BUILDING PERFORMANCE

B2

B2 Durability

Acceptable Solution B2/AS1

Durability provisions for building elements

THIRD EDITION | EFFECTIVE 28 JULY 2025

MINISTRY OF BUSINESS, INNOVATION & EMPLOYMENT
HĪKINA WHAKATUTUKI

Te Kāwanatanga o Aotearoa
New Zealand Government

Preface

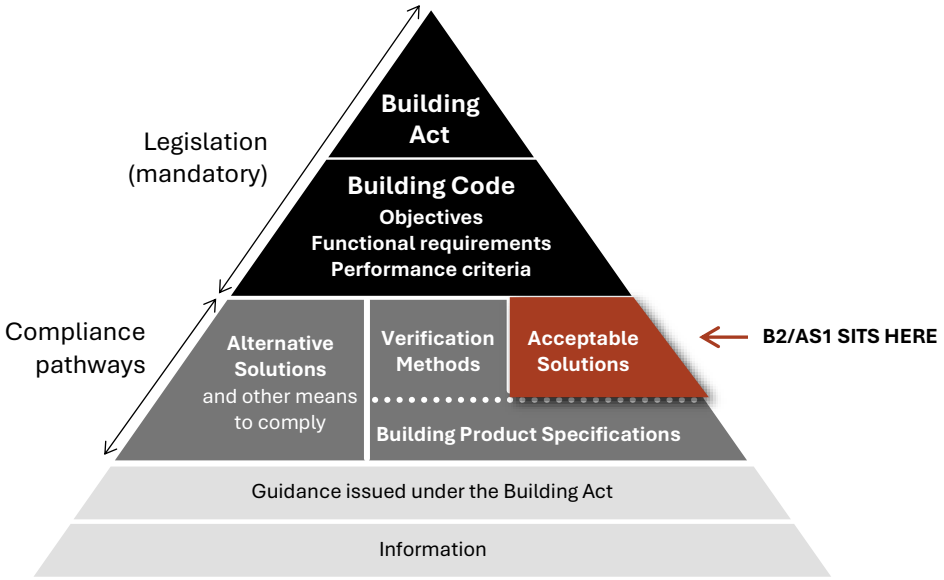
Document status

This document (B2/AS1) is an acceptable solution issued under section 22 (1) of the Building Act 2004 and is effective on 28 July 2025. It does not apply to building consent applications submitted before 28 July 2025. The previous Acceptable Solution B2/AS1 Second Edition, as amended, can be used to show compliance until 31 July 2026 and can be used for building consent applications submitted before 1 August 2026.

Building Code regulatory system

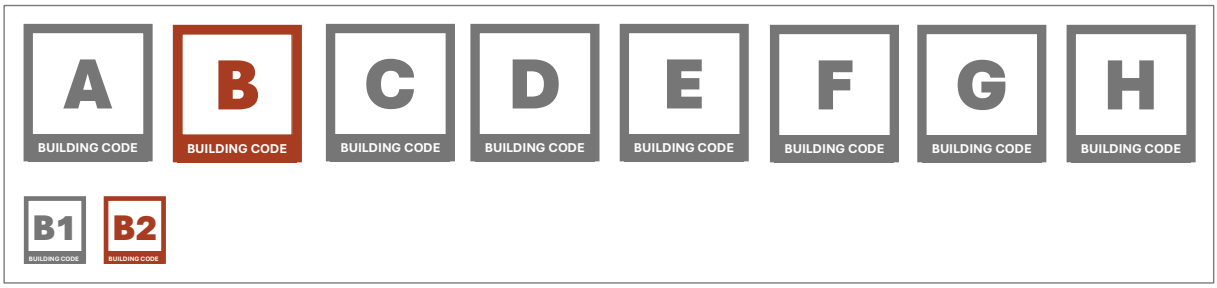
Each acceptable solution outlines the provisions of the Building Code that it relates to. Complying with an acceptable solution or verification method are ways of complying with that part of the Building Code. Other options for establishing compliance are listed in section 19 of the Building Act.

Schematic of the Building Code system



A building design must take into account all parts of the Building Code. The Building Code is located in Schedule 1 of the Building Regulations 1992 and available online at www.legislation.govt.nz.

The part of the Building Code that this acceptable solution relates to is clause B2 Durability. Information on the scope of this document is provided in Part 1. General.



