

# Design Brief

Version 7



# PREFACE

Residential Independence Pty Ltd (**RIPL**) delivers housing to meet the needs of clients of the Transport Accident Commission (**TAC**) who have been seriously injured as a result of a transport accident and are living with neurotrauma.

RIPL delivers very highly accessible housing that is above the Platinum level of the Livable Housing Design Guidelines (discussed later in this document). This standard is required to empower our residents to achieve their goal of living independently within their own home.

This Design Brief has been created to document our minimum design requirements, while providing scope for innovation and flexibility.

In the development of the Design Brief, extensive consultation has occurred with numerous groups including clients, their families, support providers, occupational therapists and access consultants.

This version of the Design Brief includes all learnings to date based on our six completed developments. This includes the learnings from the independent post-occupational evaluations of these developments. It also includes changes to bring the document in line with the fourth edition of the Livable Housing Design Guidelines, released in mid-2017.

It is acknowledged that the design of accessible housing and assistive technology is rapidly evolving. We therefore encourage your feedback on the Design Brief, so that we may continue to further refine it to the benefit of the TAC's clients and the housing industry more broadly.

Thank you on behalf of the TAC and the RIPL team and we trust that you find this Design Brief informative and useful.



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# BACKGROUND

The lack of affordable and accessible housing was identified as a key barrier for some of the TAC's most seriously injured clients regaining their independence. This issue is not limited to TAC clients, but also to the wider disability sector. Demand for affordable and accessible housing far outstrips supply, and funding to date has not been sufficient to address the needs of the wider disability community.

In 2009, the TAC Board considered options to address this shortage of accessible housing options for its clients, and embarked on a strategy to invest in disability infrastructure.

In 2010, the TAC Board endorsed the formation of the Residential Independence Trust (RIT) and its trustee company Residential Independence Pty Ltd (RIPL) to develop housing for its clients.

RIPL's current tenant base consists of TAC clients who have been seriously injured as a result of a transport accident. These individuals may have an acquired brain injury, a spinal cord injury or a combination of both. The intention of the RIPL model is to (1) enable tenants to achieve greater independence leading to significant improvements in tenant outcomes, tenant experience and quality of life measures; and (2) assist with the financial viability of the TAC scheme through savings and avoidance of rises in future attendant care costs.

One of the ancillary aims of the RIPL program is to build awareness of the RIPL model throughout the housing and social insurance sectors and also build an evidence base that can be used by other organisations to deliver similar initiatives. In this way, the RIPL model may drive positive change throughout the wider housing and social insurance sectors.

## RIPL's Design Brief

Currently there is no single design standard or combination of standards to sufficiently meet the housing needs of our tenants. RIPL therefore developed this Design Brief to document our minimum design requirements.

The Design Brief provides flexibility for different types of housing, such as independent living units and apartments. It aims to deliver housing that:

- maximises tenant independence and autonomy;
- reflects tenants wishes, needs and desires for their homes and the ways they wish to live;

- facilitates the effective and efficient provision of onsite shared support; and
- recognises the importance and value of efficient and necessary supports for our tenants while balancing this with the 'dignity of risk' that is fundamental to enabling people to live full and independent lives.

This Design Brief has been developed to be very prescriptive in parts, while other parts are aimed at performance type requirements to allow flexibility for different housing models, designs and configurations.

## Development & Review

In the development of this Design Brief, the TAC met with clients, their families, support providers, occupational therapists, hospitals and other TAC stakeholders. During this process a number of important themes emerged which were necessary to identify, understand and address in the design of successful housing. It was recognised that the needs of prospective RIPL tenants varied considerably due to:

- The nature of their injuries, which can vary considerably due to the diverse nature of acquired brain and spinal cord injury.
- The effect of their injuries on their lives and their ability to undertake activities of daily living.
  - Some have greater support requirements, whilst others live independent lives, with very little support.
- The length of time post-accident.
  - Some have only recently been injured and are just starting out on the path of their life after their accident with all the turbulence, upheaval and

adjustment that this involves; for others their accident was many years ago.

However, there were also commonalities:

- All aim to achieve as much independence as possible.
- Most are young (18 – 45 years).
- Most live on their own, or aim to do so in the future.

Overwhelmingly, the stated desire of RIPL tenants is to maximise control over their own lives, including:

- where, how and who they live with;
- control over the support they receive;
- to be able to achieve as much independence in their lives as possible and to have available the option of doing as much for themselves as they are able; and
- to live somewhere that feels like and is their home, not an institution.

## Standards for Accessible Residential Housing

The design standards that specifically relate to accessible residential housing are varied. There is very little in the way of legislative compliance for access provision for Building Code Australia (BCA) Class 1 dwellings. Class 2 dwellings have some compliance requirements in accordance with the Access to Premises Standards. However, this is limited to accessible paths of travel from street boundaries to apartment doors, and the provision of accessible apartments (quantity and distribution) within developments.

The Livable Housing Design Guidelines, as published by Livable Housing Australia, have not been legislated in Australia, and are therefore optional to adopt during a design process. The Design Brief is compliant with 'Platinum Level' requirements of the Livable Housing Design Guidelines (and in many cases exceeds these requirements). However,

achieving even the Platinum standard of these requirements will not necessarily meet the needs of our tenants.

The housing and disability sector regularly adopts parts of AS 1428.1 or AS 1428.2. However it should be noted that these standards only relate to access provision to public buildings, they only accommodate approximately 80% of people with a disability and the majority of references relate to wheelchair access provision.

It is recognised that in many areas the minimum requirements of AS 1428.1, AS1428.2 and AS 4299 are not sufficient, and that design features which exceed Australian Standards are necessary to achieve a successful 'inclusive' design. For example, this document recommends the provision of 1020mm doors to achieve a minimum clear opening of 950mm, in lieu of the 850mm per AS 1428.1 (2009) Clause 13.2.

## Site Selection

There is a lack of suitable independent housing for the TAC's clients with good community connection that is close to their support networks.

Tenants and their families want to be located close to each other. The TAC therefore identifies geographical areas where there is an unmet demand for suitable housing. RIPL then locates and acquires suitable land or developments in response to this identified need.

RIPL takes into account the following criteria when selecting sites or development opportunities:

- Site location, preferably within reasonable walking/wheeling distance to facilities and amenities, including:
  - shops, supermarkets, cafes, take-away food stores (ideally a large, modern and accessible indoor air-conditioned shopping centre);

- accessible public transport (particularly the train);
- health services;
- social / community groups (e.g. clubs, churches, neighbourhood houses);
- places of employment / training; and
- leisure / sports facilities (e.g. movies, swimming pools, gyms).

The site itself must be level (or near level) and there must be accessible paths of travel to the local facilities and amenities. A clinical Occupational Therapist shall conduct an assessment of external paths of travel during site selection, which includes connection to community facilities, shops and accessible public transport (particularly train).

If apartment style housing is considered, preference is for the apartment to be located on the ground floor to eliminate reliance on lifts.

