

# Compliance Document for New Zealand Building Code Clause G1 Personal Hygiene – Second Edition

Prepared by the Department of Building and Housing

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## Status of Compliance Documents

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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 of the Building Code and in the Definitions at the start of this Compliance Document.

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Erratum 1	11 July 2007	p. 2, Document History, Status	p. 22, Table 1
<b>Note: Page numbers relate to the document at the time of Amendment and may not match page numbers in current document.</b>			

### 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 11 July 2007 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](http://www.dbh.govt.nz)

# New Zealand Building Code

## Clause G1 Personal Hygiene

The mandatory provisions for building work are contained in the New Zealand Building Code (NZBC), which comprises the First Schedule to the Building Regulations 1992. The relevant NZBC Clause for Personal Hygiene is G1. Note that section 25 of the Disabled Persons Community Welfare Act 1975 has been replaced by section 47A of the Building Act 1991.

1992/150	<i>Building Regulations 1992</i>	53
<b>FIRST SCHEDULE—continued</b>		
<b>Clause G1—PERSONAL HYGIENE</b>		
<b>Provisions</b>	<b>Limits on application</b>	
<b>OBJECTIVE</b>		
G1.1 The objective of this provision is to:		
<ul style="list-style-type: none"> <li>(a) Safeguard people from illness caused by infection or contamination,</li> <li>(b) Safeguard people from loss of <i>amenity</i> arising from the absence of appropriate personal hygiene facilities, and</li> <li>(c) Ensure <i>people with disabilities</i> are able to carry out normal activities and processes within <i>buildings</i>.</li> </ul>	<p>Objective G1.1 (c) shall apply only to those <i>buildings</i> to which section 25 of the Disabled Persons Community Welfare Act 1975 applies.</p>	
<b>FUNCTIONAL REQUIREMENT</b>		
G1.2 <i>Buildings</i> shall be provided with appropriate spaces and facilities for personal hygiene.		
<b>PERFORMANCE</b>		
G1.3.1 <i>Sanitary fixtures</i> shall be provided in sufficient number and be appropriate for the people who are intended to use them.		
G1.3.2 <i>Sanitary fixtures</i> shall be located, constructed and installed to:		
<ul style="list-style-type: none"> <li>(a) Facilitate <i>sanitation</i>,</li> <li>(b) Avoid risk of food contamination,</li> <li>(c) Avoid harbouring dirt or germs,</li> <li>(d) Provide appropriate privacy,</li> <li>(e) Avoid affecting occupants of adjacent spaces from the presence of unpleasant odours, accumulation of offensive matter, or other source of annoyance,</li> <li>(f) Allow effective cleaning.</li> </ul>		

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*Building Regulations 1992*

1992/150

FIRST SCHEDULE—*continued*

Provisions	Limits on application
<p>(g) Discharge to a plumbing and drainage system as required by Clause G13 “Foul Water” when water-borne disposal is used, and</p> <p>(h) Provide a healthy safe disposal system when non-water-borne disposal is used.</p> <p><b>G1.3.3</b> Facilities for personal hygiene shall be provided in convenient locations.</p> <p><b>G1.3.4</b> Personal hygiene facilities provided for <i>people with disabilities</i> shall be <i>accessible</i>.</p>	<p>Performance G1.3.4 shall not apply to <i>Housing, Outbuildings, Ancillary buildings, and to Industrial buildings</i> where no more than 10 people are employed.</p>

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# References

Amend 5  
Jun 2007

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

Amend 4  
Jul 2001

## Standards New Zealand

NZS 3331: 1972 Specification for quality of vitreous china sanitary appliances

NZS 4121: 2001 Design for access and mobility – Buildings and associated facilities

## Standards Australia

AS 1449: 1994 Wrought alloy steels – Stainless and heat-resisting steel plate, sheet and strip  
*Amend: 1*

AS 3588: 1989 Shower bases and shower modules

## Standards Australia/New Zealand

AS/NZS 1730: 1996 Washbasins

AS/NZS 2023: 1995 Baths for ablutionary purposes

## Where quoted

AS1 2.6.1

AS1 4.2.7

AS1 2.3.4, 2.6.1

AS1 2.6.1

AS1 2.6.1

AS1 2.6.1





# Definitions

Amend 5  
Jun 2007

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  
Jun 2007

**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*.

Amend 5  
Jun 2007

**Accessible** Having features to permit use by a *person with a disability*.

Amend 5  
Jun 2007

**Accessible route** An access route usable by a *person with a disability*. 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 a *person with a disability* to carry out normal activities and processes within the *building*.

Amend 5  
Jun 2007

**Building** has the meaning ascribed to it by Sections 8 and 9 of the Building Act 2004.

Amend 5  
Jun 2007

**Fixture** An article intended to remain permanently attached to and form part of a *building*.

**Habitable space** A space used for activities normally associated with domestic living, but excludes any bathroom, laundry, water-closet, pantry, walk-in wardrobe, corridor, hallway, lobby, clothes-drying room, or other space of a specialised nature occupied neither frequently nor for extended periods.

## Household unit

- a) means any *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 one household; but
- b) does not include a hostel, boarding house or other specialised accommodation.

Amend 5  
Jun 2007

**Impervious** That which does not allow the passage of moisture.

**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:

- a) a physical, sensory, neurological, or
- b) a mental illness.

Amend 5  
Jun 2007

**Privacy** The situation of being withdrawn from view.

**Privy** A private room containing a receptacle (other than a WC) or an excavation for excreted liquid or solid human waste, and with a means of disposal or containment of the waste.

**Sanitary fixture** Any *fixture* which is intended to be used for *sanitation*.

**Sanitation** The term used to describe the activities of washing and/or excretion carried out in a manner or condition such that the effect on health is minimised, with regard to dirt and infection.

**Soil fixture** A *sanitary fixture* constructed to receive solid and/or liquid excreted human waste. It includes bedpan disposal units, slop sinks, urinals, water closet pans, and water-flushed sanitary towel disposal units.

Amend  
Jul 2001

**Unisex facilities** Facilities available for use by either sex.

### COMMENT:

*Unisex facilities* may also be described as both gender facilities.



# Verification Method G1/VM1

No specific test methods have been approved for verifying compliance with the performance of NZBC G1.



# Acceptable Solution G1/AS1

## 1.0 Number and Type of Sanitary Fixtures

a) live or are accommodated

### 1.1 General

1.1.1 Sanitary facilities are required in occupied *buildings*.

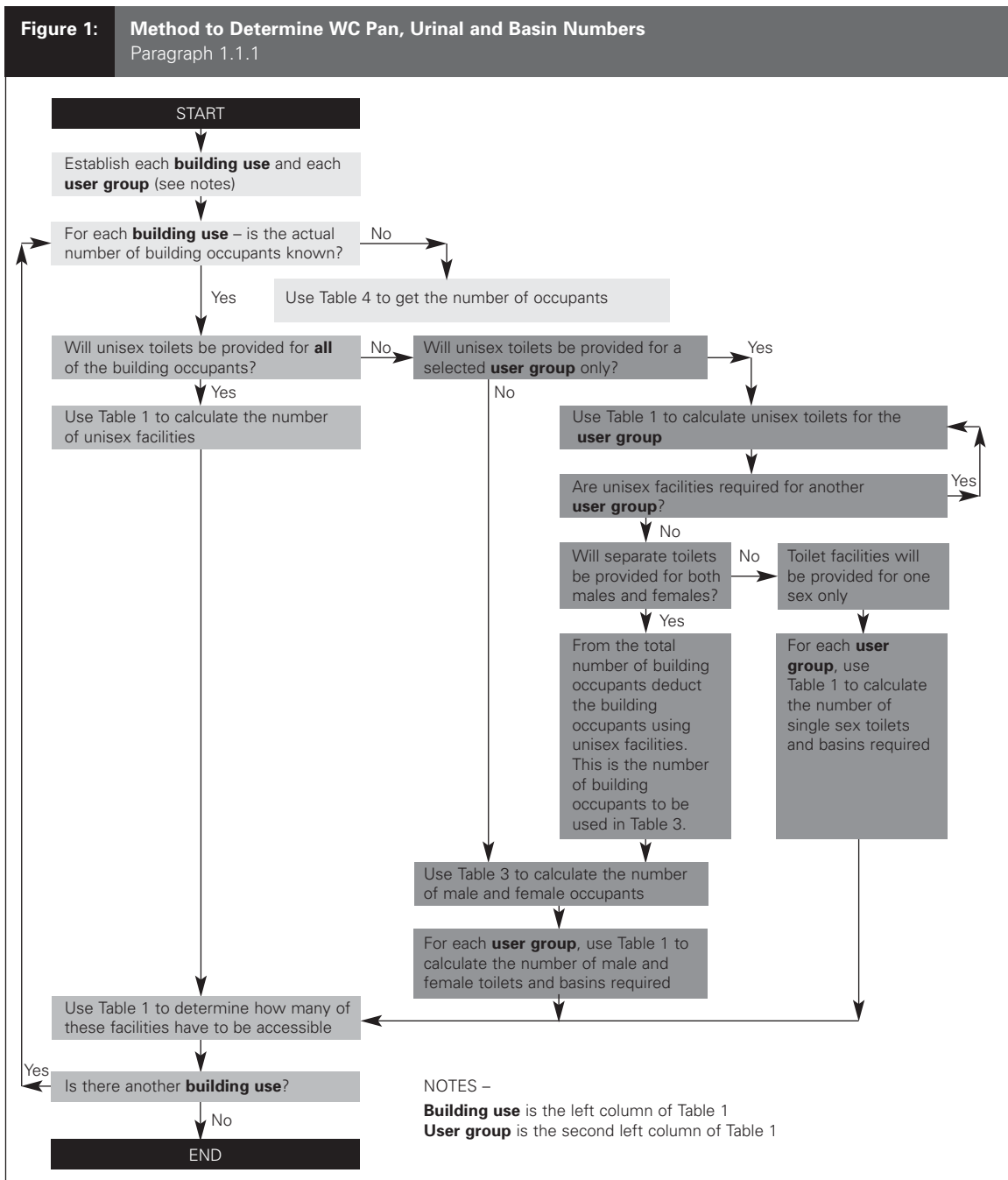
1.1.2 WC pans and basins are required in any *building* where people:

**COMMENT:**

Examples may include, but are not necessarily limited to: a dwelling, holiday cottage, boarding house, attached dwelling, flat, multi-unit apartment, commune, marae, boarding house, hall of residence, holiday cabin, hostel, hotel, motel, nurses' home, retirement village, time-share accommodation, work camp, camping ground, hospital, old people's home, health camp, borstal, drug rehabilitation centre, old people's home where substantial care is extended, and a prison.

Amend 5  
Jun 2007

Amend 5  
Jun 2007



or

b) work

**COMMENT:**

Examples may include, but are not necessarily limited to: staff facilities in all buildings.

or

c) eat food or drink on the premises

**COMMENT:**

Examples may include, but are not necessarily limited to: coffee bars, tea rooms, restaurants, bars and nightclubs.

or

d) assemble

**COMMENT:**

Examples may include, but are not necessarily limited to: a church, cinema, clubroom, hall, museum, public swimming pool, stadium, theatre, where runanga, early childhood centre, college, day care institution, centre for handicapped people, kindergarten, school, university or transport terminal.

**COMMENT:**

People who purchase food or drink to take away and customers of commercial and industrial businesses are not required to be included when calculating the number of sanitary facilities to be provided.

**1.1.3** Toilet facilities for males must contain WC pans and basins and may contain urinals.

**1.1.4** Showers or baths are required for buildings where:

- a) People live or are accommodated
- b) People engage in active recreation
- c) Children under the age of five are supervised or educated
- d) People work in occupations where they get dirty and require showers before leaving work.

**1.1.5** The number of *sanitary fixtures* for the uses in Paragraphs 1.1.2, 1.1.3 and 1.1.4 is calculated for:

- a) WC pans, urinals and basins – use Figure 1, Table 1, Table 3 and Table 4.
- b) Baths and showers – use Table 2.

**1.1.6** Provision of *sanitary fixtures* including those facilities for *persons with disabilities* are given in Tables 1 and 2.

**1.1.7** Where separate facilities are provided, the male facility may include urinals.

**1.1.8** Where *unisex facilities* are provided, they shall:

- a) Be located in a self contained compartment offering full *privacy* by way of full height doors and walls,
- b) Contain a WC pan, basin, sanitary towel disposal equipment (where required), but no urinal, and
- c) Be located so that access is not via an area restricted to one sex.

**1.2 Sanitary towel disposal**

**1.2.1** In *buildings*, other than housing and those used exclusively by preadolescents, sanitary facilities for females shall have provision for sanitary towel disposal by either:

- a) Installing incinerators, macerators or similar disposal equipment, or
- b) Providing space for a portable disposal system.

**COMMENT:**

Under the Health and Safety in Employment Regulations 1995, sanitary towel disposal equipment (either fixed or portable) must be provided in sanitary facilities used by females.

**1.2.2** The location of sanitary towel disposal equipment shall not impede access for *people with disabilities* and shall be located:

- a) Where separate female facilities are provided: within the facility to serve one or more toilet cubicles, or
- b) Where *unisex facilities* are provided: in each toilet cubicle.

Amend 5  
Jun 2007

Amend 5  
Jun 2007

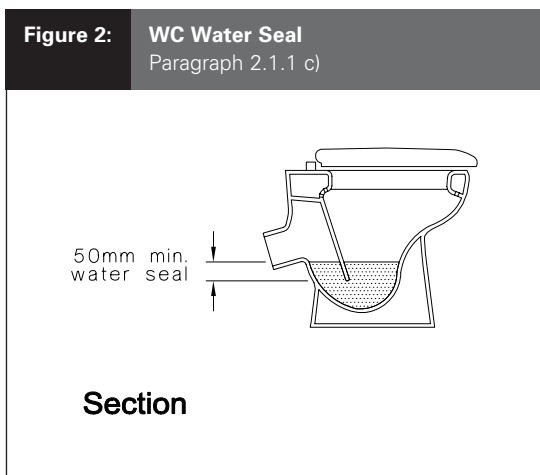
Amend 5  
Jun 2007

## 2.0 Fixture Construction and Installation

### 2.1 WC pans

**2.1.1** A WC system shall be firmly fixed in place and have:

- a) An *impervious*, easily cleaned surface finish (e.g. glazed earthenware or stainless steel),
- b) Sufficient water trap volume to contain excreta from normal usage,
- c) A minimum water seal depth of 50 mm (see Figure 2),
- d) A pan which will not overflow during a single flush even if the outlet blocks,
- e) A watertight flexible joint connecting the WC to a discharge pipe. The joint must be above floor level, and within the room containing the WC, and
- f) A flushing apparatus capable of clearing all normal faecal matter from the pan in a single flush, and of delivering a full flush within 2 minutes of the previous usage.







**2.2 Flushing systems**

**2.2.1** Flushing systems for *sanitary fixtures* shall use either cisterns or flushing valves.

**2.2.2** Cisterns may be of the dual flush, 2 button type providing the choice of a full flush or a half flush.

**2.2.3** Flushing valves shall have backflow prevention complying with G12/AS1, and a water supply capable of supplying several flushes in rapid succession. The capacity should be related to the nature and usage of the *building*.

**2.3 Urinals**

**2.3.1** A urinal may be of the stall, continuous wall, trough or bowl type.

**2.3.2** Any urinal shall have at its base a channel or trough of sufficient size to receive all fluids discharging into it. The channel shall drain to a trap at the lowest point where fluids shall enter a discharge pipe through a domed grate. The grate shall have openings with a total area at least that of the discharge pipe, and be securely fixed but removable for maintenance access (see Figure 3).

