



- **Proposed Changes to B2/AS1**  
Report to Building Industry Authority

**Attachment 5:**  
Proposed B2 Durability for Publication

November 2003

## Recommended Changes to B2/AS1.

It is recommended that the current B2/AS1 be amended as follows:

1. Replace the reference to NZS 3602: - Part 1: 1995 on page 7 with NZS 3602: Part 1: 2003<sup>1</sup>
2. Add the following comment to paragraph 3.2.1 of B2/AS1

### COMMENT

The use of different timbers or timber treatments to those referred to in NZS 3602 may still comply with the NZBC in particular applications. Where the use of a different timber or timber treatment is proposed, this would be an alternative solution and evidence must be provided to the TA or Building Certifier that the intended use will meet the NZBC. For example, if imported hardwood is to be used to surface a deck, evidence that the timber was durable for a minimum of 15 years in the expected exposure conditions is required.

3. Replace the existing Table 1 of B2/AS1 with the following new table:

<b>Table 1: Durability Requirements Of Nominated Building Elements</b>					
<p>Note: Clause B2.3.2 <i>requires</i> that all hidden elements have at least the same durability as that of the element that covers it (i.e. must have the same <i>expected</i> life) which may be more than the <i>requirement</i> in clause B2.3.1. For example, the reason that a brick tie has a requirement of not less than 50 years in this table, instead of the 15 year requirement for cladding, is that the brick veneer that hides it has an expected durability of 50 years or more</p>					
<b>Building Element</b>	<b>Component</b>	<b>Situation/Function</b>	Not less than <b>50yr</b>	Not less than <b>15yr</b>	Not less than <b>5yr</b>
<b>Acoustic elements</b>		Covered by or integral with structural elements or bracing panels	✓		
		Behind non-structural claddings or linings	✓		
		Surface mounted		✓	
<b>Balustrade</b>	(Refer to safety barrier)				
<b>Battens</b> (Cavity battens for wall cladding systems) <i>(See note at top of table)</i>	Battens	Where wall cladding durability requirement is 15 years		✓	
		Where wall cladding provides bracing	✓		
<b>Bracing Elements</b>		All – includes the bracing element and fixings	✓		
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<sup>1</sup> This date is provisional, depending on SNZ Council approval of DZ 3602

<b>Building Element</b>	<b>Component</b>	<b>Situation/Function</b>	Not less than <b>50yr</b>	Not less than <b>15yr</b>	Not less than <b>5yr</b>
<b>Building wraps</b> (see also wind barriers)  (See note at top of table)	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 eg providing bracing, or where the cladding is very durable eg brick veneer	✓		
		Where wall cladding durability requirement is 15 years		✓	
	Wind barriers	providing bracing (ie rigid wind barriers)	✓		
		not providing bracing (non-rigid wind barriers)		✓	
<b>Cladding</b> (including jointing systems)	Roof	Structural	✓		
		Non-structural		✓	
	Wall	Structural including bracing elements	✓		
		Non-structural		✓	
<b>Curtain walling</b>	Frames and fixings	All buildings	✓		
	Gaskets, glazing or panelling and beads			✓	
	Internal hardware				✓
<b>Damp-proof course (DPC)</b>	DPCs under timber members	Under structural framing	✓		
		Under non-structural framing		✓	
<b>Damp-proof membranes (DPM)</b> (See note at top of table)	Damp-proofing generally	DPMs under concrete floor slabs	✓		
		DPMs applied to the top of concrete slabs, or Behind retaining walls used for landscaping, or Designed for ready access and replacement		✓	
		DPM behind tiles		Same durability as the tile covering it	
	Water-proofing of basements	Tanking, except those designed for ready access	✓		
		Tanking designed for ready access		✓	
<b>Decking (timber)</b>	Decking	Structural eg bracing diaphragm	✓		
		Non-structural strip decking		✓	
	Sub-floor structure	All	✓		
<b>Demountable Partitions</b>	Partition including frame, fixings, and linings	All			✓

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<b>Building Element</b>	<b>Component</b>	<b>Situation/Function</b>	Not less than <b>50yr</b>	Not less than <b>15yr</b>	Not less than <b>5yr</b>
<b>Doors (including frame)</b>	Non Fire rated doors	Internal			✓
		External		✓	
		Furniture and hardware			✓
	Fire rated doors	Internal		✓	
		External		✓	
		Furniture and hardware			✓
<b>Electrical work</b> <i>(See note at top of table)</i>	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			✓		
<b>Fire Rated Walls</b>		Structural walls including bracing elements	✓		
		All others		✓	
<b>Fixings</b>	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 structural or difficult to access or replace building elements including structural elements of decks and barriers	✓		
		Used to fix non-structural or moderately difficult to replace building elements		✓	
	Brick ties and fixings	All	✓		
	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			✓