*Note: Feedback from tenants and other stakeholders is that being close to accessible shops was more important than being close to public transport. Being close to accessible shops gives the person the opportunity for independence and social interaction (e.g. being able to do their own grocery shopping, buying take-away food or meeting friends socially).*

*RIPL commits to addressing local community access limitations in partnership with local authorities where possible. This can include addressing uneven footpaths and poor pedestrian crossovers.*

# Design Objectives

The objectives in the design of a development are to:

- help tenants to achieve their goal of living independently in their own home;
- achieve Platinum level accreditation against the Livable Housing Design Guidelines;
- respond to the desires and aims of what tenants want for their lives and their homes (i.e. a 'home like' environment that facilitates their independence);
- be accessible for the broad range of tenants living with neurotrauma, as well as their families and friends;
- encourage and support social and community participation;
- maximise the efficiency and effectiveness of the shared support model of care;
- incorporate Universal Design Principles & Livable Housing Design Guidelines – to ensure the housing is versatile and appropriate for a diverse range of people at different stages of their lives;

- provide a healthy, safe and secure environment for tenants;
- provide a healthy, safe and efficient work environment for support staff;
- be thermally, visually and acoustically comfortable;
- be functional, durable, flexible, low maintenance and cost effective;
- be sustainable and energy efficient;
- be designed with the capacity for cost effective customization;
- be able to be resold on the open market, should the TAC/RIPL wish to sell any or all of the housing in the future;
- create an environment which can be personalised to the individual's tastes and preferences;
- enable privacy; and
- incorporate assistive technology to support independence.

# Design Principles (Universal Design)

Universal design is the design of products and environments to be usable by all people, to the greatest extent possible, without the need for adaptation or specialised design.

The Universal Design Standards provide fundamental design principles that underpin RIPL's Design Brief, as detailed below.

## **PRINCIPLE ONE: Equitable Use - The design is useful and marketable to people with diverse abilities.**

For example: The overwhelming feedback from RIPL tenants was that their house should look and feel like any other house or home, not an institution.

### **Guidelines:**

- 1a. Provide the same means of use for all users: identical wherever possible; equivalent when not.
- 1b. Avoid segregating or stigmatising any users.
- 1c. Provisions for privacy, security and safety should be equally available to all users.
- 1d. Make the design appealing to all users.

## **PRINCIPLE TWO: Flexibility in Use - The design accommodates a wide range of individual preferences and abilities.**

For example: Providing plenty of space for benchtop appliances such as microwaves, toasters, etc., in addition to ovens and cooktops to accommodate varying levels of cooking/meal preparation

### **Guidelines:**

- 2a. Provide choice in methods of use.
- 2b. Accommodate right or left-handed access and use.
- 2c. Facilitate the user's accuracy and precision.
- 2d. Provide adaptability to the user's pace.

## **PRINCIPLE THREE: Simple & Intuitive Use - Use of design is easy to understand, regardless of the user's experience, knowledge, language skills or current concentration levels.**

For example: In the selection of appliances such as ovens, avoid appliances with unnecessary and complicated features.

### **Guidelines:**

- 3a. Eliminate unnecessary complexity.
- 3b. Be consistent with user expectations and intuition.
- 3c. Accommodate a wide range of literacy and language skills.
- 3d. Arrange information consistent with its importance.
- 3e. Provide effective prompting and feedback during and after task completion.

## **PRINCIPLE FOUR: Perceptible Information - The design communicates necessary information effectively to the user, regardless of ambient conditions or the user's sensory abilities.**

For example: Handles should be a contrasting colour to the cupboards they are affixed to.

### **Guidelines:**

- 4a. Use different modes (pictorial, verbal, tactile) for redundant presentation of essential information.
- 4b. Provide adequate contrast between essential information and its surroundings.
- 4c. Maximise 'legibility' of essential information.
- 4d. Differentiate elements in ways that can be described (i.e. make it easy to give instructions or directions).
- 4e. Provide compatibility with a wide variety of techniques or devices used by people with sensory limitations.

**PRINCIPLE FIVE: Tolerance for Error - The design minimises hazards and the adverse consequences of accidental or unintended actions.**

For example: The provision of thermostatically controlled hot water supply and induction cooktop.

**Guidelines:**

- 5a. Arrange elements to minimise hazards and errors: most used elements, most accessible; hazardous elements eliminated, isolated or shielded.
- 5b. Provide warnings of hazards and errors.
- 5c. Provide fail-safe features.
- 5d. Discourage unconscious action in tasks that require vigilance.

**PRINCIPLE SIX: Low Physical Effort - The design can be used efficiently and comfortably with a minimum of fatigue.**

For example: Keeping items at eye level is particularly important for tenants with an ABI where peripheral vision or memory impairment may be an issue.

**Guidelines:**

- 6a. Allow user to maintain a neutral body position.
- 6b. Use reasonable operating forces.
- 6c. Minimise repetitive actions.
- 6d. Minimise sustained physical effort.

**PRINCIPLE SEVEN: Size & Space for Approach & Use - Appropriate size and space is provided for approach, reach, manipulation, and use regardless of user's body size, posture, or mobility.**

For example: Within kitchens provide range hood controls at bench height.

**Guidelines:**

- 7a. Provide a clear line of sight to important elements for any seated or standing user.
- 7b. Make reach to all components comfortable for any seated or standing user.
- 7c. Accommodate variations in hand and grip size [and dexterity].
- 7d. Provide adequate space for the use of assistive devices or personal assistance.

## Australian Standards for Accessible Design & Adaptable Housing

Universal Design outlines the underlying design principles which aim to achieve environments that are functional for people of all abilities. However, it is the accessible and adaptable Australian Standards that attempt to capture and codify these principles in the AS 1428 suite and AS 4299.

- **AS 1428.1 (2009) General requirements for access – New Building Work** is Part 1 of the AS 1428 suite of Australian Standards – Design for Access and Mobility. The objective of AS 1428.1 (2009) is to “provide building designers and users ... with the *minimum* design requirements for new building work to enable access for people with disabilities” (AS 1428.1: 2009 p.2). Some issues to note with AS 1428.1 (2009), include:
  - This standard is largely focused on design for wheelchair users, with some requirements for design for people with ambulant disabilities and people with vision impairments. This standard may not fully address the specific needs of other people with disabilities, such as people with acquired brain injuries, hearing impairments, learning difficulties or mental health issues.
  - The intention of the standard is to accommodate 80% of people with a disability. Not all people with a disability will therefore be accommodated.
  - The standard outlines minimum design requirements only. Because this standard refers to minimum requirements only, many people using a mobility aid still find environments designed in accordance with AS 1428.1 difficult to navigate.
  - The standard is applicable to public buildings, workplaces, commercial and multi-unit residential developments, rather than individual units and homes.
- **AS 1428.2 (1992) Australian Standard Design for Access and Mobility Part 2: Enhanced and additional requirements – Buildings and facilities.**
  - This standard provides enhanced requirements for access beyond AS 1428.1 (2001). In this respect, it is largely superseded by AS 1428.1 (2009). However this standard also covers items (such as fit out and furnishings) which are outside of the scope of AS 1428.1.
- **AS 4299 (1995) Adaptable Housing Standard**

The intention of the adaptable housing standard is to provide information and guidelines specifically for the design of accessible residential buildings. The standard provides information and guidance on the detailed design of housing including joinery, fixtures and fittings. AS 4299 recognises that in designing only in accordance with AS 1428.1, a home may be built for a ‘generic’ person, while not being well-suited for any particular individual.

