

Design Standards for New Construction

Social Housing: Houses and Apartments

December 2015



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Additional Reference Documentation

These Design Standards are to be read in conjunction with:

- All relevant building codes and regulations.
- Relevant planning schemes and council policies
- Department of Housing and Public Works document: *Product Standards: Social Housing Dwellings*, which provides minimum standards for building products, fixtures, fittings and other items typically required in dwellings
- Livable Housing Design Guidelines (LHDG) – as provided on the <http://livablehousingaustralia.org.au> website

For other design considerations refer to:

- Crime Prevention Through Environmental Design (CPTED) guidelines located on the Queensland Police website

These design standards relate to social housing dwellings across the state, with the exception of:

- Remote Indigenous communities (refer to *Design Standards for Social Housing: Remote Indigenous Housing*)
- Supported accommodation projects, such as domestic violence shelters. These projects require the development of specific design briefs, which support the service delivery model for the site.

If there is an inconsistency between these Design Standards and the reference documents listed above, the Design Standards shall apply to the extent of the inconsistency.

If there is an inconsistency between these Design Standards and the *Product Standards*, these Design Standards shall apply to the extent of the inconsistency.

Introduction

These Design Standards apply in relation to both State-owned and Provider-owned properties, to the extent of the State's interest.

The State seeks to develop well-designed and located housing that represents value for money for the community. Projects should look 'domestic' with design features and finishes avoiding any 'institutional' appearance.

In principle, every dwelling should deliver a variety of qualities, including:

- Be comfortable, pleasant and safe to live in;
- Be designed to meet its residents' needs, both current and future;
- Use its site well and not waste built space or land;
- Look attractive, and fit into its neighbourhood;
- Respect neighbours' privacy and amenity;
- Overlook any adjacent street or parkland opposite to provide better 'neighbourhood watch';
- Be well designed for the local climate and not rely substantially upon mechanical cooling or heating systems; and
- Respond sensitively and creatively to the characteristics of its site.

Housing Types

In its early days, public housing in Queensland was characterised by family dwellings and few designs.

As housing need has diversified and as development locations and challenges have become more varied, the range of housing forms in the State's housing programs has significantly broadened.

Dwellings may be in the form of houses or apartments, attached or detached, and single, double or multiple-storey buildings depending on requirements for adaptability, the constraints of the site, styles of houses in the area, impact on neighbours, and appropriate methods of construction for the location and type of dwelling.

This brief describes the following housing types:

Class 1a Houses as defined in the National Construction Code (NCC):

- **2-bedroom duplex or dual occupancy**
- **4-bedroom detached house**
- **5-bedroom detached house**

Class 2 Apartments, as defined in the NCC:

- **Studio**
- **1-bedroom and 1-bedroom (high yield)**
- **2-bedroom**

Note: One bedroom apartments include a multi-purpose space for possible uses such as storage of medical equipment, study area, occasional sleeping, etc. One bedroom (high yield) apartments do not contain this additional space.

Apartment developments may contain a mix of apartment types (particularly a mix of 1-bedroom and 2-bedroom apartments) and a mix of features for enhanced mobility.

Accessibility

Features for enhanced mobility are an important component of housing. The State identifies three levels of mobility features, categorised as:

- **General Level** (no accessibility features)
- **Livable Housing Design Guidelines (LHDG) Gold Level** (developed by Livable Housing Australia), with some additional requirements.
- **Livable Housing Design Guidelines (LHDG) Platinum Level** (developed by Livable Housing Australia), with some additional requirements.

Apartments: Unless otherwise specified by the State, 30% of Social Housing apartments in any new multi-unit project must be designed to LHDG Platinum Level, with all remaining ground floor and lift-served apartments designed to LHDG "Gold Level". Gold Level and Platinum Level dwellings must be located entirely on an accessible level (ground or lift-served floor) and contain the additional features outlined in this document.

Houses: The minimum standard for houses is LHDG Gold Level. The LHDG Platinum Level standard is to be applied in response to identified portfolio or client need. Both LHDG Gold Level and Platinum Level houses must also contain the additional features outlined in this document.

Town planning

Design of projects should consider the objectives of the planning schemes and comply with planning scheme requirements to the maximum extent possible.

Meeting service delivery requirements may on occasion require deviation from the planning scheme. Any non-compliance with the planning scheme must be supported by good design practice, and address the strategic objectives and performance outcomes of the planning schemes to the maximum extent possible.

Projects should address relevant Council policies such as provision of footpaths and treatment of the road verge, and Councils' requirements for operational activities such as waste collection.

Design Principles

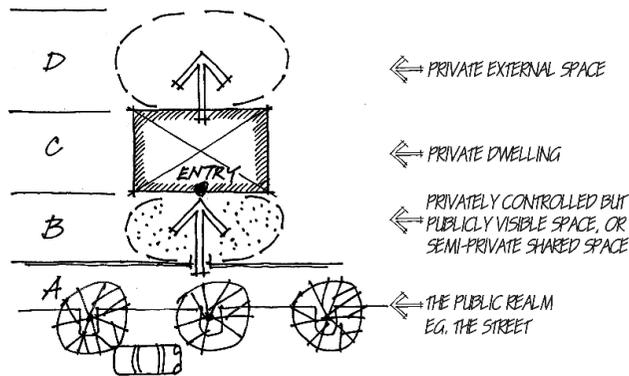
These design principles are ordered to assist the design process. They begin with a general residential diagram illustrating the design approach, followed by design principles and finally, address more detailed matters.

The order does not imply relative priorities. There are many points of overlap and interconnection. All design issues are important.

Sometimes, the pursuit of one principle may compromise another. In such cases, a shared consideration with the State is required to determine the desired priorities in that particular case as laid out in the Project Agreement, or project initiation brief.

Basic approach

All housing must be consistent with the central principle, expressed in the following diagram:



Interpreting the diagram: Space A represents the road, public access. Space B typically represents the front garden and driveway. Space C represents the dwelling, and Space D the back yard.

This diagram represents the provision of spaces or zones with changing degrees of privacy and control, illustrating the transition from the public realm (usually a street) to the private territory of the dwelling and its spaces. Apartments may achieve the intent (if not the literal interpretation) of this diagram by successfully considering the relationship and transition between public, communal and internal spaces.

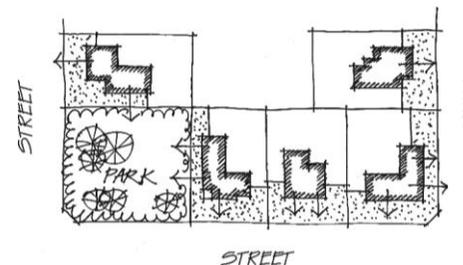
Site responsive dwelling design

Individual dwelling designs must respond to and work well in their individual site situation taking into account climate as well as neighbourhood context.

The repeated use of a single design (unrelated to site conditions, neighbourhood context, orientation, group layout, etc.) is unacceptable.

Facing the street or park

In all projects, housing adjacent to the street or public realm must 'face' it, both functionally and visually. Facing the public realm encourages and allows 'neighbourhood watch'. It is normal for houses to face the street.



On a corner site, housing must present well to both street frontages.

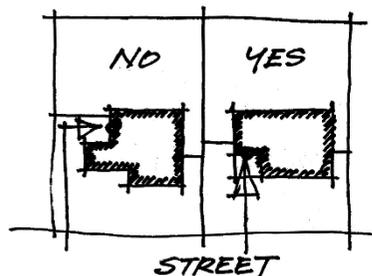
Back to back relationships, which do not 'expose' backyards, may improve security while improving privacy.

It is usually less attractive to present the side or back of a dwelling to the street. Only in extreme circumstances should housing present its side or back on the public realm, and then only as little as possible. These circumstances must be agreed with the State and the design of the dwelling must respond appropriately.

Legibility

The front doors of houses facing streets must be visible from the street or clearly signalled by the design of the dwelling. It should not be easy or likely that a visitor or resident will get confused or lost.

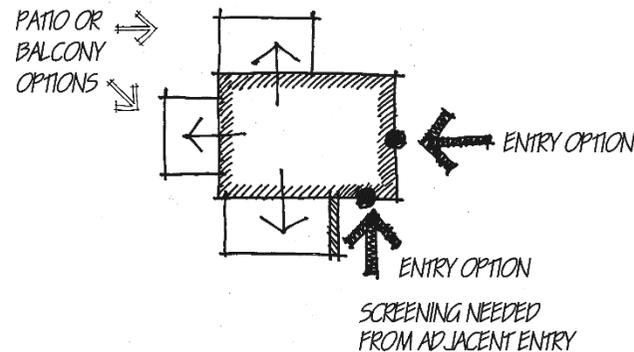
Legibility is an important contribution to more secure housing. As an element of universal design, the way into a group scheme must be obvious, sight lines must be clear along paths, and the front doors of other dwellings must be visible or clearly signalled from shared pathways by both the built form and its detailing. Legibility may improve community acceptance of denser group housing.



Access to the front door versus private space

Visitors must have direct access to the front door without moving through private outdoor space or the back yard first. The visual privacy of the private outdoor space and backyard must not be compromised.

It is important that private external space be as private as possible. This can also improve security.



In apartment or cluster developments, access by unwelcome outsiders through the site must be prevented or the path must be formalised into a public street relationship.

If access becomes formalised into a public street, then the housing must face and overlook it. The access has become a 'frontage' to which the design must respond.

Fitting into the Neighbourhood

Housing must 'fit in' to the neighbourhood and not unduly draw attention to itself.

The design must achieve this through form, scale, variety, attention to detail, appearance, setbacks and general relationship to the public realm.

This principle does not require stylistic imitation of adjoining houses, nor does it require an 'in your face' assertion of a different style, particularly if it is just for the sake of difference.

It does require that the project avoid doing things that stands it apart from everyone else in ways associated with lower quality outcomes.

Individuality, variety and scale

Housing must not be expressed externally in a standardised way. Artful and affordable variations in form, colour and detailing must be used to avoid a 'one design repeated many times' impression.

For example, dwellings which are much smaller than existing neighbours might be designed into groups that are neither too large nor too small. This should fit more comfortably in the neighbourhood context. Variations within a street or group development may aid in its legibility.



External variations in the appearance of houses may reduce the apparent scale of a large or dense project. This in turn may improve community acceptance of the project.

Car Parking and Street Presentation

The street design of housing must not be dominated by car parking or parking structures. Properly located car parking improves the street appearance of the housing and may better preserve the pattern and amenity of the neighbourhood streetscape.

The access to dwellings that are further into the site must not be hidden by parking structures.

Privacy

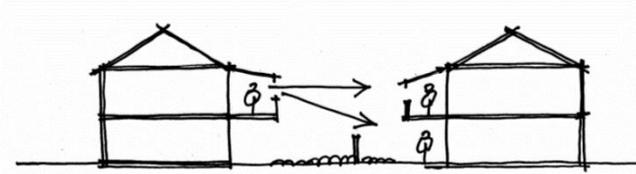
The location and design of dwellings must not unreasonably impair the privacy of neighbouring dwellings, either on the same site, or on adjacent sites.

Ground floor apartments can have private outdoor spaces near side or rear boundaries, the balconies or principal living spaces of upper level apartments must not be close to or designed to take their aspect from an adjoining property's private outdoor living areas.

The privacy of the external space of one dwelling must not be impaired by the location and design of other dwellings in the housing group.

