

Livable Housing Design Guidelines

Developed by the National Dialogue on Universal Housing Design

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What is Livable Housing Design?

Livable housing design means designing Australian homes to meet the changing needs of home occupants across their lifetime.

It recommends the inclusion of key easy living features that aim to make homes easier and safer to use for all occupants including: people with a disability, ageing Australians, people with temporary injuries, and families with young children.

A livable home is designed to:

- be easy to enter
- be easy to move around in
- be capable of easy and cost-effective adaptation, and
- be designed to anticipate and be respond to the changing needs of home occupants.

By including safer and user-friendly design features a livable home design seeks to enhance the quality of life for all occupants at all stages of their life.

The Livable Housing Design Guidelines

The Livable Housing Design Guidelines have been developed to assist the residential building and property industry and governments. They may also provide useful information for consumers seeking to introduce livable design features into a new home and could also be readily applied within an existing home.

The Guidelines describe key easy living elements that aim to make a home safer and more responsive to the changing needs of home occupants.

Three levels of performance are detailed in the Livable Housing Design Guidelines. These voluntary performance levels can be applied to all new detached and semi detached houses, terraces and townhouses (Class 1a) and new apartment dwellings (Class 2). In the majority of circumstances the performance requirements are identical.

It is noted that common areas for some Class 2 buildings will be covered by the *Disability (Access to Premises – Buildings) Standards 2010* when it comes into effect.

The levels of performance range from basic requirements through to best practice in livable home design and are as follows:

Silver Level	Core livable housing design elements
Gold Level	Enhanced standards for the core livable housing design elements + additional elements
Platinum Level	In some instances further enhanced standards for the core livable housing design elements + all remaining elements.

In line with the current Government approach to social¹ and affordable² housing initiatives, higher levels of performance are proposed for all new housing that receives government assistance or funding for construction. The milestones for social and affordable housing are detailed in the *National Dialogue for Universal Housing Design's Strategic Plan*.

¹ Social housing refers to an existing and changing portfolio of housing that has been financed with public funds. It is generally provided for low-income renters in housing need.

² Affordable housing refers to housing that is provided at an affordable rent to low and moderate-income renters. Affordable rent is charged at below the market rent rates.

Homes built to meet the Livable Housing Design Guidelines include six core design elements:

1. A safe and continuous path of travel from the street entrance and/or parking area to a dwelling entrance that is level,
2. At least one level entrance into the dwelling,
3. Internal doors and corridors that facilitate comfortable and unimpeded movement between spaces,
4. A toilet on the ground (or entry) level that provides easy access,
5. A bathroom that contains a hobless (step-free) shower recess, and
6. Reinforced walls around the toilet, shower and bath to support the safe installation of grabrails at a later date.

The core design elements would not necessarily accommodate the needs and abilities of all home occupants. However, they are considered to be of most widespread benefit and use to home occupants in the majority of circumstances.

Importantly, by including the core livable housing design elements, home occupants are provided with the opportunity to reduce or avoid the costs associated with retrofitting a home to improve access in future, should it be required.

The Gold and Platinum performance levels provide enhanced dimensions and requirements for the six core design elements along with some additional requirements.

The relationship between the Livable Housing Design Guidelines and the Building Code of Australia (BCA)

The Building Code of Australia (BCA) sets out the legal construction requirements for all new building work in Australia. The BCA includes performance requirements that must be achieved for each aspect of building construction.

In designing a home that incorporates Livable Housing Design Guideline elements it is important to ensure that all building work also complies with the relevant BCA requirements where they apply, particularly for:

- fire safety
- water proofing of wet areas (internal)
- weather proofing (external)
- termite protection
- window location and size
- floor surfaces in wet areas and on stairs.
- stairways

Application

The elements described in the Livable Housing Design Guidelines are applicable to the following classes of buildings as specified in the BCA.

Class 1 – one or more buildings, which in association constitute:

Class 1a – a single dwelling being:

- (i) a detached house; or
- (ii) one of a group of two or more attached dwellings, each being a building, separated by a fire-resisting wall, including a row house, terrace house, town house or villa unit; or

Class 1b:

- (i) a boarding house, guest house, hostel or the like; with a total area of all floors not exceeding 300 m² measured over the enclosing walls of the Class 1b building; and in which not more than 12 persons would ordinarily be resident, which is not located above or below another dwelling or another Class of building other than a private garage..
- (ii) 4 or more single dwellings located on one allotment and used for short-term holiday accommodation.

Class 2 – a building containing 2 or more sole-occupancy units, each being a separate dwelling.

Class 4 – a dwelling in a building that is a class 5, 6, 7, 8 or 9 if it is the only dwelling in the building.