  - An adaptable house is one that, while it may not be initially accessible for all tenants, it has the ability - with relatively minor adaptation - to be suitable for a variety of tenants with varying abilities and disabilities.
  - Adaptable housing is designed with consideration to features that are difficult to change later, such as:
    - Locations of structural walls;

- Load bearing structures, e.g. ceilings;
- Door widths; and
- Locations of some services.

Thus, for example, an adaptable house may have a non-structural partition wall between a bathroom and a toilet, which may enable the provision of a larger accessible bathroom in the future. Or a bathroom may have the toilet

pan suitably located to avoid the need for alterations to the sewer; however the height of the washbasin may be adjusted if required.

As discussed in Section 1.3, it is recognised that in many areas the minimum requirements of AS 1428.1, AS1428.2 and AS 4299 are not sufficient for our tenants, and that design features which exceed Australian Standards are necessary to achieve a successful design outcome.

## Livable Housing Design Guidelines

*RIPL's Design Brief delivers accessible housing, which is equal to or greater than Platinum Level requirements of the Livable Housing Design Guidelines.*

The Platinum level design elements of the Livable Housing Design Guidelines, which underpin RIPL's Design Brief, are detailed below.

**Element 1: Dwelling Access** - A safe, continuous, step-free pathway from the street entrance and/or parking area to a dwelling entrance that is level.

**Element 2: Dwelling Entrance** - At least one level (step-free) entrance into the dwelling to enable home occupants to easily enter and exit the dwelling.

**Element 3: Internal Doors & Corridors** - Facilitate comfortable and unimpeded movement between spaces.

**Element 4: Toilet** - The ground (or entry) level has a toilet to support easy access for home occupants and visitors

**Element 5: Shower** - Designed for easy and independent access for all home occupants.

**Element 6: Reinforcement of Bathroom & Toilet Walls** - Built to enable grab rails to be safely and economically installed.

**Element 7: Internal Stairways** - Where installed, stairways are designed to reduce the likelihood of injury and also enable future adaptation.

**Element 8: Kitchen Space** - Designed to support ease of movement between fixed benches and to support easy adaptation.

**Element 9: Laundry Space** - Designed to support ease of movement between fixed benches and to support easy adaptation.

**Element 10: Ground (or entry level) Bedroom Space** - There is a space on the ground (or entry) level that can be used as a bedroom.

**Element 11: Switches and Powerpoints** - Located at heights that are easy to reach for all home occupants.

**Element 12: Door and Tap Hardware** - Home occupants are able to easily and independently open and close doors and safely use tap hardware.

**Element 13: Family/Living Room Space** - Features clear space to enable the home occupant to move in and around the room with ease.

**Element 14: Window Sills** - Installed at a height that enables home occupants to view the outdoor space from either a seated or standing position.

**Element 15: Flooring** - Floor coverings are slip resistant to reduce the likelihood of slips, trips and falls in the home.

## Flexible Design

Flexible or robust places are those that can be used for a number of different purposes and therefore offer more choice in the use of that space.

- The ways in which buildings and environments will be used is not wholly predictable. A flexible or robust environment will:
  - be better able to support a greater range of tenants with varying abilities and disabilities, habits and preferences.
  - be better able to support the independence and functionality of individual tenants.
  - be more flexible over time.
  - reduce long term modification costs.
  - be more cost effective throughout its life cycle.
- The design shall consider ways in which flexibility may be incorporated, particularly:
  - Site layout.
    - Providing a variety of outdoor spaces (e.g. public and private spaces).
  - Unit size and layout.
    - Consideration for providing a second bedroom to units increases the activities that may be accommodated within the home (e.g. the second bedroom may be used as a guest room, store room, study, hobby or work room).
    - Providing internal rooms and circulation spaces of sufficient size will maximise the number of uses and users which may be accommodated.

- Detailed design of individual units.
  - Consideration to rooms (such as bedroom) which may be arranged in a number of ways.
  - Installing wall sheeting throughout bathrooms for future provision of grab rails in a variety of locations (depending on individual user requirements).

### **Room size and shape**

- Very small rooms can accommodate very few different activities, whilst very large ones can cater for a wide range. But above a certain size, further increases become less and less effective in accommodating more activities.
- This means that there is an optimum room size: the ‘best buy’ in terms of the number of activities which can be accommodated for a given floor area, offering the most choice for a given expenditure.

### **Detailed room design**

- As well as the room’s size and shape, its detailed design has an important impact on the number of different activities it can house. If carefully considered, factors like

the positioning of doors, windows, socket outlets and [heaters] can contribute significant increases in robustness at no extra cost” (Bentley et al., p.58-59).

- The structural design shall accommodate flexibility / change over time through the incorporation of such features as:
  - allowance for additional or modification to grab rail locations.
    - Structural sheeting shall be provided to all walls of bathrooms, showers and toilets to allow for alternative / flexible grab rail locations.
  - allowance for future provision of automatic doors, windows and blinds, through the provision of structural supports and power supply.
  - provision of structural supports and power supply in accessible bedrooms for future installation of ceiling hoists.
  - consideration of locations of internal non-load bearing walls.

## **Personalisation**

**“In personalising a place, users are both confirming their tastes and values to themselves, and communicating them to others” (Bentley et al., p.100).**

- Personalisation involves occupants putting their stamp on a place. It reflects the occupant having choice and control over their place. A degree of personalisation is essential in making a place someone’s home.
- The encouragement of personalisation should be an integral part of the design.
- Personalisation may be encouraged through such means as:
  - walls that are easy to fix things to.
  - the provision of display areas (e.g. open shelving).
  - occupant selection of furniture and soft furnishings.

## **Visual Appropriateness**

**The appearance of a building is important because “it strongly affects the interpretations people put on a place: whether designers want them or not, people will interpret places as having meanings” (Bentley et al., p.76).**

- In this case visual appropriateness means that in its overall scale, layout and detailed design, the building looks and feels like a home.
- Visual appropriateness will support the legibility of a place and the ease with which people perceive and understand their environment.

## **Privacy & Community**

- The design shall recognise that people wish to achieve a balance in their life that they themselves control, between private and social / communal time.
- All people require both social interaction and inclusion, and solitude.
- Design considerations include:
  - providing windows that look onto the street and street activities and passers-by.
  - ensuring that tenants are able to achieve visual and acoustic privacy within their homes through suitable design and construction.

## Durability & Low Maintenance

A carefully designed, durable and low maintenance unit will reduce long-term maintenance costs.

- It will increase the opportunity for the unit to feel like a home by reducing unsightly damage and wear and tear.

However, the design of a low maintenance home must be done in such a way as not to detract from the design and inadvertently create an institutional feel.

