

Approved Document for New Zealand Building Code Personal Hygiene Clause G1 Second Edition

Prepared by the Building Industry Authority
This Approved Document is prepared by the Building Industry Authority, which is a statutory body established by the Building Act 1991.



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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 Note that section 25 of the Disabled Persons Community Welfare Act 1975 has been replaced by section 47A of the Building Act 1991.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
FIRST SCHEDULE—continued		
Clause G1—PERSONAL HYGIENE		
Provisions	Limits on application	
OBJECTIVE		
<p>G1.1 The objective of this provision is to:</p> <ul style="list-style-type: none"> (a) Safeguard people from illness caused by infection or contamination, (b) Safeguard people from loss of <i>amenity</i> arising from the absence of appropriate personal hygiene facilities, and (c) Ensure <i>people with disabilities</i> are able to carry out normal activities and processes within <i>buildings</i>. 		
	<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>	
FUNCTIONAL REQUIREMENT		
<p>G1.2 <i>Buildings</i> shall be provided with appropriate spaces and facilities for personal hygiene.</p>		
PERFORMANCE		
<p>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.</p>		
<p>G1.3.2 <i>Sanitary fixtures</i> shall be located, constructed and installed to:</p> <ul style="list-style-type: none"> (a) Facilitate <i>sanitation</i>, (b) Avoid risk of food contamination, (c) Avoid harbouring dirt or germs, (d) Provide appropriate privacy, (e) Avoid affecting occupants of adjacent spaces from the presence of unpleasant odours, accumulation of offensive matter, or other source of annoyance, (f) Allow effective cleaning, 		

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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>G1.3.3 Facilities for personal hygiene shall be provided in convenient locations.</p> <p>G1.3.4 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

For the purposes of New Zealand Building Code compliance, acceptable reference documents include only the quoted edition and specific amendments as listed below.

		Where quoted
Standards New Zealand		
	NZS 3331: 1972 Specification for quality of vitreous china sanitary appliances	AS1 2.6.1
Amend 4 Jul 2001	NZS 4121: 2001 Design for access and mobility – Buildings and associated facilities	AS1 4.2.7
Standards Australia		
	AS 1449: 1994 Wrought alloy steels – Stainless and heat-resisting steel plate, sheet and strip <i>Amend: 1</i>	AS1 2.3.4, 2.6.1
	AS 3588: 1989 Shower bases and shower modules	AS1 2.6.1
Standards Australia/New Zealand		
	AS/NZS 1730: 1996 Washbasins	AS1 2.6.1
	AS/NZS 2023: 1995 Baths for ablutionary purposes	AS1 2.6.1

Definitions

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

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*.

Building has the meaning ascribed to it by the Building Act 1991.

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 means any *building* or group of *buildings*, or part of any *building* or group of *buildings*, used or intended to be used solely or principally for residential purposes and occupied or intended to be occupied exclusively as the home or residence of not more than one household; but does not include a hostel or boardinghouse or other specialised accommodation.

Impervious That which does not allow the passage of moisture.

People with disabilities means any *person* who suffers from physical or mental disability to such a degree that he or she is seriously limited in the extent to which he or she can engage in the activities, pursuits, and the processes of everyday life.

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.

Unisex facilities Facilities available for use by either sex.

COMMENT:

Unisex facilities may also be described as both gender facilities.

Amend
Jul 2001

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

1.1 General

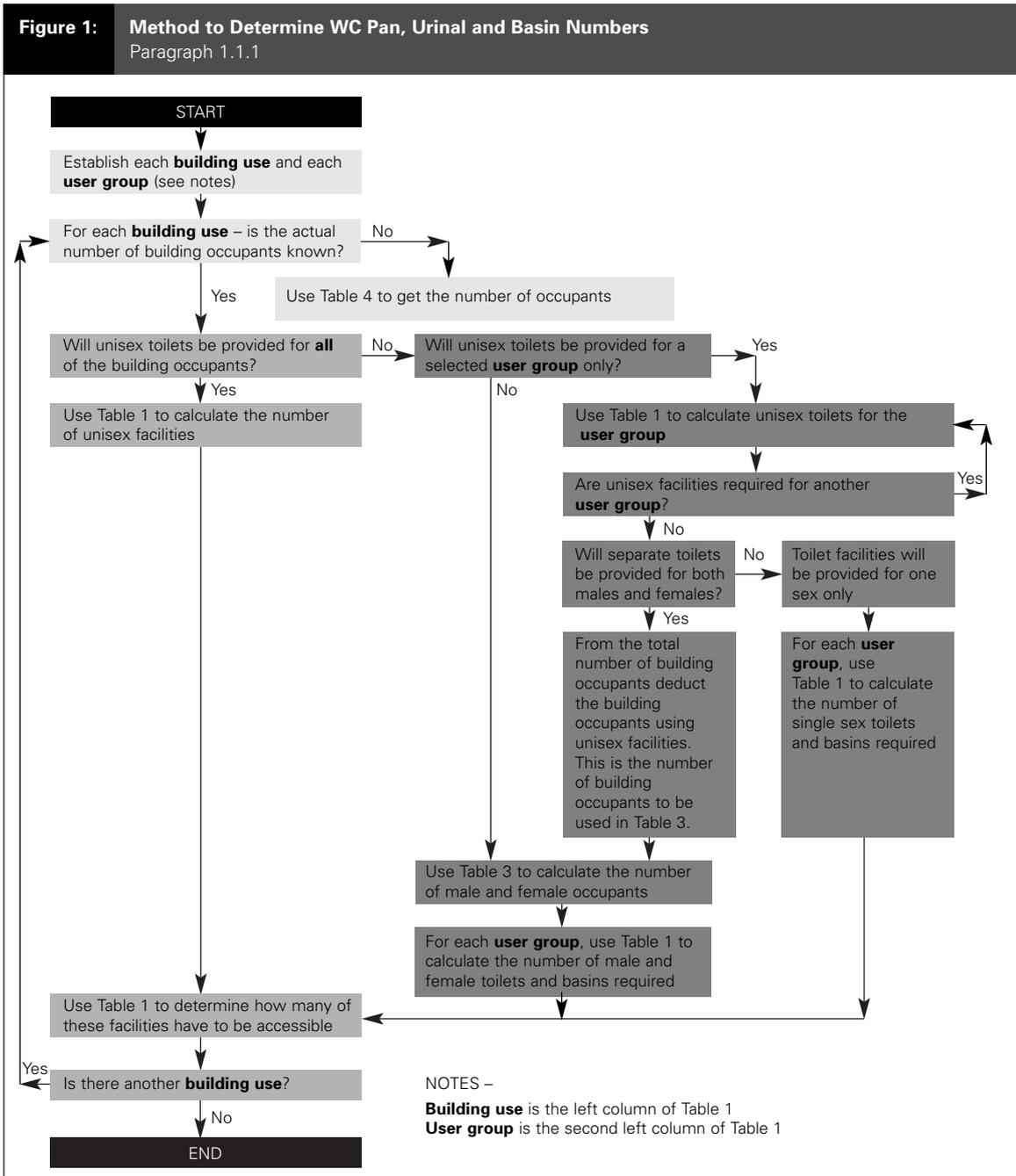
1.1.1 To determine the provision of *sanitary fixtures*:

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

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

1.1.3 Sanitary facilities may be separate for each sex or be unisex.

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



1.1.5 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.

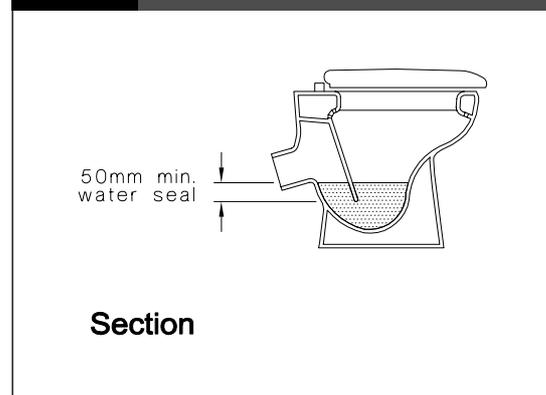
2.0 Fixture Construction and Installation

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.

Figure 2: WC Water Seal
Paragraph 2.1.1 c)



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).

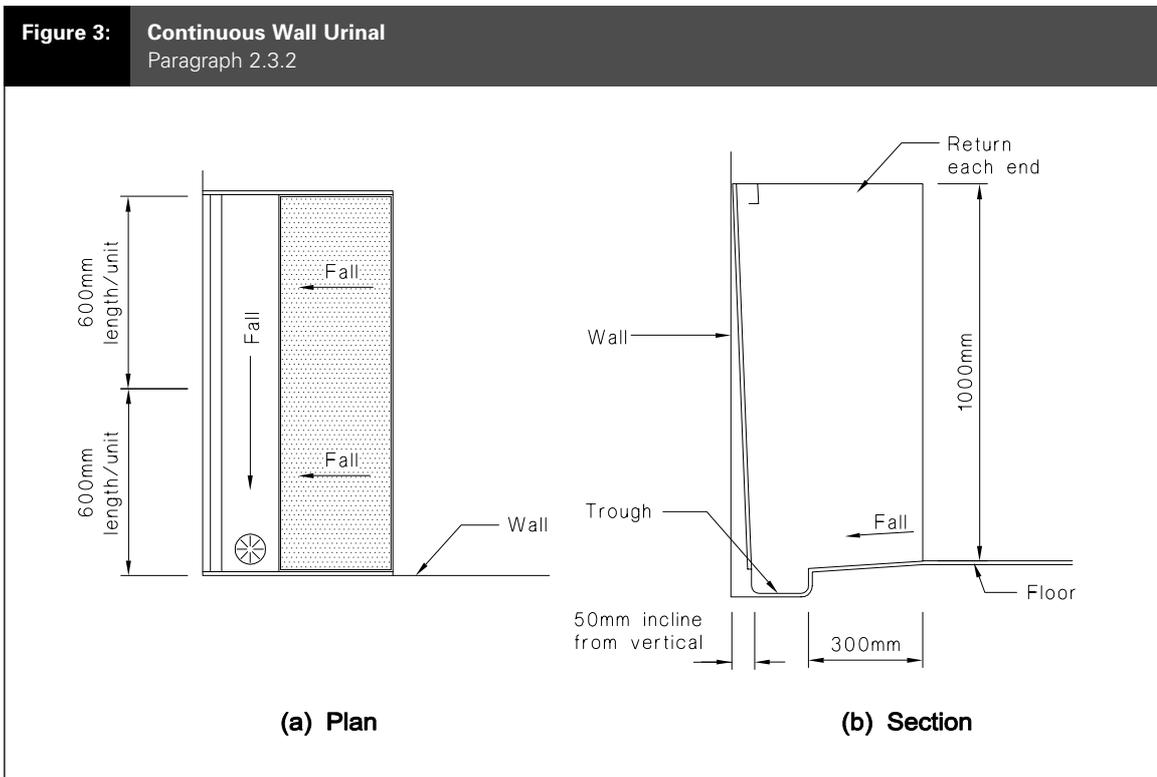
2.3.3 Wall hung bowl or trough urinals shall have the front lip height above the floor or step, no more than 600 mm for men and no more than 400 mm for boys. The back surface of the urinal must extend at least 450 mm above the front lip level.