Careful consideration must be given to the location, design and screening of:

- Upstairs balcony or certain windows in relation to ground level courtyards, and
- Upstairs balcony or certain windows in relation to other upstairs apartments or balconies.



When designing to prevent overlooking, it is not acceptable to enclose balconies or screen windows to such an extent that there is little aspect from the apartment's main living space. Windows should be screened only when the window unreasonably overlooks neighbours, or is overlooked by neighbours. (Neighbours may include other apartments in the complex, or adjoining neighbours).

Equally, residents using shared spaces within the development (such as paths or car parks) should not unreasonably diminish the level of privacy of ground floor dwellings.

Territoriality

The control of external spaces by immediately adjacent households (or the provision of shared space) must be unambiguously indicated by clear definitions of territory.

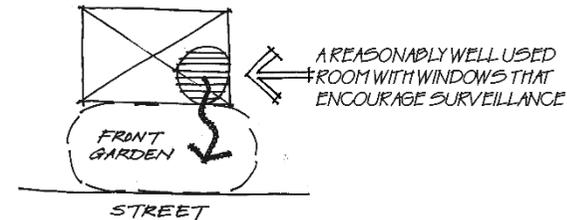
This might be achieved by plants and/or hard landscape such as walls, fences, kerbs, level changes, paths or mowing strips.

Reasons:

- Defined territories can avoid disputes over 'whose patch it is'.
- It should encourage commitment and responsibility for maintaining the patch.
- Clear definition is consistent with people's experience of traditional suburban living, which may be familiar and desirable.
- It assists home and neighbourhood security.

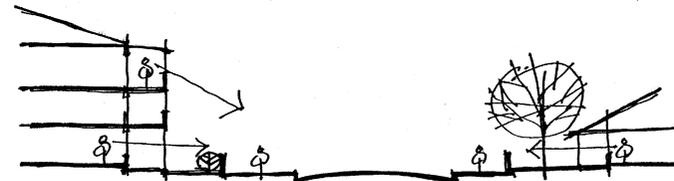
Crime Prevention through Environmental Design

Housing must be designed to facilitate casual surveillance of the front garden and the street (or the adjacent park).



Housing must not be hidden from the street or public realm behind high fences or car accommodation.

Plant species and locations must be thoughtfully chosen so that planting does not obstruct the view of the street or the internal pathways within a housing group.



Reasons:

- Encouraging casual surveillance of the street (or more formally, participating in 'Neighbourhood Watch') can be the basis of a more secure dwelling and contribute to a better community. This is one strategy of CPTED: Crime Prevention through Environmental Design.
- Good 'CPTED' design can help to build positive relationships between neighbours.
- It can allow housebound residents to participate more in the life of the community.

Equitable Design

The design of each dwelling in a group should help create the feeling that each household 'got a fair go' or is 'a little special'.

While different residents may have different views about what makes good housing, the design should seek to avoid anyone feeling that some units are significantly better than others.

Personalisation

Housing, especially in its detailing, should allow for the personal expression of tenants in ways that do not create long-term maintenance issues.

For example, designs should allow the screening of personal belongings on balconies, and internally should allow the flexible arrangement of furniture and the display of decorative items such as artwork.

Reasons:

- A household's personalisation of their dwelling reflects their individuality and may encourage a sense of commitment and responsibility, with benefits to the individual, the landlord and the community.
- The use of pot plants on balconies or landscaping in front courtyards or gardens usually improves the appearance and community acceptance of the housing.

Climatic Design

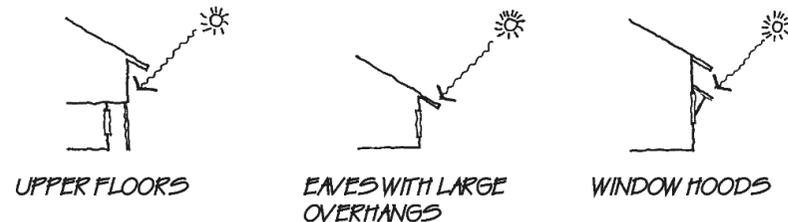
The detailed design of dwellings must respond to the microclimate of the site and its locality, acknowledging the different climatic regions of Queensland.

In ways that are consistent with other design principles, the climatic response must be reflected in elements such as:

- The plan, shape and orientation of the dwelling
- Location of particular rooms
- Materials used for construction
- Location and shape of openings
- Location of internal walls with respect to cross-ventilation
- Roof form
- Ceiling heights
- Landscaping of adjacent ground to provide shading
- Protection of openings against excessive solar access and rain penetration; and
- Insulation.

This principle does not require that all housing face north/south if this is at odds with other design principles. It does require that the design respond creatively and thoughtfully to the climatic context.

Only in rare cases may the housing rely significantly upon mechanically assisted climatic control, where specific reasons are identified in accordance with the Project Agreement or project initiation brief.



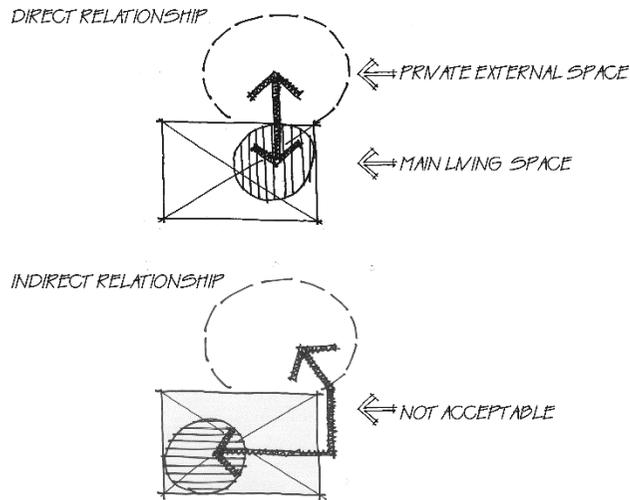
Reasons:

- Climatic design is integral to the basic liveability of the dwelling.
- Good design enhances the energy efficiency of the dwelling and hence affordability.
- Climatically well-designed housing contributes to the environmental sustainability of the overall community.

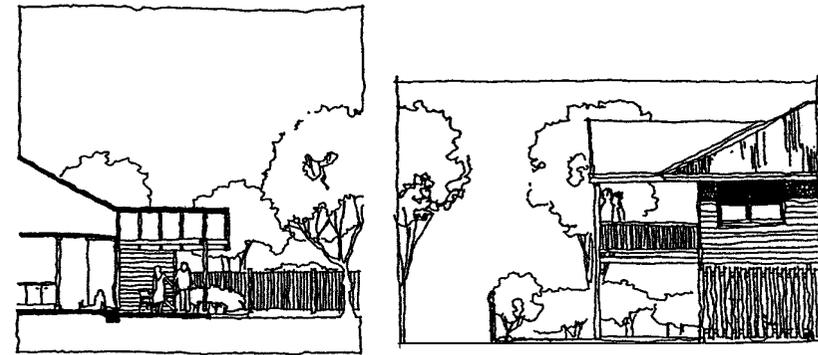
Indoor/Outdoor Connection

A direct connection to outdoor living is important for the Queensland climate.

There must be both a direct visual and a direct physical access relationship between the dwelling's living/dining area and the private outdoor living space. It is not acceptable for occupants and visitors to only access outdoor living space through service areas such as laundries or kitchens.



Outdoor living spaces must be roofed or fully covered by upper floors.



Planting and turf

Trees and plants:

- Contribute to the microclimate of the site and the locality
- Improve the appearance of front gardens
- Provide definition and amenity to private spaces
- Shade or soften group car parking areas
- Aid legibility within group schemes
- Promote community acceptance of new development
- Provide a habitat for wildlife

Wherever practical, efforts should be made to retain and protect healthy significant trees. Existing trees that cannot be properly protected from damage, or pose a risk to property or personal safety should be removed. Unless there are externally imposed requirements to retain a tree, the retention of trees should not be at the expense of apartment yield or the amenity of dwellings.

The use of trees, ground covers and other plants should be an integral and thoughtful part of the overall design.

Consider the mature height of planting and ensure that it:

- Is appropriate for the location and capable of surviving with minimal ongoing maintenance and no ongoing watering (e.g.

planting under buildings or in undercroft areas is not acceptable)

- Allows adequate light into dwellings
- Does not create maintenance issues for the building
- Is unlikely to cause health and safety issues

Unless otherwise specified, turf is acceptable to private yards, but is unacceptable in other areas. Exceptions may apply for specific projects (e.g. if onsite management is intended, or there are requirements due to overland flow or drainage).

Avoid the use of surface gravel in landscaping.
Pavers are not acceptable.

Innovation and Normality

The State seeks design excellence and the pursuit of better solutions and outcomes for its housing.

The solutions may arise through fundamental design advances, the introduction of new products or changing client briefs.

The State is open to innovation and change.

The State however, does not look for:

- Experimentation where there are no resources and processes for rectifying any problems that might arise
- The pursuit of difference only for the sake of being different, rather than better
- The abandonment of conventional, comfortable and acceptable housing techniques or solutions for no gain, or
- Inappropriate typecasting or attention seeking for social housing.

Building Design

Roofing

Roof shapes and construction must provide reliable protection from weather.

Box gutters are **not** acceptable.

Roofing materials (tiles or metal sheeting) to be light-coloured.

Fascias and rainwater goods generally must have a Colorbond finish or equivalent in terms of compliance and durability.

Provide passive vents to roofs.

Eaves and window hoods

Provide vents to eaves and/or soffits.

Equivalent eaves overhang minimum dimension – increase if required by the BCA (outside face of wall to outside of fascia):

Provide the minimum equivalent of a 600mm eaves overhang (not more than 400mm above the head height of windows and doors) to all dwellings and outdoor living spaces.

Provide the minimum equivalent sun and weather protection to all windows and doors of lower floors.

Equivalent eaves also means that fascia gutters must be at least 600mm away (measured as a horizontal projection) from the outside face of the wall.

Windows

Window frames must be powder coated or anodised aluminium. Sliding glass windows are preferred.

Internal window trims must have a timber finish. Plasterboard is not acceptable.

Provide security screens to all windows, unless precluded by the NCC

Floors

The structural floors of LHDG Gold Level and Platinum Level bathrooms to be set down 100mm to enable correct falls.

External Timber

No design and detailing with external timber requiring ongoing maintenance.

Balustrades, sun hoods and privacy screening

All screens and balustrades must be designed so that they do not promote or encourage climbing by children or intruders.

Balustrades (including lightweight balustrades) should provide screening for occupants' privacy and conceal belongings on patios, particularly upper floor apartments facing a street or public space.

Stairs

In two storey apartment projects, it may be cost-effective to provide individual stairs to the entry of each upper floor apartment, particularly if it allows reduction to Type C construction (refer to the NCC). Individual stairs may also allow better separation between apartments and apartment building, and improved privacy.

Stair mid-landings are preferred on apartments that are not lift-served.

Fire safety requirements

The possible impact of the project's proposed size, service delivery model and target client group on fire safety requirements must be considered.

Mechanical Cooling

The design of the dwelling must seek to deliver energy-efficiency and climatic appropriateness. Mechanical cooling is required in parts of Queensland, as described in the below table.