Internally, consideration may be given to features such as:

- larger doors and corridor widths (to increase the tolerance for error of people using mobility aids).
- careful selection of tough and forgiving materials and finishes (e.g. the use of impact resistant plasterboard).

- patterned surfaces (such as carpets or laminate benchtops) which less readily highlight stains or minor flaws (than flat finishes).
- heat resistant surfaces adjacent to cooktops.
- splashbacks to wet areas up to 300mm high.
- scrubbable cooktop surfaces.
- surface finishes that are repairable and easy to touch-up (e.g. avoid paint feature finishes such as sponging, or 2-pac high gloss finishes to joinery).

Externally, consideration should be given to features such as: robust external cladding (e.g. brickwork), low maintenance gardens with careful selection and location of plants, irrigation systems (if appropriate) and fixtures to common areas.

# 1. THE SITE

## 1.1 Site Selection

Performance Statement ***Location of suitable housing for TAC clients shall be close to their family and friends, and provide excellent community connection to facilities, amenities and public transport.***

	Requirements
General	<p>The number of residential units/apartments to be provided for each individual project shall be determined by RIPL in consultation with the TAC and the project team. In some cases, the configuration of housing may be a cluster development or a distribution of housing within a defined area (such as a key ring model or salt and peppered throughout a vertical or horizontal community).</p> <p>The site shall be located within 'reasonable walking distance' (determined and assessed by an Occupational Therapist or Access Consultant) to facilities and amenities, including:</p> <ul style="list-style-type: none"> <li>• Shops, supermarkets, cafes, take-away food stores (ideally a large accessible indoor air-conditioned shopping centre).</li> <li>• Accessible public transport (particularly the train).</li> <li>• Health services.</li> <li>• Social / community groups (e.g. clubs, churches, neighbourhood houses).</li> <li>• Places of employment / training.</li> <li>• Leisure / sports facilities (e.g. movies, swimming pools, gyms).</li> </ul> <p>The site itself shall be level (or near level) and there must be accessible paths of travel to the local facilities and amenities.</p> <p>If apartment style housing is considered, preference is for RIPL housing to be located on the ground floor to eliminate the reliance on lifts. If ground floor options are not available, an assessment of vertical transportation shall be carried out to assess the risk of emergency evacuation, power outage, everyday independent use and functional access.</p>
Site Scale & Layout	<p>Where practical, the site layout shall accommodate linear circulation paths of travel for ease of navigation.</p> <p>Orientation shall be carefully considered to take full advantage of sunlight, ventilation and private outdoor space.</p> <p>A number of individual independent residential units or apartments shall be provided on site (or in a cluster or close proximity) in addition to sufficient space to accommodate on site shared support staff.</p> <p>Support worker spaces shall (where possible) be kept separate from tenant housing to reduce interaction. The ability to respond quickly needs to be enabled through assistive technology and physical location.</p>

## 1.2 Privacy & Community

	Requirements
General	<p>Both private and communal outdoor spaces shall be provided (where the proposed development permits).</p> <p>Each unit shall have its own outdoor private space (courtyard), with consideration to both visual and acoustic privacy, and solar orientation.</p> <p>Each apartment shall have its own outdoor private space (courtyard or balcony) where possible.</p>

## 2. EXTERNAL AREAS

Performance Statement ***The building entrance shall be safe, accessible and welcoming.***

	Requirements	Building Codes
Front Entrance	Location and design shall provide reasonable shelter from the weather.	LHDG 2 (Platinum)
	Provide a door bell or intercom system which shall be located at a height of 900 – 1100mm (1000mm preferred) above finished floor level and not less than 500mm from an internal corner.	RIPL Requirement
	The doorbell (and camera, intercom, remote door release where provided) shall be integrated into the assistive technology to enhance independence of the occupant.	RIPL Requirement

### 2.1 Car Parking & Storage

Performance Statement ***Each unit or apartment shall incorporate at least one accessible undercover car parking space.***

	Requirements	Building Codes
Unit Car Park	The car parking space serving each residential unit shall be undercover, preferably within a carport or car park basement of a building.	LHDG 1 (Platinum)
	The car parking space shall be located with direct access to the unit or apartment, with a continuous accessible covered path of travel between the car park and the unit/apartment entry. This path of travel shall have a minimum clear width of 1200mm.	RIPL Requirement LHDG 1 (Platinum)
	The car parking space shall have minimum dimensions of 3800mm x 6000mm.	LHDG 1 (Platinum)
	To accommodate either a car or a van, the <u>minimum</u> vertical overhead clearance to the car park shall be at least 2800mm (3000mm preferred).	RIPL Requirement
	<b>It is acknowledged that this 2800mm minimum exceeds the LHDG 1 Platinum requirement, however has been incorporated to accommodate a broad range of vehicles</b>	
	Car parking space to have a maximum gradient and crossfall of 1:40 (1:33 maximum gradient for bitumen).	LHDG 1 (Platinum)
	Car parking surface shall be even, firm and non-slip under wet and dry conditions.	LHDG 1 (Platinum)
	If the car parking requirement is fulfilled by incorporating a garage, then it shall have an automated door (integrated into the assistive technology).	RIPL Requirement
	For Class 2 dwellings, one accessible parking space should be provided for each unit, where possible.	RIPL Requirement

Storage	A lockable storage area shall be located under the carport area (or within close proximity to the entrance), within the basement car park area, or garage area, whichever is applicable.	RIPL Requirement
	If space permits, the storage area shall be a minimum of 1000mm (depth) x 2000mm (length) to accommodate the storage of an additional wheelchair or assistive equipment.	RIPL Requirement
	The storage area shall be dry and contain adequate ventilation.	RIPL Requirement

## 2.2 External Paths

- Performance Statement **Accessible, safe and direct paths of travel are required from:**
- **The allotment boundary to the front entrance of each unit/apartment.**
  - **Car parking and pick-up / drop-off areas to each unit/apartment.**
  - **Between each unit/apartment.**
  - **Each unit/apartment to common facilities and the staff support unit or area.**

	Requirements	Building Codes
General	Pedestrian paths shall be separated from vehicular roadways where possible.	RIPL Requirement
	The front entrance shall be located with a direct and continuous accessible path of travel from the front boundary of the allotment.	LHDG 1 (Platinum)
	Direct and legible paths of travel (step-free) shall be provided between units and common areas.	RIPL Requirement
	The provision of visual contrast between paths and adjacent surfaces shall be considered,	RIPL Requirement
	The minimum clear width of all paths shall be 1200mm be step free, have an even firm, slip resistant surface with maximum crossfall of 1:40.	LHDG 1 (Platinum)
	There shall be no obstructions located along paths of travel, such as: vegetation, fixtures and fittings (e.g. windows that, when open intrude into circulation spaces, overhang from adjacent car parks) or services (e.g. switchboards, hot water units).	RIPL Requirement
	A minimum vertical clearance of 2000mm shall be maintained to all continuous accessible paths of travel (clear of all obstructions including overhanging vegetation and building elements such as awnings, etc.).	AS 1428.1 (2009) Clause 6.2
	All paths shall have an even, firm and slip resistant surface. Consideration shall be given to landscape elements (such as the selection and location of trees which may drop leaves) to ensure that slip and trip hazards are not introduced.	LHDG 1 (Platinum) RIPL Requirement
	All joints in paving and the abutment between adjacent surfaces shall be level and shall remain level over time. Consideration shall be given to the location of landscape elements, such as tree roots and irrigation, drainage grates and manhole covers, such that they do not create uneven or hazardous path surfaces.	RIPL Requirement
	Preferably, the maximum gradient of paths shall be 1:33. Where the gradient of paths exceeds 1:33, paths shall be designed and constructed in accordance with AS 1428.1 (2009) Clause 10 per the requirements for walkways and ramps.	AS 1428.1 (2009) Clause 10
A maximum ramp gradient of 1:14, with landings provided at no greater than 9m for a 1:14 ramp and no greater than 15m for ramps steeper than 1:20. Landings should be no less than 1200mm in length, exclusive of the swing of the door or gate that opens into them.	LHDG 1 (Platinum) AS 1428.1 (2009) Clause 10.3 & 10.8	