<b>Building Element</b>	<b>Component</b>	<b>Situation/Function</b>	Not less than <b>50yr</b>	Not less than <b>15yr</b>	Not less than <b>5yr</b>
<b>Flashings</b> <i>(See note at top of table)</i>	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	✓		
<b>Flooring –sheet or strip</b> <i>(See note at top of table)</i>		Floor bracing diaphragm	✓		
		Flooring laid under bottom plates	✓		
		Flooring laid between bottom plates		✓	
<b>Floor coverings</b>		Protective or acoustic coverings			✓
<b>Flue systems</b>	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.			✓
<b>Framing</b>	(refer to wall framing or to roof framing as appropriate)				
<b>Guttering and downpipes</b> <i>(See note at top of table)</i>		Gutters or downpipes incorporated within the structure,(eg downpipes cast into a column or boxed in behind claddings) or secret gutters (eg hidden verge or valley gutters)	✓		
		Internal or valley gutters, fascia gutters or built-in downpipes		✓	
		External gutters and down-pipes			✓
<b>Heating Appliances</b>	Solid fuel	Freestanding			✓
		Inbuilt		✓	
	Gas	Freestanding			✓
		Inbuilt		✓	
Electric	Permanently wired			✓	
<b>Insulation</b>	Sub-floor		✓		
	Walls		✓		
	Ceiling or roof	Skillion roof	✓		
		Accessible ceiling or roof space	✓		
<b>Interior wall linings</b>		Structural linings eg bracing elements	✓		
		Shower linings (excluding behind tiled showers)		✓	
		Linings behind tiled showers	Same durability as tile covering it		
		Easy to access and replace			✓

<b>Building Element</b>	<b>Component</b>	<b>Situation/Function</b>	Not less than <b>50yr</b>	Not less than <b>15yr</b>	Not less than <b>5yr</b>
<b>Lintels</b>	Steel angle (brick veneer)	All situations	✓		
	Flat steel	All situations	✓		
<b>Plumbing and piping</b>	Piping and fittings	Cast into concrete or under slabs or 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				✓
	Outlets				✓
<b>Protective Coatings</b>		Paint systems that are difficult to access or replace	✓		
		Roofing membranes		✓	
		Paint systems that are easy to access and replace			✓
<b>Roof framing including trusses, purlins, tile battens and bracing members</b>			✓		
<b>Roofing tile battens</b>			✓		
<b>Safety barrier (balustrade, baluster, and handrail)</b>	Support posts, handrails		✓		
	Balusters			✓	
<b>Septic tanks</b>		Built into or under the structure of a building	✓		
		Easy to access units eg in-ground but accessible		✓	
		Effluent field		✓	
<b>Stairs and ladders for balustrades refer to safety barriers</b>	Stringers		✓		
	Treads	Difficult to replace	✓		
		Moderately difficult to replace		✓	
Ladders including rungs			✓		
<b>Tiling</b>	Walls and floors (including showers)	Tiling in wet areas		✓	
		Decorative finish only	No durability requirement under the building code		
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<b>Building Element</b>	<b>Component</b>	<b>Situation/Function</b>	Not less than <b>50yr</b>	Not less than <b>15yr</b>	Not less than <b>5yr</b>
<b>Under-floor heating</b>	Heating coils	Buried in concrete slabs	✓		
		Accessible coils		✓	
	Cables and fittings	Buried in concrete slabs	✓		
		Accessible cables and fittings		✓	
<b>Vapour barriers</b>		Behind structural elements or difficult to access and replace	✓		
		Behind non-structural internal linings		✓	
		High gloss paint finish			✓
<b>Ventilation</b>	Plant	All		✓	
	Ducting	Built-in ducting		✓	
		Easy to access and replace			
Fittings					✓
<b>Vermin proofing</b>		Built into structure	✓		
		Moderately difficult to access or replace		✓	
		To drained ventilated cavity	Same durability as the cladding covering it		
<b>Water heaters</b>	Continuous flow heaters	Moderately difficult to access or replace eg internal		✓	
		Easy to access or replace eg on internal wall or external			✓
	Storage type water heaters	Moderately difficult to access or replace Eg installed in cupboard		✓	
		Easy to access or replace eg on internal wall or external			✓
<b>Wall framing including dwangs or nogging</b>	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	✓		
<b>Windows</b>	Frame and interior reveals	Structural units	✓		
		External window/door joinery		✓	
		Internal window joinery			✓
	Gaskets, glazing and glazing beads	Moderately difficult to access or replace eg high rise buildings		✓	
		Easy to access and replace		✓	
	Hardware				✓