Mechanical cooling zones	
Climate zone (refer BCA Vol 2, Fig. 1.1.4. Climate Zones for Thermal Design)	Mechanical cooling Type
Zone 3	Evaporative or refrigerated*; and Ceiling fans (and increased ceiling heights)
Zone 1 Zone 2** (Bundaberg LGA and north)	Ceiling fans (and increased ceiling heights)

*Decision to install either evaporative or refrigerated cooling is to be approved by the State, in consultation with tenancy and property management and with consideration of location (including ongoing servicing, availability of parts etc.)

**Ceiling fans and increased ceiling heights may also be provided in Zone 2 south of Bundaberg LGA where necessary to meet the energy efficiency requirements of the BCA.

Evaporative or refrigerated cooling requirements:

- To be provided to all habitable areas.
- Cooling plants/condensers:
 - To be mounted on or near the ground (condensers may also be mounted on an upper floor balcony) or in another appropriate, non-obtrusive and safe location.
 - Must not encroach on the minimum floor area required for covered outdoor spaces.
- Ducting for single-storey and top floor dwellings is to be located within the roof space.

Ceiling fan requirements:

- One ceiling fan is to be provided to each habitable area.
- Minimum ceiling height in rooms with fans: 2700mm (2600mm for dwellings constructed of concrete masonry). These minimum heights include upper level units.

Lifts

Lifts must be provided on projects of three or more storeys, unless otherwise directed on particular projects.

A clear path of travel from the lift to all apartments served by the lift must be provided (refer AS1428.1 – 2009).

Controls in the lift car must be suitably located and labelled for people with mobility and sight impairment.

Locate the lift doors in areas of high natural surveillance.

Access to lifts should be limited to residents and legitimate visitors to the maximum extent possible. Methods of achieving this could include

- A secure lift lobby with an intercom and remote release for the lobby door to each apartment
- Fob, key or card access to the lift itself
- Secured access to the site

The minimum internal dimensions of a lift car are 1400mm x 1600mm (nominal).

Communal areas

(Applicable for apartment projects only)

The aesthetic quality of the main access leading to an apartment (including foyer spaces, stairs, lift areas etc.) is considered

important. These areas must be finished to a high quality consistent with public entrances to apartment buildings.

Provide clear, direct and safe access through the site to stairs and lift areas.

Weather protection

Water must be prevented from entering lift areas, entrances to apartments, and minimised on covered walkways during heavy or driving rain, by providing features such as:

- Appropriate falls away from these areas
- Appropriate overhangs
- Installation of floor wastes across lift areas.

Site Design

Note: All 1-bedroom apartment provisions also apply to 1-bedroom (high yield) apartments unless otherwise specified.

Dwellings should be sited to deliver a cost-effective, balanced response to site falls, orientation, design requirements and site features; and to avoid any negative impact on neighbours. Designs must include low maintenance landscaping and fencing.

Drainage

Drainage and stormwater is to comply with all relevant codes and local government requirements. The design priority of site drainage must be disposal to a council designated stormwater system.

Access: Vehicles and Pedestrians

Houses, duplexes and dual occupancy:

General Level requirements:

Provide a differentiated driveway with appropriate grade transitions and one visitor parking space on the driveway.

1:15 maximum design gradient is required along the driveway linking the carport to the letterbox and footpath or street. Steeper driveways are acceptable in response to site constraints subject to approval of the State (not to be unreasonably withheld).

Pathways are to be provided linking carport, pedestrian entry and rubbish bin areas. A pathway is also to be provided to the clothesline.

Handrails are typically not required along paths.

LHDG Gold Level requirements: As per LHDG, plus General Level requirements.

Platinum Level requirements: As per LHDG, plus General Level Requirements

Apartments:

Some common areas for Class 2 buildings are covered by the Disability (Access to Premises – Buildings) Standards 2010. The requirements detailed in the Premises Standards and the National Construction Code (NCC), Building Code of Australia (BCA) Volume 1 and 2 take precedence over the LHDG for this building class.

Refer AS 2890.1:2004 *Parking facilities - Off-street car parking* Figure 2.8.

Spaces allocated for motor vehicle movement must be clearly defined.

Differentiate pedestrian and vehicle pathways. Coloured concrete is acceptable, but avoid painted, sprayed and stamped concrete finishes. Communal pathways must be obstacle-free and direct, and must include way-finding signage and lighting. Minimum width of paths is 1200mm. Occasional encroachments are acceptable (e.g. downpipes, bollards etc.)

Provide a handrail to steps along pathways (refer AS 1428.1-2009, Clause 11). Handrails at pathways are typically not desirable unless required by the NCC or otherwise specified in this standard.

Footpath layout should discourage use of the site as a pedestrian thoroughfare for non-residents, unless the thoroughfare is properly designed as public space with approval of the State. It is desirable that footpaths avoid private spaces.

Safe, direct and low gradient paths must be provided in accordance with LHDG Gold Level for Gold Level apartments and the LHDG Platinum Level for Platinum Level apartments linking ground level apartments, bottom of stairs and lifts (or lift foyer) with car parking, pedestrian entry to the site, letterboxes, clothes lines and rubbish bin areas.

Note that ground level dwellings requiring up to three steps to the entry, should still be designed internally to LHDG Gold Level.

Car parking

Houses, duplexes and dual occupancy:

General Level Requirements:

The design of carports or garages must complement dwellings and comply with reasonable covenants. The following minimum requirements apply for all houses, duplexes and dual occupancy dwellings:

- Single attached carport 6000mm L x 3200mm W clear space, in keeping with the design of the house.
- Garage door (roller door type)
- Screening to sides exposed to view from the street or accessible from the front yard. The sides of carports behind 1800mm high yard fencing may remain unscreened.

LHDG Gold Level Requirements: as per LHDG (except carport length, which must be 6000mm) plus General Level requirements

LHDG Platinum Level Requirements: as per LHDG (except carport length, which must be 6000mm), plus General Level requirements.

Apartments:

The Livable Housing Design Guidelines for car parking do not apply for social housing apartments

Car parking may be designated to particular apartments, provided that every dwelling in the complex is assigned a space, and that there is adequate on-site parking space for visitors.

Unless otherwise approved all car parking spaces required by Tables 1 and 2 must be covered. Design considerations include:

- Covered car parking should not be positioned between the front of the building and the street alignment.
- Visually break up large areas of pavement.
- Stairways and front entries must not utilise the driveways as circulation space.
- Visually screen vehicular lights to neighbouring properties and units within the site.
- Cars must be able to enter and exit the site driving forwards. It may be assumed that there will be a vacant car parking space to use for turning.

Car parking sizes and dimensions are to meet relevant Australian Standards for car parking and accessible car parking. Sizes and dimensions set out below are consistent with the requirements of AS 2890.1:2004, relating to 90° angle parking.

- Designers must adopt the B99 design template for "swept paths" (refer AS 2890.1:2004, Appendix B, Figure B3 and B7) for parking schemes at other than 90°
- Circulation aisle must be a minimum 6200mm wide (refer AS 2890.1:2004, Figure 2.2).
- Crossover must be a minimum 5500mm wide x 6000mm long, measured from the kerb (refer AS 2890.1:2004, Clause 3.2.2).
- Blind aisle extension must be a minimum 1000mm long (refer AS 2890.1:2004, Figure 2.3). If no blind aisle extension, provide 7200mm circulation aisle.

- Car spaces (other than accessible car parking spaces) clear area must be 5400mm x 2400mm (refer AS 2890.1:2004, Figure 2.2) with a ceiling height of 2100mm Provide additional width to car space to keep cars clear of columns, walls and obstructions (refer AS 2890.1:2004, Fig. 5.2).
- Falls along the length of the car parking bay must not exceed 1 in 20; cross falls must not exceed 1 in 16 (refer AS 2890.1-2004, Clause 2.4.6.1).

Accessible car parking: Accessible car parking must be easily located as close as possible to Platinum Level dwellings.

Provide covered car spaces suitable for people with mobility impairment pro rata with the ratio of LHDG Platinum Level apartments to other apartments, and in accordance with AS/NZS 2890.6-2009. (AS 2890.6 requires 2200mm clearance along the vehicular path to the parking space and 2500mm clearance over the bay for operation of a vehicle wheelchair hoist)

Car parking target rates of provision (apartments):

The Performance Outcomes, or overall objectives, of local authority planning schemes typically require that a development “*provides sufficient off-street parking to accommodate for the parking demand*”. It is important for the State to address these Performance Outcomes, with consideration of project yield and cost.

One covered car parking space per dwelling unit is preferred.

The department may consider proposals that reduce *coverage* to car parking spaces (without necessarily reducing the number of car parking spaces) in order to better comply with Councils’ GFA and/or site cover requirements. Proposals that reduce coverage to car parking spaces require approval from the State.

Reduced car parking rates:

Tables 1, 2 and 3 provide the minimum number of unassigned, covered car parking spaces that the department will generally consider. These minimum rates are based on measured rates of car parking ownership for social housing tenants, and take into account location and proximity to public transport. They acknowledge that on-site car parking may be required by support workers and health professionals visiting high and very high needs tenants.

The State will consider car parking rates less than those described in Tables 1, 2 and 3 only where it is demonstrated there is sustained reduced off-street car parking demand as a result of the specific requirements of the target clients and/or service, and the qualities of the project and its location.

TABLE 1: Reduced car parking rates Initial Allocation	
Applies To	Rate (number of covered spaces required)
First 3 Units	1 space per unit

TABLE 2: Reduced car parking rates Rates Applicable to Remaining Units After Initial Allocation (to be rounded up if required)			
Number of bedrooms	Site Location Category (refer table 3) Rate (number of covered spaces required)		
	A	B	C
Studio	1 per 4 units	1 per 2 units	NA
1 Bedroom	1 per 2 units	2 per 3 units	1 per each unit
2 Bedrooms	2 per 3 units	1 per each unit	1 per each unit

Notes: Car parking rates may be varied with approval from the State, to meet identified site conditions, project objectives and service delivery requirements.

TABLE 3: Site location categories	
Category	Site location
A	<p>Major centre</p> <p>Brisbane within 800m walking distance of the pedestrian entry to a train station; or within 600m walking distance of an express bus stop; or within 400m walking distance of an appropriate local bus stop*</p> <p>Excludes neighbourhoods zoned low density in the planning scheme (refer category C)</p>
B	<p>Major centre not meeting requirements of category A for proximity to public transport; or</p> <p>Large regional centres such as Gold Coast, Sunshine Coast, Cairns, Caboolture, Gladstone, Ipswich, Logan, Mackay, Pine Rivers, Redcliffe, Redlands, Rockhampton, Toowoomba, Townsville, Yeppoon etc. and</p> <p>Large towns such as Bundaberg, Maryborough, Hervey Bay within 400 metres of a local bus stop*</p> <p>Excludes neighbourhoods zoned low density in the planning scheme (refer category C)</p>
C	<p>Not located in a major centre, large regional centre or large town meeting category 'A' or 'B' criteria e.g. Beaudesert, Charleville, Dalby, Longreach, Mount Isa, Roma, St George etc.</p> <p>Includes sites zoned low density residential in the planning scheme (including Brisbane Suburbs Improvement Strategy sites or similar zoned low density in the planning scheme)</p>

* Note: an appropriate local bus service constitutes a minimum of 6 days, 7am to 7pm, at least hourly

Letterbox

General Level Requirements:

Provide letterboxes at the main pedestrian entry to the site, on the boundary along a footpath or beside the driveway.

