



## Kitchens – design guidelines

This information sheet contains guidelines to assist you when designing or modifying a kitchen in a private dwelling, to accommodate the needs of a person who is aged or has a disability. If designing for future needs, adaptability of the kitchen could allow alterations to be made as the person gets older and their needs change. Australian Standards can be used as a guide for some design principles. The Australian Standards cited relate to designing for access and mobility for persons aged 18 to 60 years, but the principles mentioned may also be appropriate for people who are older or younger than these ages.

Designing specifically for children, whose needs will change as they grow, may be better addressed by referencing the Australian Standard (AS1428.3-1992), which deals with design requirements for children and adolescents with disabilities.

It is intended that material in this publication be used in conjunction with, and not in place of, consultation with an Occupational Therapist and/or reference to the current and relevant Australian Standards, National Construction Codes, and government legislation, when you are making decisions about kitchen design. These Standards detail **minimum** dimensions which are **mandatory** for public buildings but compliance with them is **not mandatory** for private dwellings. There is no typical kitchen for people with disabilities. Each has to be specifically designed for the user.

### Useful assistance is available from

An **Occupational Therapist** who can advise on different ways of doing tasks, suitable products, and what may be required in the future – see *contact details below*:

- **The Independent Living Centre (ILC Tas)** has Information Service Occupational Therapists who can provide information and advice, either at the Centre or in the community via the ILC Tas Mobile Outreach Service. Although they cannot come to your house they can show you a display of assistive equipment and technology including home modifications and design. This is a free service available to people in all areas of Tasmania.  
1300 885 886
- **equipify** is an ILC Tas service with an Occupational Therapist who can visit you at home to assess your home modification needs, and give advice on design, construction and products to suit you and your household. A fee is charged for this service.  
1300 452 827
- **Community Occupational Therapists:** Services are free for eligible people.

Southern Tasmania:	6166 7280
Northern Tasmania:	6777 6216
North West Tasmania and West Coast:	6426 5127
- **Private Practice Occupational Therapists:**  
For information about registered Occupational Therapists in private practice in Tasmania
  - Contact ILC Tas 1300 885 886
  - Visit <http://www.otaus.com.au> 'Find a private practice OT'
  - Look under 'Occupational Therapists' in the Yellow Pages

## Australian Standards

### General

AS 1428.1—2009	<i>Design for access and mobility Part 1: General requirements for access— New building work</i>
AS 1428.2—1992	<i>Design for access and mobility Part 2: Enhanced and additional requirements—Buildings and facilities</i>
AS 4299—1995	<i>Adaptable housing</i>
AS/NZS 3018—2001	<i>Electrical installations- Domestic installations</i>

### Children and Adolescents

AS 1428.3—1992	<i>Design for access and mobility: Requirements for children and adolescents with physical disabilities</i>
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- Australian Standards detail a **minimum** standard that applies to public buildings and compliance with them is **not mandatory** for private dwellings.
- Some Australian Standards provide a starting point for anyone with additional access requirements but it is always necessary to consider each person's individual need as this may be different from the requirement described in the Australian Standard.  
Consultation with an Occupational Therapist about designing for a person's individual needs is recommended.
- The Australian Standards cited are based on the dimensions of people aged 18 to 60 years.
- Australian Standards can be purchased from Standards Australia International. Online access to the Standards is no longer available at state libraries.
- Standards Australia International Ltd telephone: 131 242
- Buy Australian Standards on-line: [www.saiglobal.com/shop](http://www.saiglobal.com/shop)



**Current legislation** – requirements for complying with building industry legislation and codes in Tasmania (including the current National Construction Code of Australia).

## Design considerations

Choosing an adaptable design for the kitchen provides greatest flexibility for all users now and over time, as needs change. Specific kitchen planning will take into account the ability of the primary user. Does the person:

- use a wheelchair (consider the size and type) or other mobility device, e.g. small motorised scooter or wheeled walker?
- need to be seated on a chair or stool?
- stand while they use the kitchen?

Additionally, are there limitations to thinking and planning ability, mobility, balance, strength, reach and vision? Is the kitchen being planned for a user with a progressive medical condition which may lead to increasing disability?

