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PRACTICE NOTE PN03

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Approved by

ACAA COM 2024

Topic: Visitable Toilets

Other Referenced Standards and Codes in this Practice Note:

- AS 1428.1 - 2009 Design for access and mobility - General requirements for access - New building work.
- AS1428 - Supplement 1 - 1993
- AS 4299 - 1995 - Adaptable Housing
- AS1428.2 - 1992 - Design for access and mobility. Part 2: Enhanced and additional requirements - Buildings and facilities
- Livable Housing Guidelines - Edition 3 - 2015

Purpose of this Practice Note:

Explore innovative design in regards to:

1. Visitable toilets
2. Livable and adaptable bathrooms
3. Door circulations spaces to access visitable toilets

This Practice Note is divided into the following sections:

- Preface
- Section 1: Visitable Toilets (independent access)
- Section 2: Visitable Toilets (minimal assistance)
- Section 3: Livable and Adaptable bathrooms (no bathtub)
- Section 4: Livable and Adaptable bathrooms (includes a bathtub)

Preparation of this Practice Note has included consultation with the Standards Australia committee personnel responsible for the above standards, Members of ACA and people with disabilities.

Note: Figures may not print to scale.

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Preface

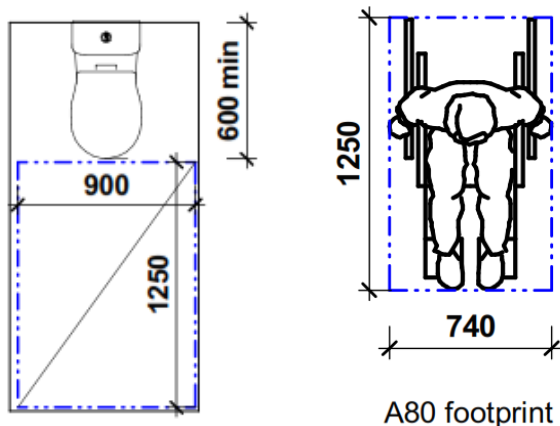
Visitable Toilets within Residential developments

The concept of visitability was introduced into AS4299 to allow people with a physical disability who use a mobility aid to visit residents of a residential dwelling and access (with minimal assistance) the living areas and use a toilet.

A visitable toilet was not considered to be a fully functioning accessible bathroom as specified by AS1428.1 but a toilet where a person using a wheelchair could be positioned to allow use of the toilet which may include the use of urinary aids and appliances.

It is the intention of this Practice Note to review how people who use a wheelchair access a toilet and explore innovative designs in the provision of visitable toilets. The Practice Note draws upon the provisions of the AS1428 - Supplement 1-1993 regarding Toilet Transfers and how people who use a wheelchair access a toilet facility and transfer to and from a toilet pan and the necessary circulation manoeuvres.

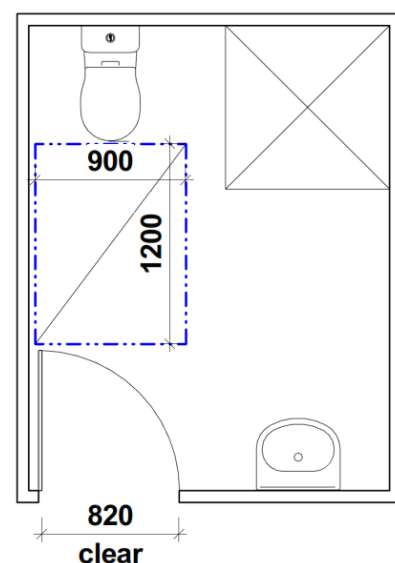
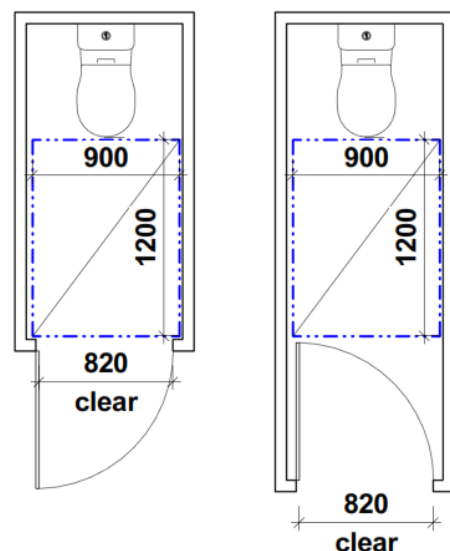
AS4299 - 1995 defines a visitable toilet to be “a toilet which has a space of minimum 1250mm in front of the toilet x 900mm wide,



clear of door swings and fixtures” as illustrated below.

This definition was based on the idea that a person using a wheelchair could enter the room, close the door and either stand to transfer or empty a urinary collection device.

The Livable Housing Guidelines includes requirements for a toilet that are very similar to AS4299, except the clear space in front of the toilet pan is reduced to 1200mm x 900mm as illustrated below.



Based on Livable Housing Guidelines

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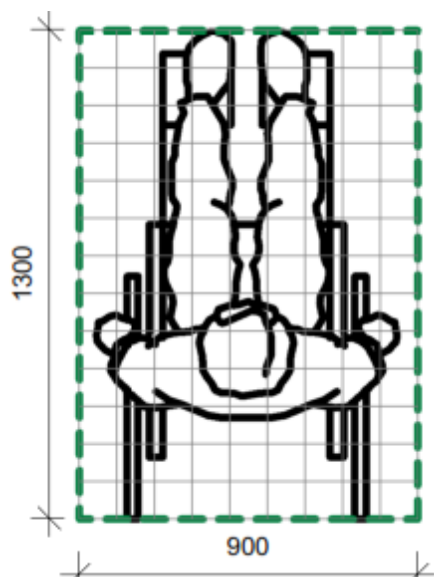
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While 1200mm x 900mm and 1250mm x 900mm will accommodate a reasonable proportion of people using a wheelchair the most recent version of AS1428.1 - 2009 is considered more appropriate in relation to the size of an occupied wheelchair.

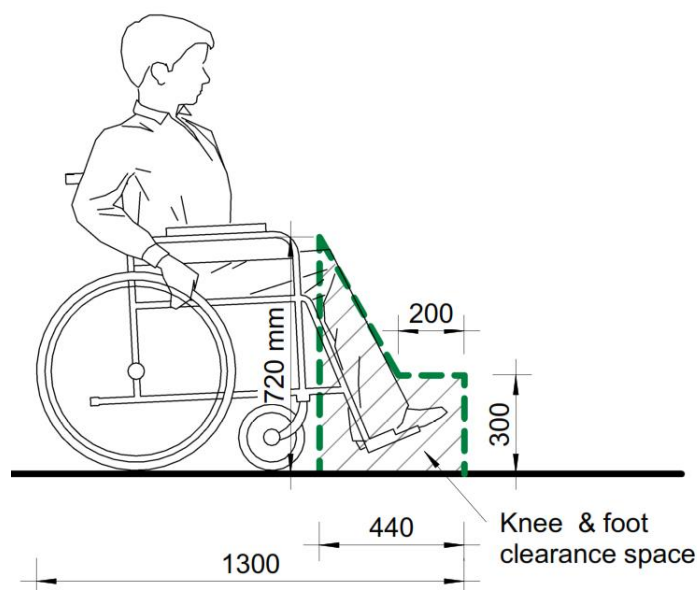
For this Practice Note the A90 occupied wheelchair footprint (1300mm x 800mm) as specified in AS1428.1 - 2009 is considered to be appropriate.

For spatial planning and manoeuvring within a bathroom, this Practice Note adopts a 1300mm x 900mm area which is generally consistent with AS4299, the Livable Housing Guidelines and AS1428.1 regarding toilet pan set out and an ambulant accessible facility.

The diagram below shows the occupied wheelchair footprint which is the basis of this practice note. Each square represents a 100mm x 100mm.

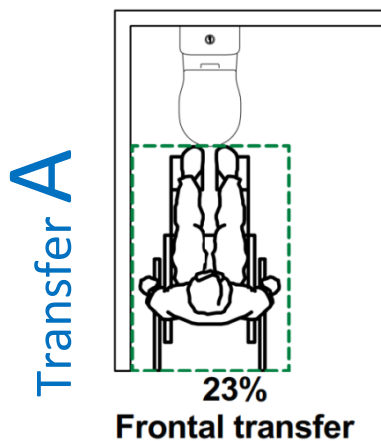


However, in recognition that the spatial envelope of a person in a wheelchair is not a cuboid, this Practice Note adopts the principles of the AS1428 - Supplement 1-1993 and AS1428.1-2009 with respect to actual manoeuvring within a sanitary facility and access to the toilet pan and basin.



Transfer Analysis

Based on the commentary provided in the AS1428 - Supplement 1 - 1993 and feedback from wheelchair users and occupational therapists only 23% of people transfer from the front-on or Frontal transfer position, which has been the guiding rule in AS4299 since 1995.



However, that position disadvantages 45% of wheelchair users who prefer a side transfer (27%), side angle transfer (9%) and an across front transfer (9%) and the largest single group of 32% who prefer Frontal Angle Transfers.