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:

- Be firmly fixed in place, and
- Have an *impervious*, easily cleaned surface finish (e.g. glazed earthenware or stainless steel), and
- Be either over-rim feed type or submersible spray type, and
- 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,

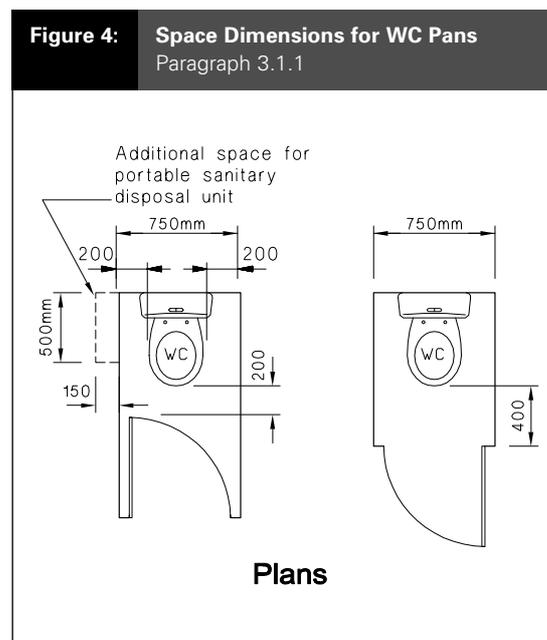
G4 "Ventilation",

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, marae, 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

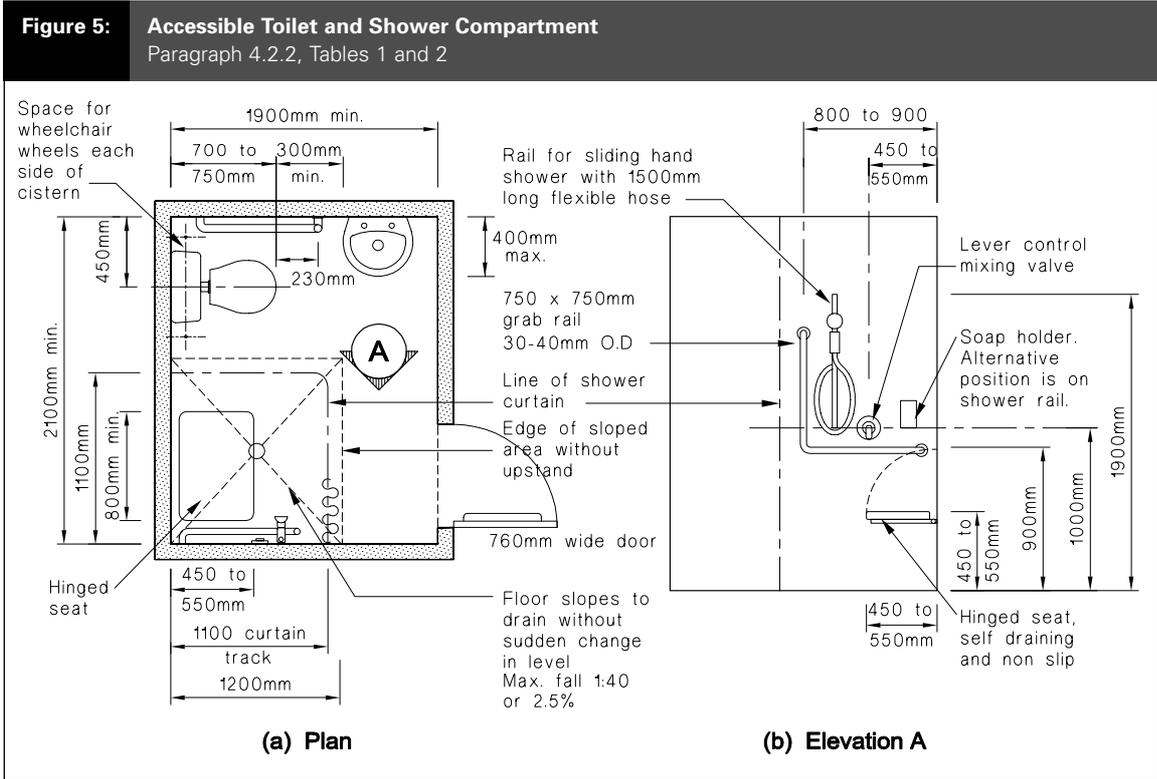
4.2.1 *Sanitary facilities* for *people with disabilities* shall be provided in accordance with Tables 1 and 2. In large *buildings* having more than 300 occupants, where sanitary facilities are provided in groups in two or more locations, *accessible* facilities shall be included at each location for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