All of these considerations will affect choice of layout, bench height, bench depth, need for uninterrupted bench surfaces, under-bench space, storage space, easily-operated knobs and controls, access to appliances, sink depth and sufficient lighting to illuminate dark areas.

## Space to move

- An L-shaped or U-shaped kitchen provides the best layout.
- A compact kitchen in a unit will work for a wheelchair/scooter user if they can drive in and reverse out.
- A corridor or galley kitchen may suit a person able to use the benches for standing support.
- A person with breathing difficulties may find it easier to move around a kitchen which has a compact circulation space.

The following space requirements are minimum dimensions specified in the Standard. They are a guide. However, always consider the style and size of the wheelchair/scooter and the ability of the user.

- The minimum space for a 180° wheelchair turn is 2070 mm in the direction of travel and 1540 mm wide. The preferred space is 2270 mm in the direction of travel and 1740 mm wide.
- The minimum space for a 360° turn is 2250 x 2250 mm. The preferred space is minimum 2450 x 2450 mm.
- A minimum clear floor space of 1500 x 820 mm allows for a forward approach of a wheelchair to a bench.
- A minimum clearance of 1550 mm shall be maintained between all opposing base cabinets, appliances and walls to allow for a 180° turn by a person in a wheelchair.
- Foot clearance for wheelchair footplates should be 280–290 mm high with a depth of 190–200 mm and may reduce the space required for a wheelchair turn.
- The space requirements for a motorised scooter may vary depending on the size and features of the device. An assessment specific to the scooter and its user should be made.
- Space between benches to provide standing support should allow comfortable reach by the user. The dimension of this space needs to suit the individual user. *In this situation, the space will not be sufficient for turning a wheelchair.*

## Floor surface

- Floor surfaces should be easy to maintain and slip-resistant when wet or dry.

## Doors

- Doors should be outward-opening or sliding.
- The clear opening door width should be minimum 850 mm, 920 mm preferred.
- If a door must open into the kitchen, additional circulation space may be required inside the kitchen.

## Windows

- Windows may be located near the sink or cook top but should be low enough to enable a wheelchair user to see out. Windowsill height should be 950–1000 mm.
- Windows should be kept clean to allow the maximum amount of light to pass through.
- Glare and heat can be reduced by using curtains, horizontal venetian blinds or vertical blinds, or tinting.
- Ventilation will be assisted if windows can be opened. A remote control device may be necessary when the window is above a bench.
- A skylight may improve natural lighting during daylight hours.

## Lighting

- Task lighting should be utilised to minimise shadows particularly over meal preparation areas, sink, and cook top.
- Recommended illumination levels are 160 lux for general lighting and 240 lux for task lighting. Many people require better artificial lighting than is normally provided. This applies particularly to older people and to people with vision impairment.
- Fluorescent tube lighting is recommended for general lighting.
- Good contrast makes it easier if you have low vision. In addition to using effective lighting, consider placement of colour, shade and texture in a way that highlights their differences.

## Switches and power points

- Locate light switches where they can be reached from sitting or standing positions 900–1100 mm above the floor, not less than 500 mm from internal corners.
- Use two-way light switches if there are two door entries to the kitchen.
- Rocker, toggle or push-plate switches with a minimum width of 35 mm are easy to use.
- Sensor devices which respond to heat or movement can be used to activate lights.
- General purpose power outlets shall be located not less than 600 mm or more than 1100 mm above the plane of the finished floor and not less than 500 mm from internal corners.
- At least one double general purpose power outlet shall be located with a horizontally accessible reach over a work surface at a maximum of 300 mm from the front of the work surface.
- The general purpose power outlets for the refrigerator and the dishwasher shall be easily reachable when these appliances are in their operating positions.



## Benches

The following space requirements are minimum dimensions specified in the Standard. They are a guide. However, always consider the style and size of the wheelchair/scooter and the ability of the user.

No individual table, counter or worktop height and clearance beneath will suit all users with disabilities. A bench with easily adjustable height within the range of 700 mm to 850 mm from the finished floor is preferred. Some users will be unable to use a bench unless it is at the correct height.

- For people with vision impairment, benches should be a plain colour, without 'busy' patterns, contrasting to the walls and cupboards (with a 30% luminance contrast), and have a non-reflective finish. Edges should be rounded.
- Adjoining benches should be at the same level, to assist with sliding (rather than lifting) items from one area to another across an uninterrupted surface. The surface should be heat-resistant.
- There should be a clear 'set down' space on the bench top next to oven, cook top, fridge and dishwasher.



