Department of
Building and Housing
Te Tari Kaupapa Whare

Dear Customer

Please find enclosed Amendment 5, effective 10 October 2011, to the Compliance Document for Clause D1 Access Routes of the New Zealand Building Code.

Section	**Old D1**	**October 2011 Amendments to D1**
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Code Clause D1	Remove page 3/4	Replace with new page 3/4
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References	Remove page 11/12	Replace with new page 11/12
Definitions	Remove page 13/14	Replace with new page 13/14
D1/AS1	Remove pages 41/42, 45/46	Replace with new pages 41/42, 45/46
Index	Remove pages 47-49	Replace with new pages 47-49

Compliance Document for New Zealand Building Code Clause D1 Access Routes – Second Edition

Prepared by the Department of Building and Housing

This Compliance Document is prepared by the Department of Building and Housing. The Department of Building and Housing is a Government Department established under the State Sector Act 1988.

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New Zealand Government

Status of Compliance Documents

Compliance Documents are prepared by the Department of Building and Housing in accordance with section 22 of the Building Act 2004. A Compliance Document is for use in establishing compliance with the New Zealand Building Code.

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Users should make themselves familiar with the preface to the New Zealand Building Code Handbook, which describes the status of Compliance Documents and explains alternative methods of achieving compliance.

Defined words (italicised in the text) and classified uses are explained in Clauses A1 and A2 of the Building Code and in the Definitions at the start of this Compliance Document.

D1: Document History

	Date	Alterations	
First published	July 1992		
Amendment 1	December 1993	p. 12, Table 5 p. 15, 4.4.2, 4.5.2	p. 30, 12.0, 12.1
Amendment 2	19 August 1994	pp. i and ii, Document History p. vii, Contents p. viii, References pp. ix and x, Definitions p. 1, 1.0, 1.0.1, 1.0.2 p. 3, 1.2.1 p. 4, Figure 2 p. 6, 1.7.1 p. 6A, 2.1.1, 2.1.2, 2.1.3, 2.1.4 pp. 6B, 6C, 6D, Table 1A p. 6D, 2.2.1	p. 7, 3.1.4 p. 10, Figure 11 p. 11, 4.1.3 p. 12, Table 5, 4.1.4, 4.1.8 p. 13, 4.4, 4.4.1 p. 14, Figure 17 p. 15, 4.4.3 deleted, Figure 18, 4.5, 4.5.1, 4.5.2, 4.6, 4.6.1, 4.6.2 p. 10, Table 1A pp. 33 to 35, Index
Amendment 3	1 December 1995	p. ii, Document History p. viii, References	p. 15, 5.1.1
Second edition	28 February 1998	Document revised – second edition issued	
Amendment 4	1 July 2001	p. 2, Document History, Status p. 11, References p. 13, Definitions	p. 25, Figure 8 p. 30, 4.2.1 Comment p. 41, 6.0.7 Comment p. 46, 12.0.1
Amendment 5	10 October 2011	p. 2, Document History, Status pp. 3–4, Code Clause D1 p. 9, Contents p. 11, References	p. 13, Definitions p. 41, D1/AS1 6.0.7 p. 46, D1/AS1 11.0 pp. 47–49, Index

Note: Page numbers relate to the document at the time of Amendment and may not match page numbers in current document.

Document Status

The most recent version of this document, as detailed in the Document History, is approved by the Chief Executive of the Department of Building and Housing. It is effective from 10 October 2011 and supersedes all previous versions of this document.

People using this Compliance Document should check for amendments on a regular basis. The Department of Building and Housing may amend any part of any Compliance Document at any time. Up-to-date versions of Compliance Documents are available from www.dbh.govt.nz

New Zealand Building Code Clause D1 Access Routes

This Clause is extracted from the New Zealand Building Code contained in the First Schedule of the Building Regulations 1992.