The access point of the letterbox (for mail retrieval) should be within the range of 700 mm – 1200 mm above the finished surface level of a level hardstand (maximum 1:40 cross-fall) on the retrieval-side of the letterboxes.

Letterbox should have capacity to have padlock attached (by tenant)

A body corporate letterbox is not required.

LHDG Gold Level requirements: As per General Level requirements.

LHDG Platinum Level requirements: As per General Level requirements, plus: Provide an accessible path to the hard stand at the retrieval side of the letterboxes. The hard stand to be minimum 1540mm wide x 1540mm long and extend minimum 400mm past the end letterboxes in the bank.

External Storage

Apartments:

Each ground level apartment with a private garden or yard is to be provided with a small secure garden locker of an appropriate size for storing tools to maintain the garden/yard (no greater than 2100mm wide) The garden locker must be located in the apartment's private outdoor space and accessed from the outside of the dwelling.

A pathway to the garden locker is not required if it is located in the yard.

Houses, duplexes and dual occupancy:

Provide a shed/garden store 1800mm high with minimum floor area of 3.5sq.m.

Position the shed/store away from the dwelling in the private yard not visible from the street. A path is not required to the shed.

Clothes lines

General Level requirements

Clothes lines must not be clearly visible from the street.

Provide:

- 7.5 lineal metres for studio apartments
- 15 lineal metres for 1-bedroom and 2-bedroom apartments
- 20 lineal metres for 2-bedroom duplex or dual occupancy
- 40 lineal metres for 4-bedroom and 5-bedroom houses

Clothes lines on upper floor apartment balconies must be fold-down, and must not encroach on the outdoor living functional area of the covered outdoor living space.

Clotheslines not positioned on a balcony or patio must be linked to the house by a path.

Clotheslines must not be positioned within easy reach of passers-by within and external to the site.

Clotheslines should be 1800mm above floor/ground level.

Rotary clotheslines should not be provided where there is a functional alternative.

LHDG Gold Level requirements: As per LHDG dwelling access requirements, plus General Level requirements.

LHDG Platinum Level requirements: As per General Level requirements plus:

- LHDG Platinum Level requirements for access.
- Provide level hardstand (maximum 1:40 cross-fall) in front of the clothesline and extending under. Hardstand to extend 1540mm in front of the clothesline for the full length of the clothesline.

Private yards

Private yards, where provided, must be fenced and accessed from the covered outdoor living area. They should be private from the street, but need not necessarily be located at the rear of the building.

Access via a gate from the front yard (for houses) or communal area (for apartments) is required where possible. Only yards with gate access can have turf.

Private yards must be safe for children's play.

House front yards must promote surveillance of the street.

Maximum gradient in garden areas: 1:4

Maximum gradient to turfed areas: 1:5

Boundary fencing

Apartment Complexes:

Boundary fencing assists in creating privacy for neighbours and tenants. Requirements for apartment sites include:

- Where possible, front fencing should allow surveillance of the street and provide a ‘softening’ of the streetscape through planting etc. Typical exceptions may include requirements for:
 - Privacy for ground floor apartments
 - Acoustic separation from road noise
 - Concealment of services e.g. electrical meters
- Where patios face the street, incorporate visual screening into the section of fence in front of the patio.
- If there is parkland to the side or rear of the site, surveillance of those spaces may be facilitated by providing sections of non-solid fencing along those boundaries.

Houses, duplexes and dual occupancy

Requirements for boundary fencing in houses, duplexes and dual occupancy include:

- Front fencing is not required, provided that side return fencing (to the houses) is provided and landscaping defines the separate front yard spaces for each dwelling.
- If front fencing is provided, it must facilitate casual surveillance of the street.

Retaining walls and garden edging

Retaining walls and garden edging must be constructed of a suitably long-lasting material, requiring no ongoing treatment or maintenance to maintain its integrity and appearance. Timber is not permitted.

Retaining walls must be of a design, height and location that is safe for tenants, neighbours and the public. Retaining walls must

not unduly restrict the light and/or views from the property or neighbours’ properties.

Garden beds in private yards, created by edging or retaining walls, must facilitate easy maintenance of the garden by tenants with impaired mobility

Preferred maximum height for retaining walls: 1400mm

Rubbish bin storage

Houses:

General Level requirements:

Make provision for at least two council bins per dwelling.

Bin storage areas must include a level hardstand surface with screening. Position hard stand away from windows and doors and ensure that bins are not visible from the street.

Ensure easy access from the hardstand to the street, preferably along the driveway.

LHDG Gold Level requirements: As per General Level requirements. Nil additional requirements.

LHDG Platinum Level requirements: As per General Level requirements, plus: Provide accessible path to the bins, with circulation space at the level hardstand (maximum 1:40 cross fall) in front of the bins minimum 1540mm wide x 1540mm long. Provide an accessible path to the street where practical.

Apartment Complexes:

General Level requirements:

Rubbish storage points are to be clearly defined and constructed in accordance with local council or waste collection services requirements. Minimum requirements include a screened, hardstand area for storing and accessing bins. It is preferable for bins to be grouped where possible.

Storage points must be easily accessible from all dwellings and the street; however must not be visible from the street. Position storage areas away from private outdoor spaces, windows to units, pedestrian entrances to the site and dwellings. Bin storage points should be covered if they are directly overlooked by neighbours or apartments.

If down bays are required by Council, the State prefers alternative solutions where possible.

LHDG Gold Level requirements: As per General Level requirements.

LHDG Platinum Level requirements: (i.e. bins that are intended to be accessed by residents of Platinum Level apartments): As per General Level requirements, plus: 1:15 Maximum gradient along path to footpath. Provide accessible path to the bins, with circulation space at the level hardstand (maximum 1:40 cross fall) in front of all bins minimum 1540mm wide x 1540mm long. Provide an accessible path to the street where practical.

Rates of provision are detailed in the table below.

Rate of provision for waste (Public Housing)		
Apartment type	Refuse	Recycling
Studio	70 litres per unit per week	35 litres per unit per week
1-bedroom	80 litres per unit per week	40 litres per unit per week
2-bedroom	120 litres per unit per week	60 litres per unit per week

If the number of wheelie bins required by calculation is a fractional number, round-up to the next whole number.

Councils' operational requirements for the collection of refuse (such as the maximum number of wheelie bins that will be collected from the kerb) must be addressed and if necessary recommended options referred for consideration at the design stage.

In considering options for bulk bins, multiple weekly collections are generally preferred to multiple or oversized bins.

For apartments, if Council allows a choice of bin type, bulk bins are preferred, subject to availability of a collection service, and availability of bins that have easily operable lids in the 900mm to 1100mm height zone.

Bicycle Parking

(Applicable for apartment projects only)

Provide bicycle parking frames at the rate of 1 space per 2 bedrooms of above ground level apartments.

Bicycle parking should be in accordance with AS 2890.3-1993 - Bicycle Parking Facilities. Class 3 (Appendix B) describes the appropriate facility for locking the frame and wheels. Other requirements for bicycle parking include:

- Locate undercover on a hardstand, easily accessed from a path along the driveway. May be located under eaves or incorporated into carports.

- Provide appropriate screening, ensuring that bicycles are not visible from the street, but allow surveillance by residents
- May be located centrally, or distributed across common areas. Do not install in locations associated with particular apartments
- Signage is not required.

Services

(Applicable for apartment projects only)

Provide individual (per dwelling) metering for electricity, gas and water (including for sites that contain centrally heated hot water).

Locate meter boxes in easily accessible outdoor areas, not visible from the street.

Electricity supply is to conform to the electricity distributor's requirements.

Mechanical storm water pumps are not preferred.

Services in visually prominent locations must be concealed.

Service ducts are required to be indicated on schematic design drawings. Methods of minimising the visual, maintenance and nuisance impact of services may include:

- Ensuring that the service layout provides for economical construction and efficient installation.
- Carefully considering the location of underground services
- Screening gas and water meters located near paths and common areas, ensuring that they are both screened from the street elevation and do not face the driveway.
- Locating and/or screening to avoid damage by vehicles, tenants or the public
- Locating hose-cocks in convenient locations over appropriate hard and/or free-draining surface.
- Using cavities, ducts, and/or ceiling spaces to conceal water supply, soil and waste stacks.

In acknowledgement of negative perceptions by some tenants, do not locate main switchboards (MSBs) on the outside face of bedrooms or living room walls.

Provide hasp and staple to MSBs, enabling locks to be fitted.

Location of gas meters, water meters, service lines, copper gas lines should be appropriate, inconspicuous and located to avoid damage by vehicles, tenants, etc. Consider shrouds for protection if needed.

Hot water systems

Hot water systems may be located within the covered outdoor living spaces of individual dwellings, and must be appropriately screened from view. Alternatively, hot water systems may be grouped and screened on the ground floor, in a location that is accessible for maintenance.

Hot water systems must be screened if they are in view of communal areas

External taps

The surface under hose cocks to be free-draining away from buildings and paths.

Provide hose cocks to private yards or gardens dedicated to apartments, to the front and back yards of houses and centrally located to communal landscaped areas for apartments.

Ground floor adaptable apartments and houses must have a hose cock as close as practical to the patio, mounted to a wall or post.

Internal space

A furniture layout plan, showing the required furniture to fit in all rooms, must be provided in order to demonstrate adequate and functional living, dining, kitchen and sleeping spaces. *Refer to Appendix 1: Furniture Dimensions.*

Note: All 1-bedroom apartment provisions also apply to 1-bedroom (high yield) apartments unless otherwise specified.

Corridors, thresholds and doorways

General Level and LHDG Gold Level requirements

General Level requirements:

With the exception of doors that are required to have automatic closers, or doors to pantries and linen cupboards, door swings must not impede on the doorway and circulation clearances or door swings of other doors.

LHDG Gold Level requirements: As per LHDG, plus General Level requirements

LHDG Platinum Level requirements

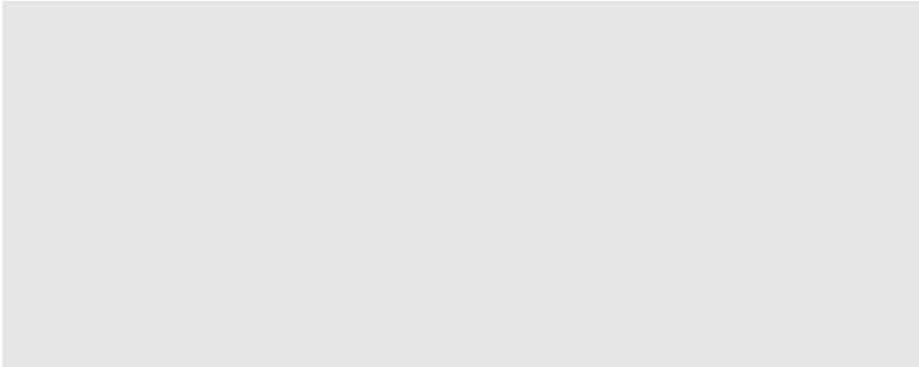
As per LHDG, plus General Level requirements, plus/except:

Internal sliding doors to be surface mounted (not cavity style)

Provide circulation space at all doors in accordance with AS1428.1-2009. In addition, note that:

- Where a surface-mounted sliding door intrudes into the required circulation space of another surface-mounted sliding door, the width of the hallway must be increased to meet the requirements of AS1428.1-2009, Clause 13.3.3.3.
- For 4 and 5 bedroom dwellings, Platinum Level access requirements are not required to the second bathroom, separate toilet, and from the corridor into the two-way bathroom/ensuite.
- Provide a minimum of 1000mm path past furniture through the space (excluding dining chairs). Furniture must not be placed within door circulation spaces.
- Refer to LHDG Element 13 for door furniture.

