Universal Design Checklist

Accessible Toilet Design

Appropriately designed accessible toilets are essential for meeting the daily needs of a range of people, including those with physical and mobility challenges.

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AUCKLAND DESIGN MANUAL
TE PUKA WHAKATAIRANGA I A TĀMAKI MAKAURAU

Auckland Council
Te Kaunihera o Tāmaki Makaurau

Provision and Location

- ☐ Provide accessible toilets on each floor of the building & locate them so that all building occupants are within a short distance (60m max) of an accessible toilet. [1]

- ☐ Where standard toilets are provided, also provide accessible toilets (CEUD). Larger blocks of standard toilets should also include an ambulant toilet.
  - For large toilet blocks accessible and ambulant toilets should be the first toilets in the block (i.e. closest to the toilet block entrance) to minimise travel distances for users with mobility impairments. [2]

- ☐ All accessible toilets are located on accessible routes (NZS 4121). [3]

- ☐ Accessible toilets are gender neutral (wherever possible) to provide a for non-binary users and ensure caregivers of the opposite sex can enter bathrooms and provide assistance if needed.

General Design

- ☐ Accessible bathrooms should have a minimum internal dimension of 2300mm wide x 2500mm long.[4]

- ☐ Toilet blocks that contain accessible toilet cubicles have a minimum 1.2m wide accessible access route through the toilet block to accessible cubicles.

- ☐ Accessible toilet cubicles within toilet blocks have the following minimum internal dimensions (CEUD):
  - Sliding door entrance - 1800mm wide x 2500mm long
  - Outward opening swing door - 1800mm wide x 2500mm
  - Inward opening swing door - 1800mm wide x 2800mm

  Even cubicles that adhere to the dimensions above require the careful placement of fixtures to ensure they can accommodate a 1500mm minimum wheelchair turning circle. [5]

- ☐ Flooring is level and has a slope of no more than 1:50.

- ☐ Drainage is located in a corner away from the toilet.

- ☐ Where two or more accessible toilets are provided split the design of toilets evenly between those that provide wheelchair transfer space to the right of the toilet and to the left of the toilet (NZS 4121:3.3.2). [6]
  - Toilet signage includes a L or R to indicate whether a wheelchair user slides to their left (L) or right (R) to mount the toilet.

- ☐ Nappy-changing tables, fixed waste bins and hand driers do not protrude into wheelchair manoeuvring spaces. In wall options are best.

- ☐ The colour of toilet seats, basins and taps contrast with the floor and walls (MBIE, 2019). [7]

- ☐ Lighting is even, non-glare and non-shading. Toilets are lit to 100 lux (CEUD).

- ☐ Signage is comprehensive. It directs users to where they need to go and orientates them by providing their current location. Signage includes braille, embossed print and pictograms and has strong colour contrast for readability. Refer to Accessible Signage Guidelines (Blind and Low Vision NZ, 2019).

Doors

- ☐ Door-free entrances to toilet blocks are prioritised as they are inherently more accessible, easier to use and more hygienic than swing or sliding doors (CEUD). [8]
- ☐ Sliding doors are preferred for accessible toilet cubicles/bathrooms as they are easier to operate than hinged doors.
- ☐ All doors have a minimum width of 860mm, with 910mm recommended.
- ☐ Door handles are 900mm-1000mm above finished floor level.
- ☐ Door locks are large and able to be operated with the palm of the hand/closed fist.
- ☐ Door locks can be opened from the outside in case of an emergency (NZS 4121).
- ☐ Doors are a contrasting colour from walls. [9]

Grab Rails

- ☐ A grab rail is provided on the inner face of doors (Building Code G1). [10]
- ☐ An L shaped grab rail is provided beside the toilet seat at 700mm above finished floor level. The vertical rail begins at a distance of 250mm forward from the front of the toilet pan (Building Code G1).
- ☐ Grab rails have a diameter of 35mm (CEUD) and a clearance of 50-60mm from the wall.
- ☐ Where multiple toilets are provided ensure there is split between toilets that provided grab rails for left-handed and right-handed users.
- ☐ Drop down rails can be useful for those who need rails on both sides of the toilet. [11]