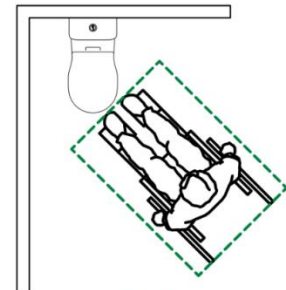
Therefore, it is evident that the singular method of Frontal transfer, which is preferred by a 23% minority, is not appropriate for a Standard and that other methods and designs can be more inclusive.

Anecdotal evidence suggests that 23% of users have adequate physical abilities to adapt their transfer technique to either Across Front Transfer or Frontal Angle Transfer.

With a focus on developing designs that suit the majority of users, this Practice

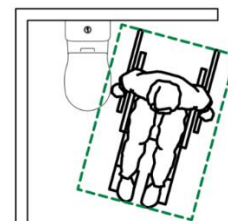
Note proposes a range of alternatives, both unassisted access and minimal assistance, to close and open a door and use the toilet.

Transfer B



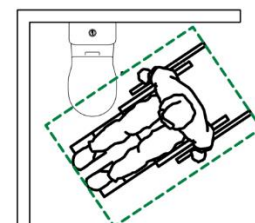
32%
Frontal Angle Transfer

Transfer C



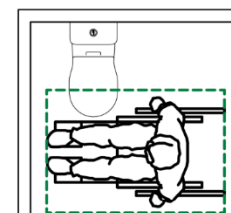
27%
Side transfer

Transfer D



9%
Side angle transfer

Transfer E



9%
Across front transfer

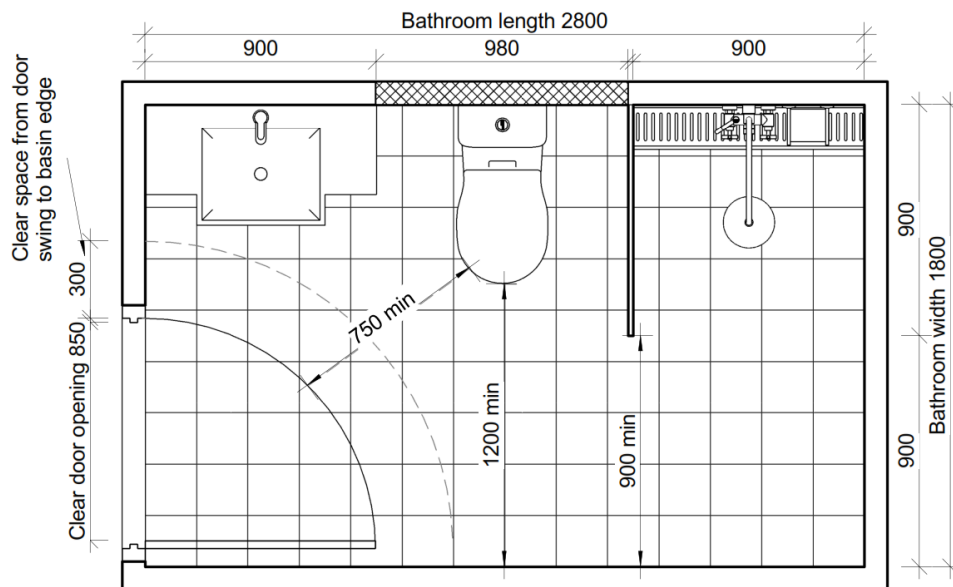
Section 1 – Visitable Toilets – Independent Access

Independent Access - Visitable Toilet Option 1.1

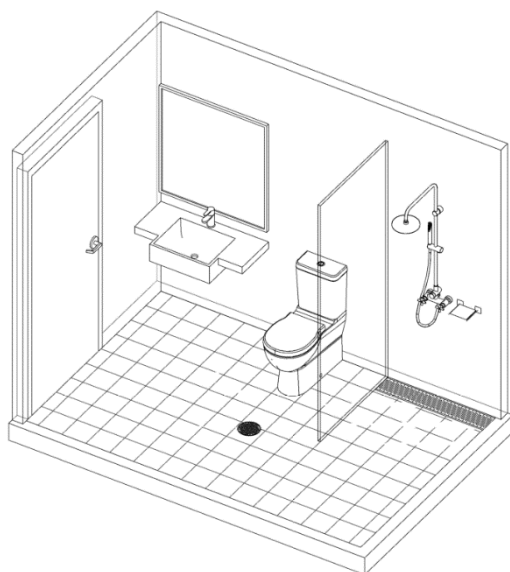
Below is an example of an independent access visitable toilet. Each square represents a dimension of 200mm x 200mm. The design relies on a shower screen without a door and a wall-hung vanity basin without any cabinetry underneath the basin.

The cross hatched section of wall represents reinforcements for future grabrails.

This option can accommodate Transfer Methods C, D and E



All dimensions are clear of finishes and fixtures.



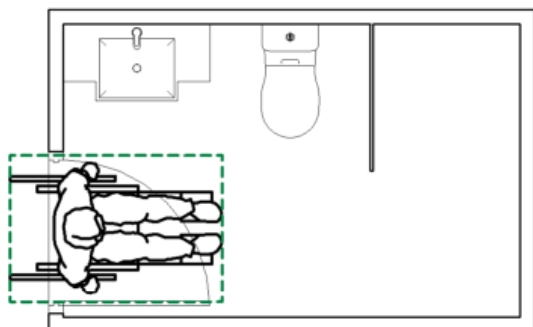
The use of a strip drain is optional.

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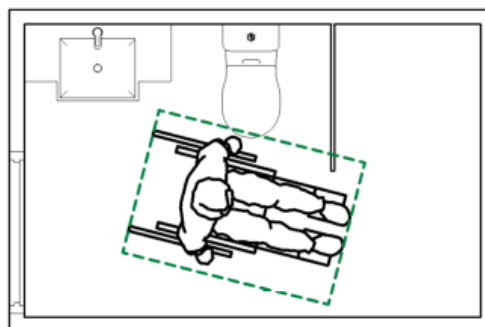
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Independent Access - Visitable Toilet Option 1.1- Transfer Steps

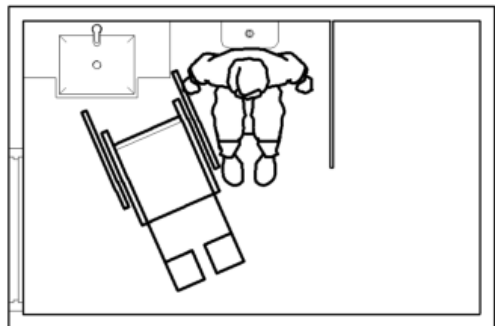
OPTION 1.1



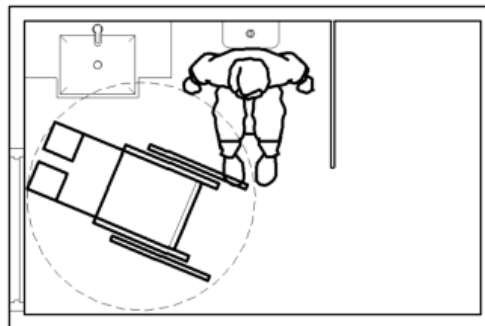
Step 1 - User enters, reaches back and closes the swing door



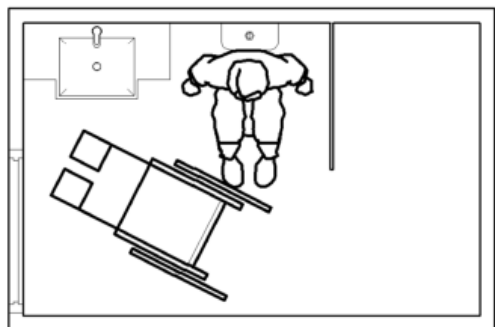
Step 2 - User gets in side angle transfer position using shower space



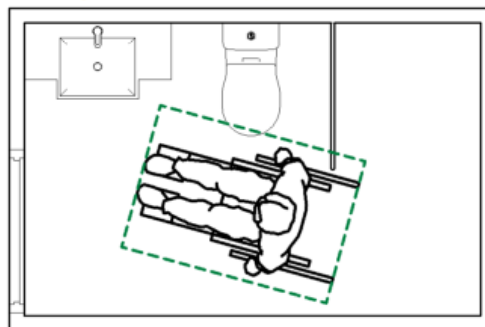
Step 3 - User transfers on to the pan



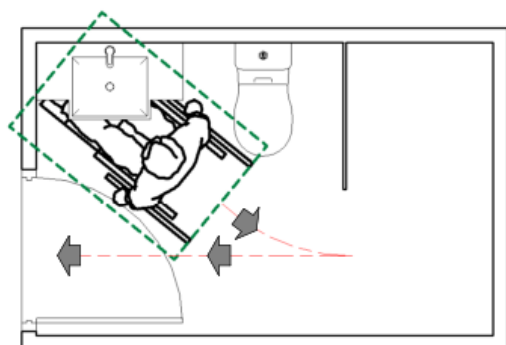
Step 4 - User swings wheelchair around 180 degrees while on the pan