General Level and LHDG Gold Level requirements



LHDG Platinum Level requirements

Sliding glass doors must be 2100mm wide.

Window requirements:

- Double hung windows are not acceptable
- Generally, window sills are to be no higher than 900mm above floor level (typical exceptions include bathroom and kitchen windows and the second window in the bedroom).

Entry

General and LHDG Gold Level requirements

General Level requirements:

Provide a covered area immediately outside the front door to each dwelling sufficient to provide protection from weather.

Entry should not be via any private outdoor living space. If the entry runs adjacent to a private outdoor living area, a suitable screening must be provided.

Provide a security swing door unless required by the NCC to have a fire door with self-closing or automatically closing mechanism.

Window adjacent to the front door must be fixed glass.

For duplexes, dual occupancies and apartments:

- Avoid shared or immediately adjacent entries (except if required for dual key apartments or similar project specific designs).
- Adjacent covered entry and covered outdoor living spaces should be visually screened.

LHDG Gold Level requirements: As per LHDG plus General Level requirements

LHDG Platinum Level requirements

As per LHDG, plus General Level requirements, plus:

- Ensure that the security screen is hinged on the same jamb as the front door.
- Only a latch-side approach or front approach is acceptable for entry doors (refer AS 1428.1-2009, Fig 31 (f), or (h)).
- Make provision for possible future retrofit of automatic door closers to external hinged doors (i.e. sufficient space, power supply and switch point).

Living and Dining

General Level and LHDG Gold Level requirements

Studio apartments (combined living, dining and sleeping)

General Level requirements:

Studio apartments must be capable of functionally accommodating the following furniture:

- Queen bed (provide access to the foot and at least one side of the bed)
- Single lounge chair
- Coffee table
- Two-person dining suite
- Television (may be located in the kitchen)

Provide direct physical and visual access to covered outdoor living space, and visual remoteness from the toilet.

LHDG Gold Level requirements: General Level requirements, plus: Provide minimum 1000mm path of travel on at least one side of the bed.

1 to 5 bedroom dwellings

General Level requirements

The living and dining areas are combined in 1 and 2 bedroom dwellings, and may be combined in four bedroom houses. In five bedroom houses, living and dining areas must be separated to support separate activities.

LHDG Platinum Level requirements

Studio apartments (combined living, dining and sleeping)

As per LHDG, plus General Level requirements, plus:

- Where doors open from the living and dining space, the furniture placement must allow a doorway width and circulation space suitable for an opening dimension of 900mm (refer AS 1428.1-2009, Clause 13).
- A path past the furniture and through the space must be a minimum width of 1000mm.
- Provide access to both sides and the foot of a queen size bed.

1 to 5 bedroom dwellings

As per LHDG, plus General Level requirements plus:

- A path past the furniture and through the space must be a minimum width of 1000mm.
- Where doors open from the living and dining space, furniture placement must allow a doorway width and circulation space

General Level and LHDG Gold Level requirements

Provide direct physical and visual access to covered outdoor living, and visual remoteness from the toilet.

For combined kitchen/dining areas (apartments only) the dining table may contribute to bench space.

Living and dining areas must be capable of functionally accommodating the following furniture:

- coffee table
- entertainment unit for television, stereo etc. and
- for **1 bedroom apartments:**
 - four-setting dining suite
 - Seating:
 - 1 x 2 seat sofa and 1 x single armchair; or
 - 1 x 3 seat sofa.
- for **2 bedroom apartments:**
 - storage/bookcase
 - four-setting dining suite
 - Seating:
 - 1 x 2 seat sofa and 2 x single armchairs; or
 - 2 x 2 seat sofas; or
 - 1 x 3 seat sofa and 1 x single armchair.
- for **4 bedroom houses:**
 - Eight-setting dining suite
 - sideboard
 - Seating:
 - 2 x 2 seat sofas and 2 x single armchairs; or
 - 3 x 2 seat sofas; or
 - 2 x 3 seat sofas
- for **5 bedroom houses:**
 - Ten-setting dining suite
 - Sideboard

LHDG Platinum Level requirements

suitable for an opening dimension of 900mm (refer AS 1428.1-2009, Clause 13).

Separate dining

If the dining area is separate (4-5 bedroom dwellings) the 1000mm path past the furniture and through the space must be measured to the dining chairs (sitting 600mm out from the table)

Alternative seating

Alternative seating for Platinum Level dwellings includes:

- for **1 bedroom apartments:**
 - 1 x 2 seat sofa; or
 - 2 x single armchairs
- For **2 bedroom apartments:**
 - 1 x 2 seat sofa and 1 x single armchair; or
 - 1 x 3 seat sofa

General Level and LHDG Gold Level requirements

- Seating:
 - 3 x 2 seat sofas and 2 x single armchairs; or
 - 3 x 3 seat sofas; or
 - 4 x 2 seat sofas.

LHDG Gold Level requirements: as per General Level requirements

Multi-purpose space (1 bedroom apartments – excluding high yield apartments)

General Level requirements:

An additional multi-purpose space (minimum dimensions 1900mm x 2100mm) must be provided in 1-bedroom apartments.

The space must be flexible to accommodate possible uses such as storage of mobility equipment, using a desktop computer or sleepover for a carer or visitor.

It must be a separate defined space, not inside the bedroom.

The multi-purpose space must be capable of functionally accommodating the following furniture:

- 1 x 1800mm x 900mm desk
- 1 x desk chair

Separation from the living area, kitchen or dining may be achieved through passive measures such as by creating a recess in the larger room and/or the use of nib walls, half-height walls and ceiling bulkheads.

LHDG Platinum Level requirements

Multi-purpose space (1 bedroom apartments – excluding high yield apartments)

As per General Level requirements.

General Level and LHDG Gold Level requirements

The space must be treated as “habitable” for the purpose of addressing NCC provisions for lighting and ventilation.

LHDG Gold Level requirements: as per General Level requirements.

LHDG Platinum Level requirements

Covered outdoor living

General Level and LHDG Gold Level requirements

General Level requirements:

Every dwelling must have a covered private outdoor space suitable for dining, which can be accessed directly off the living/dining area.

For houses and ground floor apartments, the covered outdoor living area should be associated with the yard space. Minimum sizes of covered outdoor living areas are:

- Studio - **8m²** (minimum clear dimension 2.4m)
- 1 bed - **9m²** (minimum clear dimension 2.4m)
- 2 bed - **10m²** (minimum clear dimension 2.4m)
- 4 and 5 bed – **13.5m²** (minimum clear dimension 3m)

Minimum clear dimensions are measured in each direction, and must be clear of all items including the hot water system, fully extended clothesline, balustrades and mechanical cooling plants/condensers (if applicable) in each direction.

The roofs of covered outdoor living spaces must be insulated, and it is preferred that they are under the main roof space.

For apartments:

- Balconies/patios must be appropriately screened to provide privacy, whilst allowing casual surveillance of the street, park, etc.
- Balustrades to upper floor apartment balconies must assist in concealing tenants' belongings.
- Hot water systems and clotheslines located on the patio/balcony must be appropriately screened from view.

LHDG Gold Level requirements: As per LHDG (access and circulation) plus General Level requirements.

LHDG Platinum Level requirements

As per LHDG (access and circulation) plus General Level requirements.

Kitchens

General Level and LHDG Gold Level requirements

General Level requirements:

Kitchens should not form part of the main thoroughfare through the dwelling (except in studio apartments). In four and five bedroom dwellings, the kitchen should be a separate defined space, but not necessarily a separate room.

Provide adequate free bench space for food preparation and set down beside appliances (including the oven and refrigerator). Bench space should be provided on each side of the cook top.

Good ventilation of the kitchen is required. Natural ventilation is preferred to mechanical ventilation and range hoods are not preferred if there is a viable alternative.

Cooking:

- Hotplates are not to be installed under windows or within 300mm of a window.
- Hotplates are not to be installed in benches that are not against a wall unless a suitable upstand is provided to the back of the bench.
- Hotplates are not to be installed at the end of a cupboard, adjacent to doors, windows, areas of heavy traffic, internal corners, or against side walls of a pantry. At least 300mm of bench space on each side of a cooktop must be provided.
- If an upright range is installed, a 100mm gap must be provided between the joinery and each side of the range, with the bench overhanging to provide a 10mm gap each side of the range, to facilitate cleaning. Anti-tilt brackets are required.
- A microwave shelf should be provided. If necessary, it may be provided as a recess in the pantry space, creating two

LHDG Platinum Level requirements

As per LHDG, plus General Level and Gold Level requirements, plus/except :

- Direct the sink waste(s) to a trap on the rear wall
- Maximum depth of sink bowl: 150mm (refer AS 4299-1995, Clause 4.5.6).
- Cabinets:
 - Benches to be 850mm above finished floor level
 - Cupboard and pantry doors must have 170 degree opening hinges (except for doors that are restricted by walls, other cabinets etc.)
 - The cupboard doors, plinth and shelf under the sink must be removable to a minimum length of 820mm (refer to AS 4299-1995, Figure 4.8(b)). The under-sink space must provide the required knee space (refer to AS 4299-1995, Clause 4.5.6(d)).
 - The cupboard doors, plinth and shelf under or partly under the hotplates must be removable to a minimum length of 820mm (refer to AS 4299-1995, Figure 4.8(b)). This section of removable cupboard is to form the work surface described in AS 4299-1995, Clause 4.5.5. Align the centreline of the hotplate controls with the centreline of the removable section. Hotplate controls may be located centre-front of the cooktop.
- Dimensions and clearances:

smaller pantry cupboards, one above and one below the microwave shelf.

Cabinets:

- Bench height to be 900mm
- Overhead cupboards must be installed where possible, but not above hotplates.
- Minimum of one bank of drawers is required, but not under hotplates.
- Bench tops to be laminated with a post formed outer edge and no sharp corners. Doors and drawers to be laminate finish with PVC edging, and D-handles.

Sink and taps: Sinks are to be stainless steel. A single lever mixer tap is required.

Kitchen splashback tiles are required and should continue into window reveals if applicable.

Minimum sizes and dimensions for some kitchen components are shown in the below table:

	Studios	1 & 2 bedroom	4 & 5 bedroom
Stainless steel sink	Single bowl with 1 drainer	Single bowl with 1drainer. Min. 900mm L	Double or 1 ¾ bowl with drainer.
Pantry	Min. 600mm W		1000 -1200mm wide
Cooking	Min.2 cooking elements and oven(convection microwave acceptable)	Four cooking elements plus convection oven	
Fridge Space	850mmW x 700mmD x 1900mmH		900mmW x 700mmD x 1900mmH

- Allow a minimum clearance of 300mm between the hotplates and other appliances (i.e. wall oven, refrigerator) or other obstruction such as a wall.
- The top of the cabinet around the wall mounted convection oven must be 1150mm to 1200mm above floor level. If a combined convection/microwave oven is used (studio apartments only), the top of the cabinet must be 1150mm to 1200mm above floor level.
- Provide for a microwave oven between 750mm and 1200mm above floor level (generally above the wall oven) (refer AS 4299-1995, Clause 4.5.9). The top of the cabinet around the convection oven may serve as the microwave oven shelf.
- Locate the wall oven a minimum of 600 mm from the internal corner of the front edge of the bench.
- At least one 800mm work surface must be clear bench space.
- Provide a work surface (800mm minimum length) beside the hotplates, wall oven and refrigerator. Two appliances may share a work surface. A sink drainer can form part of the work surface beside an appliance; hotplates can form part of the work surface beside the refrigerator (refer to AS 4299-1995, Clause 4.5.5).
- The work surface for the refrigerator must be measured in a straight line along the front edge of the refrigerator (i.e. must not be in a 'dead' corner)
- Provide a continuous bench top between the wall oven and refrigerator (or adjacent to refrigerator for studio apartments). The sink and hotplates are to be considered part of the continuous bench top.