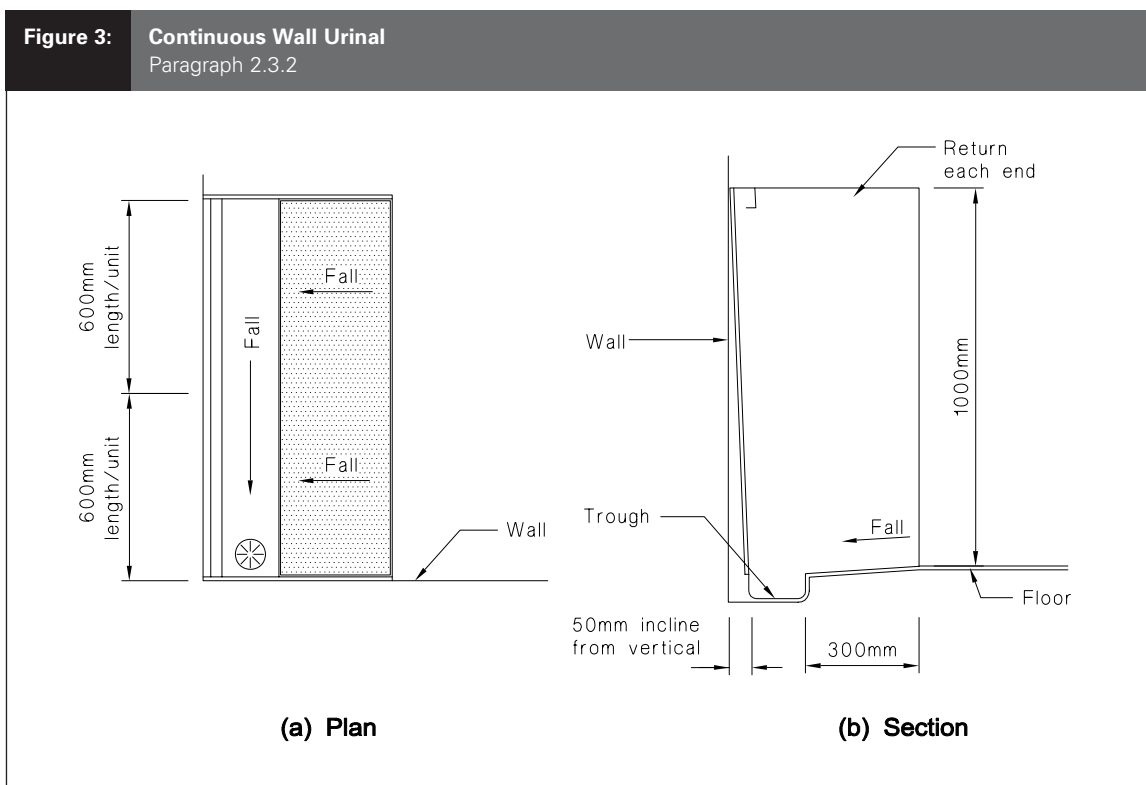
**2.3.3** Wall hung bowl or trough urinals shall have the front lip height above the floor or step, no more than 600 mm for men and no more than 400 mm for boys. The back surface of the urinal must extend at least 450 mm above the front lip level.

**2.3.4** Urinals shall have *impervious*, easily cleaned surfaces (e.g. glazed ceramic ware or stainless steel). Stainless steel urinals are to be constructed of 1.2 mm minimum sheet thickness of grade AS 1449/304 or when located in the outside air or a marine environment, the grade is to be AS 1449/316.

**2.3.5** Urinal flushing apparatus shall clean the whole urinal surface and deliver a minimum of 2.5 litres of water per flush to each stall, bowl or 600 mm length of urinal wall.

**2.3.6** A urinal flushing system shall have the cistern outlet at least 450 mm above the sparge pipe and comply with Table 5.

**2.3.7** A flushing valve is also acceptable for urinals provided the water supply complies with Table 5 and backflow prevention complies with NZBC G12.



**2.3.8** Manually operated flushing systems shall have the operating control located no more than 1.3 m above the floor.

**2.4 Bidets**

**2.4.1** Bidets shall:

- a) Be firmly fixed in place, and
- b) Have an *impervious*, easily cleaned surface finish (e.g. glazed earthenware or stainless steel), and
- c) Be either over-rim feed type or submersible spray type, and
- d) Satisfy the provisions of NZBC G12 for backflow prevention.

**2.5 Showers**

**2.5.1** Showers using either a shower tray or a level threshold shall satisfy the provisions of E3/AS1 Internal Moisture.

**2.6 Acceptable standards**

**2.6.1** *Sanitary fixtures* construction shall comply with the relevant parts of the following standards:

- AS 1449 Wrought alloy steels – Stainless and heat-resisting steel plate, sheet and strip.
- AS 3588 Shower bases and shower modules.
- AS/NZS 2023 Baths for ablutionary purposes.
- AS/NZS 1730 Washbasins.
- NZS 3331 Specification for quality of vitreous china sanitary appliances.

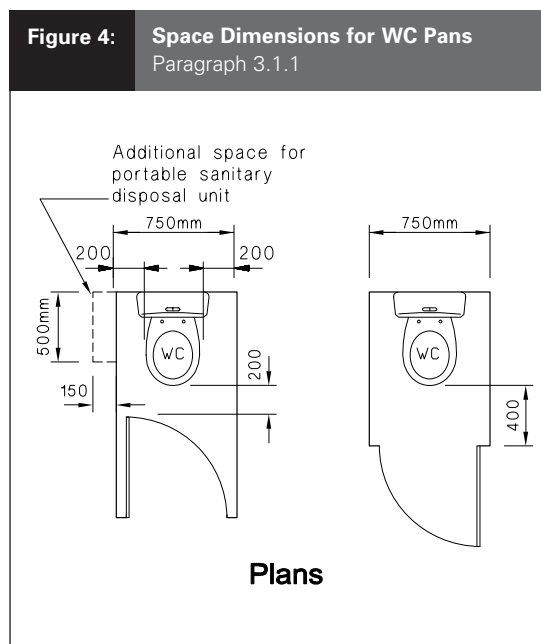
**3.0 Location of Sanitary Fixtures**

**3.0.1** Other NZBC Clauses relevant to the installation of *sanitary fixtures* are:

- E3 "Internal Moisture", for overflow and water splash requirements,
- G4 "Ventilation",
- G12 "Water supplies", and
- G13 "Foul water".

**3.1 Space dimensions**

**3.1.1** Space containing *soil fixtures* shall be separated from *habitable spaces*. WC pans shall be located in spaces having dimensions of no less than those shown in Figure 4.



## 3.2 Access to food and work areas

**3.2.1** In *household units*, at least one door shall be provided between a *soil fixture* and a kitchen or a place for food storage.

**3.2.2** In *buildings* other than *household units*, no space containing a *soil fixture* shall open directly into:

- a) A space used for the storage, preparation, sale or consumption of food, see Figure 10, or
- b) An office or other work areas (as in factories), see Figure 10.

## 3.3 Basins

**3.3.1** Basins shall be located in spaces containing a *soil fixture*, or in an immediately adjacent space. However, where only a single door is provided between the *soil fixture* space and a kitchen in *household units* (see Paragraph 3.2.1), a basin shall be provided within the *soil fixture* space.

### COMMENT:

1. The essential requirement is the provision of a basin with cold water immediately available to users of *soil fixtures* particularly before handling food. While perhaps preferable, it is often not required or practical to supply hot water in some places such as roadside rest areas.
2. It is not acceptable for the kitchen sink to be used as a hand basin.

## 3.4 Communal sanitary fixtures

**3.4.1** *Sanitary fixtures* may be located in *buildings* separate from other accommodation. The length of travel shall be convenient taking account of the type and usage of the *fixtures*.

**3.4.2** In camping grounds *sanitary fixtures* shall be located no more than 75 metres from any caravan or campsite.

### COMMENT:

This situation applies normally to institution *buildings*, motor camps, caravan parks, maraes, outdoor pursuits centres, schools and military bases, but may apply to a group of dwellings.

**3.4.3** *Sanitary fixtures* for group dwellings shall be conveniently located for all occupants.

## 4.0 People with Disabilities

### 4.1 Access

**4.1.1** *Sanitary fixtures* for *people with disabilities* shall be signposted as required by NZBC F8 "Signs" and located on an *accessible route* as required by NZBC D1 "Access Routes".

### 4.2 Number of facilities

**4.2.1** *Sanitary facilities* for *people with disabilities* shall be provided in accordance with Tables 1 and 2. In large *buildings* having more than 300 occupants, where sanitary facilities are provided in groups in two or more locations, *accessible* facilities shall be included at each location for *buildings* having the following classified uses:

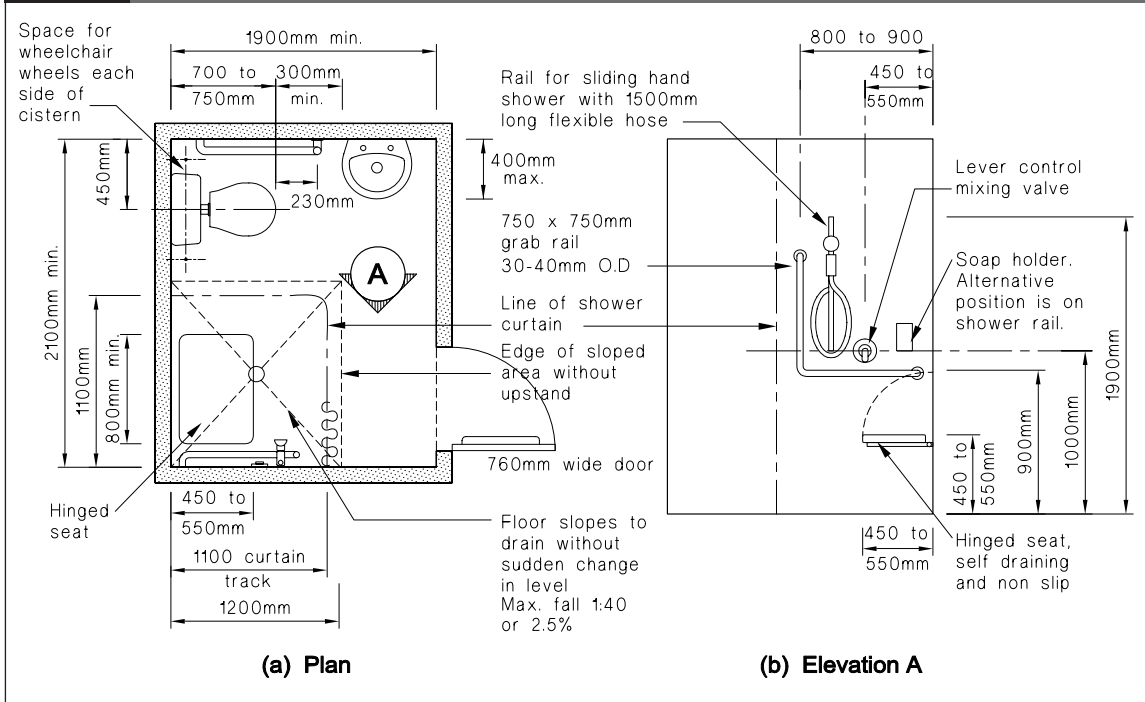
- a) Communal non-residential – all *buildings* described as "assembly service", and
- b) Commercial – those *buildings* that are amusement parks, shopping plazas, libraries and transport terminals.