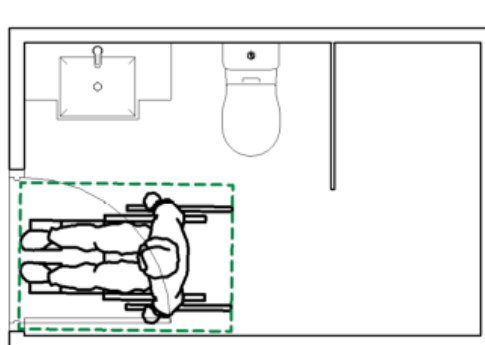
Step 5 - User positions wheelchair for transfer



Step 6 - User transfers back on to the wheelchair



Step 7 - User opens door, using space underneath basin



Step 8 - User exits

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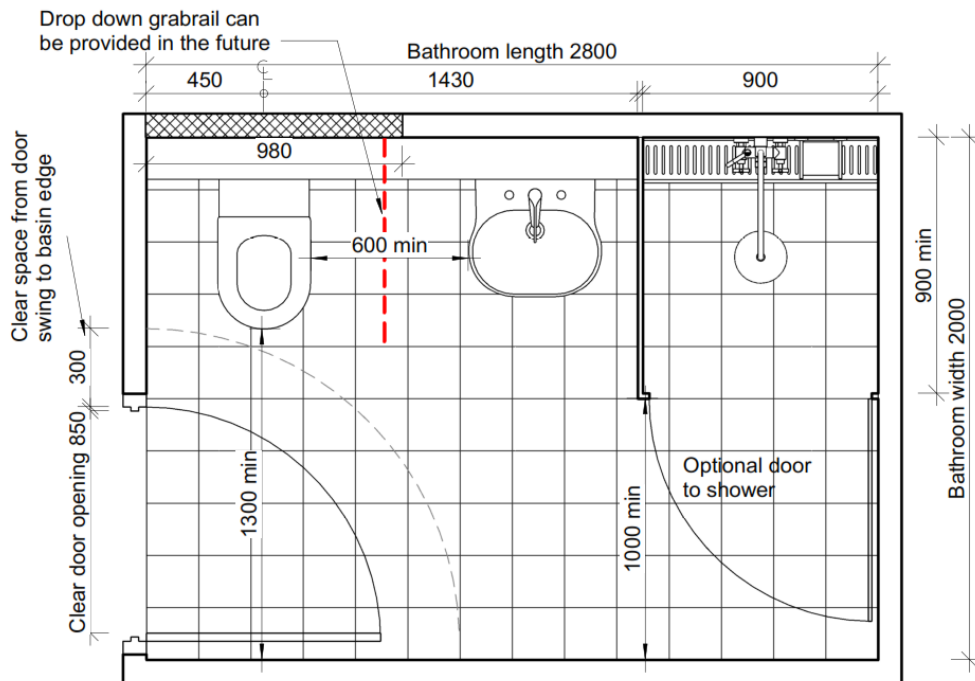
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Independent Access - Visitable Toilet Option 1.2

Below is another example of an independent access visitable toilet. Each square represents a dimension of 200mm x 200mm. The design relies on a shower screen with or without a door and a wall-hung vanity basin without any cabinetry underneath the basin.

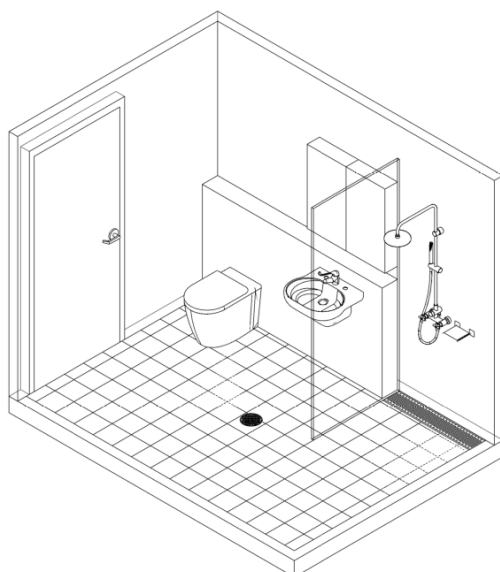
The cross hatched section of wall represents reinforcements for future grabrails.

This option can accommodate Transfer Methods A, B, D and E.



All dimensions are clear of finishes and fixtures.

This option also allows for the provision of a drop down grabrail in the future (indicated by a red dotted line)



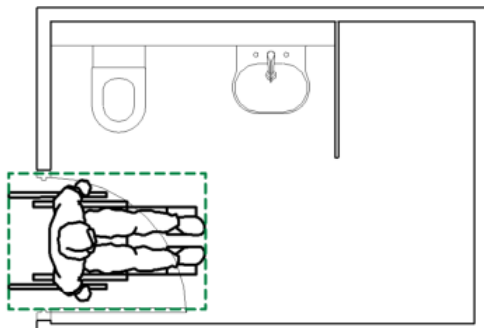
The use of a strip drain is optional.

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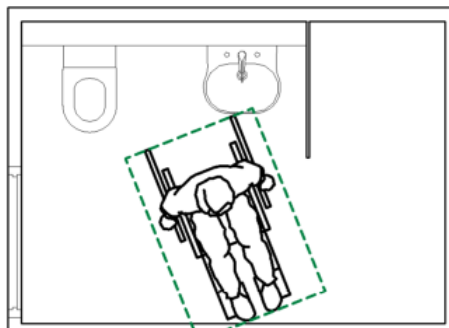
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Independent Access - Visitable Toilet Option 1.2- Transfer Steps

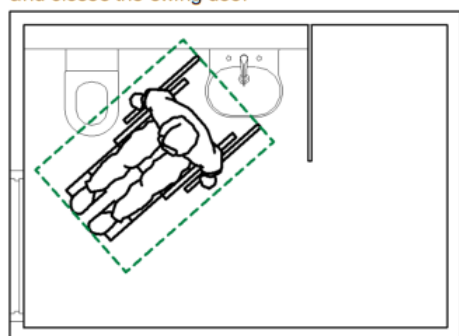
OPTION 1.2



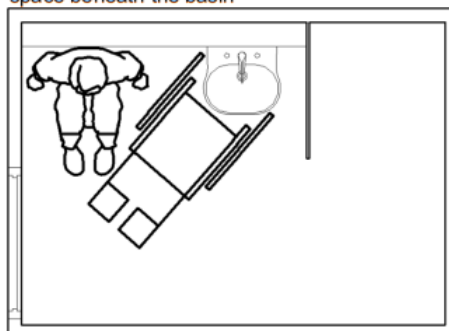
Step 1 - User enters, reaches back and closes the swing door



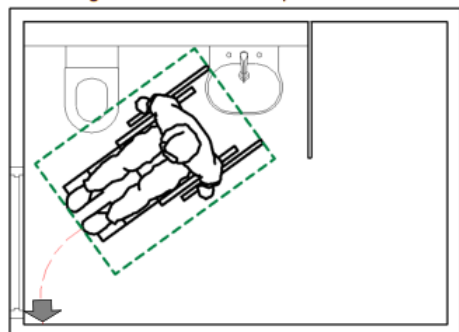
Step 2 - User turns and reverses to get into their transfer position with the rear wheels utilising space beneath the basin



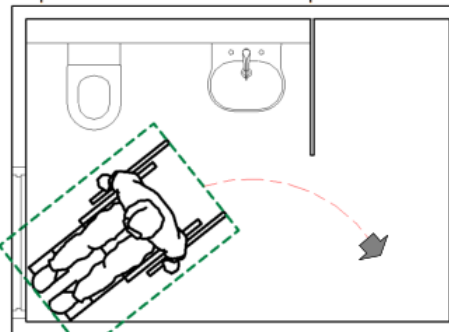
Step 3 - User reverses between toilet pan and basin to get into final transfer position



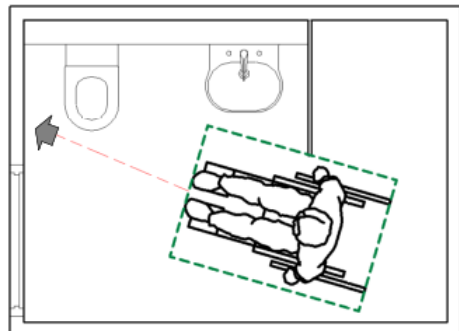
Step 4 - User transfers on to the pan



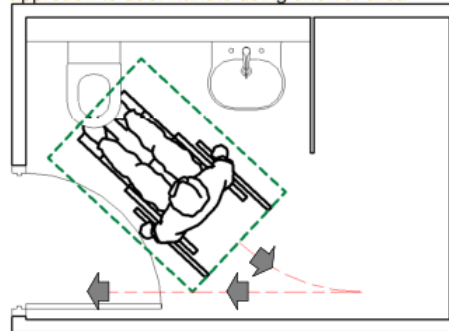
Step 5 - User transfers back on the wheelchair



Step 6 - User reverses to re-manoeuvre their approach to door handle using shower area



Step 7 - User moves forward to approach and open the door



Step 8 - User opens door partially, then reverses to fully open the door to enable an exit

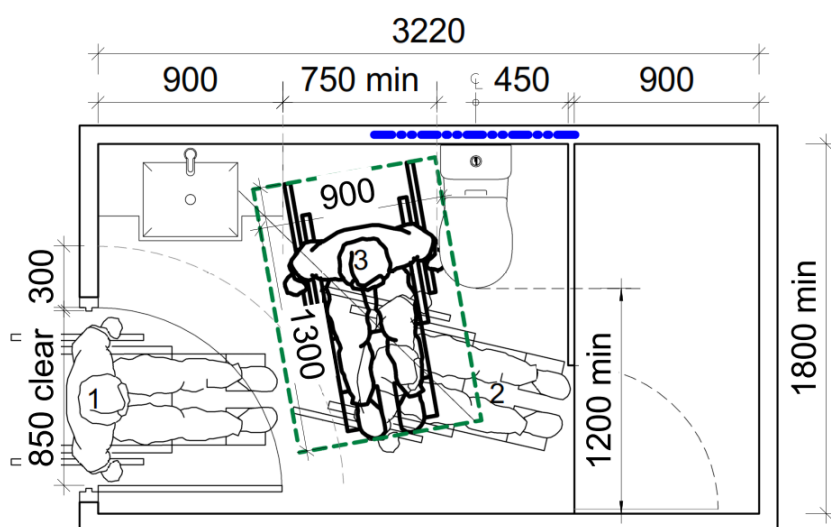
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Other Independent Access - Visitable Toilet layouts

Based on the available transfer positions, some layout options for unassisted visitable toilets have been shown below. The wheelchair foot print of 900mm x 1300mm is shown via a dotted line. A dash dot line within wall indicates wall reinforcement for future drop down grabrails.