Further information about the Building Code, including objectives, functional requirements, performance criteria, acceptable solutions, and verification methods, is available at www.building.govt.nz.

Main changes in this version and features of this document

Main changes in this version

This acceptable solution is the third edition of B2/AS1. The main changes from the previous version are:

- The document has been published in a standalone format and the layout has been revised to improve clarity. This includes using a common structure for headings and text throughout the acceptable solution.
- Minor amendments have been made to correct typos, grammar, cross-references, punctuation, wording, and formatting of the document. This includes changes to headings, paragraphs, tables and figures, table and figure notes, and definitions. These amendments do not affect the level of performance required in the document but may assist in the interpretation of the requirements.
- A title has been provided for the document to reflect the scope of acceptable solution. Additional information on the document and its scope is provided in Part 1. General.
- The acceptable solution now refers to the Building Product Specifications for timber treatment in Paragraph 3.3.1.1. More information on the Building Product Specifications is provided in Subsection 1.2.1.
- References have been revised to reflect the standards and other documents referenced in this acceptable solution in Appendix A.
- Definitions have been revised to reflect the terms used in this acceptable solution in Appendix B.

People using this document should check for amendments on a regular basis. The Ministry of Business, Innovation and Employment may amend any part of any acceptable solution or verification method at any time. Up-to-date versions of acceptable solutions or verification methods are available from www.building.govt.nz.

Features of this document

- For the purposes of Building Code compliance, the standards and documents referenced in this acceptable solution must be the editions, along with their specific amendments listed in Appendix A.
- Words in *italic* are defined at the end of this document in Appendix B.
- Hyperlinks are provided to cross-references within this document and to external websites and appear with a blue underline.
- Appendices to this acceptable solution are part of, and have equal status to, the acceptable solution. Figures are informative only and the wording of the paragraphs takes precedence. Text boxes headed ‘COMMENT’ occur throughout this document and are for guidance purposes only.
- A consistent number system has been used throughout this document. The first number indicates the Part of the document; the second indicates the Section in the Part; the third is the Subsection; and the fourth is the Paragraph. This structure is illustrated as follows:

2	Part
2.5	Section
2.5.3	Subsection
2.5.3.1	Paragraph
2.5.3.1(a)	Paragraph (as a portion of the relevant paragraph)
2.5.3.1(a)(i)	Paragraph (as a portion of the relevant paragraph)

Contents

Part 1. General

1.1 Introduction

1.1.1 Scope of this document

1.1.1.1 This acceptable solution applies to materials and components required to satisfy the performances specified in other clauses of the Building Code.

> COMMENT: All *building work* shall comply with the Building Code. This means that *building elements*, both individually and as part of a system, shall meet all the performances required by the applicable Building Code clauses and shall continue to do so for the required durability period.
>
> In some cases, *building elements* such as decorative coatings and trim are not required to satisfy a Building Code performance criterion. Such *building elements* will then have no B2 Durability requirement. However, where a *building element* serves two purposes, only one of which must satisfy the Building Code, it shall have the durability appropriate to its location and use. For example, a decorative finish applied to a *building element* required by the Building Code to have an impervious easily cleaned surface will need to satisfy the 5 year durability performance.

1.1.2 Items outside the scope of this document

1.1.2.1 In special circumstances and where *building elements* are called up but are used outside the scope of the application in the acceptable solution or verification method, durability shall be verified by using Verification Method B2/VM1.

> COMMENT: It is not practicable within the acceptable solutions and verification methods to cover all possible combinations, uses, and conditions that may be applied to a *building element*.

1.1.3 Compliance pathway

1.1.3.1 This acceptable solution is one option that provides a means of establishing compliance with the functional requirement and the performance criteria in Building Code clause B2 Durability. It can be used to demonstrate compliance with B2.2, B2.3.1, and B2.3.2.

1.1.3.2 If this acceptable solution cannot be followed in full, use Verification Method B2/VM1 or an alternative means to demonstrate compliance.

1.2 Using this acceptable solution

1.2.1 Building Product Specifications

1.2.1.1 This acceptable solution refers to the Building Product Specifications for *building* product standards and specifications in relation to their manufacture, fabrication, testing, quality control, physical properties, performance, installation, and/or maintenance

1.2.1.2 The Building Product Specifications cannot be used in isolation to demonstrate compliance with any requirements of the Building Code. To comply with B1/AS1, *building* products conforming to the Building Product Specifications must be used with the scope, limitations, and other applicable requirements set out in this acceptable solution.