Note: The design levels described in this Guideline should only be applied to the parts of the building classes not covered by the *Disability (Access to Premises – Buildings) Standards*.

Key Design Elements

1. Dwelling access

Performance statement: There is a safe and continuous pathway from the street entrance and/or parking area to a dwelling entrance that is level.

Silver Level

- (a) A safe and continuous pathway from:
- (i) the front boundary of the allotment; or
 - (ii) a car parking space, where provided, which may include the driveway on the allotment,
- to an entrance that is level as specified in Element 2.
- This provision does not apply where the average slope of the ground where the path would feature is steeper than 1:14.
- (b) The path of travel as referred to in (a) should have a minimum clear width of 1000mm and –
- (i) an even, firm, slip resistant surface;
 - (ii) a crossfall of not more than 1:40;
 - (iii) a maximum pathway slope of 1:14. (Landings are to be provided at intervals as detailed in AS1428.1 (2009) for gradients between 1:20 – 1:14).³
 - (iv) a step ramp compliant with AS1428.1 (2009) may be incorporated, with a landing at its head, and foot where there is a change in height of 190mm or less. The landings must have a length of at least 1200mm exclusive of the swing of the door or gate that opens onto them.

Gold Level

As for silver level except replace (b) with a minimum clear pathway width of 1100mm.

Platinum Level

As for silver level except replace (b) with a minimum clear pathway width of 1200mm provided from:

- (i) the front boundary of the allotment, and
- (ii) any car parking space, where provided, which may include the driveway on the allotment,

to an entrance that is level as specified in Element 2.

³ Full compliance with the requirements of AS1428.1 is not required. Consideration could be given to ensuring that the design does not preclude the installation of kerb guards, handrails and tactile ground surface indicators (TGSIs) in the future.

2. Dwelling entrance

Performance statement: There is at least one level entrance into the dwelling to enable home occupants to easily enter and exit the dwelling.

Silver Level

- (a) The dwelling should provide an entrance door with -
 - (i) a minimum clear opening width of 820mm;
 - (ii) a level transition and threshold (maximum vertical tolerance of 5mm between abutting surfaces is allowable provided the lip is rounded or beveled); and
 - (iii) reasonable shelter from the weather.
- (b) A level landing area of 1200mm x 1200mm should be provided at the level entrance door.
- (c) Where the threshold at the entrance exceeds 5mm a ramped threshold of up to 56mm compliant with AS1428.1 (2001) may be provided. (Refer Figure 1)
- (d) The level entrance should be connected to the safe and continuous pathway as specified in Element 1.

Note: The entrance must incorporate waterproofing and termite management requirements as specified in the BCA.

Gold Level

As for silver level except replace (b) with a level landing area of 1350mm x 1350mm and (a) (i) with minimum clear door opening width of 850mm.

Platinum Level

As for silver level except replace (b) with a level landing area 1500mm x 1500mm and (a) (i) with a minimum clear door opening width of 900mm.

3. Car parking (where part of the dwelling access)

Performance statement: Where the parking space is part of the dwelling access it should allow a person to open their car doors fully and easily move around the vehicle.

Silver Level

(a) Where the parking area forms part of the access pathway into the dwelling the space should incorporate -

- (i) minimum dimensions of at least 3200mm (width) x 5400mm (length);
- (ii) an even, firm and slip resistant surface; and
- (iii) a level surface (1:40 maximum gradient, 1:33 maximum gradient for bitumen).

Gold Level

As for silver level with the following additional features incorporated for Class 1a dwellings:

- (iv) where practicable, a vertical clearance over the parking space of 2500mm; and
- (v) where possible, it is desirable that the parking space be covered to ensure protection from the weather.

Platinum Level

As for gold level for Class 1a dwellings except that parking space should provide minimum dimensions of at least 3800mm x 6000mm.

(b) For Class 2 dwellings, parking spaces compliant with the accessible parking provisions detailed in AS2890.6 (2009), should be provided as follows:

- (i) where individual parking spaces form part of the individual unit's title, one accessible parking space should be provided for each unit; and
- (ii) if visitor parking is provided, then 1 space per 100 units (or part thereof) should be an accessible parking space.

4. Internal doors & corridors

Performance statement: Internal doors and corridors facilitate comfortable and unimpeded movement between spaces.

Silver Level

- (a) Doorways to rooms on the entry level used for living, dining, bedroom, bathroom, kitchen, laundry and sanitary compartment purposes should provide:
- (i) a minimum clear opening width of 820mm; and
 - (ii) a level transition and threshold (maximum vertical tolerance of 5mm between abutting surfaces is allowable provided the lip is rounded or beveled).
- (b) Internal corridors/passageways to the doorways referred to in (a) should provide a minimum clear width of 1000mm.