FIRST SCHEDULE—*continued*

Clause D1—ACCESS ROUTES

Provisions	Limits on application
OBJECTIVE	
D1.1 The objective of this provision is:	
(a) Safeguard people from injury during movement into, within and out of *buildings,*	
(b) Safeguard people from injury resulting from the movement of vehicles into, within and out of *buildings,* and	
(c) Ensure that *people with disabilities* are able to enter and carry out normal activities and functions within *buildings*.	Objective D1.1(c) shall apply only to those *buildings* to which section 47A of the Act applies.
FUNCTIONAL REQUIREMENT	
D1.2.1 *Buildings* shall be provided with reasonable and adequate access to enable safe and easy movement of people.	Requirement D1.2.1 shall not apply to *Ancillary buildings* or *Outbuildings*.
D1.2.2 Where a *building* is provided with loading or parking spaces, they shall be constructed to permit safe and easy unloading and movement of vehicles, and to avoid conflict between vehicles and pedestrians.	
PERFORMANCE	
D1.3.1 *Access routes* shall enable people to:	
(a) Safely and easily approach the main entrance of *buildings* from the apron or *construction* edge of a *building*,	
(b) Enter *buildings*,	
(c) Move into spaces within *buildings* by such means as corridors, doors, stairs, ramps and lifts,	
(d) Manoeuvre and park cars, and	
(e) Manoeuvre and park delivery vehicles required to use the loading space.	

Note: Section 47A is in the Building Act 1991. The equivalent section in the Building Act 2004 is section 118.

Effective from 29 December 2000

FIRST SCHEDULE—*continued*

Provisions	Limits on application
D1.3.2 At least one *access route* shall have features to enable *people with disabilities* to: (a) Approach the *building* from the street boundary or, where required to be provided, the *building* car park, (b) Have access to the internal space served by the principal access, and (c) Have access to and within those spaces where they may be expected to work or visit, or which contain facilities for personal hygiene as required by Clause G1 "Personal Hygiene". **D1.3.3** Access routes shall: (a) Have *adequate* activity space, (b) Be free from dangerous obstructions and from any projections likely to cause an obstruction, (c) Have a safe cross fall, and safe slope in the direction of travel, (d) Have *adequate* slip-resistant walking surfaces under all conditions of normal use, (e) Include stairs to allow access to upper floors irrespective of whether an escalator or lift has been provided, (f) Have stair treads, and ladder treads or rungs which: (i) provide *adequate* footing, and (ii) have uniform rise within each flight and for consecutive flights, (g) Have stair treads with a leading edge that can be easily seen,	Performance D1.3.2 shall not apply to *Housing, Outbuildings, backcountry huts, Ancillary buildings*, and to *Industrial buildings* where no more than 10 people are employed.

Effective from 31 October 2008

Contents

Amend 5 Oct 2011

References

Amend 4 Jul 2001

For the purposes of New Zealand Building Code (NZBC) compliance, the Standards and documents referenced in this Compliance Document (primary reference documents) must be the editions, along with their specific amendments, listed below. Where these primary reference documents refer to other Standards or documents (secondary reference documents), which in turn may also refer to other Standards or documents, and so on (lower-order reference documents), then the version in effect at the date of publication of this Compliance Document must be used.

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		Where quoted
Standards New Zealand		
NZS/AS 1657: 1992	Fixed platforms, walkways, stairways and ladders – Design, construction and installation (known as the SAA Code for fixed platforms, walkways, stairways, and ladders)	AS1 11.0.3
NZS 3114: 1987	Specification for concrete surface finishes *Amend: 1*	AS1 Table 2
NZS 3116: 2002	Concrete segmental and flagstone paving *Amend: 1*	AS1 Table 2
NZS 4121: 2001	Design for access and mobility – Buildings and associated facilities	AS1 11.0.1, 12.0.2
Standards Australia		
AS 2890:-	Parking facilities	
Part 1: 2004	Off street parking *Amend: 1*	AS1 10.1, 10.2
Part 2: 2002	Off street commercial facilities *Amend: 1*	AS1 11.0.2
AS/NZS 3661:-	Slip resistance of pedestrian surfaces	
Part 1: 1993	Requirements	VM1 1.0.2, AS1 2.1.1, 3.1.4, Table 2
Part 2: 1994	Guide to the reduction of slip hazards	AS1 2.1.3
British Standards Institution		
BS 585:-	Wood stairs.	
Part 1: 1989	Specification for stairs with closed risers for domestic use, including straight and winder flights and quarter or half landings	AS1 4.5.3
BS 5395:-	Stairs, ladders and walkways	
Part 2: 1984	Code of practice for the design of helical and spiral stairs	AS1 4.4.1

Definitions

This is an abbreviated list of definitions for words or terms particularly relevant to this Compliance Document. The definitions for any other italicised words may be found in the New Zealand Building Code Handbook.