## 2.3 Gardens

Performance Statement ***Accessible, private and sunny garden areas shall be provided to each unit/apartment. In addition, a communal outdoor area shall be incorporated where possible.***

	Requirements	Building Codes
General	<p>Individual, private gardens shall either have, or provision for a wheelchair accessible garden bed.</p> <p>An accessible garden bed includes:</p> <ul style="list-style-type: none"> <li>• Being raised to a suitable height (generally 850mm) for wheelchair users.</li> <li>• Depth of the garden bed to be within a seated user's zone of reach.</li> </ul>	RIPL Requirement
	<p>Garden areas shall be low maintenance, with consideration given to:</p> <ul style="list-style-type: none"> <li>• Minimal lawn areas or artificial turf (if appropriate).</li> <li>• Low water use.</li> <li>• Consideration to native / drought tolerant plants.</li> <li>• Irrigation with timers for common areas.</li> <li>• Plants that drop leaves, etc. are not located adjacent to paths.</li> <li>• Incorporation of communal facilities (i.e. BBQ area etc.)</li> </ul>	RIPL Requirement
	<p>Gardens should be designed with low maintenance plants. Ensure poisonous or prickly plants are not introduced. Give consideration to selecting low pollen / low allergy plants.</p>	RIPL Requirement
	<p>Consideration should be given to minimising the transition between surface types.</p>	RIPL Requirement

## 3. EXTERNAL FIXTURES & FITTINGS

Performance Statement ***All external fixtures & fittings shall be selected and located with safety, security, ease of use and accessibility.***

### 3.1 Gates & Fences

	Requirements	Building Codes
Gates	All gates shall be wheelchair accessible, including minimum clear opening width of 950mm.	RIPL Requirement
	Gate circulation spaces shall be in accordance with Australian Standards.	AS 1428.1 (2009) Clause 13.3
	Make allowance for the provision of future automation of gates. This shall include: gate posts suitable for gate operator, gate frame to allow installation of electric strike, appropriate mortice lock, power supply to gate and access control.	RIPL Requirement
Fences	No street frontage fence is preferred (to maximise the opportunity of views of the street from internal living areas), unless a requirement of Town Planning. Private outdoor areas to be secured sufficiently to allow the tenant to own a pet or companion animal.	RIPL Requirement

### 3.2 Mailboxes

	Requirements	Building Codes
General	Height, location and fastenings of mailboxes shall be accessible. Where practical, height shall be 900mm to 1100mm above finished pavement level and not located within 500mm from an internal corner.	RIPL Requirement
	A flat landing shall be provided at each mailbox (maximum gradient and crossfall 1:40).	RIPL Requirement
	Mailboxes shall be located at each individual unit (and be lockable), or grouped provided that they are accessible with regard to height, location, landing and accessible path of travel.	RIPL Requirement
	The numbering of mailboxes shall be clear and legible with consideration for people with vision impairments.	RIPL Requirement

### 3.3 House Identification Numbers

	Requirements	Building Codes
General	The numbering of houses shall be clear and legible, with consideration for people with vision impairments.	RIPL Requirement

## 3.4 Rubbish Bins

	Requirements	Building Codes
General	It is preferred that bins are able to be located close to each unit/apartment to minimise the path of travel and encourage independent use of the bins where possible (or as defined by Town Planning requirements).	RIPL / Town Planning Requirement

## 3.5 Washing Lines

Performance Statement

***There shall be an area within each unit's private outdoor area for an accessible washing line.***

	Requirements	Building Codes
General	The washing line shall be located on an accessible path of travel, with a flat landing underneath providing good circulation space to use the line.	RIPL Requirement
	There shall be provision to mount the washing line at an accessible height, installed to ensure an adjustable height of 1350mm - 1800mm from the ground surface.	RIPL Requirement
	Preference is for a fold down washing line to maximise circulation space, particularly when not in use. Retractable washing lines may also be considered, if space is limited.	RIPL Requirement

# 4. INTERNAL AREAS

## 4.1 Kitchen

Performance Statement

***The kitchen shall be functional and safe for all users, regardless of their abilities or disabilities.***

	Requirements	Building Codes
Kitchen Design	Each unit/apartment shall have one kitchen, located adjacent to an open plan meals and living area. The kitchen shall as far as practical incorporate requirements for wheelchair users, people with acquired brain injury and vision impairment.	RIPL Requirement
	<b>Preference is for joinery installation to be delayed as long as possible during construction, to allow for any specific tenant modifications.</b>	
	<p>Consideration is required with regard to features such as:</p> <ul style="list-style-type: none"> <li>• An efficient and functional layout, with sufficient circulation space to all areas, work surfaces and appliances.</li> <li>• Work surfaces (i.e. benches), sinks and stoves at an appropriate height which provide under-bench access with sufficient knee and foot clearance.</li> <li>• Locating kitchen elements within the zone of reach for seated users including: <ul style="list-style-type: none"> <li>– Controls to all appliances.</li> <li>– Fixtures and fittings over bench tops (such as power points, taps).</li> <li>– Storage cupboards/space (such as height adjustable shelving).</li> <li>– Rubbish bin access (such as pull out)</li> </ul> </li> </ul>	RIPL Requirement
	<ul style="list-style-type: none"> <li>– A simple and legible layout of kitchen work surfaces, appliances and storage.</li> <li>– Consideration for flexible approach (from left or right side) for access to joinery and appliances.</li> <li>– Careful selection and location of appliances and fixtures with regard to: <ul style="list-style-type: none"> <li>– Simple and intuitive design of controls.</li> <li>– Colour contrast between controls and adjacent surfaces.</li> <li>– Design and layout of storage, such as shallow rather than deep pantry shelves (giving visibility to all pantry contents), and height adjustable shelving.</li> </ul> </li> </ul>	RIPL Requirement
	<ul style="list-style-type: none"> <li>• The provision of colour contrast between surfaces (e.g. between kitchen flooring and joinery cupboards, between benchtops and adjacent vertical surfaces, between joinery doors and handles).</li> <li>• The selection of matt or satin finish surfaces (avoid materials such as stainless steel benchtops).</li> <li>•</li> </ul>	RIPL Requirement
	The configuration of the kitchen shall be designed in consideration to circulation requirements and the “work triangle” of the kitchen sink, stove and refrigerator. Therefore L-shaped or galley plan kitchens are preferred.	RIPL Requirement