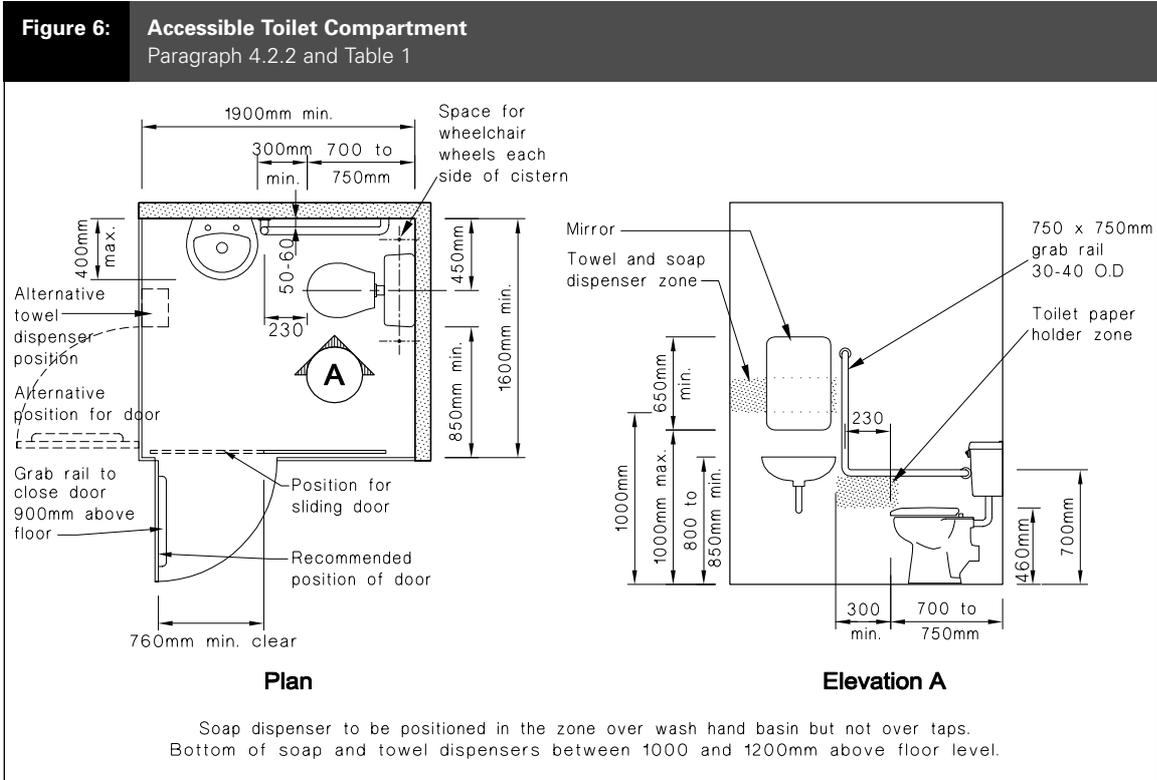
COMMENT:

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.