Part 2. Durability of building elements

2.1 Evaluation of building elements

2.1.1 Assessing required durability

2.1.1.1 The evaluation of *building elements* shall be based on the following concepts:

a) difficult to access or replace – applies to *building elements* where access or replacement involves significant removal or alteration of other *building elements*. Examples are works involving the removal of masonry or concrete *construction*, or structural elements or repair of buried tanking membranes. A 50 year durability is required; and

b) moderately difficult to access or replace – applies to *building elements* where access or replacement involves the removal or alteration of other *building elements*. Examples are the replacement of services reticulation in wall cavities and skillion *roofs*, or of plant and hotwater cylinders built into *roof* spaces without adequately sized access openings. A 15 year durability is required; and

c) easy to access and replace – applies to *building elements* where access or replacement involves little alteration or removal of other *building elements*. Examples are linings, trim, light fittings, hotwater cylinder elements and door hardware, or where specific provision for removal has been made. A 5 year durability is required; and

d) failure to comply with the Building Code would go undetected during both normal use and maintenance of the *building* – applies where the *building elements* are hidden from view with no provision for inspection access, and failure would not be apparent until significant damage had occurred to other *building elements*. Examples are building paper behind a masonry veneer *cladding*, and insulation in a skillion *roof*. A 50 year durability is required; and

e) failure to comply with the Building Code would go undetected during normal use of the *building* but would be easily detected during normal maintenance – applies where normal maintenance will identify faults unlikely to be observed by *building* occupants until significant damage has occurred. Examples are degradation of exterior *claddings* on *roofs* and *walls*, sealant filled joints, flashings, services with specific provision for inspection access, chimneys and flues. A 15 year durability is required; and

f) failure to comply with the Building Code would be easily detected during normal use of the *building* – applies where the failure is obvious to the *building* occupants. Examples are exposed *building elements* which are damaged or inoperative such as protective finishes, essential signs, sticking doors, slip resistant surfaces, stair treads and surface-run *building* services equipment. A 5 year durability is required.

2.1.1.2 Figure 2.1.1.2 provides a means of assessing the durability requirements for *building elements*.

2.1.1.3 Appendix C. Durability requirements for nominated building elements can be used to establish durability requirements of nominated *building elements*.

Figure 2.1.1.2: Assessment of durability requirements

Paragraph 2.1.1.2

Step 1. Assess other clauses of the Building Code	a) If the *building element* is **not** required to satisfy other clauses of the Building Code, there is no durability requirement. b) If the *building element* is required to satisfy other clauses, continue to Step 2.
Step 2. Assess structural stability	a) If the *building element* provides structural stability to the *building*, then the durability requirement is 50 years. b) If the *building element* does not provide structural stability, continue to Step 3.
Step 3. Assess the difficulty to access or replace	If *building element* is difficult to access or replace, then the durability requirement is 50 years. Otherwise, continue to Step 4.
Step 4. Assess the difficulty to detect failure	a) If the failure of the *building element* would go undetected in both normal use and maintenance of the *building,* then the durability requirement is 50 years. b) If the failure would go undetected during normal use of the *building* but would be easily detected during normal maintenance, or if the *building element* is moderately difficult to access or replace (see Step 3), then the durability requirement is 15 years. Otherwise, continue to Step 5.
Step 5. Remaining cases	If the *building element* is easy to access and replace and failure of the *building element* would be easily detected during normal use of the *building*, then the durability requirement is 5 years.

Note: (1) *Building elements* are not required to satisfy a durability requirement that exceeds the *specified intended life* of the *building*.

2.2 Maintenance

2.2.1 Normal maintenance

2.2.1.1 Normal maintenance is that work generally recognised as necessary to achieve the expected durability for a given *building element*. The extent and nature of that maintenance will depend on the material, or system, its geographical location and position within the *building*, and can involve the replacement of components subject to accelerated wear.

2.2.1.2 It is the responsibility of the *person* specifying the *building element* to determine normal maintenance requirements. These may be based on the manufacturer's recommendations and

may also include periodic inspections of elements not readily observable without a specific effort (e.g. access to roof or subfloor spaces).