	Requirements	Building Codes
	<p>Sufficient circulation space is required for wheelchair access to all areas of the kitchen.</p> <p>Ensure a minimum clearance of 1550mm is maintained between all fixtures, including opposing walls, cabinets and appliances (excluding handles) to facilitate a 180° turn by a wheelchair user. A minimum clear floor space of 1550mm x 900mm shall be provided at the sink and all appliances in the kitchen, allowing either a forward or parallel approach by a person in a wheelchair.</p>	<p>AS 4299 (1995) Clause 4.5.2</p> <p>LHDG 8 (Platinum)</p>
Joinery	Where possible, joinery shall be designed to be easily modified to facilitate bench heights that can be tailored to suit the user. This may include height adjustable legs or kickboards, with splash backs that extend below the bench height (750mm from finished floor surface).	RIPL Requirement
	Joinery shall be designed for the easy removal of cupboards under cooktop and sink, to provide under-bench access for wheelchair users.	RIPL Requirement
Lighting	Task lighting is required above all workspaces.	LHDG 8 (Platinum)
Sinks	In order to maximise knee clearance to the underside of the sink, set the waste trap as close as possible to the outlet and as far back against the rear wall as possible.	RIPL Requirement
	Special consideration needs to be given to configuration and insulation of waste pipes and traps to ensure maximum knee clearance under, to avoid obstruction and eliminate the possibility of injury to the user (potential burns).	
	Consideration shall be given to the depth of the sink to allow for wheelchair access.	RIPL Requirement
	Lever action tap ware (with ability to easily modify the lever if required) shall be provided. Taps or their operating handles shall be located within 300mm from the front edge of the sink and bench, throughout the arc of movement, for ease of operation. Consideration may be given to installation of a tap with a pull-out spray head.	LHDG 12 (Platinum) AS 4299 (1995) Clause 4.5.6
	Provide a section of clear bench space of no less than 900mm in length adjacent to the sink.	RIPL Requirement
Worktops / Benches	Benchtops of 850mm, with an allowance of +/- 100mm height adjustment is preferred.	RIPL Requirement
	Minimum depth to be 600mm to cater for cooktops and appliances.	
	Moveable/portable benchtop shall be provided for each unit/apartment which has knee/foot clearance under and is adjustable in height (700mm to 1100mm). This can be utilised for a number of tasks including meal preparation, study, flexible storage, etc. and can be moved to different areas of the unit/apartment.	RIPL Requirement
	Bench space shall be provided with accessible power points to accommodate benchtop appliances such as toasters, microwaves, sandwich makers, benchtop ovens and the like in preparing meals.	RIPL Requirement
	<b>Give consideration to the provision of free standing, height adjustable, mobile, under bench storage units which may be relocated to enhance access. Also give consideration to the provision of pull-out retractable / adjustable worktops to increase the amount of accessible work surfaces available.</b>	
	Provide set down spaces adjacent to the sink, cooktop, oven, microwave and fridge. Provide pull out table system (weight rated to 100 kg) below oven.	RIPL Requirement
	It is preferable that set down spaces adjacent to cooking surfaces are heat resistant (e.g. Corian inserts). Alternatively, provide heat pads.	RIPL Requirement

	Requirements	Building Codes
	The designer shall select benchtop surfaces that are durable, scratch resistant, heat resistant and with consideration to wear and staining over time.	RIPL Requirement
Ovens	The designer shall select ovens with simple, intuitive controls. Controls on appliances shall be easily gripped by hand and located in a safe and accessible position for ease of use.	RIPL Requirement
	Ovens shall be wall mounted with a side opening door (left or right handed hinged to suit the layout), mounted at a height whereby the bottom shelf of the oven is on the same level as the adjacent work surface.	RIPL Requirement
Cooktops	Induction type cooktops shall be specified.	RIPL requirement
	Select a cook top with front, countertop controls which do not require users to reach over the hotplates to be mounted so the cook top is flush with the adjacent work surface.	AS 1428.2 (1992) Appendix A8 RIPL Requirement
	A rangehood (integrated with the assistive technology) shall be provided to the cooktop and be ducted and vented externally.	RIPL Requirement
Joinery & Storage	Where shelving is provided, ensure it is adjustable where practical.	RIPL Requirement
	Depth of shelving: <ul style="list-style-type: none"> <li>• up to 800mm above the floor should not exceed 600mm;</li> <li>• 800mm up to 1500mm above the floor should not exceed 450mm depth;</li> <li>• above 1500mm above the floor should not exceed 300mm depth.</li> </ul>	AS 4299 (1995) Clause 4.5.10
	Maximise the provision of drawers to under bench cupboards.	RIPL Requirement
	Ensure storage units are legible and easy to use, e.g. where large pantry units are installed, provide narrower shelves so that items within are easier to see. Narrower shelves shall also be more accessible for wheelchair users, and weigh less when loaded.	RIPL Requirement
	Where kick plates are provided to joinery units, provision of foot clearance of not less than 290mm in height for a depth of 200mm, is required in order to reduce risk of damage to joinery from wheelchair footplates.	RIPL Requirement
	To all cabinets provide horizontal D-pull handles with a minimum length of 150mm and a minimum clearance of 35mm between the rear face of the handle and the face of the door.	LHDG 12 (Platinum) AS 1428.1 (2009)
	Handles shall be consistently located within 150mm from the bottom edge of overhead cupboards or from the top edge of the door on base cabinets.	AS 4299 (1995) Clause 4.5.10
	Handles shall have colour contrast with background surface.	RIPL Requirement
	Consideration to provide 170° hinges on swing doors to improve access and reduce maintenance.	RIPL Requirement
	<b>Do not include soft closers on cabinetry doors, as this can create accessibility issues for people with a disability.</b>	

## 4.2 Bathrooms

Performance Statement ***The accessible bathroom should provide a homelike environment and allow for ease of use. Care in detailed design of the bathroom, including the selection and location of all fixtures and finishes shall be undertaken to achieve a safe and functional design for all.***