Space between benches (or to dining table in combined kitchen/dining) and to face of refrigerator	1200mm	1350mm
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LHDG Gold Level requirements: as per LHDG, plus General Level requirements, plus:

- Wall oven required
- Sink and cook top should be located on the same, continuous bench

Bathroom, ensuite, toilet

General Level and LHDG Gold Level requirements

General Level requirements:

- Provide good lighting and ventilation. Natural light and ventilation must be provided where possible, supplemented by mechanical ventilation in order to provide appropriate airflow. Mechanical ventilation must provide a minimum of 15 air changes per hour, and the fan and light must be switched separately.
- In dwellings with two or more bedrooms, main bathrooms must not be accessed through bedrooms.
- In one bedroom dwellings, access to the main bathroom through the bedroom should be by exception only and requires approval from the State.
- For one bedroom (high yield) and studio apartments, it is preferred that the main bathroom is accessed off the living space, not through the bedroom or sleeping space.
- Ensure visual privacy between the living areas (including kitchen) and the bathroom and toilet.
- The clear floor area, incorporating the toilet, must be a minimum of 900mm wide and 1500mm long.
- Shower may have a hob, tiled floor recess or shower base.
- Shower screen must be provided and should have a minimum 800mm pivot type glass door
- Provide storage in the bathroom and ensuite (wall shelves or under vanity)
- Provide drop in basin (or basin integrated with polymer top)

LHDG Platinum Level requirements

Platinum Level features are NOT required in the second bathroom (and or second toilet) of 4 bedroom and 5 bedroom Platinum Level houses.

As per LHDG, plus:

For the ensuite or two-way bathroom in a 4 or 5 bedroom house, clearances must be provided for leaf swing doors—or face-of-wall sliding doors in accordance with AS1428.1-2009, Clause 13 (for a clear opening width of 900mm) from bedroom 1, and is desirable from the corridor. Surface mounted sliding door access from the bedroom is preferred.

Vanity

Provide a vanity with a bank of drawers and a semi-recessed basin; with adequate circulation space (refer to AS 1428.1-2009, Figure 46). Position the basin to the end of the vanity unit that is away from the corner. Provide clearance under vanity (refer to AS4299-1995, Figure 4.4: washbasin clearances)

Shower

The shower recess must be open on two sides and the floor tiles in the shower area must be a different colour to the general floor tile (at least 30% luminance contrast)

The shower configuration is to be in accordance with AS 1428.1-2009, Figure 47(a) or, if the WC is located adjacent to the open side

- Provide accessories (e.g. towel rails, toilet roll holders, soap holders etc. as applicable).

Provision requirements for bathrooms of different dwelling types are summarised in the table on the following page:

	Apartments. 4-5 bedroom houses (ensuite, or 2 way bathroom accessible from bed 1).	2 bedroom duplexes. Dual Occupancies.	4-5 bedroom houses (2nd bathroom)
Toilet	Yes (located in the bathroom)	Yes (located in bathroom)	Yes (separate adjacent toilet room. min 720mm door)
Shower	Yes	Yes (may be over bath)	Yes (may be over bath)
Bath tub	No	Yes	Yes
Vanity basin/mirror	Yes	Yes	Yes
Towel rail	Yes	Yes	Yes

LHDG Gold Level requirements: As per LHDG, plus General Level requirements, plus/except:

- Provide a 1000mm x 1000mm shower recess, reinforced to the full width of both shower walls (not 900mm wide as described in LHDG) to enable *future* installation of shower equipment.
- Bathroom floors to drain in accordance with the preferred method described by the LHDG Informative Diagram for bathrooms (floor gradients are to be between 1:60 and 1:80) or the State’s Platinum

of the shower, Figure 47(b). Note that actual disability equipment (e.g. shower seats, grab rails) is not required.

Provide circulation space as per LHDG Figure 5(b).

Position the shower away from doors that lead to other rooms (to minimise splashing into other rooms).

Reinforce shower walls as per LHDG, except:

- Extend reinforcing to full shower width (not 900mm): and
- On wall without shower combination, extend reinforcement to within 200mm of the finished floor line (for possible future shower seat)

The walls of the shower area to be tiled to 1900mm minimum.

Bathroom and shower floor drainage

Bathroom floors may drain in accordance with the preferred method described by the LHDG Informative Diagram for bathrooms (floor gradients are to be between 1:60 and 1:80); or

Position the shower waste in the centre of the shower area and fall the entire bathroom floor to the shower waste. The fall at the shower shall be between 1 in 50 and 1 in 60. The fall in the bathroom shall be between 1 in 70 and 1 in 80.

Toilet

Locate toilet adjacent to a side wall that is a minimum of 1200mm long. Reinforce the side wall in accordance with Livable Housing Design Guidelines. Reinforce the rear wall in accordance with AS 4299-1995, Figure 4.5.

Set-out the WC in accordance with LHDG Figure 4. In addition, the minimum dimension from centreline of the toilet to edge of shower area must be 500mm

Standard, requiring the entire floor to fall to the shower (if this option is used, water must not be obstructed by the shower screen)

- Provide semi-recessed basin

Circulation space is to be in accordance with AS 1428.1-2009, Figure 43). (It is accepted that a future shower seat may encroach on circulation space when folded down.)

Laundry

General Level and LHDG Gold Level requirements

General Level requirements

The laundry tub must be compact style with short edge and door facing the front.

Make provision for a clothes dryer (may be wall mounted).

Where possible, provide natural ventilation to the laundry space.

For houses, provide direct access from laundry to clothesline.

Laundry space requirements by dwelling type are described below:

	Studio & 1 bed	2 Bed	4 & 5 Bed
Laundry tub (min capacity)	35 litres	45 litres	70 litres
Washing machine space	700mm W x 650mm D		900mm W x 650mm D
Location	Bathroom, or recess accessed from corridor, kitchen or foyer* May also be located in covered outdoor living space (behind lockable doors)	Dedicated laundry room OR combine with secured carport (note: clear circulation applies to carport locations)	

*If a laundry recess is visible from the entry or living area, doors must be provided. Doors should enable full use of the laundry space when open.

LHDG Gold Level requirements: As per LHDG plus General Level requirements

LHDG Platinum Level requirements

As per LHDG, plus General Level requirements, plus:

Provide space for washing machine and dryer beside the tub (1250mm long x 650mm deep).

Provide 150mm swivel spout and mixer on the side wall at the laundry tub (refer AS 4299-1995, clause 4.8c)

Washing machine taps to be 1300mm above floor level.

Provide circulation space at the appliances and tub. This can be achieved in two ways:

1. Provide a minimum clear area of 1550mm in front of the tub and appliances (refer to AS 4299-1995, Clause 4.8). This will apply if the laundry is provided in a separate room, within the bathroom, or as a recess off a larger space (eg accessed from a foyer); or
2. Provide clearances consistent with the circulation clearances at doorways as set out in Figures 31 and 32 in AS 1428.1-2009. Figure 32 (b) is likely to be particularly instructive in calculating clearances. This applies if the laundry is provided as a recess in a Hallway.

Note that if the front of the appliances and/or tub is recessed more than 300mm behind the line of the hallway wall, the circulation clearances must increase by the same dimension (refer AS 1428.1-2009, Clause 13.3.3.3).

Bedroom 1

General Level and LHDG Gold Level requirements

General Level requirements

Bedroom 1 must accommodate one queen sized bed and two bedside tables.

Provide the following:

- A second window for cross ventilation where possible. Windows above the intended bed-head space to have min 1500mm sill height.
- 1800mm minimum long built in wardrobe with sliding doors, top shelf, hanging rail and 3 x 600mm wide shelves (not in the corner).
- Minimum clearance of 900mm around all sides of bed

Minimum room width is 3000mm. The minimum floor area (excluding wardrobe) is

- 11sqm (1 – 2 bed units/dwellings)
- 12sqm (4 - 5 bed dwellings)

LHDG Gold Level requirements: As per LHDG (LHD Element 11), plus General Level requirements. Also:

- General Level room sizes above override LHDG
- Minimum 900mm clearance on remaining sides of bed.

LHDG Platinum Level requirements

In accordance with LHDG (LHD Element 11 - Platinum Level), plus:

Provide a surface mounted sliding door hung inside the room wherever possible.

Built in robes should be positioned away from the head of the bed.

If the linen store is provided in bedroom 1 (apartments, duplexes and dual occupancies only), it may be located on the side wall adjacent to the bed head.

Bedrooms 2, 3, 4 & 5

General Level and LHDG Gold Level requirements

General Level requirements

Provide a second window for cross ventilation if possible. Windows above intended bed-head space to have 1500mm minimum sill height.

Provide an 1800mm long built in wardrobe with sliding doors, top shelf, hanging rail and 3 x 600mm wide shelves (not in the corner).

Furniture and dimensional requirements are outlined below:

	Bed 2	Bed 3	Bed 4	Bed 5
Apartments, duplexes, dual occupancies				
Furniture	2 x single beds 1 x desk	n/a		
Minimum width	2700mm			
Minimum area (excl. wardrobe)	10sq.m			
4 bedroom house				
Furniture	2 x single beds 1 x desk	1 x bunk bed (2 stacked singles) 1 x desk	n/a	
Minimum width	2700mm	n/a		
Minimum area (excl. wardrobe)	10sq.m	8sq.m		
5 bedroom house				
Furniture	2 x single beds 1 x desk		1 x bunk (2 stacked singles) 1 x desk	
Minimum width	2700mm		n/a	
Minimum area (excl. wardrobe)	10sq.m		8sq.m	

LHDG Gold Level requirements: as per General Level.

LHDG Platinum Level requirements

As per general level with the following additional requirements:

Apartments, duplexes and dual occupancies:

Bedroom 2 must accommodate one single bed positioned to provide access to the end and at least one side of the bed.

4-bedroom and 5-bedroom houses:

Bedroom 2 must accommodate a queen sized bed, and two bedside tables. Access required to at least 2 sides of the bed.

The minimum room area (excluding wardrobe) is 11m².

Nil additional requirements for Bedrooms 3, 4 & 5

Storage

Provide a 500mm wide broom cupboard. (This may be a dedicated cupboard or may be incorporated as additional dedicated space in a laundry recess).