2.2.1.3 Basic normal maintenance tasks shall include but not be limited to:

a) where applicable, following manufacturers' maintenance recommendations; and
b) washing down surfaces, particularly exterior *building elements* subject to wind driven salt spray; and
c) re-coating interior and exterior protective finishes; and
d) replacing sealant, seals and gaskets in joints; and
e) replacing valves, washers and similar high wear components in easily accessed service equipment and other *building elements*; and
f) Cleaning and replacing filters in building services systems; and
g) the regular servicing of boilers, cooling towers, lifts, escalators, emergency lighting and *fire* protection equipment; and
h) the maintenance of signs for access, *escape routes*, emergency equipment and *hazardous* areas.

COMMENT: Maintenance does not include such things as upgrading *building element*s to meet the demands of new technology or the increased environmental expectations of users.

2.2.2 Scheduled maintenance

2.2.2.1 Scheduled maintenance comprises the inspection, maintenance and reporting procedures for *building elements* required to have a compliance schedule in terms of section 100 of the Building Act. By those procedures the *building elements* concerned are effectively deemed to have a durability of the life of the building because they are required to perform as designed at all times. The relevant maintenance procedures may include total replacement.

Part 3. Generic building elements

3.1 Concrete

3.1.1 Concrete building elements

3.1.1.1 NZS 3101.1 Section 3 can be used to meet the durability requirements of concrete *building elements* subject to the following modification:

a) "Provisions in this Standard that are in non-specific or unquantified terms do not form part of the Acceptable Solution. Non-specific or unquantified terms include, but are not limited to, special studies, manufacturer's advice and references to methods that are appropriate, adequate, suitable, relevant, satisfactory, acceptable, applicable, or the like. Such provisions must be treated as the basis of an alternative solution proposal."

3.2 Steel

3.2.1 Steel structures and components

3.2.1.1 SNZ TS 3404 can be used to meet the durability requirements of steel *building elements* within the scope of the standard.

3.2.2 Light steel framing

3.2.2.1 Clause 3 of NASH Standard Part 2 can be used to meet the durability requirements of light steel framing *building elements* used within the standard's scope and subject to the following modification of the standard:

a) replace clause 3.1 with:

"3.1 GENERAL
Steel framing, brackets and fixings used for wall framing, roof framing, and mid floors shall be within a closed building envelope that provides at least the same level of performance as a building envelope that conforms to Acceptable Solution E2AS1.
Eaves shall be lined."

3.3 Timber and wood-based building products

3.3.1 Timber treatment

3.3.1.1 The durability requirements of timber and wood-based *building elements* can be satisfied by using:

a) Section 3.6.1 of the Building Product Specifications where durability of not less than 50 years is required; and

b) Section 3.6.2 of the Building Specifications where a 15 year durability is required; and

c) NZS 3604, with reference to NZS 3602 (and NZS 3640), as modified by Sections 3.6.1 and 3.6.2 of the Building Product Specifications.

3.3.2 Untreated Douglas fir

3.3.2.1 Preservative-free (untreated) solid Douglas fir framing can be used for *roof* members protected from the weather, floor members protected from the weather and not exposed to ground atmosphere, and for internal and external wall framing protected from the weather provided that the *building* meets all of the following requirements:

a) is a stand-alone, single *household unit* of no more than two storeys (as defined in NZS 3604) and designed and *constructed* to NZS 3604; and

b) is situated in *wind zones* no greater than High as defined in NZS 3604; and

c) has an envelope complexity of no greater than medium risk and a deck design no greater than low risk as defined by the risk matrix in Acceptable Solution E2/AS1; and

d) has drained and vented cavities complying with Acceptable Solution E2/AS1 behind all claddings; and

e) uses *roof* and *wall cladding* systems and details conforming with Acceptable Solution E2/AS1; and

f) has a risk matrix score of no more than 6 on any *external wall* face as defined in E2/AS1; and

g) has a simple pitched *roof* incorporating hips, valleys, gables, or mono pitches, all draining directly to external gutters; but excluding internal or secret gutters, concealed gutters behind fascias, or any *roof* element finishing within the boundaries formed by *external walls* (for example, the lower ends of aprons, chimneys, dormers, clerestories, box windows, and so forth); and

h) has a *roof* slope of not less than 10°; and

i) if it has a skillion *roof*, then the roofing material shall be corrugated iron or concrete, metal or clay tiles to ensure adequate ventilation; and

j) has eaves 450 mm wide or greater for single storey houses, and eaves 600 mm or greater for two storey houses.