## Height

- Bench height from the floor to the top of the bench for a wheelchair user is 850+/-20 mm.
- Bench height for a standing user is often 900 mm although 850 mm may suit many older users. A specific height may be required for an individual user.
- Benches should provide a minimum clear width opening beneath the surface of not less than 820 mm to allow for a front approach by a wheelchair.
- Height-adjustable benches should have a minimum clear opening width of 820 mm and be height-adjustable within the range of 750–850 mm.
- A pull-out work board on runners, between 750±20 mm and 850±20 mm high, will provide a surface for food preparation.

## Depth

- The typical depth of a bench and of under-bench appliances is 600 mm.
- The front 350 mm of a bench is generally used for food preparation and the rear for storage.
- 550 mm is considered the maximum forward reach of a wheelchair user. For this reason a power outlet should be not less than 500 mm from an internal corner, at a maximum of 300 mm from the front of the work surface, 600–1100 mm above the floor.

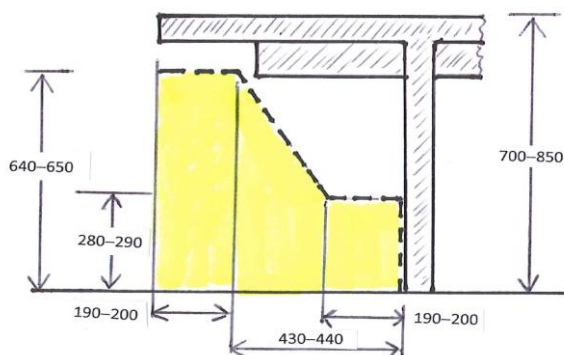
## Length

- The length of the top of a bench provided for general use should be minimum 900 mm with clear floor space in front of this part of the bench, as described above. Where a single bench only can be provided, the height of the top of the unit should be 830–870 mm.

## Knee space

Knee space is needed by people who use a wheelchair or who sit to access work areas in the kitchen. Knee space should be provided at the sink, under the bench, and near the cook top, refrigerator and oven. Further space may be needed to accommodate the dimensions of a wheelchair to allow room to manoeuvre the wheelchair and have unimpeded access to work areas.

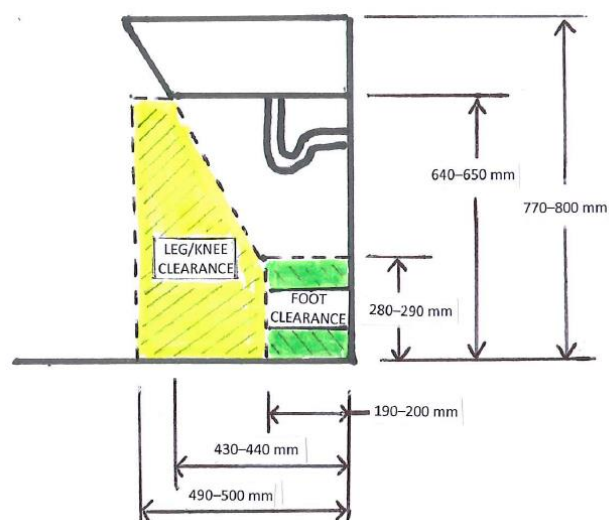
- For a wheelchair user the recommended minimum clear opening is 820 mm wide x 620–640 mm deep.
- For a wheelchair user the clear underneath space for knees beneath a fixed-height bench must be 640–650 mm high, allowing a depth of 430–440 mm from the back of the space for leg/knee clearance, and a height of 280–290 mm and depth of 190–200 mm for toe clearance.
- Plumbing in the knee space should be insulated to prevent people from burning their legs on hot pipes.



LEG/KNEE AND FOOT CLEARANCE BENEATH A BENCH

## Sinks

- The sink height should be 770–800 mm and on the same level as the bench.
- For people who sit, and for wheelchair users, knee space beneath the sink is required. Leg clearance beneath the sink should be to a height of 640–650 mm.
- Knee clearance under the sink is improved if the sink drain is located towards the back.
- The bowl depth should be no greater than 150 mm for a seated user.
- The underside of the sink bowl, exposed pipes, taps and fittings should be insulated.