Provide 600mm deep linen store inside the dwelling preferably not accessed from the kitchen or bathroom:

- 600mm wide in studio and 1-bedroom apartments
- 900mm wide in 2-bedroom dwellings
- 1200mm wide in 4-bedroom and 5-bedroom houses not accessed from the kitchen, bathroom or bedroom

Linen store may be located in bedroom 1 in apartments, duplexes and dual occupancies only. Wardrobe and linen store may be combined in a studio apartment

Electrical Requirements

General Level requirements

Lighting and switches, whilst being robust, must be 'residential' in appearance, avoiding the look of a public or institutional building.

Light and fan switches to be located between 900mm and 1100mm above the finished floor level, and generally located inside the room adjacent to the door or entry to the room. External lights must be switched from inside the dwelling.

Provide telephone points in the living room (or multi-purpose room in 1-bedroom apartments) within 500mm of a socket outlet (SO) and in bedroom 1 at the double SO adjacent to the bed head.

Kitchen GPOs must be on a separate circuit. Residual current devices (RCDs), or safety switches, are required for all circuits within individual dwellings. For apartments, RCDs must be able to be reset from the sub board within individual apartments.

Where applicable, provision should be provided for connection of electric hot water systems to an economy tariff.

LHDG Gold Level requirements: As per LHDG, plus General Level requirements

LHDG Platinum Level requirements: As per LHDG (Platinum Level) plus General Level requirements, plus: sub-board to be located 1200mm above finished floor level.

Lighting

General, LHDG Gold and LHDG Platinum Level requirements:

Provide energy efficient lighting to all internal areas (including the entry/foyer, corridors and multi-purpose area in 1-bedroom

apartments), carports/garages, covered outdoor living areas and outside external doors.

Spaces that may be combined in some dwellings such as living, dining, kitchen and multi-purpose area must have separately switched individual lighting that reflects likely furniture arrangements.

Provide an additional separately switched light where the lit floor area exceeds 12m².

Lighting to provide uniform luminance and be located so that light emitted is not affected by the moving blades of a ceiling fan.

Provide an additional fluorescent light on the wall above the mirror in bathrooms and task lighting above the kitchen sink.

Communal lighting

Durable, energy efficient communal lighting is required on multi-unit sites to car parking areas, pathways, building entrances, communal spaces (including outdoor communal landscaped spaces), shared stairways and access balconies.

Power to the lighting must be supplied and separately metered at the main switchboard and have a connection to the electrical distributor metering equipment.

Communal lighting must be designed to avoid light spillage into dwellings, including dwellings on neighbouring sites, and glare from direct line of sight to fixtures.

Photoelectric sensors are required in order to turn lights on at sunset. High level (bright) lighting (e.g. near car ports) should include a timer to turn lights off at midnight. Low level lighting that is contained so as not to 'spill' into dwellings (including neighbours'

dwellings), or is located close the ground (such as bollard lighting along pathways) should be capable of being left on until dawn.

Lights to individual landings outside entry doors to apartments must be individually switched with time delay function. These lights are not considered communal lighting. If communal lighting is required near apartments for safety, then this should be provided.

For testing purposes, all communal lighting and power is to be controlled by a single switch that can override the time switch and photoelectric switch.

Each lighting and power circuit must be protected by a separate, combined residual current device (RCD).

Non glare light fittings or appropriate glare shields must be used if residents or neighbouring properties may be affected by glare.

Communal lighting placement:

Requirements for placement of communal lighting include:

- Lights must reasonably illuminate paths of travel and landscaping areas immediately adjacent to paths.
- Lights must facilitate reasonably safe cleaning, maintenance and globe replacement
- Lights must be fitted over landings, never over stairs
- Ceiling lights must be fitted not more than 2700mm above the level of the landing
- Wall lights to be 2100mm (maximum) above the landing level.

Power and antenna outlets

General Level Requirements:

Room	Power/antenna requirements
Living/Dining (1 bed dwellings) Living, dining & sleeping (studios)	<ul style="list-style-type: none"> - 1 x Antenna outlet - 1 x Double SO near antenna outlet - 2 x additional double SOs (in separate locations) - 1 x double SO adjacent to likely bed head position
Dining (excl. studio & 1 bed dwellings)	<ul style="list-style-type: none"> - 1 x double SO
Corridor	<ul style="list-style-type: none"> - 1 x double SO
Carport/garage (houses)	<ul style="list-style-type: none"> - 1 x weatherproof double SO (to rear of carport/garage, in houses) - 1 x additional weatherproof SO (Platinum Level only) (locate near garage/carport door entry. 1800mm above floor level)
Multi-purpose space (1 bed dwellings)	<ul style="list-style-type: none"> - 1 x double SO
Kitchen:	<ul style="list-style-type: none"> - 1 x isolating switch for cooktops/stoves. (max 100mm above bench top, not behind hotplates, located at least 600mm from corners, preferably to right-hand side of hotplates) - 1 x isolating switch for wall oven or under bench oven (if applicable) - 1 x single SO for refrigerator on back wall, 1800mm above floor, remotely switched (switch, with neon or LED indicator lamp, to be located preferably on return wall of fridge recess or on adjacent wall, maximum 1100mm off floor. refer to AS 4299-1995, Clause 4.5.11) If switch is located above a bench,

Room	Power/antenna requirements
	locate within 300 mm of the front edge of the bench). – 1 x single SO for microwave – 2 x additional double SOs (minimum) (at least one within 300mm of front edge of bench top. Must be at least 600mm from internal corners)
Bathroom	– 1 x double SO (Locate on side wall at vanity bench, as close as possible to 600mm from corner and 100mm above bench height. position to reduce risk of appliance cords draping across the basin – at 150mm from edge and side of basin)
Laundry	– 1 x double SO (locate on wall behind appliances 1500mm above floor level)
Bedroom 1	– 2 x double SOs (max. 500mm above floor level, and min 600mm from corner walls, adjacent to likely bed head location) – 1 x double SO (wall opposite bed location). – Approximately 1200mm above floor level. – 1 x antenna outlet (wall opposite bed location). – Approximately 1200mm above floor level.
Bedrooms 2,3,4,5	– 2 x double SOs (adjacent to bedhead locations) – 1 x double SO (at desk location)
Outdoor Living	– 1 x waterproof, double GPO
Outside	– 1 x GPO to main switchboard (apartments) – 1 x GPO to splitter box (apartments) to accommodate booster if needed.

National Broadband Network (NBN)

For detailed NBN requirements refer to the DHPW Product Standards document.

In summary, NBN equipment should be provided and installed in accordance with the NBN Co. document **Residential Preparation and Installation Guide: SDUs and MDUs**. Note that *Open Wall Locations* (as described in Section 4.4.2) are not acceptable.

For dwellings with more than one bedroom, NBN equipment must be located in a common space. Location should be easily accessible and unobtrusive.

LHDG Gold Level requirements: As per General Level requirements

LHDG Platinum Level requirements: As per General Level requirements, plus: Compliance with requirements for electrical wiring in relation to hand held shower installation (refer laundry AS3000:2007) Detailed requirements.

Detailed Requirements

Windows and doors

General Level requirements:

Security swing doors must not impede the path of travel.

Curtains to be provided, except in wet areas.

LHDG Gold Level requirements: As per General Level requirements

LHDG Platinum Level requirements: As per General Level requirements, plus:

Maximum 10mm change in floor levels (maximum 20mm at sliding glass doors) throughout dwelling at doorways.

Sliding glass doors:

- Recess the bottom track of sliding glass doors to suit a maximum gradient of 1:8.
- Recessed door frames to have a low profile threshold track.

Windows:

- Double hung windows are not acceptable.
 - At least one window in all habitable rooms must be operable from a height of 900mm – 1100mm (may require a window winder)
- Floor coverings

Floor finishes

For detailed floor covering requirements refer to the DHPW Product Standards document. In summary, floor covering requirements include:

- Bedrooms: Sheet vinyl or carpet, depending on project and location.

- Wet areas: Tiles preferred.
- Living, dining, kitchen and corridor: Sheet vinyl or tiles (vinyl only for Platinum Level). If providing vinyl, a row of tiles is required at external door thresholds (including sliding doors).
- Laundry or laundry recess: Sheet vinyl or tiles.
- Covered outdoor living areas: Slip resistant finish. Pavers not acceptable in any outdoor areas, including paths.

Bathroom

LHDG Platinum Level additional requirements:

The National Construction Code (Volume 3) requires hot water temperature control in accordance with AS3500.4 on fixtures and appliances used for personal hygiene. Thermostatic mixing valves should not be used as the method for temperature control unless recommended by an occupational therapist for a specified dwelling.

The towel rail must be suitable for use as a grab rail.

Do not provide grab rails at the toilet or shower except in response to identified particular need.

Install semi recessed toilet roll holder as per AS 1428.1- 2009. Dispenser shall not encroach upon the clearance space required for grab rails.

Shower:

The underside of the shower curtain rail must be located 1800mm above the finished floor level. Shower curtains should not touch the floor. Positioning of shower curtains must not impeded on circulation space.

The soap holder must be recessed (refer to AS 4299-1995, Clause 4.4.4(f), position as per AS 1428.1-2009, Figure 48).

Place the lever mixer tap toward the open side of the shower but within zone of reach as specified in AS 1428.1 - 2009.

Shower head - to have a flexible hose of min length of 1500mm. Ensure that the shower head does not reach to the rim of the toilet at the full extension of the hose. An adjustable shower head holder shall:

- Be installed on the shower head holder support rail
- Allow the shower head to be positioned at various angles and heights (between 1000mm to 1800mm above the floor)

Basin (fitted into vanity):

The height at the front lip of the basin must be 840mm – 860mm above the finished floor level, notwithstanding the requirements of AS 4299-1995, Figure 4.4.

Washbasin clearances must be as per AS 4299-1995, Figure 4.4.

The waste must exit in the wall behind the basin

Vanity:

Provide a 300mm deep vanity bench top.

The vanity bench top must be 820mm – 840mm above the finished floor level to achieve the required basin height.

The vanity drawers must be 300mm clear of the floor.

Edges to be rounded and corners truncated.

One 100mm high row of tiles must be used as the splashback to the vanity.

Provide a mirror behind the basin from the top of the splashback to 2000mm high and a minimum of 750mm wide (900mm – 1200mm

wide preferred). Mirror may be installed off centre with the vanity basin if required due to window location.

Bathtub (no shower over)

Note, bathtubs are not generally required in apartments.

The lever mixer tap is to be installed in the zone identified as 'Alternative' in AS 1428.2-1992, Figure 17.

Provide reinforced wall areas (refer to AS 4299-1995, Figure 4.7 for extent and Clause 4.4.4(h), Note 1 for method).

Tile the walls to a minimum of 450mm above the rim of bath.

Provide a recessed soap holder.

Toilet

The height of the toilet and cistern is to be in accordance with AS 1428.1-2009, Figure 38.

Flushing controls shall be proud of the surface and shall activate the flush before the button becomes level with the surrounding surface.

Kitchen

LHDG Platinum Level additional requirements

Provide a single lever mixer tap and spout to the sink.

The plinth must be 200mm high.

The kickboard must be 200mm back from the vertical line of the edge of the bench-top.

Benches must be a minimum of 600mm wide with rounded edges and truncated corners.

Pantry shelves (five minimum) must be height-adjustable and 450mm – 600mm deep and full-width (not a cut-out shape). Pantry is to have no plinth.

Lazy Susan storage units may be installed under the internal corners of kitchen bench ($\frac{3}{4}$ size, 360° turn).

