



**Response by  
Australian Network for  
Universal Housing Design  
to the  
Draft National Construction Code  
2022**



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## Preamble

ANUHD acknowledges the Building Ministers' decision on 30 April 2021 to “to include minimum accessibility provisions for residential housing and apartments in the National Construction Code (NCC) 2022 based on the Livable Housing Design Guidelines (LHDG) silver standards.”

ANUHD, however, considers that LHD Gold Level (yet to be released) as the most suitable and cost-effective standard to meet the NCC objectives G7O1 and H8O1: “to ensure that housing is designed to meet the needs of the community, including older Australians and those with a mobility-related disability”. That said, our responses aim to:

- improve the clarity of the draft NCC 2022, including the draft ABCB Livable Housing Design (LHD); and
- address two inconsistencies. The two inconsistencies are:
  1. In the draft NCC Volumes 1 and 2, there is a requirement that the designated step-free hobless shower be on the entry level (See G7P1(d) and H8P1 (e)). Yet in the draft ABCB LHD standard, a designated shower on the entry level is not required (See Clause 5.1).

ANUHD supports the requirement that the designated step-free hobless shower be on the entry level.

2. The option of relying on a garage (with solid walls) as the accessible path of travel (or part thereof) to the dwelling entry requires the person to arrive and exit from a vehicle in the garage.

The minimum width of a single vehicle garage would need to be 3435mm (see p. 6) in order to provide an accessible path of travel to the dwelling entry.

We accept the exemptions for Class 1a dwellings, and the application for Class 2 sole occupancy units regarding the accessible path of travel to the dwelling entry; that is:

- For Class 1a dwellings (family homes), H8P1(a) need not be complied with if—
  - (a) step-free access cannot be provided from an appurtenant Class 10a garage or carport, or a car parking space provided for the exclusive use of the occupants of the dwelling; and
  - (b) due to site conditions, there is no other suitable location on which to construct the access path.
- For Class 2 dwellings (apartments), G7P1(a) only applies to a sole-occupancy unit that is located on an accessible floor.

## Response

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**NCC Volume(s):**  One  Two  Three  Housing Prov.  Livable Housing

**Clause/Figure/Table:** Clause 1.1(1)

**Recommended change to draft:**

- a. a ~~the~~ pedestrian entry at the allotment boundary *from the ground level of the adjoining land*;

**Comment/reason for change:**

- Changing the number to singular recognises that there may be more than one pedestrian entrance at a boundary to the allotment.
  - The addition of “*from the ground level of the adjoining land*” is directed to the case where there is a difference in height (altitude) between the accessible property and the adjoining land at the point where the accessible path of travel connects with the adjoining land.
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**NCC Volume(s):**  One  Two  Three  Housing Prov.  Livable Housing

**Clause/Figure/Table:** Clause 1.2

**Recommended change to draft:**

1.2 Parking space incorporated into step-free access path

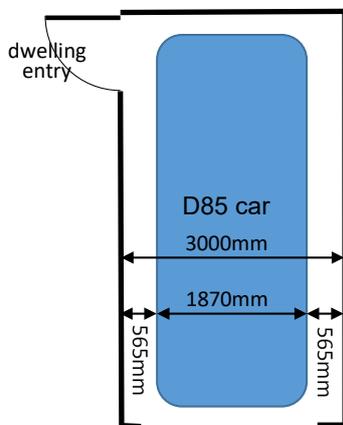
- 1 Where one or more car parking spaces are connected to or form part of a required access path, at least one of the car parking spaces must have—
  - a. a minimum unobstructed space of 3435 mm wide x 5400 mm long.

**Comment/reason for change:**

- Clause 1.2 does not take into account the requirement of Clause 2.3 (1), as follows:
  1. An entrance door that is subject to Clause 2.1 must have a space of at least 1200 mm x 1200 mm on the external (arrival) side of the door that is—
    - a. unobstructed; and
    - b. level, or has a gradient not exceeding 1:40 if a gradient is necessary to allow for drainage.
- Using AS/NZS 2890.1:2004, which references a D85 (1870 mm wide) vehicle and specifies a minimum width of a single car garage as being 3000 mm, it is calculated that the minimum acceptable width for a vehicle door opening on each side of the vehicle is 565 mm.

- Using the draft ABCB LHD standard, and the above D85 (1870 mm wide) vehicle size and 565 mm vehicle door opening on one side (being the side of the vehicle on which a person without a mobility-related disability is sitting), there is inadequate space on the other side of the vehicle (being the side on which the person with a mobility-related disability is sitting) for a 1000 mm wide step-free path of travel to the entry.
- A single vehicle garage must be at least 3435 mm wide to fully comply with the draft ABCB LHD standard. See the diagrams below.