Amend 5 Oct 2011

Access route A continuous route that permits people and goods to move between the apron or construction edge of the *building* to spaces within a *building*, and between spaces within a *building*.

Accessible Having features to permit use by *people with disabilities*.

Accessible route An *access route* usable by *people with disabilities.* It shall be a continuous route that can be negotiated unaided by a wheelchair user. The route shall extend from street boundary or car parking area to those spaces within the *building* required to be *accessible* to enable *people with disabilities* to carry out normal activities and processes within the *building*.

Accessible stairway A *stairway* having features for use by *people with disabilities*. *Buildings* required to be *accessible* shall have at least one *accessible stairway* leading off an *accessible route* whether or not a lift is provided.

Adequate *Adequate* to achieve the objectives of the *building code*.

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Building has the meaning given to it by sections 8 and 9 of the *Building Act 2004*.

Common ramp A ramp which is used, or intended to be used by the public whether as of right or not, and is not a *service ramp* or *accessible* ramp.

Common stairway A *stairway* which is used, or intended to be used, by the public whether as of right or not, and is not a *private stairway*, *service stairway* or *accessible stairway*.

Handrail A rail to provide support to, or assist with the movement of a person.

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.

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Kerb ramp means a short ramp either cutting through a kerb or built up to the kerb.

Main private stairway A *private stairway* intended to provide access to and between frequently used spaces such as living areas, kitchens and garages, and includes all exterior *private stairways*.

Minor private stairway A *private stairway* not on a main thoroughfare, and intended to provide infrequent access to a single room which is not a living area or kitchen.

Nosing The rounded projecting edge of a stair tread.

Person with a disability means a *person* who has an impairment or a combination of impairments that limits the extent to which the *person* can engage in the activities, pursuits, and processes of everyday life, including, without limitation, any of the following:

Amend 4 Jul 2001

(a) a physical, sensory, neurological, or intellectual impairment:

(b) a mental illness.

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Pitch line The line joining the leading edge or *nosings* (if any) of successive stair treads within a single flight of a *stairway*.

Private stairway A *stairway* used, or intended to be used, by the occupants of a single *household unit*.

Secondary private stairway A *private stairway* other than a *main* or *minor private stairway*, intended to provide access to another floor containing only bedrooms, bathroom or similar accommodation

Service ramp means a ramp that is used, or intended to be used, infrequently by service personnel to gain access to spaces for the purposes of maintenance and the movement of goods.

Service stairway means a *stairway* that is used, or intended to be used, infrequently by service personnel to gain access to spaces for the purposes of maintenance and the movement of goods.

Stairway A series of steps or stairs with or without landings, including all necessary *handrails* and giving access between two different levels.

Threshold A sill to an external door, or the floor under an internal door.

6.0.2 Any *stairway* which exceeds 2.0 m in width shall:

a) Have *handrails* on both sides and, where the width exceeds 4.0 m, shall also have an intermediate *handrail* provided at the centre of the *stairway*, or

b) If the *stairway* is essentially an outdoor architectural feature and not required to be an ***a**ccessible stairway,* have at least one *handrail*. Examples of such *stairways* are those leading to civic areas, or to decks on *Housing*.

COMMENT:
A central rail gives all users a rail to use for safety purposes. On *stairways* in public *buildings*, such as sports stadia, intermediate rails are also effective for crowd control. The 2.0 m width is a comfortable width for three people, two of whom can grasp a rail if anyone trips.

6.0.3 Accessible stairways and accessible ramps – *Handrails* shall be provided on both sides of *accessible stairways* and on both sides of *accessible* ramps where the ramp slope is steeper than 1 in 20. The *handrails* shall be continuous except where doors are located on landings (see Figures 9 and 25).

6.0.4 Slope of handrails – *Handrails* shall have the same slope as the *pitch line*, begin no further than the second riser from the lower end of the *stairway*, and extend the full length of the *stairway* they serve. Except that, where the *handrail* serves an *accessible stairway* or *accessible* ramp, a 300 mm (minimum) horizontal extension shall be provided at each end of the *handrail*, as shown in Figures 9 and 25.