	Requirements	Building Codes
Provision	Each unit/apartment shall have one accessible bathroom located as an ensuite to the main bedroom.	RIPL Requirement
	Each unit/apartment should, where possible, also have a second bathroom in the form of a powder room with a toilet, wash basin and shower where practical. This second bathroom shall be visitable where practical, and be accessible for use by ambulant people with disabilities.	RIPL Requirement
Accessible Bathrooms	The main accessible bathroom (bedroom ensuite) shall be designed with regard to: <ul style="list-style-type: none"> <li>• Safety and functionality.</li> <li>• Privacy.</li> <li>• Aesthetics (it is important that the bathroom has domestic appearance, not institutional).</li> </ul>	RIPL Requirement
	The minimum circulation space required to all sanitary fixtures (i.e. toilet, washbasin, and shower) shall be per AS 1428.1 (2009) Clause 15.	AS 1428.1 (2009) Clause 15
	Grab rails shall not be installed initially (unless directed by the RIPL project representative).	RIPL Requirement
	All bathroom walls (except where solid masonry or concrete is used for construction) shall be fully sheeted to provide structural support/reinforcement for grab rails to any location within the room (i.e. 12mm structural plywood behind all wall cladding).	LHDG 6 (Platinum)
	<b>Photographic evidence of completion of this component is required to support application for LHA Platinum Level accreditation. Please contact the Project Manager or Architect to coordinate this.</b>	
	The internal finishes of bathroom walls shall allow for ease of cleaning and maximum water resistance. (Wall tiles preferred from floor to ceiling or minimum height of 2100mm on all walls.)	RIPL Requirement
	All towel rails shall be specified as grab rails to ensure user safety and practicality.	RIPL Requirement
	To allow for access in an emergency situation the preference is that at least 1 bathroom door shall not be lockable.	RIPL Requirement
	Fastenings, wall reinforcement and grab rails combined must be able to withstand 1100N of force applied in any position and in any direction.	RIPL Requirement

Toilet in Accessible Bathroom	Accessible bathrooms shall have toilets located adjacent to a side wall. There shall be a combination (equal distribution where reasonable) of left and right handed transfer options in developments of multiple units or apartments.	LHDG 4 (Platinum)
	The distance from the centreline of the pan to the side wall shall be 450 – 460mm. Height for the seat of between 460mm – 480mm above finished floor level. 600mm minimum clearance forward of the cistern measured from the front of the cistern to the front of the toilet seat. 800, (+/- 10mm) clearance is required.	LHDG 4 (Platinum)
	Clear width of 1200mm between the walls of the bathroom if located in a separate room, or between amenities if located in a combined bathroom.	LHDG 4 (Platinum)
	A minimum 1200mm clear circulation space forward of the toilet pan exclusive of the swing of the door.	LHDG 4 (Platinum)
	Toilet seat to be a full-round type and securely hinged to the pan with a load-rating to 150kg.	
	The toilet paper dispenser shall allow for the free-flow of paper when dispensed and be located in accordance with AS 1428.1 (2009) Clause 15.2.6.	AS 1428.1 (2009) Clause 15.2.6
Shower in Accessible Bathroom	The transfer side of the shower recess shall be the same as that of the toilet within the bathroom.	RIPL Requirement
	The floor of the shower recess and associated circulation space shall be self-draining and without a step-down, raised step kerb or hob at the entry to the recess.	AS 1428.1 (2009) Clause 15.5.2 LHDG 5 (Platinum)
	The hobless (step-free) shower recess shall provide minimum dimension of 1160mm (width) x 1100mm (length).	AS 1428.1 (2001) Figure 25 LHDG 5 (Platinum) & Figure 5 (b)
	The hobless (step-free) shower recess shall provide a clear space of 1600mm (width) x 1400mm (length) forward of the shower recess.	AS 1428.1 (2009) Figure 47 LHDG 5 (Platinum) & Figure 5 (b)

	<p>The following fittings shall be provided to the shower, generally in accordance with AS 1428.1 (2009) Clause 15.5:</p> <ul style="list-style-type: none"> <li>• Preference for a weighted shower curtain. Curtain to be positioned to hang approximately 100mm within the graded area of the stepless shower base.</li> <li>• Bottom of curtain to hang no higher than 100mm from finished floor level.</li> <li>• Hand held shower head and vertical support grab rail. Top of rail to be 2000mm above finished floor level. The hand held shower shall have a 2000mm hose and be able to be clamped to a vertical grab rail (not proprietary shower clamping rail) with an adjustable clamping bracket.</li> <li>• Lever style tap ware (with the ability to easily modify the lever if required) to be between 900mm – 1100mm from finished floor level, and at uniform height to door hardware.</li> <li>• Recessed shelf of 400mm W x 450mm H x 125mm D for shampoo and the like, recessed into the thickness of the wall.</li> </ul>	<p>AS 1428.1 (2009) Clause 15.5</p> <p>RIPL Requirement</p>
	<p><b>Note: The lever tap ware (shower mixer) shall be located so that a support worker does not have to reach under the water flow to adjust or use the shower mixer. The location should suit both the user from within the shower and a support worker from outside the shower base/curtain. This requirement may not comply with AS1428.1</b></p>	
Vanity	<p>Preference is to provide a height adjustable vanity with semi-recessed hand basin and clear knee/foot clearance under. The vanity design should incorporate the following:</p> <ul style="list-style-type: none"> <li>• Minimum depth vanity top of 450mm.</li> <li>• Floor to ceiling storage tower located on one side (adjacent wall side). Tower to have pull-out drawers under the vanity top, open shelf at vanity top level and adjustable open shelving above (or openable cupboard above accessible reach range for storage).</li> <li>• The vanity top should be cantilevered (open ended) on the opposite side of the tower to allow a wheelchair user to pivot sideways without obstruction.</li> <li>• The front fascia of the vanity should be as shallow as possible to accommodate the semi-recessed hand basin and maximize knee clearance under.</li> <li>• The entire vanity shall be height adjustable to cater for different size and type of wheelchairs. Height adjustment method shall be fixed to suit the user prior to occupation (does not require daily adjustment). This shall be achieved by extending the splashback or wall tiling behind the vanity to floor level, and may involve adjustable brackets.</li> </ul> <p>Special consideration needs to be given to configuration and insulation of waste pipes and traps to ensure maximum knee clearance under, to avoid obstruction and eliminate the possibility of injury to the user (potential burns).</p>	<p>Vanity to be located within bathroom in accordance with AS 1428.1 (2009) Clause 15</p> <p>RIPL Requirement</p>
	<p>A semi-recessed wash basin shall be provided, incorporated within the vanity top. The height (unless advised otherwise), minimum dimensions, under knee and foot clearances, etc. to the basin shall be in accordance with AS 1428.1 (2009) Clause 15.3.2 for wash basins to accessible sole occupancy units.</p>	<p>AS 1428.1 (2009) Clause 15.3.2</p>
	<p>There shall be no exposed water supply pipes.</p> <p>Do not use metal bottle traps.</p>	<p>RIPL Requirement</p>
Sinks	<p>Ambulant people require a sink at a height of 900mm, which is not functional for a person using a wheelchair. Therefore, the sink shall be located at a height of 850mm above the finished floor level.</p>	<p>AS 4299 (1995) Clause 4.5.6</p>
	<p>Lever style tap ware (with the ability to easily modify the lever if required) shall be provided.</p>	<p>LHDG 12 (Platinum)</p>

Fittings & Storage	Maximise private space within the bathroom for all tenant equipment and supplies associated with toileting.	RIPL Requirement
	Provide a vanity unit / benchtop with ample bench space to either side of the basin.	RIPL Requirement
	Provide coat hooks within the bathroom, including two within reach of the shower recess.	RIPL Requirement
	Provide a mirror at the vanity or washbasin in accordance with AS 1428.1 (2009) Clause 15.4.1.	AS 1428.1 (2009) Clause 15.4.1
	Provide two (2) towel rails (grab rail specification) within the bathroom.	AS 1428.1 (2009) Clause 17
Ventilation and Lighting	Provide a mechanical exhaust, heat lamp and light.	RIPL Requirement