COMMENT: This paragraph provides an option for those who do not want to use chemically treated timber in their home. In the case of commercial or other *building* categories, the use of untreated Douglas fir to comply with the Building Code is outside the scope of this acceptable solution and needs to be considered on a case-by-case basis.

3.4 Other building elements

3.4.1 Solid plastering

3.4.1.1 NZS 4251.1 can be used to meet the durability requirements of cement plasters for walls, ceilings and soffits within its scope.

3.4.2 Earth buildings

3.4.2.1 NZS 4297 and NZS 4299 can be used to meet the durability requirements of earth *buildings* within their scope.

3.4.3 Insulating glass units

3.4.3.1 NZS 4223.2 can be used to meet the durability requirements of insulating glass units, within its scope and subject to the following modification of the standard:

a) replace clause 5.3 with:

"5.3 Marking
Insulating glass units shall be permanently and clearly marked. As a minimum, marking shall include the following:
(a) The name or registered trademark of the manufacturer or supplier;
(b) The date of manufacture (use the year as the minimum), and
(c) Complies with NZS 4223.2:2016.
Marking shall be visible after the IGU has been installed, and must be legible and durable for the life of the unit.
NOTE -
(1) Etching and permanent laser marking are acceptable means for marking insulating glass units. Externally affixed adhesive labels are not acceptable.
(2) Additional marking may be used by the manufacturer."

Appendix A. References

For the purposes of Building Code compliance, the standards and documents referenced in this acceptable solution must be the editions, along with their specific amendments, listed below.

Standards New Zealand		**Where quoted**
NZS 3101.1:2006	Concrete structures standard – Part 1: The design of concrete structures, Amendment 1, 2, 3	3.1.1.1
SNZ TS 3404:2018	Durability requirements for steel structures and components	3.2.1.1
NZS 3602:2003	Timber and wood-based products for use in building	3.3.1.1(c)
NZS 3604:2011	Timber framed buildings	3.3.1.1(c), 3.3.2.1, Definitions
NZS 3640:2003	Chemical Preservation of round and sawn timber Amendments 1, 2, 3, 4, 5	3.3.1.1(c)
NZS 4223.2:2016	Glazing in buildings – Part 2. Insulating glass units	3.4.3.1
NZS 4251.1:2007	Solid plastering – Part 1. Cement plaster for walls, ceilings and soffits	3.4.1.1
NZS 4297:1998	Engineering design for earth buildings	3.4.2.1
NZS 4299:1998	Earth buildings not requiring specific design Amendment 1	3.4.2.1

These standards can be accessed from www.standards.govt.nz.

The National Association of Steel Framed Housing Inc. (NASH)	**Where quoted**
NASH Standard Part 2:May 2019 Light Steel Framed Buildings	3.2.2.1

This standard can be accessed from www.nashnz.org.nz.

Appendix B. Definitions

These definitions are specific to this acceptable solution. Other defined terms italicised within the definitions are provided in clause A2 of the Building Code.

Term	Definition
Adequate	Adequate to achieve the objectives of the Building Code.
Baluster	A post providing the support for the top and bottom rails of a barrier.
Balustrade	The infill parts of a barrier (typically between floor and top rail).
Building	Has the meaning given to it by sections 8 and 9 of the Building Act 2004.
Building element	Any structural and non-structural component or assembly incorporated into or associated with a *building*. Included are *fixtures*, services, *drains*, permanent mechanical installations for access, glazing, partitions, ceilings and temporary supports.
Cladding	The exterior weather-resistant surface of a building.
Construct	In relation to a *building*, includes to design, build, erect, prefabricate, and relocate the *building*; and construction has a corresponding meaning.
Damp-proof course (DPC)	A narrow strip (generally up to 300 mm wide) of durable vapour barrier placed between *building elements* to prevent the passage of moisture from one element to another.
Damp-proof membrane (DPM)	A sheet material, coating or *vapour barrier*, having a low water vapour transmission, and used to minimise water and water vapour penetration into *buildings*. It is usually applied against concrete in contact with the ground and is also known as a concrete *underlay*.
External wall	Any vertical exterior face of a *building* consisting of *primary* and/or *secondary elements* intended to provide protection against the outdoor environment.
Fixture	An article intended to remain permanently attached to and form part of a *building*.
Flue	The passage through which the products of combustion are conveyed to the outside.
Handrail	A rail to provide support to, or assist with the movement of a *person*.
Hazardous	Creating an unreasonable risk to people of bodily injury or deterioration of health.
Household unit	a) means a *building* or group of *buildings*, or part of a *building* or group of *buildings*, that is— i) used, or intended to be used, only or mainly for residential purposes; and ii) occupied, or intended to be occupied, exclusively as the home or residence of not more than 1 household; but b) does not include a hostel, boarding house, or other specialised accommodation.