### COMMENT:

For example: a sports stadium may have groups of sanitary facilities conveniently distributed to service the seating arrangement for the users. It is essential that *people with disabilities* have the same access to facilities as other occupants.

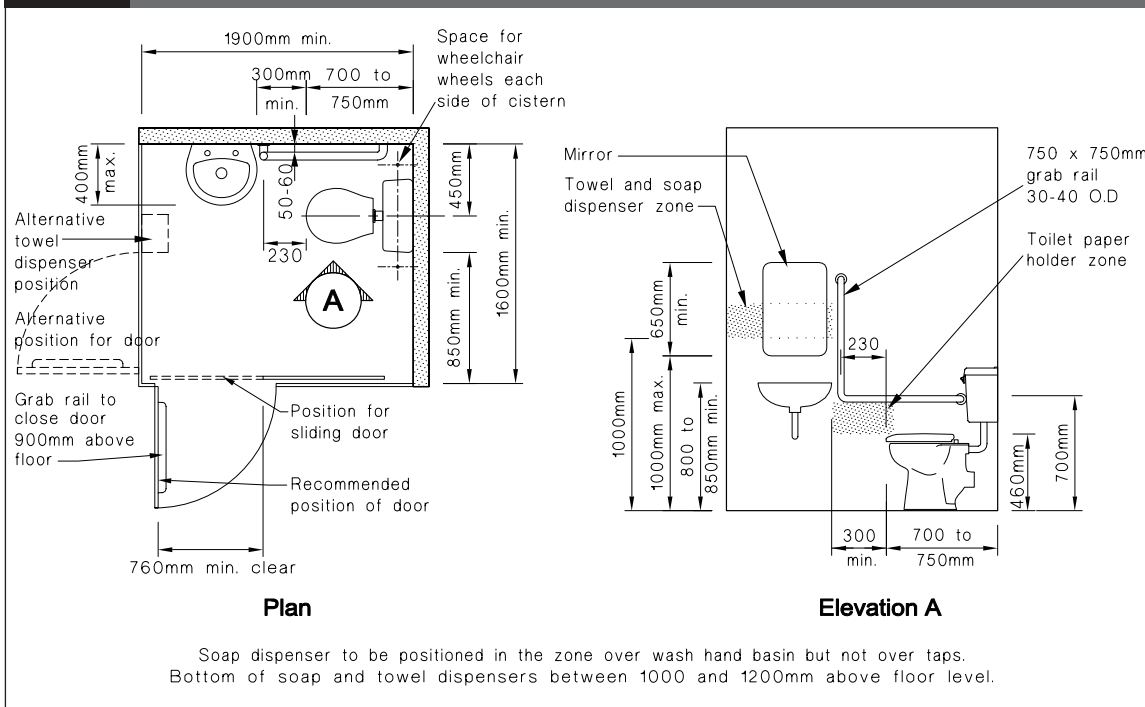
**4.2.2** *Fixtures* and spaces for *people with disabilities* shall comply with the relevant layouts shown in Figures 5, 6, 7, 8 and 9.