This option can accommodate Transfer Methods C, D and E



Independent Visitable toilet Option 1.3:

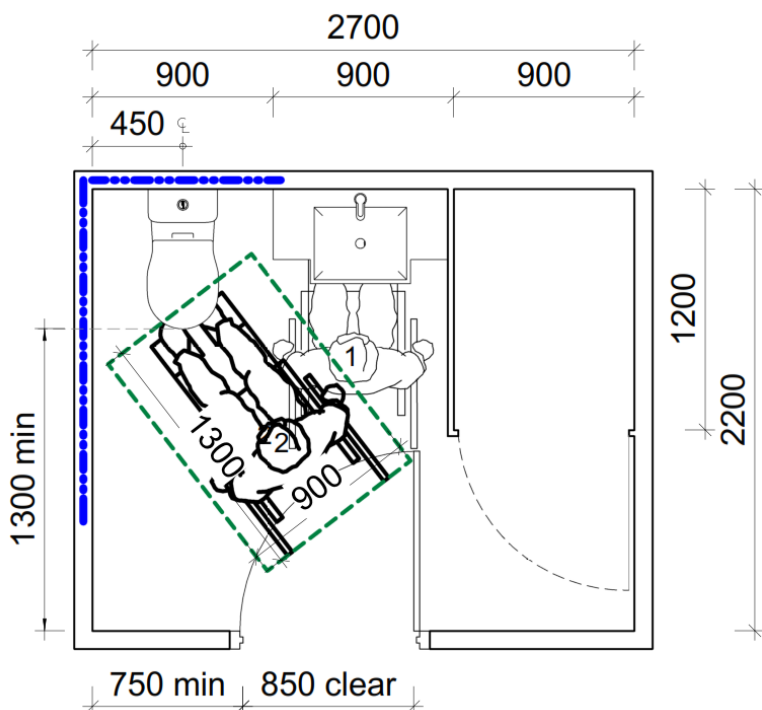
This option can be used where a shower screen with door is provided.

Position 1 - User enters the bathroom.

Position 2 - User closes the door and reverses into position 3

Position 3 - User performs a side, side angle or across front transfer.

This option can accommodate Transfer Methods A, B and E

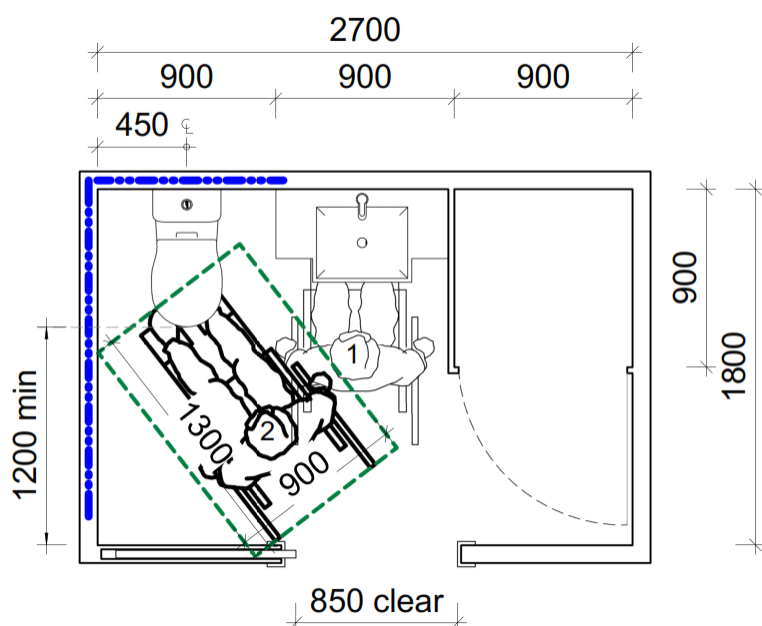


Independent Visitable toilet Option 1.4:

Position 1 - User enters and uses space under the basin to close the door.

Position 2 - User gets into transfer position.

This option can accommodate Transfer Methods B, E and A



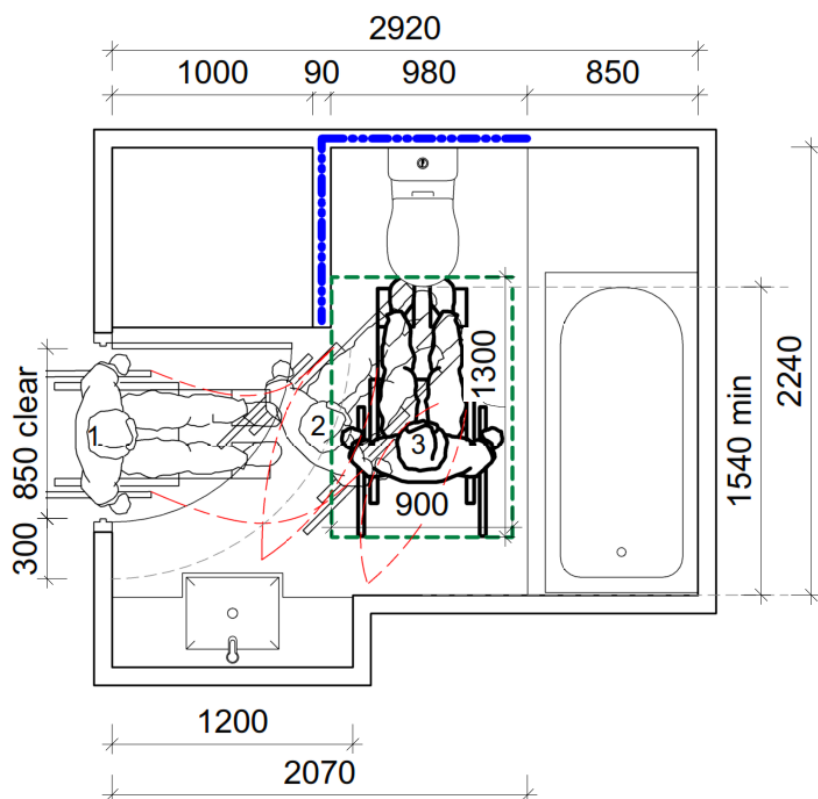
Independent Visitable toilet Option 1.5:

Position 1 - User enters and uses space under the basin to close the door.

Position 2 - User gets into transfer position.

Many wheelchair users could reverse into transfer method (A) for a front-on transfer.

This option can accommodate Transfer Methods A, B and E



Independent Visitable toilet Option 1.6:

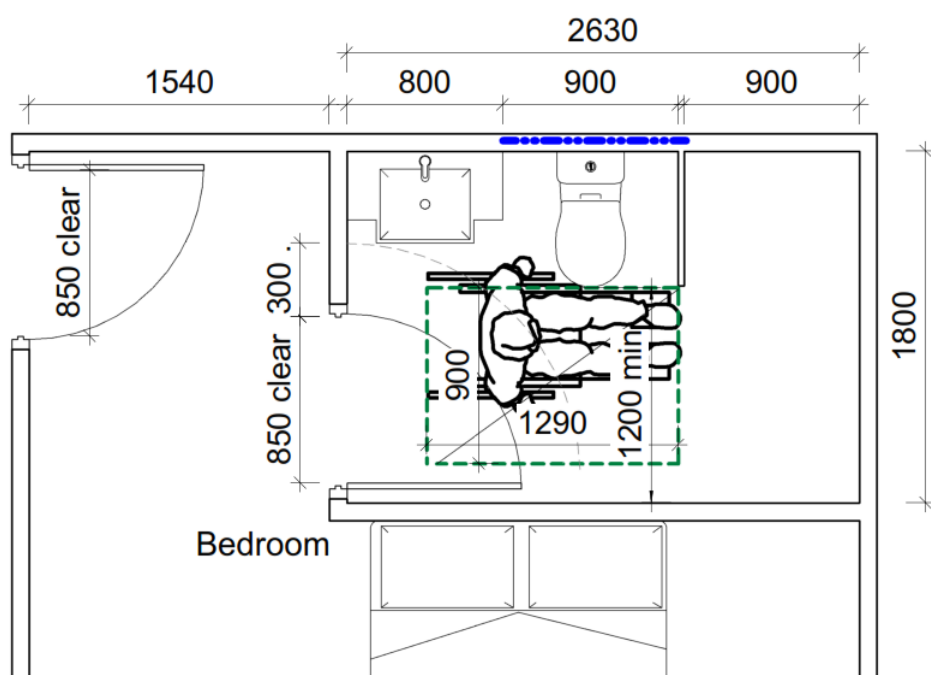
Position 1 – User enters the bathroom.

