 42nd parallel).

Regulation 4(1) amends clause A2 by substituting a new definition of building performance index (BPI). The new definition—

- uses an updated annual loss factor design tool (ALF 3); and
- calculates a building's insulation performance by reference not only to its floor area, but also to its total wall area; and
- assesses a building's performance by reference to the mean monthly temperatures in the locality in which it is situated.

Regulation 4(2) inserts in clause A2 new definitions of terms used in calculating a building's building performance index or the building's old measure building performance index (which will still be used, for transitional purposes, until 30 September 2008).

Regulations 5 to 7 substitute new clauses H1.3.2A, H1.3.2C, and H1.3.2E, and related limits on application. These new clauses require housing to achieve, in the staged way outlined above, increased thermal resistance performance requirements. The effect is to require enhanced insulation (for example, double-glazing).

Regulation 8 is a savings provision for building work that requires a building consent and is covered by an application, made before the new requirements commence, for a building consent or a certificate of acceptance. The Building Code continues to apply to that building work as if these regulations had not been made.

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These regulations do not arise from the report on the review of the Building Code required by section 451 of the Building Act 2004.

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