**Figure 5: Accessible Toilet and Shower Compartment**  
Paragraph 4.2.2, Tables 1 and 2



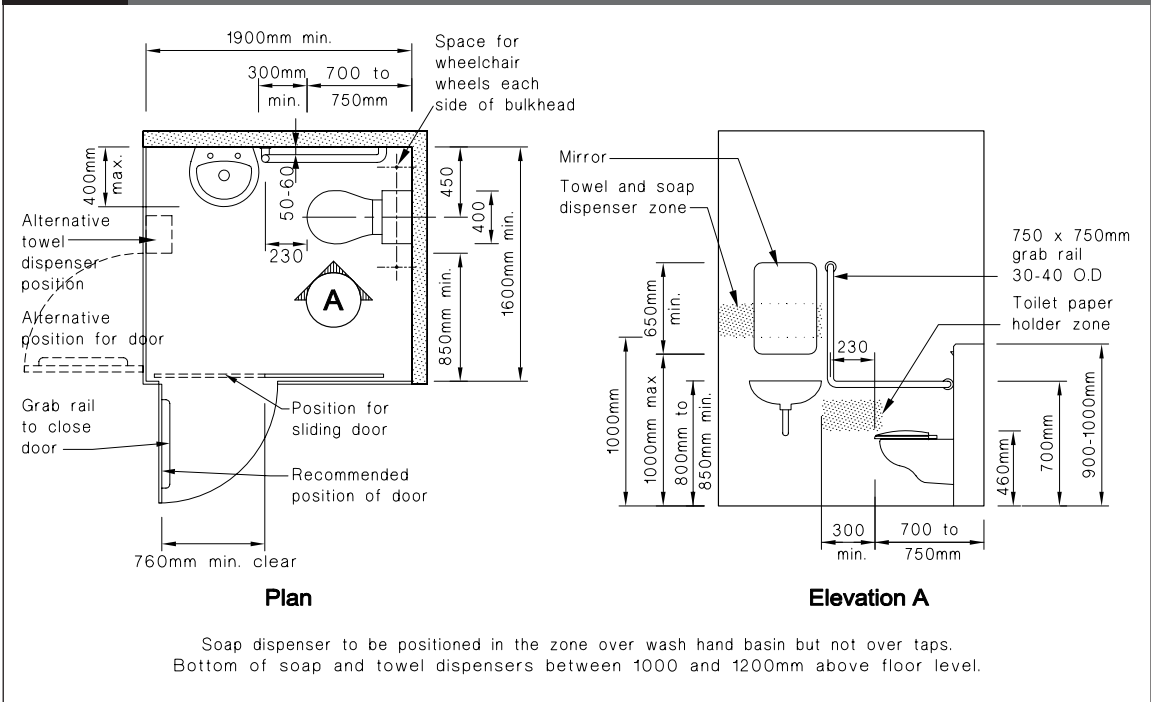
Amend 4  
Jul 2001

**Figure 6: Accessible Toilet Compartment**  
Paragraph 4.2.2 and Table 1



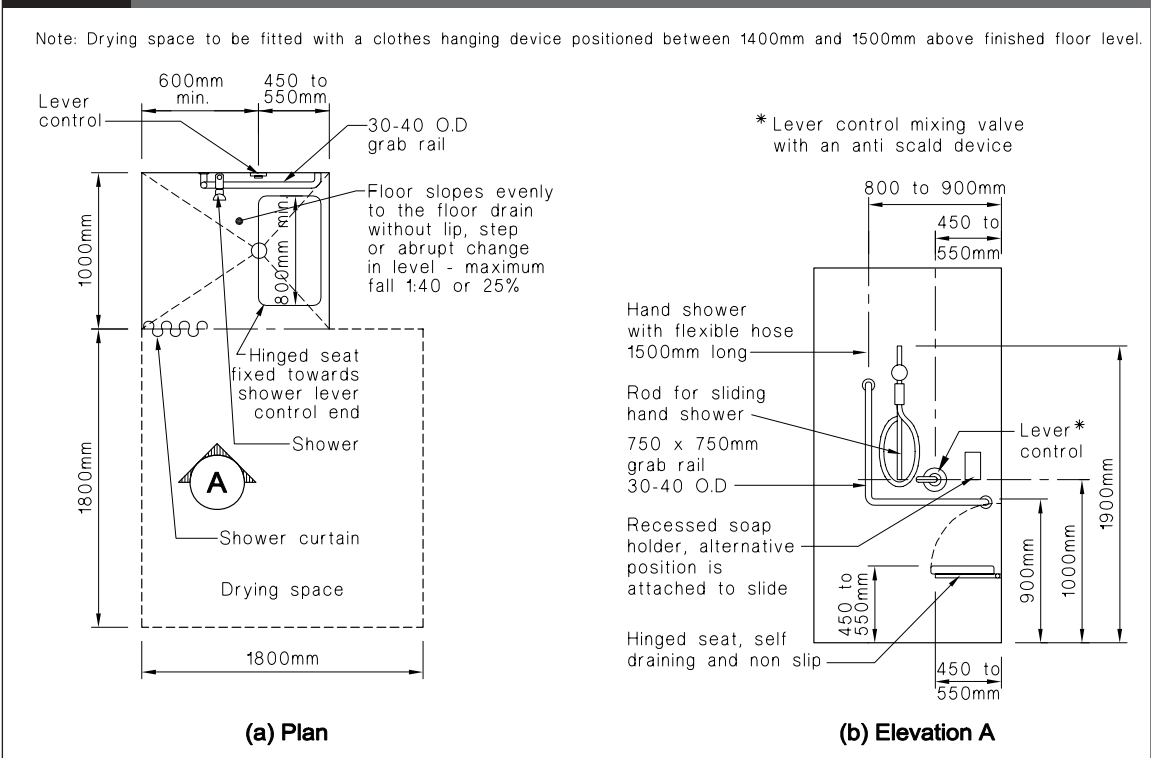
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**Figure 7: Requirements for Accessible Wall Hung Pans**  
Paragraph 4.2.2, 4.2.8 and Table 1



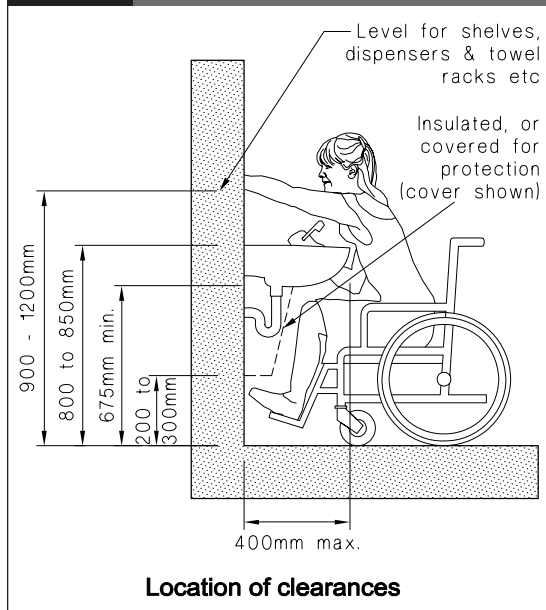
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Jul 2001

**Figure 8: Accessible Shower Compartment**  
Paragraph 4.2.2 and Table 2



Amend 4  
Jul 2001

**Figure 9: Accessible Basin**  
Paragraph 4.2.2 and Table 1



Amend 4  
Jul 2001

**4.2.3** For safety in an *accessible* shower compartment the shower slider rod, or the adjustable shower assembly integrated with the grab rail, shall be firmly fixed in place.

**COMMENT:**

Sliding rod assemblies are used by *people with disabilities* as a grab rail in an emergency and rods can come away in their hands leading to a fall.

**4.2.4** *Accessible* showers shall have a level threshold.

**4.2.5** If two or more toilet compartments are provided for wheelchair users, at least one shall have a pan of the opposite hand.

**4.2.6** The WC flushing control shall be easily operable, positioned on the centre line or approach side of the WC pan, and no higher than 1200 mm above the finished floor level. Similarly, easily operable privacy bolts (to indicate whether the toilet is occupied) shall be located no more than 1200 mm above floor level.

**4.2.7** NZS 4121 Section 10 is also an acceptable solution for *people with disabilities*.

Amend 4  
Jul 2001

**4.2.8** Where there is a wall hung pan or a concealed cistern, full access is required each side of the WC pan, as detailed in Figure 7, to allow for wheel-over access. The wall in front of a concealed cistern shall extend no less than 1.0 m above floor level to provide back support, and fold-up lid shall be provided.

**5.0 Non-flushing Sanitary Fixtures**

**5.0.1** *Soil fixtures* that are not water flushed, such as those using chemicals or biological treatment, shall be located where they will not cause a nuisance.

**COMMENT:**

1. "Nuisance" is a defined term under the Health Act 1956.
2. Some types of non-water borne toilets may require the provision of specific ventilation.

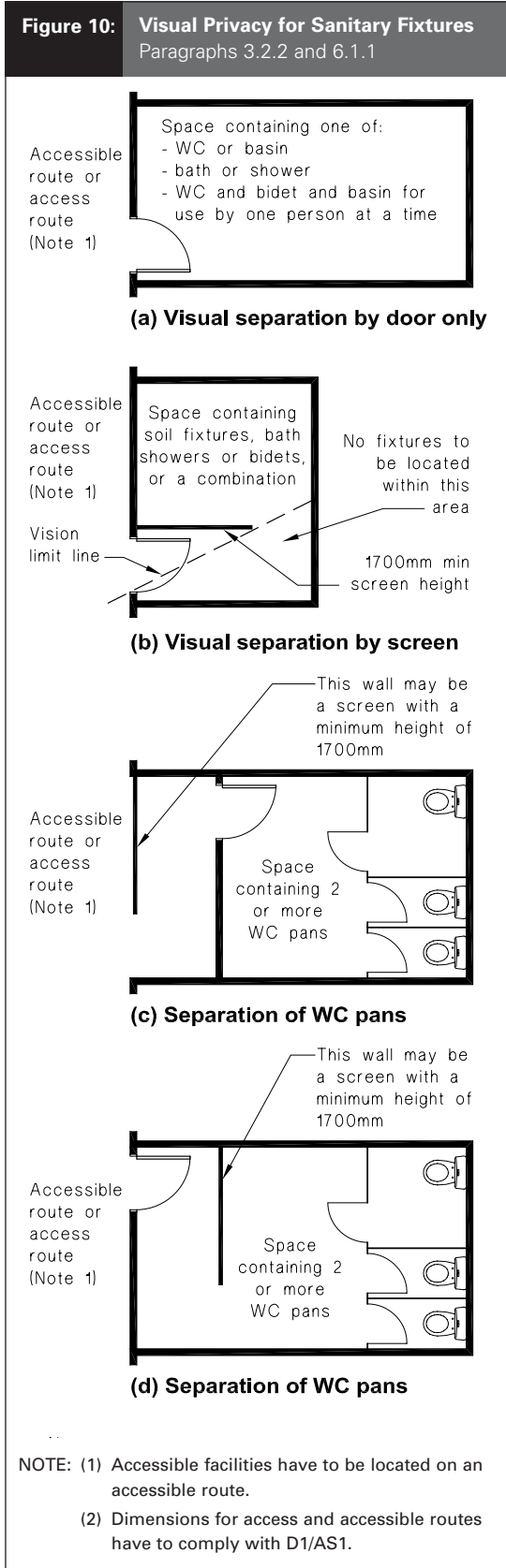
**5.0.2** *Privies* are acceptable if located at least 3.0 m from any *building* having a classified use, other than outbuildings or ancillary buildings. Receptacles for excreta are to be constructed to exclude flies and be fitted with a hinged lid.

**6.0 Privacy**

**6.1 Line of sight**

**6.1.1** There shall be no direct line of sight between an *access route* or *accessible route* and a WC, urinal, bath, shower or bidet. See Figure 10 for acceptable layouts.

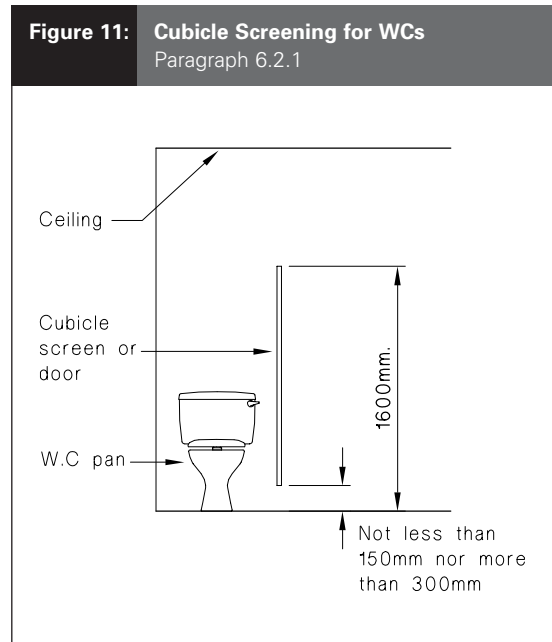
Amend 5  
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## 6.2 Cubicles

**6.2.1** Where a space contains more than one WC pan, each pan shall be enclosed in a separate cubicle. Screen walls and doors are acceptable with their upper edge at least 1600 mm above the floor, and their lower edge between 150 mm and 300 mm above the floor (see Figure 11).