Position 2 – User angles the chair to the front of the pan and uses the Frontal Angle Transfer Method (B).

Position 3 – User uses space within the bathroom to manoeuvre into the Frontal transfer position.

The 2070 X 1240-1540mm clear area would enable many wheelchair users to turn and exit the room.

This option can accommodate Transfer Methods B, D and E



Independent Visitable toilet Option 1.7:

This option can be used when the ensuite is used as a visitable toilet.

- Door circulation for the bedroom door is provided so that the user can close the door when the ensuite is in use.
- The door to the ensuite can be left open while in use and therefore the door does not impede the access

Door Sizes and door circulation

In addition to the interior room design other important elements of visitable toilets include door size, door type, door hardware and doorway circulation spaces outside and inside the room to facilitate entry and exit.

Consistent with the adoption of the A90 occupied wheelchair this Practice Note recommends the provision of 850mm minimum clear opening doorways and doorway circulation spaces generally consistent with AS1428.1 (2009) for unassisted access to enter the room with the visitable toilet.

With respect to door types, the most conventional design is a manual inward swing door with butt hinges, especially where the door adjoins a hallway or communal living area within a dwelling.

However, this does not preclude the use of sliding doors, outward swing doors or even pivot hinge doors.

Sliding doors and outward swing doors are more commonly used on an ensuite or where a secondary door to a bathroom is provided from a bedroom, while the primary access is from a hallway or living area.

With respect to door hardware the lever handle and D-pull handles on sliding doors provide universal access consistent with AS1428.1. However, the use of other innovative door handles such “pop-out” end pulls and recessed flush pulls in sliding doors with wider and deeper openings may also be adequate in some cases.

Rising butt hinges that provide a self-closing function and future modifications incorporating auto operating doors may also be factored into a design for maximum convenience and access by users.

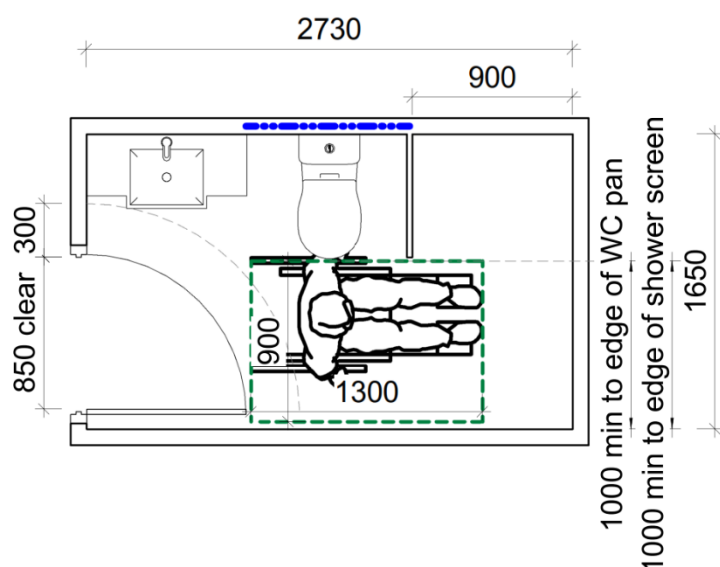
Visitable toilets – Conclusions and recommendations

1. An accessible path of travel is required to enter a dwelling from the street frontage or parking area to access the main living area and provide an accessway to the visitable toilet. This includes 1000mm minimum width passageways and hallways, 1200mm width at 90 degree turning hallways and doorway circulation spaces to enter the visitable toilet consistent with AS1428.1 for unassisted access and doors (920mm) providing 850mm minimum clear opening width.
2. Visitable toilet designs should accommodate the majority of Transfer Methods.
3. That a 900mm x 1300mm basic area be adopted to accommodate people using an A90 wheelchair and that visitable toilet designs acknowledge the actual shape of a person in a wheelchair, general manoeuvrability and to utilise floor area under a washbasin.
4. To provide privacy and independent access, a person using a wheelchair must be clear of the door swing to enable the person to close the door unassisted.
5. **When is Assisted Access reasonable? -**
In some cases, such as an ensuite or where outward swing and sliding can be closed by others for privacy.

Section 2 – Visitable Toilets – Assisted Access

Where the spatial area available to enable unassisted access is limited, then in some circumstances designs may require the need for assisted access to close and open the door. On this basis, several layout options of visitable toilets have been shown below using the same transfer techniques as mentioned in section 1. Green dotted line indicates the wheelchair footprint of 900mm x 1300mm.

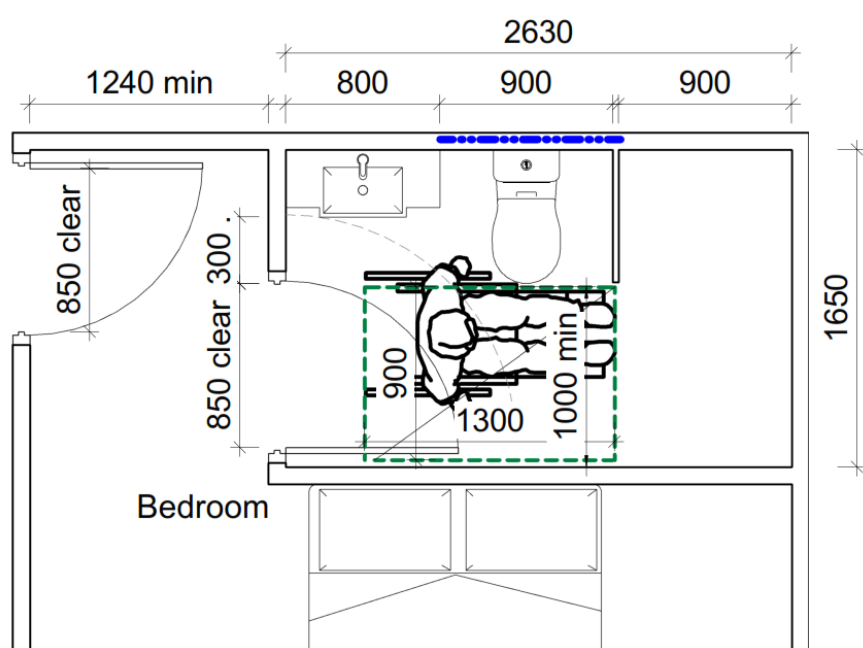
This option can accommodate Transfer Methods E and D



Assisted Access Visitable toilet Option 2.1:

- User enters the bathroom directly in the Across Front transfer position

This option can accommodate Transfer Methods E and D

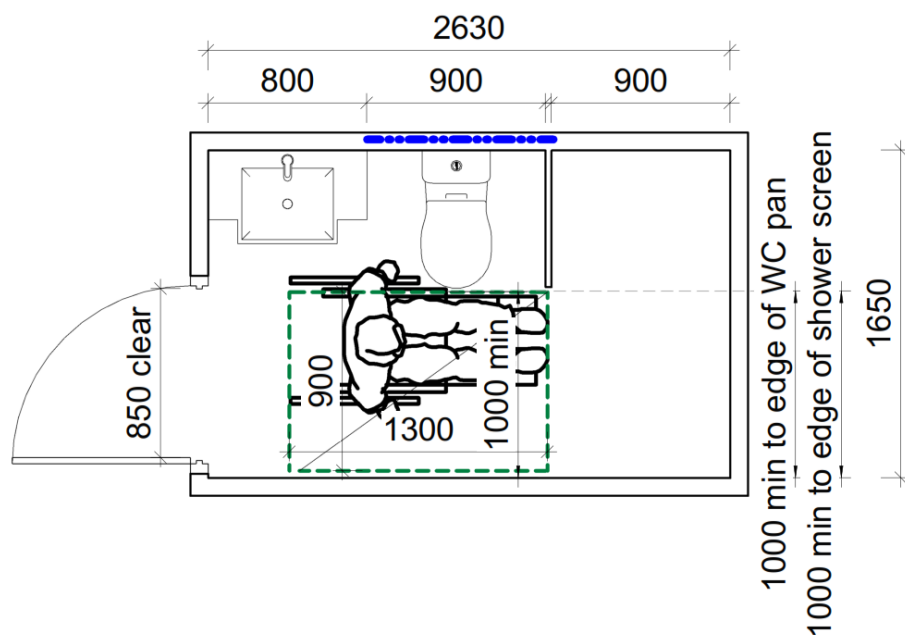


Assisted Access Visitable toilet Option 2.2:

This option can be considered when the ensuite is used as a visitable toilet.

- User enters the bedroom and closes the door.
- User enters the ensuite in Across Front or Side Angle transfer positions.
- The ensuite door could be left open while in use which would not impede access.