Gold Level

As for the silver level except replace (a) (i) with a minimum clear opening width of 850mm and (b) with a minimum corridor/passageway width of 1200mm.

Platinum Level

As for the silver level except replace (a) (i) with a minimum clear opening width of 900mm and (b) with a minimum corridor/passageway width of 1200mm.

5. Toilet

Performance statement: The ground (or entry) level has a toilet to support easy access for home occupants and visitors.

Silver Level

- (a) Dwellings should have toilet on the ground (or entry) level that provides:
- (i) a minimum clear width of 900mm between the walls of the bathroom if located in a separate room; and
 - (ii) a minimum 1200mm clear circulation space forward of the toilet pan exclusive of the swing of the door in accordance with Figure 1.
- (b) If the toilet is located within the ground (or entry) level bathroom, the toilet pan should be located in the corner of the room to enable the installation of grabrails.

Gold Level

As for silver level except replace (a) (i) with a minimum clear width of 1200mm between the walls of the bathroom if located in a separate room.

Platinum Level

As for the gold level with the following additional features:

- (iii) the toilet pan is positioned between 450mm – 460mm from the nearest wall as measured from the centre line of the toilet;
- (iv) 600mm minimum clearance is provided forward of the cistern measured from the front of the cistern to the front of the toilet pan. 800mm (+/-10mm) clearance is required if the cistern is recessed; and
- (v) the height of the pan is between 460mm - 480mm above the finished floor level.

6. Shower

Performance statement:

The bathroom and shower is designed for easy and independent access for all home occupants.

Silver Level

- (a) One bathroom should feature a slip resistant, hobless (step-free) shower recess. Shower screens are permitted provided they can be removed at a later date.
- (b) The shower recess should be located in the corner of the room to enable the installation of grabrails at a future date.

Gold Level

As for silver level except that the hobless (step-free) shower recess described in (a) should -

- (i) be located in a bathroom on the ground (or entry) level;
- (ii) provide dimensions of 900mm x 900mm; and
- (iii) provide a clear space of 1200mm x 1200mm forward of the shower recess entry.

Platinum Level

As for gold level except that the hobless (step-free) shower recess should -

- (ii) provide dimensions of 1160mm x 1100mm; and
- (iii) provide a clear space 1400mm x 1600mm forward of the shower recess entry.

7. Reinforcement of bathroom & toilet walls

Performance statement: **The bathroom and toilet walls are built to enable grabrails to be safely and economically installed.**

Silver Level

- (a) Except for walls constructed of solid masonry or concrete, the walls around the shower, bath (if provided) and toilet should be reinforced to provide a fixing surface for the safe installation of grabrails.
- (b) The fastenings, wall reinforcement and grabrails combined must be able to withstand 1100N of force applied in any position and in any direction.
- (c) The walls around the toilet are to be reinforced by installing -
 - (i) noggings with a thickness of at least 25mm in accordance with Figure 2a; or
 - (ii) sheeting with a thickness of at least 12mm in accordance with Figure 2b.
- (d) The walls around the bath are to be reinforced by installing –
 - (i) noggings with a thickness of at least 25mm in accordance with Figure 3a; or
 - (ii) sheeting with a thickness of at least 12mm in accordance with Figure 3b.
- (e) The walls around the hobless (step-free) shower recess are to be reinforced by installing -
 - (i) noggings with a thickness of at least 25mm in accordance with Figure 4a; or
 - (ii) sheeting with a thickness of at least 12mm in accordance with Figure 4b.

Gold Level

Silver level requirements apply.

Platinum Level

Silver level requirements apply.

8. Kitchen space

Performance statement: The kitchen space is designed to support ease of movement between fixed benches and to support easy adaptation.

Silver Level No requirements.

Gold Level

- (a) The kitchen space should be designed to support ease of movement and adaptation with –
 - (i) at least 1200mm clearance provided in front of fixed benches and appliances; and
 - (ii) slip resistant flooring.⁴
- (b) Where practicable, floor finishes should extend under kitchen cabinetry to enable cupboards to be moved without affecting the flooring.

Platinum Level As for the gold level except that the kitchen space described in (a) should be designed with -

- (i) at least 1550mm clearance should be provided in front of fixed benches and appliance;
- (ii) slip resistant flooring; and
- (iii) task lighting above workspaces should be installed.

⁴ As per the BCA

9. Laundry space

Performance statement: The laundry space is designed to support ease of movement between fixed benches and to support easy adaptation.

Silver Level No requirements.