## 6.3 Lobbies

**6.3.1** Lobbies between the space containing sanitary facilities and general public areas are not necessary to meet privacy and line of sight requirements, but if provided:

- They shall be independent for each sex if the facilities are single sex or,
- They shall be unisex for *unisex facilities*.

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Jul 2001

**Table 1: Number of Sanitary Fixtures: WC Pans, Urinals and Basins**  
Paragraph 1.1

Building use	User group	Housing (see Notes)										
		Separate sex toilet facilities					Unisex toilet facilities					
		Combination of WC pans and urinals		WC pans only		Basins		Combination of WC pans and urinals		WC pans only		Basins
Design Occ.	Number	Design Occ.	Number	Design Occ.	Number	Design Occ.	Number	Design Occ.	Number	Design Occ.	Number	
												WC pans
Detached dwellings and multi-unit dwellings	Occupants											
			1		1							1
Group dwelling Marae, commune	Occupants	Provide in accordance with Communal Residential: boardinghouse, hospitals, prisons, old people's homes.										
<b>Communal Residential (see Notes)</b>												
Building use	User group	Separate sex toilet facilities					Unisex toilet facilities					
		Combination of WC pans and urinals		WC pans only		Basins		Combination of WC pans and urinals		WC pans only		Basins
Community Service and Community Care Boardinghouses, hospitals, prisons, old people's homes	Female occupants	Design Occ.	Number	Design Occ.	Number	Design Occ.	Number	Design Occ.	Number	Design Occ.	Number	Design Occ.
	Male occupants	1-2	1	1-50	1	1-2	1	1-20	1	1-35	1	1
		3-9	2	51-160	2	3-9	2	21-70	2	36-120	2	2
	Occupants with disabilities. Note 6	10-30	3	>160	add 1 per 10	10-19	3	>70	add 1 per 50	>120	add 1 per 90	2-7
		>30	add 1 per 10	>160	add 1 per 160	20-30	4	>70	add 1 per 50	>14	add 1 per 9	8-14
	Staff	Provide in accordance with Commercial: staff facilities.										



**Table 1: Number of Sanitary Fixtures: WC Pans, Urinals and Basins (Cont'd)**  
Paragraph 1.1

Building use	User group	Communal Non-residential (see Notes)									
		Separate sex toilet facilities					Unisex toilet facilities				
		Combination of WC pans and urinals		WC pans only		Basins		WC pans only		Basins	
Design Occ.	Number	Design Occ.	Number	Design Occ.	Number	Design Occ.	Number	Design Occ.	Number		
<b>Camping Grounds</b> Comment: See also Camping Grounds Regulations, which contain the allocation of 3.5 people per camp site for calculating the number of campers.	<b>Female occupants</b>	1-25	1	1-12	1	1-25	1	1-25	1	1-25	1
		26-50	2	13-25	2	26-50	2	26-50	2	26-50	2
<b>Male occupants</b>	<b>Male occupants</b>	51-100	3	51-100	2	51-75	4	51-75	4	51-75	5
		>100	add 1 per 40	>100	add 1 per 40	>100	add 1 per 40	>100	add 1 per 40	>100	add 1 per 40
		1-25	1	1-50	1	1-12	1	1-25	1	13-25	3
		26-50	2	51-100	2	13-25	2	26-50	2	26-50	4
<b>People with disabilities. Note 6</b>	<b>People with disabilities. Note 6</b>	51-100	3	51-75	4	51-75	4	51-75	4	51-75	5
		>100	add 1 per 40	>100	add 1 per 50	>100	add 1 per 40	>100	add 1 per 40	>100	add 1 per 40
		1-100	1	1-100	1	1-100	1	1-100	1	1-100	1
<b>Assembly Service</b> Churches, club rooms, assembly halls, stadiums, sports venues, grandstands	<b>Staff</b>	101-300	2	101-300	2	101-300	2	101-300	2	101-300	2
		>300	3	>300	3	>300	3	>300	3	>300	3
<b>Male patrons</b>	<b>Female patrons</b>	1-15	1	1-15	1	1-60	1	1-60	1	1-60	1
		16-60	2	16-60	2	61-200	2	61-200	2	61-200	2
		61-120	3	61-120	3	201-350	3	201-350	3	201-350	3
		>120	add 1 per 70	>120	add 1 per 70	>350	add 1 per 150	>350	add 1 per 150	>350	add 1 per 150
<b>Patrons with disabilities. Note 6</b>	<b>Male patrons</b>	1-25	1	1-25	1	1-70	1	1-70	1	1-70	1
		26-110	2	26-110	2	71-230	2	71-230	2	71-230	2
		111-200	3	111-200	3	231-410	3	231-410	3	231-410	3
		>200	add 1 per 100	>200	add 1 per 100	>410	add 1 per 190	>410	add 1 per 190	>410	add 1 per 190
<b>All patrons</b>	<b>Patrons with disabilities. Note 6</b>	1-300	1	1-300	1	1-300	1	1-300	1	1-300	1
		>300	2	>300	2	>300	2	>300	2	>300	2
Museums, art galleries (display areas)	<b>All patrons</b>	Provide in accordance with Commercial: amusement park, shopping plaza etc.									

**Table 1: Number of Sanitary Fixtures: WC Pans, Urinals and Basins (Cont'd)**  
Paragraph 1.1

**Communal Non-residential (see Notes) - Continued**

Building use	User group	Separate sex toilet facilities										Unisex toilet facilities		
		Combination of WC pans and urinals			WC pans only			Basins			Design Occ.	Number	Design Occ.	Number
		Design Occ.	Number	Urinals	Design Occ.	Number	Design Occ.	Number	Design Occ.	Number				
Theatres, cinemas	Female patrons	1-15	1	1-80	1	1-10	1	1-80	1	1-5	1			
		16-80	2	81-290	2	11-50	2	251-430	2	1-5	1			
		>80	add 1 per 100	>290	add 1 per 230	>50	add 1 per 60	>430	add 1 per 200	6-30	2			
	Male patrons	1-15	1	1-80	1	1-10	1	1-65	1					
		16-80	2	81-290	2	11-60	2	66-220	2					
		>80	add 1 per 100	>290	add 1 per 230	>60	add 1 per 70	>220	add 1 per 170	>30	add 1 per 40			
	Patrons with disabilities. Note 6					1-300	1	1-300	1					
						>300	2	>300	2					
Places of active recreation, swimming pools, squash courts, gymnasiums	Female patrons	Provide in accordance with Commercial: staff facilities.												
		1-10	1	1-70	1	1-10	1	1-70	1	1-5	1			
		11-60	2	71-230	2	61-120	3	231-400	3	6-40	2			
	Male patrons	1-25	1	1-50	1	1-20	1	1-50	1					
		26-130	2	51-180	2	21-80	2	51-180	2					
		131-270	3	181-320	3	81-150	3	>180	add 1 per 140	>40	add 1 per 40			
	Patrons with disabilities. Note 6	>270	add 1 per 150	>320	add 1 per 150	>150	add 1 per 80	1-300	1					
						>300	2	>300	2					
Assembly Care Early childhood centres	Students	1-40	1	1-25	1	1-40	1	1-25	1	1-25	1			
		41-150	2	41-150	2	41-150	2	26-120	2	26-120	2			
		151-270	3	151-270	3	121-230	3	121-230	3	121-230	3			
Schools, universities	Staff and students	>270	add 1 per 130	>270	add 1 per 150	>270	add 1 per 130	>350	add 1 per 150	>350	add 1 per 150			

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**Table 1: Number of Sanitary Fixtures: WC Pans, Urinals and Basins (Cont'd)**  
Paragraph 1.1