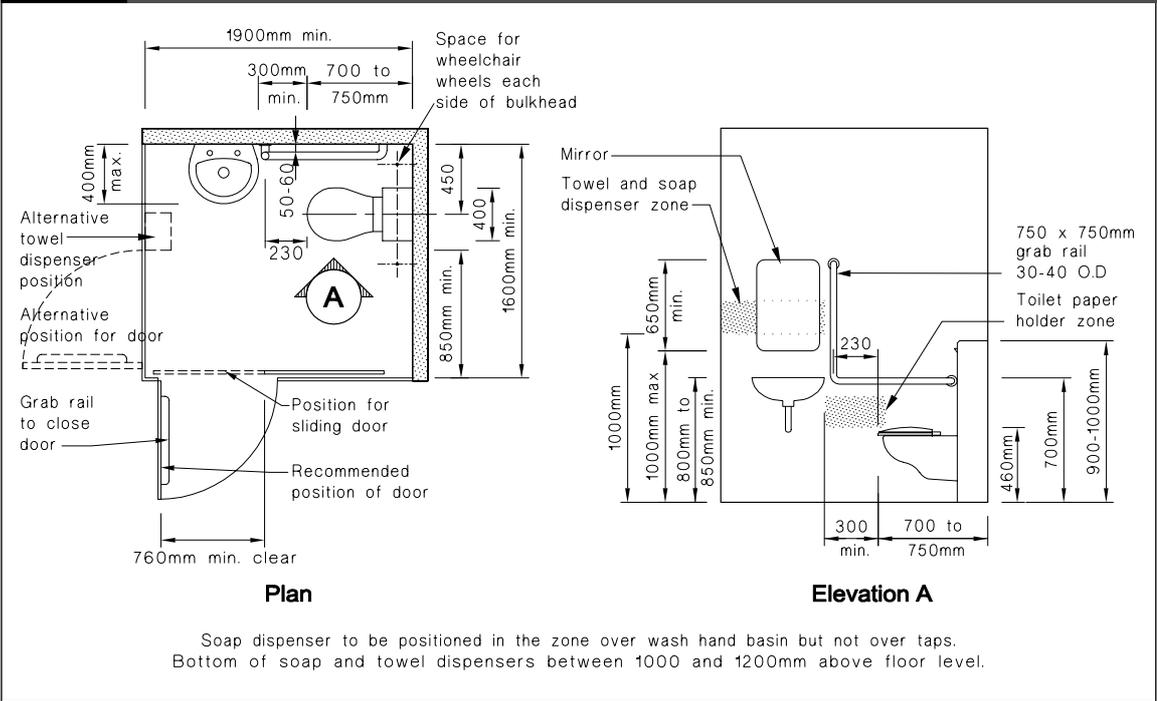


Amend 4 Jul 2001



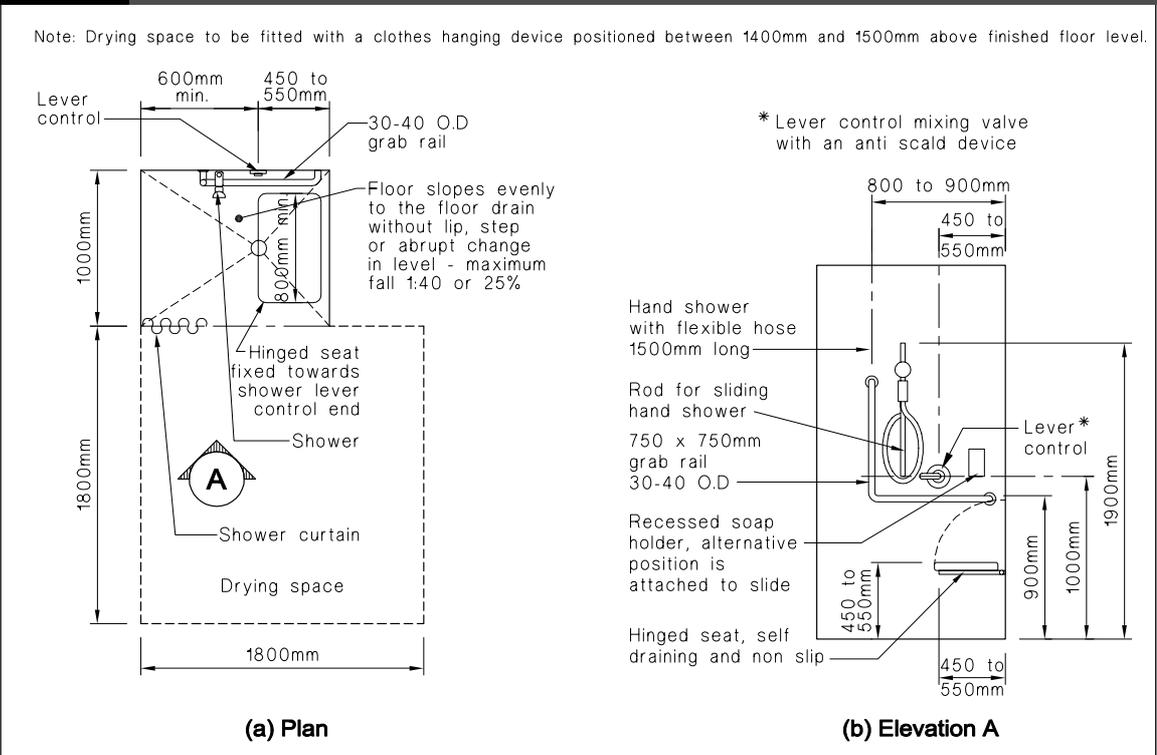
Amend 4 Jul 2001

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



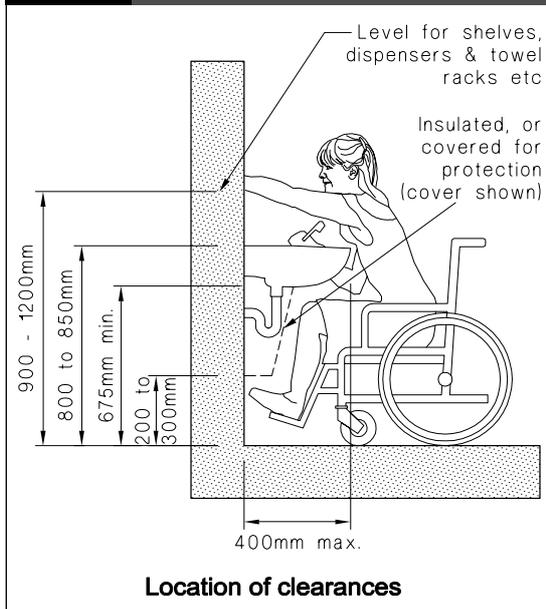
Amend 4
Jul 2001

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*.

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.

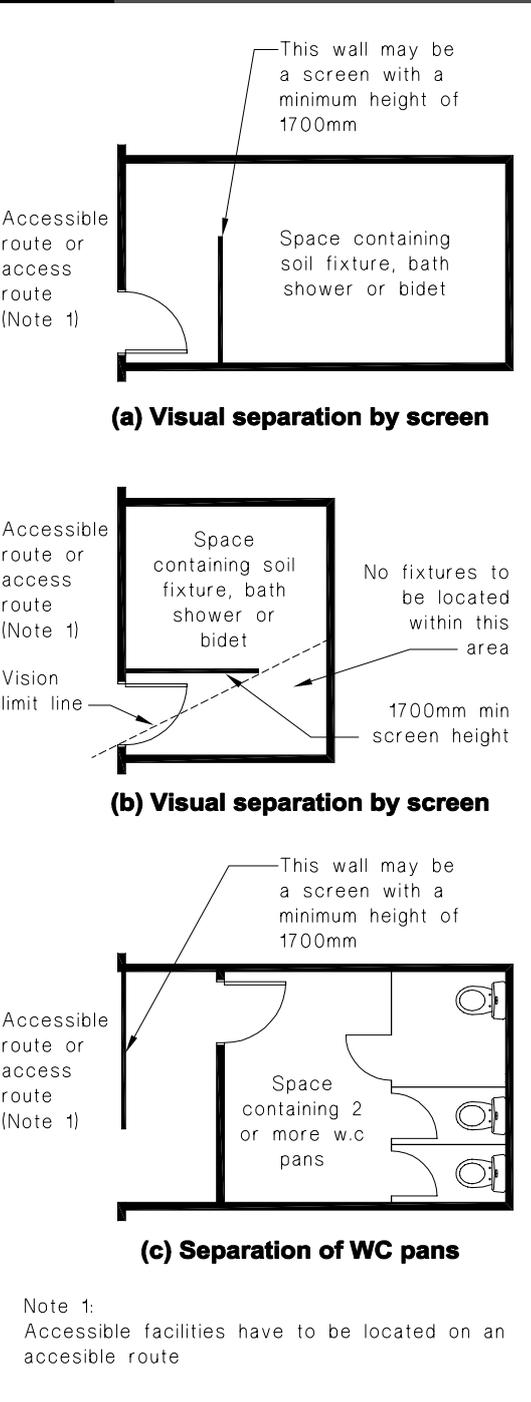
5.0.2 *Privies* are acceptable if located at least 3.0 m from any *building* having a classified use, other than outbuildings or ancillary buildings. Receptacles for excreta are to be constructed to exclude flies and be fitted with a hinged lid.