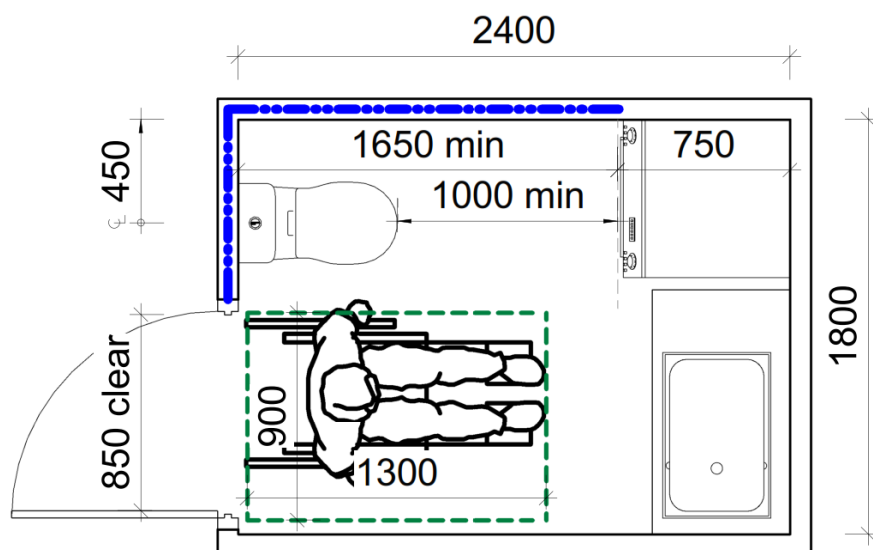
This option can accommodate Transfer Methods E and D.



**Assisted Access
Visitable toilet
Option 2.3:**

- User enters the bathroom directly in the Across Front transfer position
- Door swings outside the bathroom

This option can accommodate Transfer Methods C, D and E



**Assisted Access
Visitable Toilet
Option 2.4:**

- User enters the combined Laundry/toilet directly in Across Front transfer position
- Door swings outside the laundry to provide a clear space for manoeuvring into three transfer methods.

This design could be adapted to an inward swing door if there is clear space below the laundry sink for the feet and knees of a person using a wheelchair.

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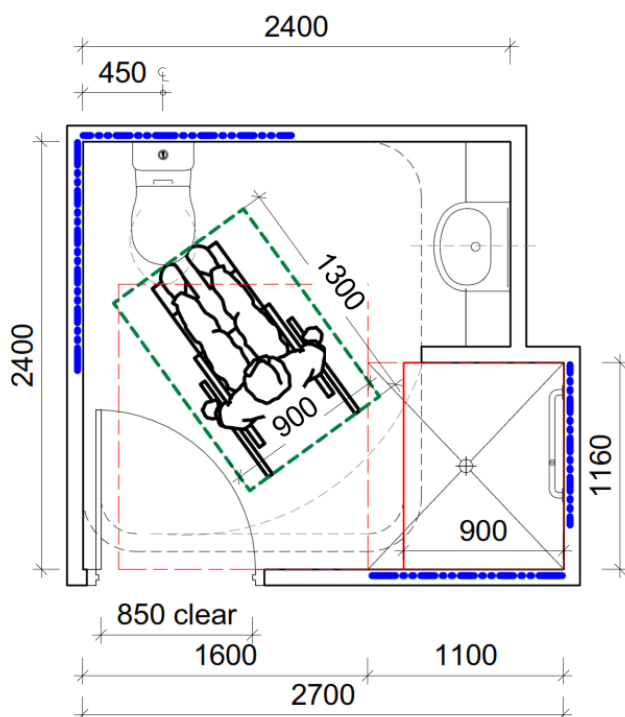
Section 3 – Livable and Adaptable bathrooms (no bathtub)

Livable & Adaptable Bathrooms that incorporate a Visitable toilet without a bathtub

For designers who wish to incorporate a visitable toilet within an adaptable bathroom to satisfy multiple objectives of AS4299 and Livable Housing Guidelines this section of the Practice Note provides a range of design options.

While the following designs are not exhaustive they aim to promote innovation in design.

- All options show a clear door opening of 850mm with door circulation spaces as required by AS1428.1-2009.
- All options show the circulation requirements of WC pan and showers spaces as required by AS1428.1-2009.
- **Green dotted lines indicate visitable toilet template**
- **A Red dotted line indicates the circulation requirements for Showers** and a **solid red line is a removable shower screen**
- **A Thick Blue dotted line indicates the location of wall reinforcement** as required by AS4299-1995
- Shower rails can be accommodated on either wall
- Either strip drains or standard drains can be used
- Dimensions of the bathrooms account for standard finishes like tiling works.

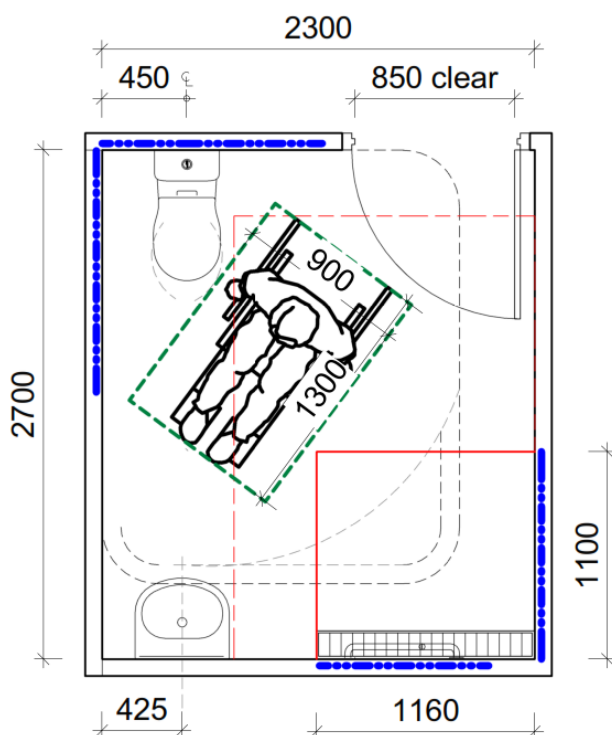


Livable & Adaptable Bathroom Option 3.1:

- User enters the bathroom directly in the Across Angle transfer position
- The door swing inside the bathroom is clear of the 900mm x 1300mm space.
- By removal of the shower screen (which is 900mm wide at pre-adaptation), the bathroom will comply with AS1428.1

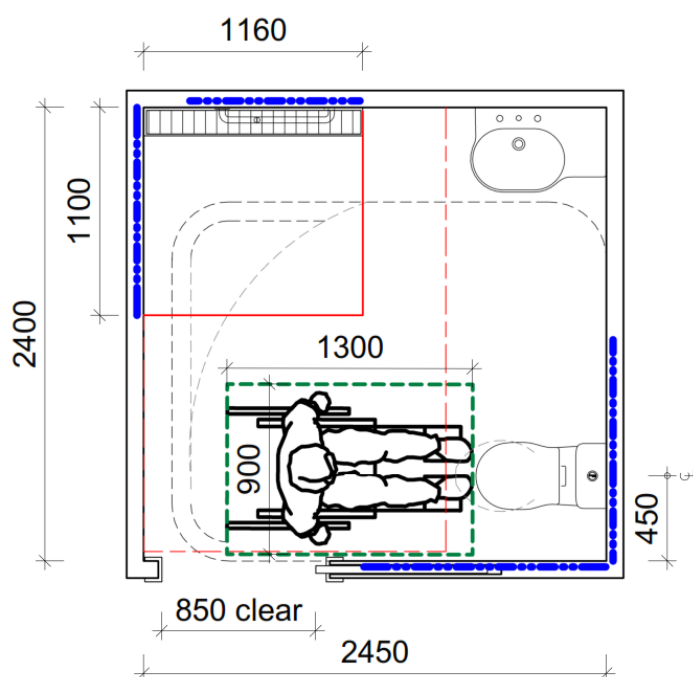
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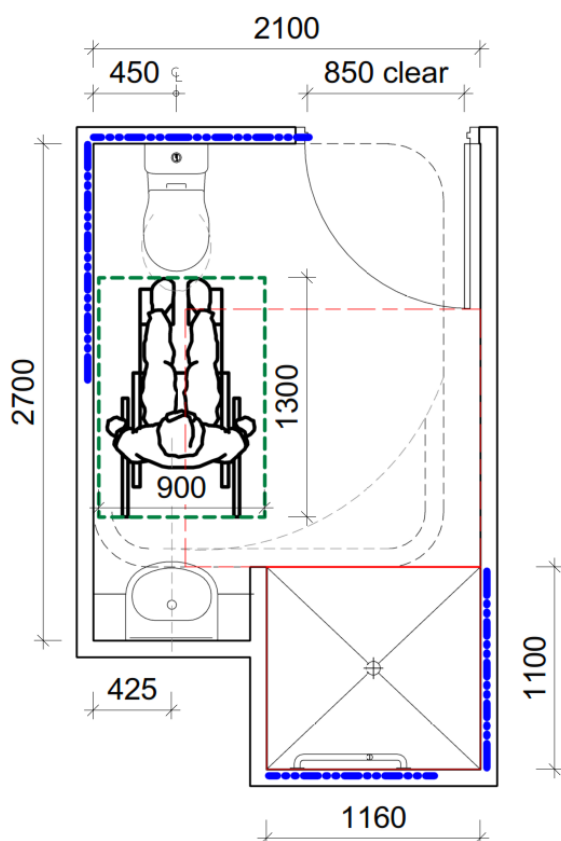
Livable & Adaptable Bathroom Option 3.2:

- User enters the bathroom directly in the Side Angle transfer position
- The door swing inside the bathroom is clear of the 900mm x 1300mm space.
- By removal of the shower screen, the bathroom will comply with AS1428.1



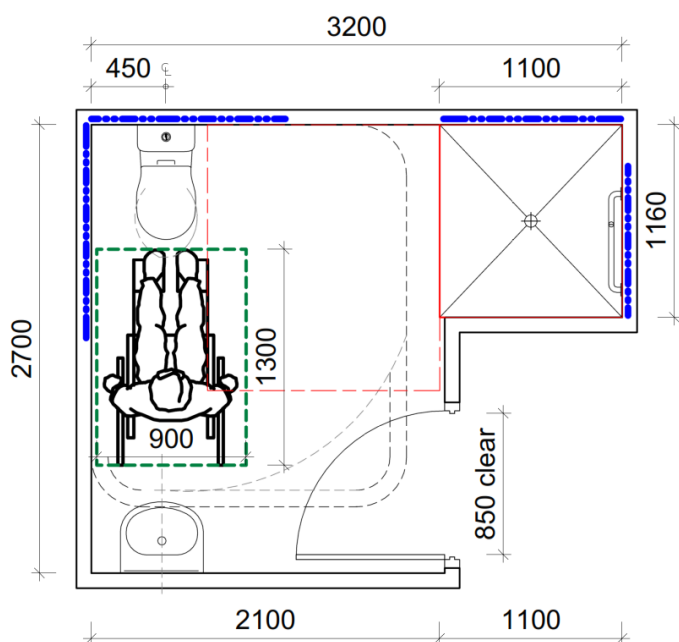
Livable & Adaptable Bathroom Option 3.3:

- User enters the bathroom and manoeuvres in the Side Angle Frontal transfer position
- By removal of the shower screen and swapping the sliding door to a hinged door, the bathroom will comply with AS1428.1



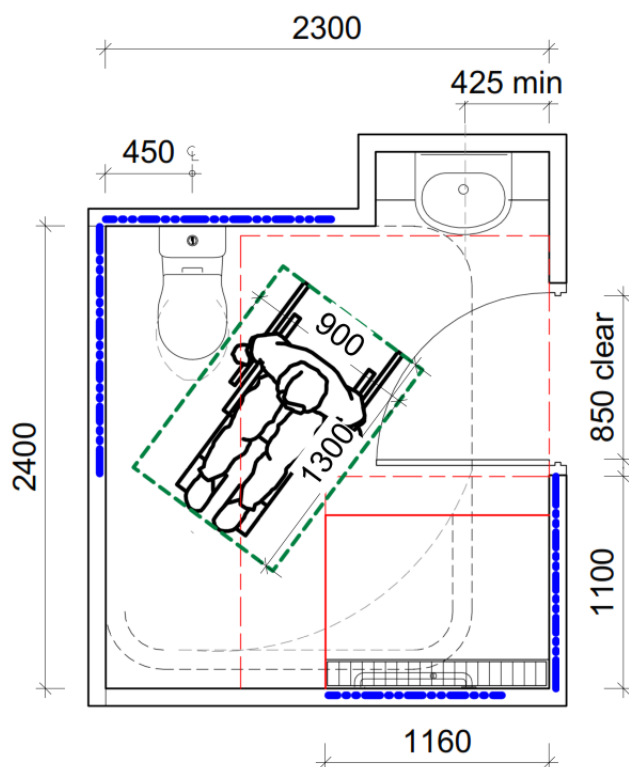
Livable & Adaptable Bathroom Option 3.4:

- User enters the bathroom and manoeuvres in the Frontal transfer position
- The door swing inside the bathroom is clear of the 900mm x 1300mm space.
- By removal of the shower screen, the bathroom will comply with AS1428.1



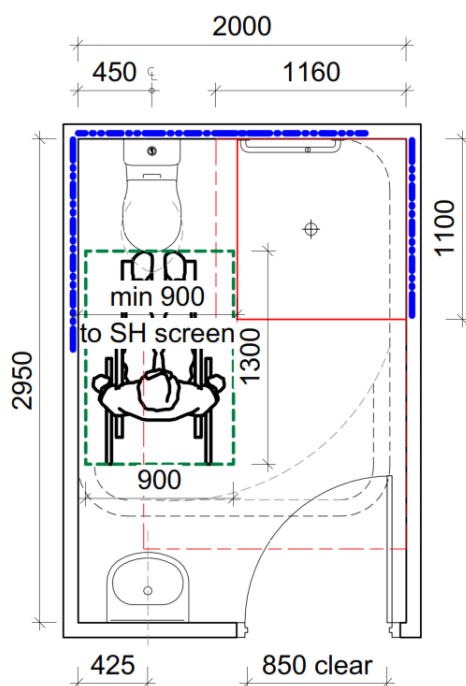
Livable & Adaptable Bathroom Option 3.5:

- User enters the bathroom and manoeuvres in the Frontal transfer position
- The door swing inside the bathroom is clear of the 900mm x 1300mm space.
- By removal of the shower screen, the bathroom will comply with AS1428.1



Livable & Adaptable Bathroom Option 3.6:

- User enters the bathroom and manoeuvres in the Side angle transfer position
- The door swing inside the bathroom is clear of the 900mm x 1300mm space.
- By removal of the shower screen (which is 900mm wide at pre-adaptation), the bathroom will comply with AS1428.1

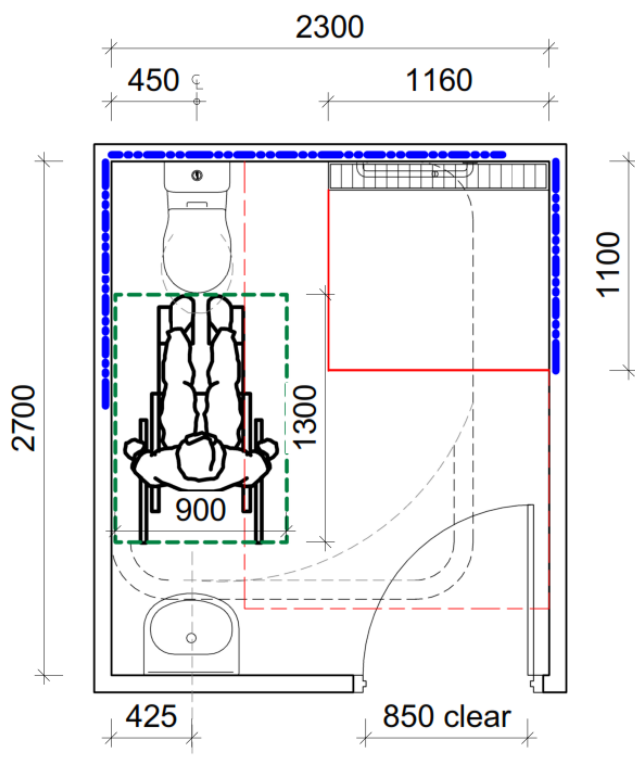


Livable & Adaptable Bathroom Option 3.7:

- User enters the bathroom and manoeuvres in the Front transfer position
- The door swing inside the bathroom is clear of the 900mm x 1300mm space.
- By removal of the shower screen (which is 900mm wide at pre-adaptation), the bathroom will comply with AS1428.1