Definitions

Term	Definition
Intended use	In relation to a *building* – a) includes any or all of the following: i) any reasonably foreseeable occasional use that is not incompatible with the intended use; ii) normal maintenance; ii) activities undertaken in response to *fire* or any other reasonably foreseeable emergency; but b) does not include any other maintenance and repairs or rebuilding.
Person	includes the Crown, a corporation sole, and also a body of persons, whether corporate or unincorporated.
Primary element	A *building element* providing the basic loadbearing capacity to the structure, and which if affected by *fire* may initiate instability or premature structural collapse.
Roof	That part of a *building* having its upper surface exposed to the outside and at an angle of 60° or less to the horizontal.
Secondary element	A *building element* not providing load bearing capacity to the structure and if affected by *fire*, instability or collapse of the *building* structure will not occur.
Specified intended life	Has the meaning given to it by section 113(3) of the Building Act 2004. Section 113(3) states: "(3) In subsection (2), specified intended life, in relation to a building, means the period of time, as stated in an application for a building consent or in the consent itself, for which the building is proposed to be used for its intended use."
Vapour barrier	Sheet material or coating having a low water-vapour transmission, and used to minimise water-vapour penetration in buildings. Vapour barriers are sometimes referred to as *damp-proof membranes*.
Wall	Refer to **External wall**.
Water heater	A device for heating water.
Wind zone	Categorisation of wind force experienced on a particular site as determined in NZS 3604 Section 5. COMMENT: Maximum ultimate limit state speeds are: Low *wind zone* = wind speed of 32 m/s Medium *wind zone* = wind speed of 37 m/s High *wind zone* = wind speed of 44 m/s Very High *wind zone* = wind speed of 50 m/s Extra High *wind zone* = wind speed of 55 m/s. *Specific design* is required for wind speeds greater than 55 m/s.

Appendix C. Durability requirements for nominated building elements

C.1 Requirements based on situation and function

C.1.1 50, 15, and 5 year durability

C.1.1.1 Durability requirements for different *building elements* are provided in Table C.1.1.1.

> COMMENT: Clause B2.3.2 requires that all hidden elements have at least the same durability as that of the element that covers it (that is, they must have the same expected life) which may be more than the requirement in clause B2.3.1. For example, a brick tie has a requirement of not less than 50 years in Table C.1.1.1 while *cladding* has a 15 year requirement. This is because the brick veneer that hides the brick tie has an expected durability of 50 years or more.

Table C.1.1.1: Durability requirements of nominated building elements (continued on following pages)

Paragraph C.1.1.1

Building element	Component	Situation or function	≥ 50 years	≥ 15 years	≥ 5 years
Acoustic elements	All	Covered by or integral with structural elements or bracing panels	✓		
		Behind non-structural *claddings* or linings	✓		
		Surface mounted		✓	
Balustrade	All	Refer to safety barrier			
Battens (Cavity battens for wall *cladding* systems)	Battens	Where *wall cladding* durability requirement is 15 years		✓	
		Where *wall cladding* provides bracing	✓		
Bracing elements	All including the bracing element and fixings	All situations	✓		
Building wraps (see also wind barriers)	Roof underlay	Access requires removal of roof tiles or structural elements	✓		
		Where *roof cladding* durability requirement is 15 years		✓	
	Wall underlay	Where *wall cladding* durability requirement is not less than 50 years (for example, those providing bracing, or where the *cladding* is very durable such as brick veneer)	✓		
		Where *wall cladding* durability requirement is 15 years		✓	
	Wind barriers	Providing bracing (rigid wind barriers)	✓		
		Not providing bracing (non-rigid wind barriers)		✓	

Durability requirements for nominated building elements

Table C.1.1.1: Durability requirements of nominated building elements (continued from previous page)