6.0 Privacy

6.1 Line of sight

6.1.1 There shall be no direct line of sight between a general public area and a WC, urinal, bath, shower or bidet. See Figure 10 for acceptable layouts.

Figure 10: Visual Privacy for Sanitary Fixtures
Paragraphs 3.2.2 and 6.1.1

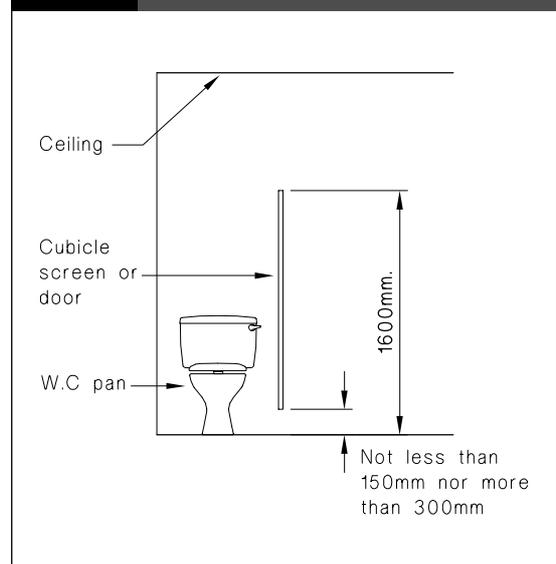


Amend 4
Jul 2001

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).

Figure 11: Cubicle Screening for WCs
Paragraph 6.2.1



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*.

Amend 4
Jul 2001

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

Building use	User group	Housing (see Notes)						Unisex toilet facilities	
		Combination of WC pans and urinals		Separate sex toilet facilities		Basins		Design Occ.	Number
		WC pans Design Occ. Number	Urinals Design Occ. Number	WC pans only Design Occ. Number	Basins Design Occ. Number				
Detached dwellings and multi-unit dwellings	Occupants					1	-		
Group dwelling Marae, commune	Occupants	Provide in accordance with Communal Residential: boardinghouse, camping grounds etc.							
Building use	User group	Communal Residential (see Notes)						Unisex toilet facilities	
		Combination of WC pans and urinals		Separate sex toilet facilities		Basins		Design Occ.	Number
		WC pans Design Occ. Number	Urinals Design Occ. Number	WC pans only Design Occ. Number	Basins Design Occ. Number				
Community Service and Community Care Boardinghouses, camping grounds, hospitals, prisons, old people's homes	Female occupants					1	1-35 36-120	1	1
	Male occupants	1-2 3-9 10-30 >30	1-50 51-160 >160	1 2 3 add 1 per 10	1 2 3 4 add 1 per 10	1 2 3 4 add 1 per 20	1-20 21-70 >70	1 2 add 1 per 50	2 3 4 add 1 per 90
	Occupants with disabilities. Note 6					1-100 101-300 >300	1-100 101-300 >300	1 2 3	add 1 per 9
	Staff	Provide in accordance with Commercial: offices, banks etc.							