Toilets

- ☐ The toilet seat is 460mm-480mm above finished floor level. [12]
- ☐ The front edge of the toilet seat is 700mm-750mm forward from the cistern or wall behind it. (Building Code G1). [13]
- ☐ The centre of the toilet pan is 450mm from the nearest side wall (i.e. the wall with grab rails).
- ☐ There is at least 850mm of clear space (i.e. without fixtures or bins) to one side of the toilet to fit wheelchairs for side transfers onto the toilet seat. (Building Code G1)
- ☐ The toilet has a back support (NZS 4121). The back support should be comfortable and not have a rim or edge which may dig into the user's back (MBIE). It should support the user to sit upright between 90-110 degrees when seated on the pan. [14]
- ☐ Toilet seats and fittings are more robust than standard toilets to withstand higher stress demands:
  - Toilet seats have under seat buffers and are strong enough to withstand the impact of people sitting down heavily on the toilet.
  - Toilet seat hinges have adequate lateral strength to withstand the force of people sliding horizontally onto the toilet seat (MBIE, 2019). Many proprietary hinges on toilet seats are not strong enough to support transfer from a wheelchair.
- ☐ Hands-free toilet flushing is preferred (MBIE, 2019). Otherwise, the toilet flushing mechanism should be large and easily operable with a palm of hand/closed fist (NZS 4121). The toilet flushing mechanism should be located at a height of 800-1000mm above finished floor level. [15]

Fixtures and fittings

- ☐ The top of accessible basins are a maximum of 850mm above finished floor level, with 675mm of clearance below the basins (NZS 4121).
- ☐ The hand basin edge is 400mm from the front of the toilet seat. [16]
- ☐ Washbasin taps are mixed to the correct temperature and should be automatic (to minimise hand contact with surfaces). Where manual taps are installed ensure that lever handles are provided and avoid the use of separate hot and cold taps (MBIE, 2019).
- ☐ Position soap dispensers over basins (MBIE, 2019). [17]
- ☐ The bottom of paper towel dispensers are 900-1000mm above finished floor level.
- ☐ Hand dryers/paper towel dispensers are an adequate distance from entry/exit door so that they do not turn on when entering or exiting the door.
- ☐ If automatic hand dryers are provided, ensure they are in addition to paper towels (MBIE, 2019). [18]
- ☐ Specify quiet hand driers, with a maximum decibel rating of 85DB (Pediatrics & Child Health, 2019). [19]
- ☐ Waste sanitary receptacles are reachable for users seated on the toilet pan and are large enough to accommodate adult-sized pads (MBIE, 2019).
  - Waste bins and sanitary disposal bins take up space and are best recessed into the wall.
- ☐ A shelf is provided for putting toilet supplies on (CEUD). [20]
  - Ensure shelves are a contrasting colour to the background.
  - Ensure shelves are not located where they can be a hazard to building users, recessed shelves may assist with this.
- ☐ A coat hook is provided at a maximum height of 1000mm from finished floor level (CEUD).
  - Ensure coat hooks are a contrasting colour to the background and not projecting into the room in a way that creates a hazard (MBIE, 2019).
- ☐ Ensure the position and size of toilet paper dispensers does not extrude into space and obstruct access to the grab rail or the movement of a seated user (MBIE, 2019).

Changing Places

- ☐ Adult changing facilities with an accessible toilet and shower are becoming more commonplace within New Zealand and the rest of the world. These facilities enable a much wider range of users and their caregivers to access and use them safely and with dignity.
  Please refer to Changing Places NZ for further guidance:
  http://www.changingplaces.org.nz/

Accessible Toilet Examples

- ☐ Examples of accessible toilets can be found at www.aucklanddesignmanual.co.nz/en/design-guidance/universal-design.html

Endnotes

1 It is desirable that unisex accessible facilities are located on each floor of a multi-story building. This ensures that in the event of a lift failure, power cut or emergency, every person will still have access to a toilet.