6.0.5 The first riser shall be located a sufficient distance back from the corner where the two walls meet, to accommodate the extended *handrail*, as shown in Figure 25.

6.0.6 Height of handrails – *Handrails* shall be positioned between 900 mm and 1 m above the *pitchline* (see Figure 25).

6.0.7 Handrail profiles – *Handrails* shall have a profile which can be readily grasped by an adult hand and shall be installed in a way that avoids the likelihood of personal injury. An acceptable *handrail* shall be shaped and located to ensure that, under normal usage, a person's hand will not contact adjacent walls, supporting brackets or fixings, or any other obstruction.

COMMENT:
It is important that in the event of stumbling on a *stairway* or ramp an adult, even with a small hand, can firmly grasp the *handrail* to prevent a fall.

Amends 4 and 5

6.0.8 A graspable *handrail* profile shall have:

a) A flat or convex upper surface,

b) Arrised or radiused edges,

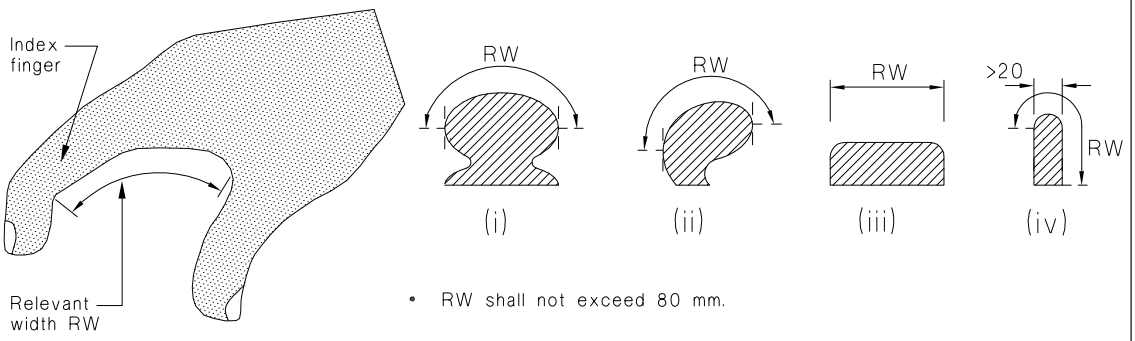
c) A minimum cross section width of 20 mm, and

d) A "relevant width" (as illustrated in Figure 26 (a)) across the top surface of no greater than 80 mm. Figure 26 (a) and (b) indicates some acceptable profiles but others may also be acceptable.

6.0.9 Acceptable *handrail* profiles for *accessible stairways* and *accessible* ramps are shown in Figure 26 (b).

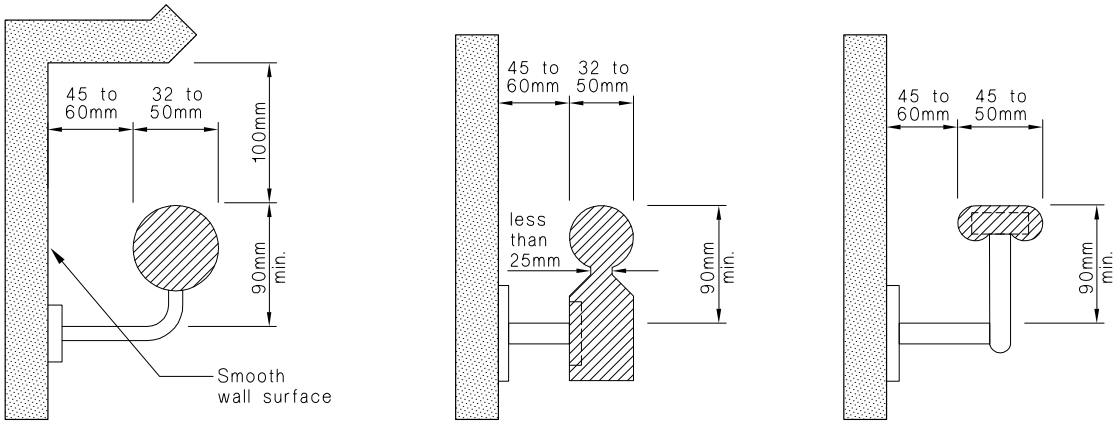
COMMENT:
In most circumstances a *handrail* is used with a light grip to steady the user of a *stairway* or ramp. Ambulant *people with disabilities* use *handrails* for both leverage and support, and wheelchair users often need to firmly grip the rails to pull themselves along, particularly on ramps. In those circumstances a profile offering an adequate grip is important.