Building use	User group	Commercial (see Notes)										Unisex toilet facilities	
		Combination of WC pans and urinals				Separate sex toilet facilities				Basins		Design Occ.	Number
		WC pans		Urinals		WC pans only		Basins					
Design Occ.	Number	Design Occ.	Number	Design Occ.	Number	Design Occ.	Number	Design Occ.	Number	Design Occ.	Number		
Staff facilities for: offices, banks, shops, hotels, bars and any other building use * Refer Note 5	<b>Female staff</b>	1 – 10	1	1 – 10	1	1 – 10	1	1 – 70	1	1 – 5	1	1	
		11 – 50	2	11 – 50	2	11 – 50	2	71 – 250	2	1 – 5	1	1	
		51 – 90	3	51 – 90	3	>90	add 1 per 60	>250	add 1 per 200	1 – 5	1	1	
	<b>Male staff</b>	1 – 10	1	1 – 10	1	1 – 10	1	1 – 70	1	6 – 30	2	2	
		11 – 50	2	11 – 50	2	11 – 50	2	71 – 250	2	6 – 30	2	2	
		51 – 90	3	51 – 110	3	>110	add 1 per 70	>250	add 1 per 200	>30	add 1 per 40	add 1 per 40	
	Amusement parks, shopping plaza, libraries, transport terminals * Refer Note 5	<b>Staff with disabilities. Note 6</b>	1 – 120	add 1 per 80	>550	add 1 per 450	1 – 300	1	1 – 300	1	1 – 35	1	1
			1 – 300	2	>300	>300	>300	2	>300	2	1 – 35	1	1
			1 – 50	1	1 – 50	1	1 – 50	1	1 – 350	1	1 – 35	1	1
		<b>Female patrons</b>	51 – 240	2	51 – 240	2	51 – 240	2	351 – 1150	2	36 – 165	2	2
241 – 480			3	241 – 480	3	481 – 750	4	>1150	add 1 per 850	166 – 320	3	3	
481 – 750			4	>750	add 1 per 250	1 – 75	1	1 – 280	1	166 – 320	3	3	
<b>Male patrons</b>		1 – 50	1	1 – 500	1	1 – 500	1	1 – 280	1	>320	add 1 per 200	add 1 per 200	
		51 – 250	2	501 – 1700	2	501 – 1700	2	281 – 950	2	>320	add 1 per 200	add 1 per 200	
		251 – 500	3	>800	add 1 per 350	>1700	add 1 per 1400	>950	add 1 per 700	>320	add 1 per 200	add 1 per 200	
Coffee bars, tea rooms, restaurants, bars, night clubs * Refer Note 5		<b>Patrons with disabilities. Note 6</b>	1 – 350	add 1 per 350	>1700	add 1 per 1400	1 – 300	1	1 – 300	1	1 – 5	1	1
	1 – 300		1	>300	>300	>300	2	>300	2	1 – 5	1	1	
	1 – 15		1	1 – 15	1	1 – 15	1	1 – 120	1	1 – 5	1	1	
	<b>Female patrons</b>	16 – 80	2	101 – 340	2	16 – 65	2	121 – 380	2	6 – 40	2	2	
		341 – 600	3	341 – 600	3	66 – 135	3	>380	add 1 per 290	41 – 80	3	3	
		>600	add 1 per 100	>200	add 1 per 280	136 – 200	4	>250	add 1 per 200	>80	add 1 per 50	add 1 per 50	
	<b>Male patrons</b>	1 – 15	1	1 – 100	1	1 – 15	1	1 – 70	1	>80	add 1 per 50	add 1 per 50	
		16 – 80	2	101 – 340	2	16 – 65	2	71 – 250	2	>80	add 1 per 50	add 1 per 50	
		>80	add 1 per 100	>600	add 1 per 280	66 – 135	3	>300	2	>80	add 1 per 50	add 1 per 50	
	<b>Patrons with disabilities. Note 6</b>	1 – 100	1	1 – 300	1	1 – 300	1	1 – 300	1	>80	add 1 per 50	add 1 per 50	
1 – 300		1	>300	>300	>300	2	>300	2	>80	add 1 per 50	add 1 per 50		
1 – 300		1	>300	>300	>300	2	>300	2	>80	add 1 per 50	add 1 per 50		

**Table 1: Number of Sanitary Fixtures: WC Pans, Urinals and Basins (Cont'd)**  
Paragraph 1.1

Building use	User group	Industrial (see Notes)						Unisex toilet facilities	
		Combination of WC pans and urinals		Separate sex toilet facilities		Basins		Design Occ.	Number
		Design Occ.	Number	Design Occ.	Number	Design Occ.	Number		
Factories, power stations, industrial plants	Female staff	1 – 10	1	1 – 10	1	1 – 70	1		
		11 – 60	2	11 – 50	2	71 – 250	2		
		61 – 120	3	51 – 90	3	>250	add 1	1 – 5	1
		>120	add 1	>90	add 1	per 200			
	Male staff	1 – 10	1	1 – 10	1	1 – 70	1		
11 – 60		2	11 – 50	2	71 – 250	2			
61 – 120		3	51 – 110	3	>250	add 1	6 – 30	2	
		>120	add 1	>110	add 1	per 200			
	Staff with disabilities. Note 6	1 – 80	add 1	1 – 300	1	1 – 300	1	>30	add 1
		per 80	per 450	>300	2	>300	2	per 40	

**Note:**

- Design Occ: Design occupancy – the number of people in the user group.
- Number: The number of fixtures or facilities required.
- Greater than: > = greater than.
- Urinals: 600 mm long stall urinal = 1 urinal.
- Staff: Staff and patrons may share the same facilities. The number provided must be the total as required for staff plus those required for patrons.
  - Where staff and patrons use separate toilet facilities: You should calculate the number of toilets for staff and add them to the number of toilets that you have calculated for patrons.
  - Where staff and patrons share facilities: You should add the number of toilets you have calculated for staff to the number of toilets you have calculated for patrons like this: If the number of patrons is greater than the “>[30]” in the staff section of the table, you should use the “add 1 per >[40]” to calculate the number of toilets for staff and the number of toilets for patrons.
 

<sup>1</sup> is based on unisex toilets for staff.
- People with disabilities:
  - See Paragraph 4.2.1 for situations where accessible facilities must be provided at all groups of toilets.
  - For Industrial buildings – accessible facilities shall be provided where more than 10 people are employed.
  - Accessible facilities need not be in addition to those required for other building occupants.
  - See Figures 5, 6 and 7 for accessible toilet facility layouts.

**COMMENT:**

Example for separate toilet facilities: Using unisex facilities, 100 patrons at a coffee bar require 4 facilities. Using unisex facilities, 8 staff of a coffee bar require 2 facilities.

**COMMENT:**

Example for shared toilet facilities: Using unisex facilities, 100 patrons at a coffee bar require 4 facilities. Using unisex facilities, 8 staff of a coffee bar require 1 facility based on >30 add 1 per 40.

<b>Table 2: Number of Sanitary Fixtures, Baths and Showers</b> Paragraph 1.1				
Building use	User group	Baths or showers		Accessible showers
		Design	Occ. Number	
<b>Housing</b>				
<b>Detached dwellings and multi-unit dwellings</b>	Occupants	–	1	
<b>Group Dwelling</b> Marae, commune	Occupants	1 – 25 26 – 60 61 – 100 >100	1 2 3 add 1 per 50	
<b>Communal Residential</b>				
<b>Community Service and Community Care</b> Hospitals, old people's homes, community housing, specialist care facilities	Occupants	1 – 8 9 – 20 >20	1 2 add 1 per 10	Accessible showers to be provided in accordance with the needs of the occupants, patients or treatment within the institutions
Hotels, hostels, motels, prisons, boardinghouses	Occupants	1 – 8 9 – 20 >20	1 2 add 1 per 10	For each accessible unit: One accessible shower
Camping grounds, motor camps, caravan parks	Occupants	1 – 25 26 – 60 61 – 100 >100	1 2 3 add 1 per 50	Accessible showers provided on the scale of: 1 – 100    1 101 – 300    2 >300    3
<b>Communal Non-residential</b>				
Churches, club rooms, assembly halls, grandstands (seating areas), museums, art galleries (display areas)	Patrons Staff	–	0	Where showers are provided include at least one accessible shower compartment (see Figure 8)
Places of active recreation, swimming pools, squash courts, gymnasiums	Patrons Staff	1 – 30 >30	1 add 1 per 50	Where showers are provided include at least one accessible shower compartment (see Figure 8)
Early childhood centres	Children	–	1 bath	–
Schools, Universities – spaces other than those used for active recreation	Students Staff	–	0	Where showers are provided include at least one accessible shower compartment (see Figure 8)
<b>Commercial</b>				
Amusement parks, shopping plaza, libraries, transport terminals, coffee bars, tea rooms, restaurants, bars, night clubs, offices, banks. (Includes staff facilities for other building uses.)	Patrons Staff	–	0	Where showers are provided include at least one accessible shower compartment (see Figure 8)
<b>Industrial</b>				
Factory, power station, industrial plant (for those workers engaged in dirty occupations.)	Staff	1 – 7 8 – 16 >16	1 2 add 1 per 10	Where showers are provided one accessible shower is required when more than 10 people are employed (see Figure 8)

**Table 3: Sanitary Facility Design Occupancy for Each Sex**  
Paragraph 1.1.1

Building Use	Multiplication factor (applies to the number of building occupants)	
	Males	Females
<b>Housing</b>		
<b>Group dwelling</b> Marae, commune	0.60	0.60
<b>Communal Residential</b>		
Boarding house, hospital, prison and old people's home (see <b>Note 1</b> )	0.60	0.60
<b>Camping ground</b>	0.50	0.50
<b>Communal Non-residential</b>		
<b>Assembly Service</b>		
Church	0.50	0.60
Club room, assembly hall, stadium, sports venue, grand stand	0.80	0.60
Museum and art galleries (display areas only)	0.60	0.60
Theatre, cinema	0.60	0.70
Swimming pool	0.60	0.60
<b>Assembly Care</b>		
School (see <b>Note 1</b> ), university	0.60	0.60
<b>Commercial</b>		
Shopping plaza	0.40	0.70
Library	0.60	0.60
Transport terminals	0.70	0.50
Amusement park, or other building where people are only present for about 1 hour and there is no interval	0.60	0.60
Coffee bar, tea rooms, restaurants, bars, night club	0.80	0.50
Office, banks (including staff facilities for shops, hotels, bars and any other building use)	1.00	0.65
<b>Industrial</b>		
Factory, power stations, industrial warehouse	1.00	0.65
<b>Note:</b>		
1. Applies to <i>buildings</i> or parts of <i>buildings</i> used by both sexes, e.g. co-education schools.		