Gold Level

- (a) The laundry space should be designed to support ease of movement and adaptation with -
 - (i) at least 1200mm clearance provided in front of fixed benches and appliances; and
 - (ii) slip resistant flooring.⁵
- (b) Where practicable, floor finishes should extend under laundry cabinetry to enable cupboards to be moved without affecting the flooring.

Platinum Level As for the gold level except that in laundry space described in (a) should be designed with:

- (i) at least 1550mm clearance should be provided in front of fixed benches and appliances;
- (ii) slip resistant flooring; and
- (iii) task lighting above workspaces should be installed.

⁵ As per the BCA

10. Ground (or entry level) Bedroom space

Performance statement:	There is a space on the ground (or entry) level that can be used as a bedroom.
Silver Level	No requirements.
Gold Level	The dwelling features a space (or room) on the ground (or entry) level that: <ul style="list-style-type: none">(i) is of at least 10m² with one wall a minimum length of 3m;(ii) provides for a minimum path of travel of at least 1000mm on at least one side of the bed.
Platinum Level	As for the gold level with the following additional circulation space requirements: <ul style="list-style-type: none">(iii) a space 1540mm (width) x 2070mm (in the direction of travel) to be provided on the side on the bed that is closest to the door approach; and(iv) a minimum path of travel of 1000mm on the remaining side of the bed.

11. Internal stairways

Performance statement: Where installed, stairways are designed to reduce the likelihood of injury and also enable future adaptation.

Silver Level No requirements.

Gold Level

(a) Where practicable, stairways in dwellings should provide a minimum clear width of 1000mm and –

- (i) be straight in design;
- (ii) be positioned adjoining a load-bearing wall; and
- (iii) feature a continuous handrail on at least one side of the stairway.

Note: The steps must provide a slip resistant finish and suitable non-slip tread as specified in the BCA. Handrails on both sides of the stairway are preferred.

Platinum Level

(a) Where practicable, stairways in dwellings should provide a minimum clear width of 1200mm and –

- (i) be straight in design;
- (ii) be positioned adjoining a load-bearing wall;
- (iii) feature continuous handrails on both sides of the stairway; and
- (iv) minimum landing areas of 1200mm x 1200mm at the top and base of the stairway.

Note: The steps must provide a slip resistant finish and suitable non-slip tread as specified in the BCA.

12. Switches and Powerpoints

Performance statement:	Light switches and powerpoints are located at heights that are easy to reach for all home occupants.
Silver Level	No requirements.
Gold Level	<ul style="list-style-type: none">(a) Light switches should be positioned in a consistent location -<ul style="list-style-type: none">(i) between 900mm – 1100mm above the finished floor level; and(ii) horizontally aligned with the door handle at the entrance to a room.(b) Powerpoints should be installed not lower than 300mm above the finished floor level.
Platinum Level	As for gold level with the following feature – <ul style="list-style-type: none">(iii) light and powerpoint switches to be rocker action, toggle or push pad in design with a recommended width of 35mm.

13. Door and Tap hardware

Performance statement: Home occupants are able to easily and independently open and close doors and safely use tap hardware.

Silver Level No requirements.

Gold Level (a) Doorways to feature door hardware installed at between 900mm -1100mm above the finished floor.

Platinum Level As for gold level with the following features -

- (b) Doorways to feature lever or D-pull style door hardware; and
- (c) Basins, sinks and tubs to feature lever or capstan style tap hardware with a central spout.

14. Family/Living room space

Performance statement: The family/living room features clear space to enable the home occupant to move in and around the room with ease.

Silver and Gold Levels No requirements.

Platinum Level (a) The family/living room accommodates a free space, 2250mm in diameter, to enable ease of movement clear of furniture.

15. Window sills

Performance statement:

Windows sills are installed at a height that enables home occupants to view the outdoor space from either a seated or standing position.

Silver and Gold Levels

No requirements.

Platinum Level

- (a) Window sills on the ground (or entry) level in living areas and bedroom spaces should be positioned no higher than 1000mm above the finished floor level to facilitate natural surveillance.
- (b) Window controls should be able to be easy to operate with one hand and located within easy reach from either a seated or standing position.

Note: A concession from (a) is reasonable in kitchen, bathroom and utility spaces.

16. Flooring

Performance statement:

Floor coverings are slip resistant to reduce the likelihood of slips, trips and falls in the home.

Silver and Gold Levels

No requirements.

Platinum Level

- (a) All floor coverings should:
- (i) be firm and even, and
 - (ii) feature a level transition between abutting surfaces (maximum vertical tolerance of 5mm between abutting surfaces is allowable provided the lip is rounded or beveled).