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)												
		Combination of WC pans and urinals				Separate sex toilet facilities			Basins			Unisex toilet facilities		
		WC pans		Urinals		WC pans only	Design Occ.	Number	Design Occ.	Number	Design Occ.	Number	Design Occ.	Number
Assembly Service Churches, club rooms, assembly halls, stadiums, sports venues, grandstands	Female patrons	1-50	1	1-60	1	1-15	1	1-60	1	1-60	1	1-10	1	
		51-250	2	61-220	2	16-60	2	61-200	2	61-200	2	1-5	1	
		251-500	3	221-400	3	61-120	3	201-350	3	201-350	3	6-30	2	
		501-800	4	>400	add 1 per 190	>120	add 1 per 70	>350	add 1 per 150	>350	add 1 per 150	>40	add 1 per 50	
Museums, art galleries (display areas) Theatres, cinemas	Male patrons	1-50	1	1-60	1	1-25	1	1-70	1	1-70	1	11-40	2	
		51-250	2	61-220	2	26-110	2	71-230	2	71-230	2	>40	add 1 per 50	
		251-500	3	221-400	3	111-200	3	231-410	3	231-410	3	>40	add 1 per 50	
		>800	add 1 per 350	>400	add 1 per 190	>200	add 1 per 100	>410	add 1 per 190	>410	add 1 per 190	>40	add 1 per 50	
Museums, art galleries (display areas) Theatres, cinemas	Patrons with disabilities. Note 6	1-50	1	1-60	1	1-300	1	1-300	1	1-300	1	>40	add 1 per 50	
		51-250	2	61-220	2	>300	2	>300	2	>300	2	>40	add 1 per 50	
		251-500	3	221-400	3	>300	2	>300	2	>300	2	>40	add 1 per 50	
		>800	add 1 per 350	>400	add 1 per 190	>200	add 1 per 100	>410	add 1 per 190	>410	add 1 per 190	>40	add 1 per 50	
Museums, art galleries (display areas) Theatres, cinemas	All patrons	Provide in accordance with Commercial: amusement park, shopping plaza etc.												
		Female patrons	1-10	1	1-10	1	1-80	1	1-80	1	1-80	1	1-5	1
			11-60	2	11-60	2	81-250	2	81-250	2	81-250	2	1-5	1
			>50	add 1 per 60	>50	add 1 per 60	>430	add 1 per 200	>430	add 1 per 200	>430	add 1 per 200	6-30	2
>800	add 1 per 100		>400	add 1 per 230	>200	add 1 per 70	>410	add 1 per 170	>410	add 1 per 170	>30	add 1 per 40		
Places of active recreation, swimming pools, squash courts, gymnasiums	Male patrons	1-15	1	1-80	1	1-10	1	1-65	1	1-65	1	>30	add 1 per 40	
		16-80	2	81-290	2	11-60	2	66-220	2	66-220	2	>30	add 1 per 40	
		>80	add 1 per 100	>290	add 1 per 230	>60	add 1 per 70	>220	add 1 per 170	>220	add 1 per 170	>30	add 1 per 40	
		>800	add 1 per 100	>290	add 1 per 230	>60	add 1 per 70	>220	add 1 per 170	>220	add 1 per 170	>30	add 1 per 40	
Places of active recreation, swimming pools, squash courts, gymnasiums	Patrons with disabilities. Note 6	Provide in accordance with Commercial: office, banks etc.												
		Female patrons	1-10	1	1-10	1	1-70	1	1-70	1	1-70	1	1-5	1
			11-60	2	11-60	2	71-230	2	71-230	2	71-230	2	1-5	1
			>50	add 1 per 60	>50	add 1 per 60	>430	add 1 per 200	>430	add 1 per 200	>430	add 1 per 200	6-30	2
>800	add 1 per 100		>290	add 1 per 230	>60	add 1 per 70	>220	add 1 per 170	>220	add 1 per 170	>30	add 1 per 40		
Places of active recreation, swimming pools, squash courts, gymnasiums	Male patrons	1-25	1	1-50	1	1-20	1	1-50	1	1-50	1	>40	add 1 per 40	
		26-130	2	51-180	2	21-80	2	51-180	2	51-180	2	>40	add 1 per 40	
		131-270	3	181-320	3	81-150	3	>180	add 1 per 140	>180	add 1 per 140	>40	add 1 per 40	
		>270	add 1 per 150	>320	add 1 per 150	>150	add 1 per 80	>180	add 1 per 140	>180	add 1 per 140	>40	add 1 per 40	
Places of active recreation, swimming pools, squash courts, gymnasiums	Patrons with disabilities. Note 6	1-10	1	1-10	1	1-300	1	1-300	1	1-300	1	>40	add 1 per 40	
		11-60	2	11-60	2	>300	2	>300	2	>300	2	>40	add 1 per 40	
		>50	add 1 per 60	>50	add 1 per 60	>430	add 1 per 200	>430	add 1 per 200	>430	add 1 per 200	>40	add 1 per 40	
		>800	add 1 per 100	>290	add 1 per 230	>60	add 1 per 70	>220	add 1 per 170	>220	add 1 per 170	>40	add 1 per 40	