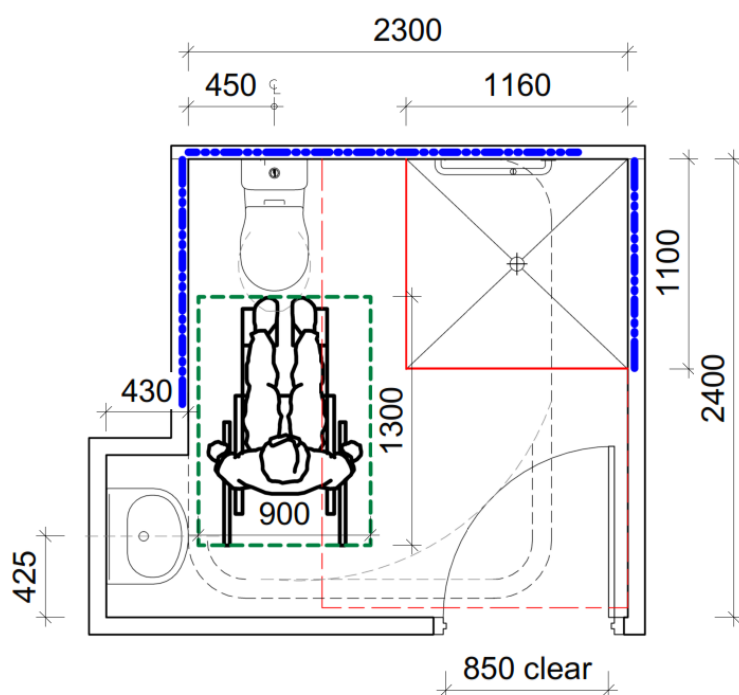
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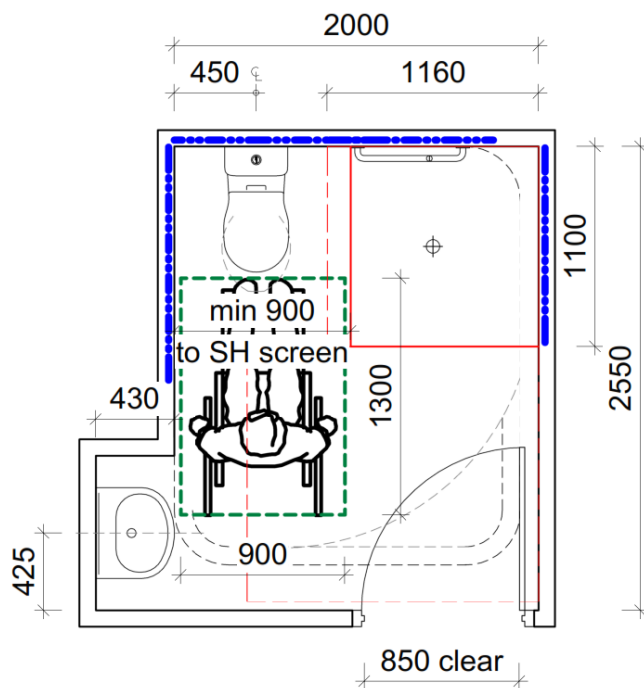
Livable & Adaptable Bathroom Option 3.8:

- User enters the bathroom and manoeuvres in the Frontal transfer position
- The door swing inside the bathroom is clear of the 900mm x 1300mm space.
- By removal of the shower screen, the bathroom will comply with AS1428.1



Livable & Adaptable Bathroom Option 3.9:

- User enters the bathroom and manoeuvres in the Frontal transfer position
- The door swing inside the bathroom is clear of the 900mm x 1300mm space.
- By removal of the shower screen, the bathroom will comply with AS1428.1

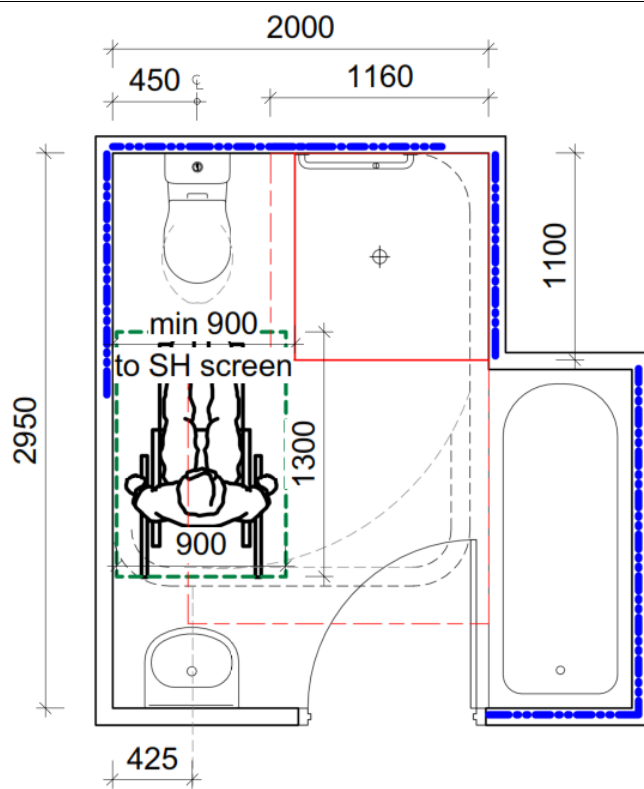


Livable & Adaptable Bathroom Option 3.10:

- User enters the bathroom and manoeuvres in the Frontal transfer position
- The door swing inside the bathroom is clear of the 900mm x 1300mm space.
- By removal of the shower screen (which is 900mm wide at pre-adaptation), the bathroom will comply with AS1428.1

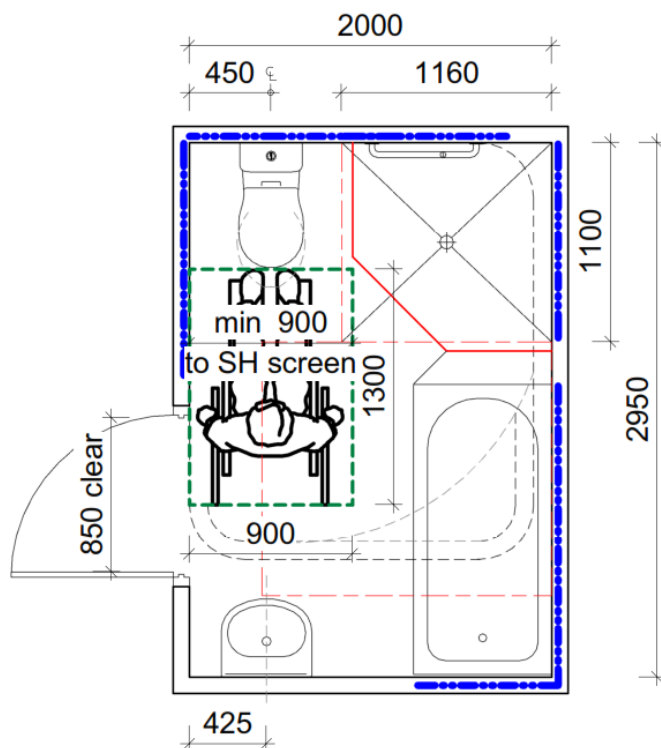
Section 4 – Livable and Adaptable bathrooms (with a bathtub)

Livable & Adaptable Bathrooms that incorporate a Visitable toilet and a bathtub



Livable & Adaptable Bathroom with Bathtub Option 4.1:

- User enters the bathroom and manoeuvres in the Frontal transfer position
- The door swing inside the bathroom is clear of the 900mm x 1300mm space.
- By removal of the shower screen (which is 900mm wide at pre-adaptation), the bathroom will comply with AS1428.1

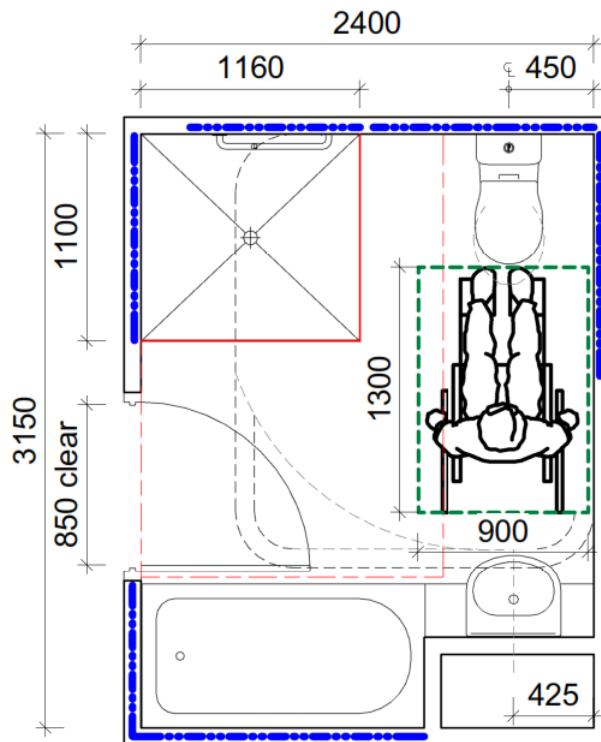


Livable & Adaptable Bathroom with Bathtub Option 4.2:

- User enters the bathroom and manoeuvres in the Frontal transfer position
- The door swings outside the bathroom and is clear of the 900mm x 1300mm space.
- By removal of the shower screen (which is a different shape at pre-adaptation) and by removal of the bathtub, the bathroom will comply with AS1428.1

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Livable & Adaptable Bathroom with Bathtub Option 4.3:

- User enters the bathroom and manoeuvres in the Frontal transfer position
- The door swing inside the bathroom is clear of the 900mm x 1300mm space.
- By removal of the shower screen, the bathroom will comply with AS1428.1

Livable / Adaptable / Visitable bathrooms – Conclusions and recommendations

1. An accessible path of travel is required to enter a dwelling from the street frontage or parking area to access the main living area and provide an accessway to the Livable / Adaptable Bathroom. This includes 1000mm minimum width passageways and hallways, 1200mm width at a 90 degree turning area at hallways and doorway circulation spaces to enter the visitable toilet consistent with AS1428.1 for unassisted access and doors (920mm) providing 850mm minimum clear opening width.
2. Livable / Adaptable Bathrooms shall provide Visitable toilets designs that accommodate the majority of Transfer Methods.
3. Hobless showers are essential and any water bar shall not exceed 6mm in height.
4. Shower screens can be reduced in size to accommodate for visitable toilet access prior to future adaptation.
5. Wall reinforcement requirements shall satisfy AS4299 and Livable Housing Design Guidelines for grabrail installation.
6. Vanity units and washbasins should be wall hung and under basin cabinets and legs should be avoided to maximise internal circulation space at floor level.

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