2 Ambulant toilets are like standard toilet cubicles but wider and have L-shaped grabrails (like those used in an accessible toilet). They are for users that do not require a fully accessible toilet, but do require some assistance to stand and sit (for example older adults or people with temporary injuries). The provision and location of ambulant cubicles should be clearly communicated using appropriate symbols and text (AS 1428.1).

3 An accessible route is accessed via an accessible elevator, ramp or level entrance and has a minimum clear corridor width of 1.2m. Any doors opening onto the route should swing inwards to avoid obstructing the route.

4 Care must still be taken to design the interior of the bathroom to accommodate an 1800mm wheelchair turning circle and appropriate space for users to mount and dismount the toilet.

5 While these dimensions can accommodate a 1500mm turning circle, wider cubicles designed to accommodate an 1800mm turning circle are optimal. They allow many more users, including people with larger sized wheelchairs/mobility devices and those requiring the assistance of a caregiver to easily turn and manoeuvre within a cubicle. Providing an 1800mm turning circle can also reduce maintenance costs as mobility equipment is less likely to mark/impact the surrounding walls.

6 Mirroring toilets (and the associated grab rails) provides users with choice and flexibility to maximise their independence.

7 It can be useful to have a dark wall for better contrast of fixtures and fittings.

8 Where door-free arrangements are used, privacy can be safeguarded by the appropriate placement of screens or walls. Avoid sharp 90 degree turns in the design, as this is difficult for users with mobility equipment.

9 Doors should be a different colour from walls to make them easier for people with low vision to locate.

10 A grab rail on the inner face of the door assists users to close the door behind them more easily and can provide additional stability for those with impaired balance.

Endnotes (continued...)

11 Carefully consider the model of drop-down rail and any associated maintenance requirements.

12 Higher toilets are preferable for older users and are sanctioned by MBIE

13 Australian 800mm long pans are acceptable provided the bathroom/cubicle is large enough to ensure a 1500mm minimum turning circle (with 1800mm recommended).

14 A back support is imperative for many users who lack upper body strength and balance.

15 Avoid recessed or flush buttons as these are difficult for many people to operate.

16 When the hand basin is located 400mm from the front of the toilet seat it is accessible from a seated position, while still leaving space for a support person to assist a disabled person onto the pan.

17 Soap dripping on to the floor presents a slip hazard. Positioning the soap dispenser over the wash basin may prevent this.

18 Providing both paper towel and hand dryers enables choice, particularly for people with sensitivity to sound, including people with autism.

19 Consider the number of hard surfaces within the toilet and how good acoustic design could lessen the noise levels.

20 Where the top of a toilet cistern is not flat, shelves are also required for people changing colostomy bags or using other toileting supplies.

Reference List

1 Standards New Zealand (2001). NZS: 4121 Design for access and mobility – Buildings and associated facilities. Wellington, NZ: SNZ

https://www.standards.govt.nz/shop/NZS-41212001

2 The Centre for Excellence in Universal Design (n.d.) Building for everyone. Dublin, Ireland: CEUD

https://universaldesign.ie/uploads/publications/Entire-Series-Books-1_10.pdf

3 Ministry of Business Innovation & Employment (2019). Buildings for everyone: Designing for access and usability. Wellington, NZ: MBIE

https://www.building.govt.nz/building-code-compliance/d-access/accessible-buildings

4 Blind and Low Vision NZ (2019). Accessible Signage Guidelines.

https://blindlowvision.org.nz/resources/accessibility-guidelines/accessible-signage-and-spaces/

5 Changing Places NZ
https://www.changing-places.org/

6 Keegan (2019). Children who say hand dryers 'hurt my ears' are correct: A real-world study examining the loudness of automated hand dryers in public places. Paediatrics & Child Health.

https://doi.org/10.1093/pch/pxz046

Building Code G1 Personal hygiene

https://www.building.govt.nz/building-code-compliance/g-services-and-facilities/g1-personal-hygiene

7 Building Code Compliance (2014). Toilets privacy and access for people with disabilities

https://www.building.govt.nz/building-code-compliance/g-services-and-facilities/g1-personal-hygiene/toilets-privacy-and-access-for-people-with-disabilities