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			
		WC pans only		Basins		WC pans only		Basins	
		Design Occ.	Number	Design Occ.	Number	Design Occ.	Number	Design Occ.	Number
Assembly Care Early childhood centres	Students	Combination of WC pans and urinals		WC pans only		Basins		Unisex toilet facilities	
		Design Occ.	Number	Design Occ.	Number	Design Occ.	Number	Design Occ.	Number
		1-25	1	1-40	1	1-25	1	1-25	1
		26-120	2	41-150	2	26-120	2	26-120	2
		121-230	3	151-270	3	121-230	3	121-230	3
		231-350	4	>270	add 1	231-350	4	231-350	4
		>350	add 1	>350	per 130	>350	add 1	>350	per 150
Schools, universities	Staff and students	Provide in accordance with Commercial: offices, bank etc.							
Commercial (see Notes)									
Building use	User group	Separate sex toilet facilities				Unisex toilet facilities			
		WC pans only		Basins		WC pans only		Basins	
		Design Occ.	Number	Design Occ.	Number	Design Occ.	Number	Design Occ.	Number
Amusement parks, shopping plaza, libraries, transport terminals	Female patrons	Combination of WC pans and urinals		WC pans only		Basins		Unisex toilet facilities	
		Design Occ.	Number	Design Occ.	Number	Design Occ.	Number	Design Occ.	Number
		1-50	1	1-50	1	1-35	1	1-35	1
		51-240	2	51-240	2	36-165	2	36-165	2
		241-480	3	241-480	3	166-320	3	166-320	3
		481-750	4	481-750	4	>320	add 1	>320	per 200
		>750	add 1	>750	per 250	>1150	add 1	>1150	per 850
		1-75	1	1-75	1	1-280	1	1-280	1
		76-330	2	76-330	2	281-950	2	281-950	2
		331-650	3	331-650	3	>950	add 1	>950	per 700
		>650	add 1	>650	per 350	>950	add 1	>950	per 200
		1-300	1	1-300	1	1-300	1	1-300	1
		>300	2	>300	2	>300	2	>300	2
		1-15	1	1-15	1	1-120	1	1-5	1
		16-90	2	16-90	2	121-380	2	6-40	2
		91-170	3	91-170	3	>380	add 1	41-80	3
		>170	add 1	>170	per 100	>380	add 1	>80	add 1
		1-15	1	1-15	1	1-70	1	>80	per 50
		16-65	2	16-65	2	71-250	2	>80	per 200
		66-135	3	66-135	3	>250	add 1	>80	per 200
		136-200	4	136-200	4	1-300	1	>80	per 50
		>200	add 1	>200	per 80	>300	2	>80	per 50
		1-300	1	1-300	1	>300	2	>80	per 50
		>300	2	>300	2	>300	2	>80	per 50
Coffee bars, tea rooms, restaurants, bars, night clubs	Female patrons	Provide in accordance with Commercial: offices, bank etc.							
		1-15	1	1-100	1	1-15	1	1-5	1
		16-80	2	101-340	2	16-80	2	6-40	2
		>80	add 1	341-600	3	>80	add 1	41-80	3
		>80	per 100	>600	add 1	>250	add 1	>80	per 50
		>80	per 100	>600	per 280	>300	2	>80	per 50
		>80	per 100	>600	per 280	>300	2	>80	per 50
		>80	per 100	>600	per 280	>300	2	>80	per 50

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

Building use	User group	Industrial (see Notes)						Unisex toilet facilities		
		Combination of WC pans and urinals		Separate sex toilet facilities		Basins		Design Occ.	Number	
		WC pans Design Occ.	Number	Urinals Design Occ.	Number	WC pans only Design Occ.	Number	Design Occ.	Number	
Offices, banks, staff facilities for: shops, hotels, bars and any other building use	Female Staff	1 - 10	1	1 - 150	1	1 - 10	1	1 - 70	1	
		11 - 60	2	151 - 550	2	11 - 50	2	71 - 250	2	
	Male staff	61 - 120	3			51 - 90	3	>250	add 1 per 200	
		>120	add 1 per 80	>550	add 1 per 450	>110	add 1 per 70	>250	add 1 per 200	
						1 - 300	1	1 - 300	add 1 per 40	
	Staff with disabilities. Note 6					>300	2	>300	2	
	Factories, power stations, industrial plants	Female staff	1 - 10	1	1 - 150	1	1 - 10	1	1 - 70	1
			11 - 60	2	151 - 550	2	11 - 50	2	71 - 250	2
		Male staff	61 - 120	3			51 - 90	3	>250	add 1 per 200
>120			add 1 per 80	>550	add 1 per 450	>110	add 1 per 70	>250	add 1 per 200	
						1 - 300	1	1 - 300	add 1 per 40	
Patrons with disabilities. Note 6						>300	2	>300	2	

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 but the number provided must be the total as required for staff plus those required for patrons.
- 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.

Table 2: Number of Sanitary Fixtures, Baths and Showers
Paragraph 1.1

Building use	User group	Baths or showers		Accessible showers
		Design Occ.	Number	
Housing				
Detached dwellings and multi-unit dwellings	Occupants	–	1	
Group Dwelling Marae, commune	Occupants	1 – 25 26 – 60 61 – 100 >100	1 2 3 add 1 per 50	
Communal Residential				
Community Service and Community Care 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 <i>accessible</i> unit: One <i>accessible</i> 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
Communal Non-residential				
Churches, club rooms, assembly halls, grandstands (seating areas), museums, art galleries (display areas)	Patrons Staff	–	0	Where showers are provided include at least one <i>accessible</i> 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 <i>accessible</i> 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 <i>accessible</i> shower compartment (see Figure 8)
Commercial				
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 <i>accessible</i> shower compartment (see Figure 8)
Industrial				
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 <i>accessible</i> 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
Housing		
Group dwelling Marae, commune	0.60	0.60
Communal Residential		
Boarding house, camping ground, hospital, prison, and old people's home (see Note 1)	0.60	0.60
Communal Non-residential		
Assembly Service		
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
Assembly Care		
School (see Note 1), university	0.60	0.60
Commercial		
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
Industrial		
Factory, power stations, industrial warehouse	1.00	0.65
Note:		
1. Applies to <i>buildings</i> or parts of <i>buildings</i> used by both sexes, e.g. co-education schools.		

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

Building use	Occupant density (Users/m ²) (see Note 1)
Communal Non-residential and Commercial	
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 Note 2)
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

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

Building use	Occupant density (Users/m ²) (see Note 1)
Communal Residential	
Bedrooms	as number of beds
Bunkrooms	(see Note 2)
Detention quarters	
Dormitories, hostels	
Halls and wharehousi	
Wards containing more than two beds	
Commercial and Industrial	
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 Note 3)
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
Buildings and parts of buildings with intermittent use (see Note 4)	
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 m²).
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 (see Note 1)	5	10.0	40	25

Note:

- 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
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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