Paragraph C.1.1.1

Building element	Component	Situation or function	≥ 50 years	≥ 15 years	≥ 5 years
Cladding (including jointing systems)	*Roof*	Structural	✓		
		Non-structural		✓	
	Wall	Structural including bracing elements	✓		
		Non-structural		✓	
Curtain walling	Frames and fixings	All situations	✓		
	Gaskets, glazing or panelling, and beads	All situations		✓	
	Internal hardware	All situations			✓
Damp-proof course (DPC)	*DPCs* under timber members	Under structural framing	✓		
		Under non-structural framing		✓	
Damp-proof membranes (DPM)	Damp-proofing generally	*DPMs* under concrete floor slabs	✓		
		DPMs applied to the top of concrete slabs		✓	
		DPMs behind retaining walls used for landscaping		✓	
		DPMs designed for ready access and replacement		✓	
		DPM behind tiles	(1)	(1)	(1)
	Water-proofing of basements	Tanking, except those designed for ready access	✓		
		Tanking designed for ready access		✓	
Decking (timber)	Decking	Structural (such as bracing diaphragm)	✓		
		Non-structural strip decking		✓	
	Sub-floor structure	All situations	✓		
Demountable partitions	Partitions	All partitions including frame, fixings, and lining			✓
Doors (including frame)	Non-fire rated doors	Internal			✓
		External		✓	
		Furniture and hardware			✓
	Fire rated doors	Internal		✓	
		External		✓	
		Furniture and hardware			✓

Note: (1) Same durability as the tile covering it.

Durability requirements for nominated building elements

Table C.1.1.1: Durability requirements of nominated building elements (continued from previous page)

Paragraph C.1.1.1

Building element	Component	Situation or function	≥ 50 years	≥ 15 years	≥ 5 years
Electrical work	Wiring	Buried in or under concrete slabs or behind structural linings without ducts	✓		
		Concealed behind linings or in complex ducts or conduit, or surface mounted in conduit		✓	
		Wires in easy to access ducts			✓
	Fittings	Concealed and moderately difficult to access or replace	✓		
		Surface mounted			✓
	Ducting or conduit	Difficult to access or replace	✓		
		Moderately difficult to access or replace		✓	
Fire rated walls	All	Structural walls including bracing elements	✓		
		All others		✓	
Fixings	Nails and screws	Used to fix structural or difficult to replace *building elements*	✓		
		Under water-proof membranes	✓		
		Under roofing membranes	✓		
		Used to fix non-structural or moderately difficult to replace *building elements*		✓	
	Bolts	Used to fix *building elements* that are difficult to access or replace or that are structural (including structural elements of decks and barriers)	✓		
		Used to fix non-structural or moderately difficult to replace *building elements*		✓	
	Brick ties and fixings	All situations	✓		
	Proprietary fixings	Used to fix structural or difficult to replace *building elements*	✓		
		Used to fix non-structural or moderately difficult to replace *building elements*		✓	
	Adhesives	Used to fix structural or difficult to replace *building elements*	✓		
		Used to fix non-structural or moderately difficult to replace building elements		✓	
	Face fixings	Used to fix accessories, door furniture and hardware			✓

Durability requirements for nominated building elements

Table C.1.1.1: Durability requirements of nominated building elements (continued from previous page)

Paragraph C.1.1.1

Building element	Component	Situation or function	≥ 50 years	≥ 15 years	≥ 5 years
Flashings	Roof, wall, or window	All flashings to roof *cladding*, flues and other roof penetrations		✓	
		Requires the removal of *cladding* above the roof to be replaced	✓		
		Hidden flashings such as behind brick veneer, stucco, or spandrel panels	✓		
		Visible and does not require the removal of the *cladding* to be replaced		✓	
		Requires the removal of the *cladding* to be replaced	✓		
Flooring sheet or strip	All	Floor bracing diaphragm	✓		
		Flooring laid under bottom plates	✓		
		Flooring laid between bottom plates		✓	
Floor coverings	All	Protective or acoustic coverings			✓
Flue systems	All *flue* systems	Those built into the floor, wall, ceiling, or *roof*		✓	
		Those exposed to view or penetrating the floor, wall, ceiling, or *roof* through a sleeve			✓
Framing	All	Refer to wall framing or *roof* framing			
Guttering and downpipes	All	Gutters or downpipes incorporated within the structure (such as downpipes cast into a column or boxed in behind claddings), or secrete gutters (such as hidden verge or valley gutters)	✓		
		Internal or valley gutters, fascia gutters or built-in downpipes		✓	
		External gutters or downpipes			✓
Heating appliances	Solid fuel	Freestanding			✓
		Inbuilt		✓	
	Gas	Freestanding			✓
		Inbuilt		✓	
	Electric	Permanently wired			✓
Insulation	Sub-floor	All situations	✓		
	Walls	All situations	✓		
	Ceiling or roof	Skillion *roof*	✓		
		Accessible ceiling or roof space	✓		