Amend 5  
Jun 2007

**Table 4: Occupant Densities (adapted from C/AS1 Part 2)**  
Paragraph 1.1.1

Building use	Occupant density (Users/m <sup>2</sup> ) (see <b>Note 1</b> )
<b>Communal Non-residential and Commercial</b>	
Airports – baggage claim	0.5
Airports – concourses	0.1
Airports – waiting areas, check in	0.7
Area without seating or aisles	1.0
Art galleries, museums	0.25
Bar sitting areas	1.0
Bar standing area	2.0
Bleachers, pews or similar bench type seating	2.2 users per linear metre
Classrooms	0.5
Dance floors	1.7
Day care centres	0.25
Dining, beverage and cafeteria spaces	0.8
Exhibition areas, trade fairs	0.7
Fitness centres	0.2
Gymnasias	0.35
Indoor games areas/bowling alleys, etc.	0.1
Libraries – stack areas	0.1
Libraries – other areas	0.15
Lobbies and foyers	1.0
Mall areas used for assembly purposes	1.0
Reading or writing rooms and lounges	0.5
Restaurants, dining rooms and lounges	0.9
Shop spaces and pedestrian circulation areas including malls and arcades	0.3
Shop spaces for furniture, floor coverings, large appliances, building supplies and manchester	0.1
Showrooms	0.2
Space with fixed seating	as number of seats (see <b>Note 2</b> )
Space with loose seating	1.3
Spaces with loose seating and tables	0.9
Stadia and grandstands	1.8
Stages for theatrical performances	1.3
Standing space	2.6
Swimming pools (water surface area)	0.2
Swimming pool surrounds and seating	0.35
Teaching laboratories	0.2
Vocational training rooms in schools	0.1
<b>Communal Residential</b>	
Bedrooms	as number of beds
Bunkrooms	(see <b>Note 2</b> )
Detention quarters	
Dormitories, hostels	
Halls and wharehousi	
Wards containing more than two beds	

**Table 4: Occupant Densities (Cont'd)**  
Paragraph 1.1.1

Building use	Occupant density (Users/m <sup>2</sup> ) (see <b>Note 1</b> )
<b>Commercial and Industrial</b>	
Aircraft hangars	0.02
Bulk storage (e.g. solid stacked)	0.01
Commercial laboratories, laundries	0.1
Computer rooms (not used as classrooms for training)	0.04
Factory space in which layout and normal use determines the number of people using it in working hours	as approved (see <b>Note 3</b> )
Heavy industry	0.03
Interview rooms	0.2
Kitchens	0.1
Manufacturing and process areas, staff rooms	0.1
Offices and staffrooms	0.1
Personal service facilities	0.2
Reception areas	0.1
Workrooms, workshops	0.2
Warehouse storage (e.g. racks and shelves)	0.03
<b>Buildings and parts of buildings with intermittent use</b> (see <b>Note 4</b> )	
Boiler rooms, plant rooms, service units and maintenance workshops	0.03
Parking buildings, garages	0.02
Exitways, enclosed corridors, lifts (no occupants counted)	0.0
Laundry and house keeping facilities	0.2
Storage	0.02
Toilets and subordinate spaces (no occupants counted)	0.0

Note:

1. The floor area to be used shall be the total building use floor area including that occupied by internal partitions and fixtures. The occupant densities in this table already allow for a proportion of floor area, appropriate to the activity, being occupied by furniture, partitions, fixtures and associated equipment.
2. For fixed seating and beds, the number of seats or beds is used instead of an occupant density (users per m<sup>2</sup>).
3. In such cases, the number of occupants must be specified when seeking a building consent. Future increase in numbers shall be treated as a change in use.
4. Spaces in buildings and parts of buildings with intermittent use are normally not included in the calculations for the number of occupants. It is assumed that the occupation is temporary and by people who would already have been included in the number of occupants of another space. The figures given in the table apply where people are specifically employed to perform the functions for which the spaces are provided.

**Table 5: Urinal Flushing Systems**  
Paragraph 2.3.6

Number of urinals per cistern	Number of spreaders for wall urinals	Minimum capacity of flush pipe (litres)	Diameter of flush pipe (mm)	Diameter of sparge to spreaders (mm)
1	2	2.5	25	20
2	3	5.0	32	20
3	4	7.5	40	25
4	5	10.0	40	25

(see **Note 1**)

Note:

1. Up to 6 urinal stalls may be flushed by one cistern or flushing valve provided no more than 3 stalls are served by any branch from the flush pipe.



# Index G1/VM1 & AS1

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

## Access to a facility

- food and work areas ..... **AS1** 3.2, Figure 10
- lobbies ..... **AS1** 6.3.1
- unisex facilities ..... **AS1** 1.1.5 c)

## Camping grounds ..... **AS1** 3.4.2, Tables 1 to 3

- People with disabilities** ..... **AS1** 1.1.2, 1.2.2, 4.0, 4.1, 4.2,  
Figures 5 to 9, Tables 1 and 2
- accessible route ..... **AS1** 4.1.1

- Privacy** ..... **AS1** 6.0
- cubicles ..... **AS1** 6.2, Figure 11
- line of sight ..... **AS1** 6.1, Figure 10
- lobbies ..... **AS1** 6.3

## Sanitary fixtures

- acceptable standards ..... **AS1** 2.6
- access
  - pans ..... **AS1** 4.2.7
  - people with disabilities ..... **AS1** 1.2.2, 4.1
- basins ..... **AS1** 3.3, Figure 9, Table 1
- bidets ..... **AS1** 2.4
- communal sanitary fixtures ..... **AS1** 3.4
- construction and installation ..... **AS1** 2.0
- locations ..... **AS1** 3.0, 4.2.1
- non-flushing sanitary fixtures ..... **AS1** 5.0
  - privies ..... **AS1** 5.0.2
- number of fixtures required ..... **AS1** 1.0, Figure 1, Tables 1 to 4
- sanitary towel disposal ..... **AS1** 1.1.5 b), 1.2, 1.2.2
- showers ..... **AS1** 2.5, 4.2.3, 4.2.4, Figures 5 and 8, Table 2
- space dimensions ..... **AS1** 3.1, 4.2.2, 6.2.1, Figures 4 to 9
- toilets ..... see WC pans
- types of fixtures required ..... **AS1** 1.0, Tables 1 and 2
- urinals ..... **AS1** 2.3, 6.1.1, Table 1
  - bowl urinals ..... **AS1** 2.3.1, 2.3.3, 2.3.5
  - continuous wall urinals ..... **AS1** 2.3.1, Figure 3
  - discharge system ..... **AS1** 2.3.2
  - flushing systems ..... **AS1** 2.3.5 to 2.3.8, Table 5
    - manually operated ..... **AS1** 2.3.8
  - stall urinals ..... **AS1** 2.3.1, 2.3.5
  - surface finish ..... **AS1** 2.3.4
  - trough urinals ..... **AS1** 2.3.1 to 2.3.3

## Soil fixtures ..... **AS1** 3.1.1, 3.2.1, 3.2.2, 3.3.1

- WC pans** ..... **AS1** 2.1, 3.1.1, 4.2.2, Figures 4 to 6, Table 1
- cisterns ..... **AS1** 2.2.2
- cubicles ..... **AS1** 6.2, Figure 11
- flushing systems ..... **AS1** 2.1.1 f), 2.2, 4.2.6
- surface finish ..... **AS1** 2.1.1 a)
- water seals ..... **AS1** 2.1.1 c), Figure 2