Figure 26: Handrail Profiles and Clearances
Paragraphs 6.0.8 and 6.0.9



- RW shall not exceed 80 mm.
- RW (relevant width) is measured around the upper surface perimeter of the handrail section between the vertical tangents on either side.
- Variations in shape are acceptable provided the effective grip is not reduced. For example, the side faces shown as vertical in details (iii) and (iv) are still acceptable even if slightly curved or sloped up to 5° from vertical.
- See fig. 26 (b) for wall clearances.

(a) Determination of relevant width for private and common stairways



The profiles shown comply with the provisions for accessible handrails.

The clearances apply to all handrails and the maximum dimension must be used for rough textured wall surfaces.

(b) Acceptable profiles and clearances for accessible stairways

Figure 30: **Seating Spaces for Wheelchairs**
Paragraph 8.1.2

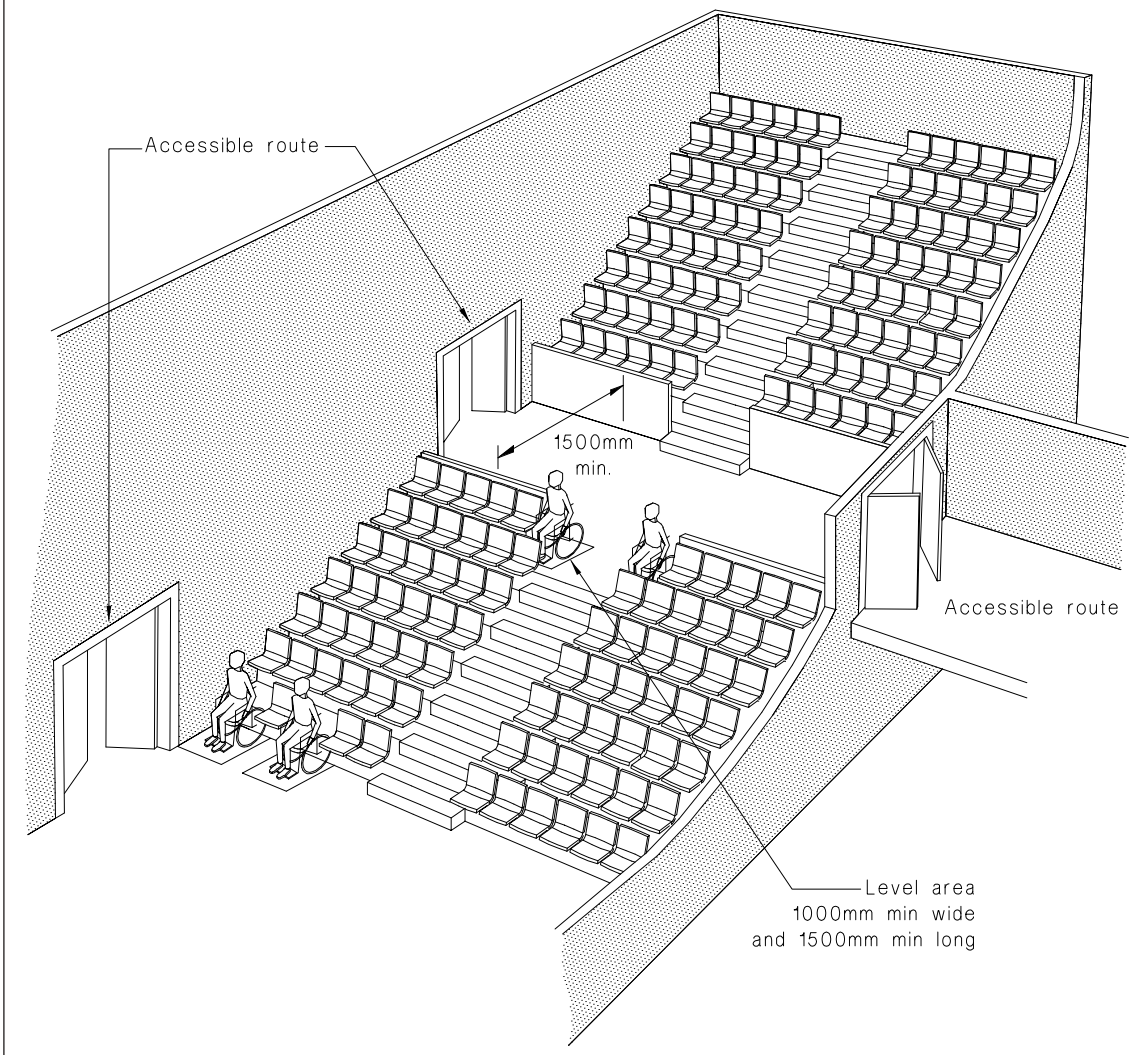


Table 9: **Accessible Accommodation Units**
Paragraph 9.1.1

Total number of guest units	Number of accessible units to be provided
0 – 9	1
10 – 25	2

Plus 1 unit for every additional 25 guest units provided.

9.2 Facilities to be provided

9.2.1 *Accessible* accommodation units shall have:

a) Toilet and bathroom facilities complying with G1/AS1.

b) Kitchen facilities complying with G3/AS1.

c) Bedrooms, sitting and dining areas with sufficient floor area for a 1500 mm diameter wheelchair turning circle.

10.0 Movement of Vehicles

10.1 Car parking areas

10.1.1 AS 2890: Part 1 as modified by Paragraph 10.2 is an acceptable solution for car parking areas and circulation routes.

COMMENT:
The width of an *accessible* car park is given in AS 2890.1 Figure 2.2 as 3.2 m, but it is noted in 2.4.1 (b) (ii) of the Standard that if there is an adjacent obstruction the width of all car parks should be increased by 300 mm. In the case of an *accessible* car park an obstruction would include a kerb or garden which would prevent the movement of a wheelchair.

10.2 Modifications to AS 2890

10.2.1 AS 2890: Part 1 is modified as follows:

Clause 4.7 Lighting: After final sentence add a new sentence – "These lighting provisions may exceed the performance criteria of NZBC D1 and G8."

Appendix C: Delete and replace with:

"*Accessible* car parking spaces shall be provided on the scale of:

1 for up to 10 total spaces provided

2 for up to 100 total spaces provided

plus 1 more for every additional 50 spaces

when car parks are provided in or associated with a *building* which is *accessible*."

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11.0 Other Acceptable Solutions

11.0.1 Accessible routes – The access provisions of NZS 4121 are an acceptable solution for *accessible routes*, but may exceed the requirements of NZBC D1.

11.0.2 Commercial vehicles – AS 2890: Part 2 is an acceptable solution for loading spaces and circulation routes for commercial vehicles, but may exceed the requirements of NZBC D1.

11.0.3 Access routes for service and maintenance personnel – NZS/AS 1657 is an acceptable solution for fixed platforms, walkways, *stairways*, and ladders, but provisions may exceed the requirements of NZBC D1.

12.0 Lifts

12.0.1 For the purposes of determining whether a lift must be provided for *people with disabilities* to access upper floors, the design occupancy shall be determined using C/AS1 Paragraph 2.3.7 and Table 2.2.

Amend 4 Jul 2001

COMMENT:
Alternative design occupancies being less than derived from Table 2.2, must be justified with clear supporting information. Table 2.2 already takes account of effective floor area reductions for normal furnishings associated with a given activity, such as desks or workstations in offices. However, in a factory situation with fixed machinery, actual operator numbers may be acceptable as the *occupant load*.

Amend 4 Jul 2001

12.0.2 *Building* size may also be used to determine the need for a lift for *people with disabilities*. NZS 4121 is an acceptable solution based on gross floor area.

Index D1/VM1 & AS1

All references to Verification Methods and Acceptable Solutions are preceded by **VM** or **AS** respectively.