LEG/KNEE AND FOOT CLEARANCE BENEATH A SINK

## Taps

- Lever taps are preferred. Fit them so that the tap and water source are no further than 300 mm from the front of the bench.
- Taps with sensor plates may be desirable.
- Taps with a ¼ turn function allow a full stream of water with minimal turning.

## Storage

- Shelves 800 mm above the floor should not exceed 600 mm depth.  
Shelves 800–1500 mm above the floor should not exceed 450 mm depth.
- Shelves above 1500 mm should not exceed 300 mm depth.
- Cupboard and drawer handles should be positioned horizontally or vertically.
- D-shaped handles are recommended for cupboards and drawers. They should be attached at the top of low cupboards and the bottom of high cupboards for ease of reaching.
- Ensure that D-shaped cupboard and drawer handles allow adequate hand clearance for ease of grasp.
- Pantry shelves should be U-shaped and shallow to make it easy to reach stored items.
- Consider various forms of shelving and storage: corner drawers, deep drawers, open shelving, storage trolley under or over bench storage, rotating shelves with a lip not less than 50 mm in corner units, bi-fold doors.
- Drawers on easy-glide runners, or slide-out wire baskets are preferred, rather than large open cupboards.
- Movable shelves need to have a 'stop mechanism' which maintains the level of the shelf and prevents it from tipping when pulled out.
- Height-adjustable, easily re-positioned shelves are recommended.



## Cook tops

- Choosing separate cook top and oven means that both can be installed at a height suitable for the user.
- Cook tops should be flush with the surrounding benches to enable safe sliding of pots and surfaces should be heat-resistant as pots may be hot.
- Controls are more easily managed if they are at the front or side of the cook top.
- Good contrast markings on controls may assist people with vision impairment. Raised markings may also be helpful but if they are not incorporated in the design of the controls they would need to be applied, in consultation with the user.
- Hotplates configured in a U-shape can be easily reached and limit the risk of the user being burnt while reaching over hot surfaces or pots.
- An induction cook top may be desirable because the surface area around cooking zones remains cool to touch.
- If knee space is left underneath the cook top, the underside should be insulated to prevent burns.



## Ovens

- A wall oven with a side-opening door allows closer access, particularly for a seated user.
- A side-opening door should open through 180° and should be installed so that the bottom shelf is on approximately the same level as the adjacent work surface.



## Other kitchen appliances

- The internal storage space of a refrigerator should be within the vertical range 700–1200 mm.
- When selecting an appliance with a door, such as a refrigerator, choose a model with a door which opens in a direction that does not block movement in the room. Some refrigerators have reversible doors which open to either the left or the right. Conversion kits are also available for refrigerators so that doors can be hinged on whichever side suits the location.
- Place the appliance alongside empty bench space which is on the side opposite to the hinge of the door, to reduce the need for lifting and carrying.
- Appliance shelves need to have a 'stop mechanism' which maintains the level of the shelf and prevents it from tipping when pulled out.
- A cordless kettle can remain switched on at the power point, eliminating the need to reach the power point to switch it off each time the kettle is used. However, the power point for a corded kettle should be within easy reach so that it can be turned off each time the kettle is disconnected, for example, when being taken to the sink to be filled.
- A range hood with a remote control is available.
- If a dishwasher is too high to be installed under a bench, locate it freestanding or at the end of the bench. A drawer-style dishwasher could be installed under a bench to eliminate some bending.
- Consider appliances with self-cleaning and automatic defrost mechanisms.



**Discuss ways to adapt your current kitchen to suit you now, and in the future, with an occupational therapist.**

For further information about building design principles, specific details and dimensions and advice about plumbing considerations, please refer to ILC Tas publications:

**Making your home accessible**

**Taps and water temperature regulation**

## Contact ILC Tas for more information



Ring **1300 885 886** to speak to a health professional

Visit our website [www.ilctas.asn.au](http://www.ilctas.asn.au) or email us at [ilc@ilctas.asn.au](mailto:ilc@ilctas.asn.au)



Make an appointment to visit our centre at **275 Wellington Street, South Launceston**

Ring us to find out when we will be visiting your area

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