Durability requirements for nominated building elements

Table C.1.1.1: Durability requirements of nominated building elements (continued from previous page)

Paragraph C.1.1.1

Building element	Component	Situation or function	≥ 50 years	≥ 15 years	≥ 5 years
Interior wall linings	All	Structural linings (for example, bracing elements)	✓		
		Shower linings (excluding behind tiled showers)		✓	
		Linings behind tiled showers	(1)	(1)	(1)
		Easy to access and replace			✓
Lintels	Steel angle (brick veneer)	All situations	✓		
	Flat steel	All situations	✓		
Plumbing and piping	Piping and fittings	Cast into concrete	✓		
		Under slabs	✓		
		Installed in a masonry cavity and not ducted or provided with maintenance access	✓		
		Concealed behind wall linings or installed in maintenance ducting		✓	
		Surface mounted and easy to replace			✓
	Valves	Concealed or moderately difficult to replace		✓	
		Surface mounted and easy to replace			✓
	Fixtures	All situations			✓
	Outlets	All situations			✓
Protective coatings	All	Paint systems that are difficult to access or replace	✓		
		Roofing membranes		✓	
		Paint systems that are easy to access and replace			✓
Roof framing	All Including trusses, purlins, tile battens, and bracing members		✓		
Roofing tile battens	All	All situations	✓		
Safety barriers (*balustrade*, *baluster*, and *handrail*)	Support posts, *handrails*	All situations	✓		
	Balusters	All situations		✓	

Note: (1) Same durability as the tile covering it.

Durability requirements for nominated building elements

Table C.1.1.1: Durability requirements of nominated building elements (continued from previous page)

Paragraph C.1.1.1

Building element	Component	Situation or function	≥ 50 years	≥ 15 years	≥ 5 years
Septic tanks	All	Built into or under the structure of a *building*	✓		
		Easy to access units (such as in-ground but accessible units)		✓	
		Effluent field		✓	
Stairs and ladders	Stringers	All situations	✓		
	Treads	Difficult to replace	✓		
		Moderately difficult to replace		✓	
	Ladders and rungs	All situations		✓	
Tiling	Walls and floors	Tiling in wet areas including showers		✓	
		Decorative finish only	(2)	(2)	(2)
Under-floor heating	Heating coils	Buried in concrete slabs	✓		
		Accessible coils		✓	
	Cables and fittings	Buried in concrete slabs	✓		
		Accessible cables and fittings		✓	
Vapour barriers	All	Behind structural elements or difficult to access and replace	✓		
		Behind non-structural internal linings		✓	
		High gloss paint finish			✓
Ventilation	Plant	All situations		✓	
	Ducting	Built-in ducting		✓	
		Easy to access and replace			✓
	Fittings	All situations			✓
Vermin proofing	All	Built into structure	✓		
		Moderately difficult to access or replace		✓	
		To drained ventilated cavity	(3)	(3)	(3)
Water heaters	Continuous flow heaters	Moderately difficult to access or replace (for example, installed in a cupboard)		✓	
		Easy to access or replace (such as on internal or *external wall*)			✓
	Storage *water heaters*	Moderately difficult to access or replace (for example, installed in a cupboard)		✓	
		Easy to access but moderately difficult to replace		✓	

Notes:
(2) No durability requirement under the Building Code.
(3) Same durability as the *cladding* covering it.

Durability requirements for nominated building elements

Table C.1.1.1: Durability requirements of nominated building elements (continued from previous page)

Paragraph C.1.1.1

Wall framing including dwangs or nogging	Timber or steel	Load-bearing framing	✓		
		Easy to access lined, non-load-bearing partitions		✓	
		Easy to access unlined, non-structural partitions or non-load-bearing demountable partitions			✓
	Structural steel	All situations	✓		
Windows	Frame and interior reveals	Structural units	✓		
		External window/door joinery		✓	
		Internal window joinery			✓
	Gaskets, glazing, and glazing beads	Moderately difficult to access or replace		✓	
	Hardware				✓

BUILDING PERFORMANCE

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