Insulate exposed hot metal surfaces under the sink (refer to AS 4299-1995, Clause 4.5.6 (d)).

Colour contrast

General Level requirements:

Where possible, provide contrasting colours (minimum 30% luminance contrast preferred) between the following adjacent surfaces:

- Wall and floor
- Door leaf and adjacent wall

Contrasting colours (minimum 30% luminance contrast) are required between the following adjacent surfaces:

- Bench top and splashbacks
- Bench top and floor
- Floor of the shower recess and the rest of the bathroom floor

LHDG Gold Level requirements: As per General Level requirements

LHDG Platinum Level requirements: As per General Level requirements

Appendix 1: Furniture Dimensions

Room	Furniture piece	Dimensions
Bedroom	Single bed	1870mm long x 920mm wide
	Double bed	1870mm long x 1370mm wide
	Queen bed	2030mm long x 1530mm wide
	Bedside table	600mm wide x 400mm deep
Living	Single armchair	900mm long x 900mm wide
	2 seat sofa	1500mm wide x 900mm deep
	3 seat sofa	2100mm wide x 900mm deep
	Coffee table	900mm long x 600mm deep
	Entertainment unit (1-2 bed dwellings)	900mm wide x 400mm deep
	Entertainment unit (4-5 bed dwellings)	1200mm wide x 400mm deep
	Book case / storage	900mm wide x 400mm deep
Dining	Dining table – Studio dwelling (2-setting)	900mm long x 900mm wide
	Dining table – 1 - 2 bedroom dwelling (4-setting)	1200mm long x 900mm wide
	Dining table – 4 bedroom dwelling (8-setting)	1800mm long x 900mm wide
	Dining table – 5 bedroom dwelling (10-setting)	2100mm long x 900mm wide
	Sideboard / buffet	1200mm wide x 400mm deep

Appendix 2: Version Control

Notable updates since release of V4.2 (December 2014):

TITLE AND CONTENTS

- Changed title of standard
- Table of contents: created subtitles for Design Principles section.

ADDITIONAL REFERENCE DOCUMENTATION

- Noted that the design standards may not apply for some supported accommodation projects, such as domestic violence shelters.

INTRODUCTION

- Noted that the standards do not apply to remote Indigenous housing

DESIGN PRINCIPLES

- **Basic Approach.** Clarification that apartments may not require a literal interpretation of the approach diagram.
- **Privacy:** Consolidated 2 sections into one, and improved clarity regarding screening: windows are to be screened only when the window unreasonably overlooks neighbours, or is overlooked by neighbours.
- **Personalisation:** Removed reference to pot plants, including other examples.
- **Planting and turf** Additional information: Planting under buildings or in undercroft areas not acceptable, turf not acceptable except in private yards. More direction regarding retaining/removing trees. Avoid the use of gravel in landscaping. Noted that pavers are not acceptable.

BUILDING DESIGN

- **Eaves and window hoods:** Deleted the requirement for eaves overhangs of 750mm or 900mm minimum in certain climate zones, replacing with requirement for 600mm eaves-equivalent throughout Queensland (with improved clarity regarding alternative solutions)
- **Windows:** Internal window trims must have a timber finish. Plasterboard is not acceptable.

- **Stairs (P14)** Stair mid landings are *preferred* (previously *required*).
- **Fire safety requirements:** New section. The possible impact of the project's proposed size, service delivery model and target client group on fire safety requirements must be considered.
- **Mechanical cooling:**
 - Clarified requirements regarding fans and ceiling heights.
 - Made allowance for condensers to be mounted in locations other than ground and specified that cooling plants/condensers must not encroach on floor area of outdoor living spaces.
 - Noted that the decision about whether to install evaporative or refrigerated cooling needs to be approved by the State and must consider availability of parts, servicing etc.
- **Lifts:**
 - Clarified lift access to be limited to residents and legitimate visitors.
 - Previous version stated preference for secure lift lobby. Have now noted other ways that secure access could also be achieved, such as swipe access to the lift itself, or secured access to the site.
- **Communal Areas:** New subsection and content:
 - The aesthetic quality of main access to an apartment (including foyer spaces, stairs, lift areas etc.) is important. These areas must be finished to a high quality.
 - Provide clear and safe access through the site to stair and lift areas.
- **Weather protection:** New subheading and content :
 - Prevent water entering lift areas and entrances to apartments
 - Minimise water entering covered walkways.

SITE DESIGN

- **Access: vehicles and pedestrians:**
 - Clarified application of the access requirements of the LHDG to certain common areas of apartment complexes
 - Coloured concrete is acceptable, but avoid painted, sprayed and stamped concrete finishes.
 - Clarification that ground level dwellings requiring up to three steps to the entry, should still be designed to Gold Level. Also clarification that slight encroachments on the 1200mm wide paths are acceptable (e.g. for downpipes, bollards).

- **Car parking:**
 - Removed requirement for 'roll up garage door', stating just garage door'
 - Clarity regarding requirements for covered car parking and additional explanation regarding AS 2890.6.
 - Requirement that stairways and front door must not utilise the driveway as circulation space.
 - Clarification that the minimum crossover dimension is measured from the kerb
 - Added detail that it may be assumed that there will be a vacant car parking space for turning.
 - Rates of provision: Reorganised content for clarity. Clarification of instances when reduced coverage may be considered. Also, instruction to 'round up' to nearest car park in calculations.
- **Letterboxes:** Should be lockable (with tenant-supplied padlock). Also, clarification that body corporate letterbox is not required.
- **Clotheslines:** Clarifications: Hanging lines to be 1800mm above floor/ground. Also, noted that rotary clotheslines are not preferred.
- **Boundary fencing:** Where patios face the street, provide visual screening to sections of fence facing the patio.
- **Private yards:** Maximum gradients: Garden areas: 1:4, turfed areas: 1:5
- **Retaining walls:** added content: Maximum height 1400mm.
- **Rubbish bin storage:**
 - Clarification that Platinum Level requirements for bins relate to bin areas intended for access by residents of Platinum Level apartments.
 - If wash down bays are required by Council, the State prefers alternative solutions where possible.
 - Bin storage points should be covered if they are directly overlooked by neighbours or apartments.
 - Stated preference for bulk bins, subject to collection services and availability of suitable bins
- **Services:** Additional information:
 - Locate meter boxes in easily accessible outdoor areas, not visible from the street.
 - Services in visually prominent locations to be concealed. Service ducts to be indicated on schematic design drawings

- Do not locate main switchboards (MSBs) on walls directly outside bedrooms or living areas.
- Provide hasp and staple to MSBs, enabling locks to be fitted.
- Mechanical storm water pumps are not preferred.
- More detail provided regarding screening requirements.

INTERNAL SPACE

- **Corridors, thresholds and doorways:**
 - Internal sliding doors to be surface mounted (not cavity style)
 - Additional information (General Level): With the exception of doors that are required to have automatic closers, or doors to pantries and linen cupboards, door swings must not impede on the clearances of other doors.
 - Platinum Level Requirements: Sliding Door minimum widths removed, as minimum opening widths are covered in LHDG
 - Added width requirement for sliding glass doors (2100mm) for ease of operation.
- **Entry:** Make provision for possible future retrofit of automatic door closers to external hinged doors. Also, stated that **security doors** must be provided unless a fire door with self-closing or automatically closing mechanism is required by the NCC (previously just stated 'unless precluded by the NCC)
- **Living and dining:**
 - Removed inconsistency with LHDG re clear door clearances relating to furniture placement (changed clear opening to 900mm from 850mm)
 - Included furniture requirements for multi-purpose space in one bedroom dwellings.
- **Covered outdoor living:**
 - Clarification that clear dimension of 2.4 is in both directions and must be measured clear of balustrades.
 - Added minimum size outdoor living for 4-5 bedroom houses (13.5m²)
 - Added requirement that roofs of outdoor living space must be insulated and preferably should be under the main roof space.

- **Kitchens:**
 - Extra detail: Hotplates not to be installed against ends of cupboards, adjacent to doors, areas of heavy traffic etc. 300mm of bench space required on each side of cooktop.
 - Extra detail: If upright ranges selected, provide a 100mm gap must be provided between the joinery and each side of upright range, with bench overhanging to provide 10mm gap each side. Anti-tilt brackets required.
 - Extra detail: Tiles are required and should continue into window reveals if applicable.
 - Extra detail: Hotplate controls may be located centre-front in Platinum dwellings.
 - Noted that 170 degree opening hinges are not required to doors that open against walls etc.
 - Noted that PVC edging is required to cupboard doors.
- **Bathroom, ensuite, toilet:**
 - General Level Requirements: Mechanical ventilation is required (rather than 'if needed'). Fan and light need to be separately switched. Also outlined requirement for 15 air changes per hour.
 - Semi-recessed basin required for Gold Level. Drop in basin required for General Level.
 - Removed reference to door widths, instead using clearances (aligned with LHDG)
 - Clarification: Shower screen must be provided (General, Gold Level)
 - Clarification: Disability items (e.g. shower seats, grab rails) not required.
 - Clarification: Gold Level floors: May drain to Platinum standard, requiring entire floor to fall to the shower (If this option is used, water must not be obstructed by the shower screen)
 - Detailed requirements regarding main bathrooms not being accessed off bedrooms for different dwelling types. Previous version stated that it was acceptable for bathrooms in studios or 1 bedroom (high yield) apartments to be accessed from the bedroom.
 - Clarified that it is accepted that a future shower seat may encroach on circulation space when folded down.

- **Laundry:** New requirement: if possible, provide natural ventilation. Also, clarification that for houses, provide direct access from laundry to clothesline.
- **Storage:** added that the broom cupboard may be incorporated into the laundry recess space. Also, clarified that linen store may be located in Bedroom 1 in apartments and duplexes only.

ELECTRICAL REQUIREMENTS

- Added requirement for provision for hot water systems to be connected to an economy tariff (where applicable)
- Added requirement for kitchen GPOs to be on a separate Added requirement for kitchen GPOs to be on a separate circuit. Also, RCDs required for all circuits within individual dwellings. For apartments, RCDs must be able to be reset from the sub board within individual apartments.
- **Communal Lighting.** Removed requirement for all communal lighting to have time switch and PE switch, and added additional information:
 - High level lighting: PE switches, plus timer switches
 - Low level lighting and communal lighting to foyers etc.: PE sensors (dusk until dawn)
 - Landings: individual switches, time delay function.
- **Power and Antenna outlets:**
 - Added requirement: single GPO for microwave (aligning with product standard)
 - Added requirement for isolating switch for wall oven or under bench oven.
 - Bedroom 1: Specified height of TV point and TV GPO (1200mm above floor level)
 - Outdoor living: New requirement: waterproof, double GPO
 - 1 x GPO to main switchboard (apartments)
 - 1 x GPO to splitter box
- **National Broadband Network:** New content

DETAILED REQUIREMENTS

- **Windows and Doors:** Clarification that curtains not to be provided in wet areas (consistent with product standards). Also, removed requirement for all door frames to be steel.

- **Floor Finishes:** Clarifications only:
 - Platinum Level apartments should always have vinyl (not tiles) to living, dining, kitchen and corridor.
 - If providing vinyl, a row of tiles is required at external door thresholds (including sliding doors)
 - Covered outdoor areas must have a slip resistant finish. Pavers not acceptable.
- **Bathroom vanity:** Mirror may be installed off centre with the vanity basin if required due to window location.