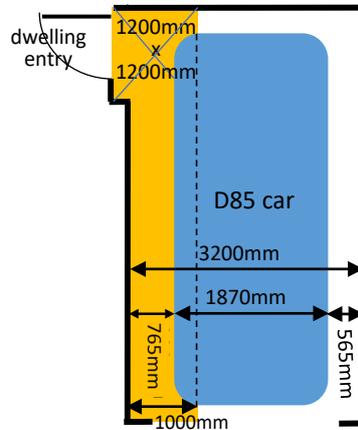
### Single vehicle garage (AS/NZS 2890.1:2004)



**Indicates that:**

565 mm is acceptable minimum for able-bodied person to exit a vehicle

### Single vehicle garage draft ABCB Livable Housing Design standard



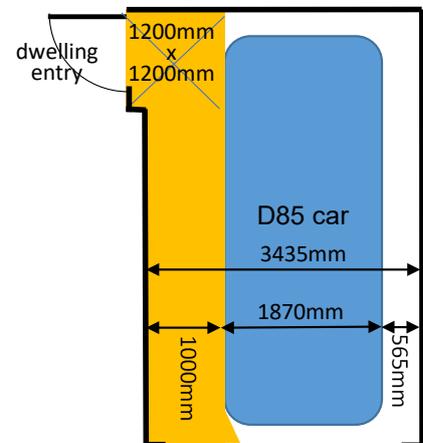
**Provides:**

565 mm for able-bodied person to exit the vehicle

**Does not provide:**

1000 mm step-free path of travel to dwelling entry

### Single vehicle garage AS 2890.1:2004 with step- free accessible path to dwelling entry



**Provides:**

565 mm for an able-bodied person to exit a vehicle

**Provides:**

1000 mm for a person with mobility-related disability to exit a vehicle

- Note: As a vehicle may be driven into the garage either forwards or backwards to allow a person with a *mobility-related disability* to exit the vehicle and travel to the dwelling entrance, the path of travel on each side of the vehicle will need to be unobstructed.

**NCC Volume(s):**  One  Two  Three  Housing Prov.  Livable Housing

**Clause/Figure/Table:** Clause 2.1(3)

**Recommended change to draft:**

- It is recommended that 2.1(3) be deleted.

- The information note should be deleted.

**Comment/reason for change:**

- There should be no exception for measuring the minimum clear opening width in any other way than the door must be able to swing open far enough (possibly beyond 90 degrees) to enable the door hardware to be outside of the clear opening width (no exemptions).
- Referring to the door opening dimension of 850 mm with a 920 mm door leaf risks confusion about what is the minimum clear door opening that is required.
- Figure 2.1 clearly illustrates the minimum clear opening requirement.

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**NCC Volume(s):**  One  Two  Three  Housing Prov.  Livable Housing

**Clause/Figure/Table:** Clause 2.3(1)

**Recommended change to draft:**

Add the following:

- unobstructed (other than by a screen door);

**Comment/reason for change:**

- Many entry doors have security screen doors which open out over the landing.
- To cater for them as an obstruction, the landing would have to be increased significantly in size.

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**NCC Volume(s):**  One  Two  Three  Housing Prov.  Livable Housing

**Clause/Figure/Table:** Clause 3.1

**Recommended change to draft:**

It is recommended that the following change be made:

All internal doors ~~on the ground or entry level~~ to the habitable rooms, laundry, bathroom and toilet of the dwelling must provide a minimum clear opening width of at least 820mm measured in accordance with Fig. 2.1.

**Comment/reason for change:**

- The objective of this Part is to ensure that housing is designed to meet the needs of the community, including older Australians and those with a mobility-related disability.
- In accordance with H8F1 Livable Housing Design, a dwelling must be designed such that it is capable of easy and cost-effective adaptation, and be responsive to

the changing needs of occupants. A resident may use assistive technology to access other floors in the future.

- Using the same door size throughout a dwelling would minimise building errors and waste and would simplify the ordering of door leaves and architraves for individual projects.

**NCC Volume(s):**  One  Two  Three  Housing Prov.  Livable Housing

**Clause/Figure/Table:** Clause 3.2

**Recommended change to draft:**

The threshold of an internal door that is subject to Clause 3.1 **and transitions within and between rooms** must—

- (a) be level; or
- (b) **have a height difference not exceeding 5 mm between finished floor coverings with a rounded or bevelled lip or extruded transition cover.**

**Comment/reason for change:**

- The current standard does not refer to internal transitions that are within, or between, rooms on the entry level that are not at defined doorways, such as sunken lounges or changes in surface levels.
- These transitions have the same impact on accessibility as do transitions at doorways.
- All finished floor transitions (including changes in tiles and floor coverings) must have a maximum height of 5 mm with the edge rounded or bevelled, or else fitted with an extruded transition cover.

**NCC Volume(s):**  One  Two  Three  Housing Prov.  Livable Housing

**Clause/Figure/Table:** Clause 5.2

**Recommended change to draft:**

### **5.2 Hobless and step-free entry**

1. At least one shower **on the entry level** must have a hobless and step-free entry.
2. A lip not exceeding 5 mm in height may be provided for water retention purposes if it is constructed in accordance with the specification given in Clause 3.13.4 and Figure 3.6 of AS 3740.

**Comment/reason for change:**

- We recommend the requirement that the designated step-free hobless shower in the draft ABCB LHD standard (Clause 5.2) be amended to reflect the requirements in Volume 1 (G7P1(d) and Volume 2 H8P1 (e)), that is, to be on the entry level.

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**NCC Volume(s):**  One  Two  Three  Housing Prov.  Livable Housing

**Clause/Figure/Table:** Clause 5.3 (1)

**Recommended change to draft:**

1. All of the shower screen, including the door (if provided), must be capable of being removed without causing damage to adjoining parts of the shower enclosure.

**Comment/reason for change:**

- All of the shower screen (not just the door) may need to be removed to allow for a mobility aid to be used at a later date.

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**NCC Volume(s):**  One  Two  Three  Housing Prov.  Livable Housing

**Clause/Figure/Table:** Clause 6.2

**Recommended change to draft:**

6.2 Construction

1. Reinforcing constructed in accordance with the requirements of (3) must be provided in the locations depicted in—
  - a. Figures 6.2a or 6.2b for walls surrounding a bath; and
  - b. Figures 6.2c or 6.2d for shower walls; and
  - c. Figures 6.2e or 6.2f for a wall adjacent to a toilet.
2. Where a wall referred to (1)(a), or (b) ~~or (c)~~—
  - a. is narrower than the width of the area required to be provided with reinforcing; or
  - b. terminates at window sill lower than the height or the area required to be provided with reinforcing—

An alternative Performance Solution to the Performance Requirements H8P1(f) or G7P1(e) is required.

**Comment/reason for change:**

- The capacity to install grabrails at a later date should not be over-ridden by design decisions about the placement of windows and doors.
- Some flexibility through a Performance Solution is possible for showers and baths but not for toilets.
  - (Note: reinforcement for an alternative L shaped grabrail has been recommended when there is not space for a standard toilet grabrail (draft ABCB LHD standard Figure 6.2e).

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**NCC Volume(s):**  One  Two  Three  Housing Prov.  Livable Housing

**Clause/Figure/Table:** Figure 6.2d

**Recommended change to draft:**

Figure 6.2d should show the total height of the sheeting as 1850 mm above the shower floor.

**Comment/reason for change:**

- This appears to be an error in the draft. (See LHDG version 4 (p. 41)) for correct measurements.)

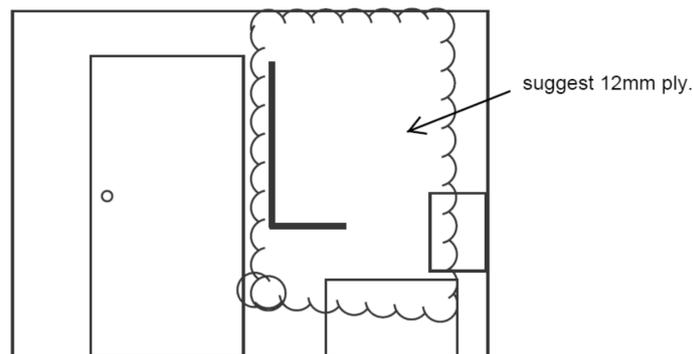
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**NCC Volume(s):**  One  Two  Three  Housing Prov.  Livable Housing

**Clause/Figure/Table:** Figure 6.2e

**Recommended change to draft:**

Additional Figure with L shaped grabrail should be given. See diagram below:



**Comment/reason for change:**

- Refer to our recommended changes to Clause 6.2. Using an L shaped grabrail offers greater layout flexibility to designers.

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**NCC Volume(s):**  One  Two  Three  Housing Prov.  Livable Housing

**Clause/Figure/Table:** Clause 11.3.5

**Recommended change to draft:**

- (1) Handrails to a stairway or ramp must—
  - (a) be located along at least one side of the stairway **flight** or ramp; and
  - (b) be located along the full length of the stairway **(including landings between flights) flight** or along the full length of the ramp, except in the case where a handrail is associated with a barrier **in which case** the handrail may terminate where the barrier terminates; and

- (c) have the top surface of the handrail not less than 865 mm vertically above the nosings of the stair treads, or the floor surface of the ramp (see Figure 11.3.4b);
- (d) be continuous and have no obstruction on or above them that will tend to break a handhold, except for newel posts, ball type stanchions, or the like; and
- (e) in the case of a winder stairway, be on the wide side of the tread of a winder step.

~~(2) The requirements of (1) do not apply to—~~

- ~~(a) a stairway or ramp providing a change in elevation of less than 1 m; or~~
- ~~(b) a landing; or~~
- ~~(c) a winder where a newel post is installed to provide a handhold.~~

**Comment/reason for change:**

- The LHDG Version 4 (Silver level) states: “*Stairways in dwellings must feature a **continuous** handrail on one side of the **stairway** where there is a rise of more than 1 m*”.
- The NCC does not require a continuous handrail on one side of the stairway where there is a rise of less than 1m. Also, the NCC does not require handrails of stairway landings. These oversights need to be remedied.
- Clause 11.3.5(2)(e) in Volume 2 aims to provide a useful continuous handrail on a stairway with winder treads. If winder stairs are the sole method of access to a level on which the accessible bathroom is located, then higher (safer) minimum specifications for these stairs are necessary to provide an acceptable level of safety.