### 4.3 Living / Meals Area

Performance Statement ***An open plan living and meals area, shall be provided (adjacent to the kitchen), preferably north facing with doors opening to the private outdoor area.***

	Requirements	Building Codes
Living / Meals Area Design	A minimum circulation space of at least 2250mm in diameter shall be provided, clear of obstructions such as furnishings.	LHDG 13 (Platinum)
	Consideration shall be given to the location of windows and their outlook to gardens or streetscapes.	RIPL Requirement

### 4.4 Bedrooms

Performance Statement ***The main bedroom shall be a pleasant and quiet space with visual and acoustic privacy and ample circulation space and storage.***

	Requirements	Building Codes
Bedroom Design	One or two bedroom units/apartments are preferred. It is acknowledged that in a number of development scenarios, only one bedroom configurations may be achievable. In one bedroom configurations, careful consideration is required to ensure provision of adequate storage.	RIPL Requirement
Master Bedroom	The room should be a minimum size of 4040mm x 4040mm, measured from skirting board to skirting board. (This may not be practical for 1 bedroom apartments or units).	RIPL Requirement (in excess of LHDG 10 (Platinum))
	The room shall provide a space of 1540mm (width) x 2070mm (in the direction of travel) on the side on the bed that is closest to the door approach, and 1000mm on the remaining sides.	LHDG 10 (Platinum)
	The building construction and detailing shall afford acoustic privacy to the bedroom.	RIPL Requirement
	The main accessible bedroom should have an external door for emergency evacuation. (This may not be possible for apartment style housing).	RIPL Requirement

	Requirements	Building Codes
	<p>The bedroom shall include the following for future installation of an overhead electric lifting hoist:</p> <ul style="list-style-type: none"> <li>• Ceiling framing/structural beams providing sufficient structural support and power supply.</li> </ul>	RIPL Requirement
	<p>An accessible 'walk-in' or 'wheel-through' wardrobe or other suitable design shall be provided with the following features:</p> <ul style="list-style-type: none"> <li>• Full access shall be provided to the robe, that is, it shall be free of hobs or kickers.</li> <li>• Preference is for a largely open design for easy access. Some storage with doors to be provided for the discrete storage of personal hygiene products. If doors are incorporated, they shall be hinged, sliding or roller type.</li> <li>• The layout of the robe shall incorporate a minimum clear width of 950mm to all sides of the robe to accommodate wheelchair users.</li> <li>• Varying height hanging rails or height adjustable hanging rail shall be provided to allow the rail (or at least one rail) to be located at a height of 1350mm above finished floor level.</li> <li>• Any shelving shall be height adjustable.</li> <li>• Internal drawers or pull out baskets shall be provided on both sides to cater for left or right handed ability.</li> <li>• Internal lighting shall be provided.</li> <li>• Handles shall be D-pull handles.</li> </ul>	RIPL Requirement
Second Bedroom	<p>The second bedroom shall be flexible to accommodate a variety of functions, for example:</p> <ul style="list-style-type: none"> <li>• To accommodate visiting family or friends.</li> <li>• As a hobby, study or work room.</li> <li>• To store items.</li> </ul>	RIPL Requirement
<p><b>Note: Dimensions for the Second Bedroom do not need to comply with Master Bedroom requirements and a second bedroom may not be provided in all developments.</b></p>		

## 4.5 Laundry

Performance Statement ***A laundry shall be provided, with sufficient capacity to accommodate large amounts of washing.***

	Requirements	Building Codes
Laundry Design	The laundry shall be provided as an open/European style laundry, potentially within the kitchen/living area, accessible bathroom or secondary bathroom.  Consideration shall be given to the aesthetics of the laundry when not in use.	RIPL Requirement
	Within the laundry the following shall be included: <ul style="list-style-type: none"> <li>• Provision for a combination front loader washing machine/clothes dryer which is located on a raised plinth. (The plinth should be easily removable if tenant does not require this.)</li> <li>• A set down bench area (with knee/foot under clearance) adjacent to the washing machine and sufficient bench space for folding washing.</li> <li>• Ample storage.</li> </ul>	RIPL Requirement
	Clearance of at least 1550mm shall be provided in front of fixed benches and appliances. This includes giving consideration to the protrusion of door handles, fittings and the like.	LHDG 9 (Platinum)
Sink	Lever style tap ware (with the ability to easily modify the lever if required) shall be provided at the trough.	LHDG 12 (Platinum)
	Consideration shall be given to the depth of the sink, configuration and insulation of waste pipes and traps. This is to ensure maximum knee clearance under the sink, to avoid obstruction and eliminate the possibility of injury to the user (i.e. potential burns).	RIPL Requirement
Storage	Provide a utility / linen cupboard with adjustable shelving. Consideration shall be given to extra storage space for supplies.	RIPL Requirement

# 5. INTERNAL FINISHES

## 5.1 Surfaces

Performance Statement

**Internal finishes shall be:**

- **Durable and hardwearing.**
- **Low maintenance and repairable.**
- **Visually appropriate, that is, domestic in appearance, rather than reflecting a healthcare or institutional setting.**

	Requirements	Building Codes
Contrast Between Surfaces	Consideration shall be given to the luminance contrast between joinery counters / benchtops and doors and abutting floor surface and also between controls and switches and their background surfaces.	RIPL Requirement
	Ensure surfaces have matt or low sheen surfaces. Avoid stainless steel or high gloss finishes.	RIPL Requirement
	Dark coloured surfaces and bold contrasting strips or patterns are to be avoided.	RIPL Requirement

## 5.2 Walls

	Requirements	Building Codes
Wall Surfaces	Walls and wall finishes shall be of a durable construction with a hard wearing, easily cleaned finish.	RIPL Requirement
	Bathroom walls shall allow for ease of cleaning and maximum water resistance. (Wall tiles preferred from floor to ceiling or minimum height of 2100mm on all walls.)	RIPL Requirement
	Impact resistant plasterboard shall be provided for all non-wet area walls up to 1200mm above finished floor level.	RIPL Requirement
	Construction shall be suitable to fix joinery items such as benches, shelves, and display boards (timber stud walls are preferred).	RIPL Requirement

## 5.3 Floors

	Requirements	Building Codes																																			
Floor Surfaces	All floor coverings shall be firm, even and slip resistant, and feature a level transition between abutting surfaces. (A maximum vertical tolerance of 5mm between abutting surfaces is allowable provided the lip is rounded or bevelled.)	LHDG 15 (Platinum)																																			
	Floor finishes shall be durable and easily cleaned. Provide non-absorbent flooring to toilets, bathrooms and bedrooms.	RIPL Requirement																																			
	Provide floor finishes that are domestic in appearance. Note: <ul style="list-style-type: none"> <li>Floating floors or laminated flooring shall not be used for durability reasons.</li> <li>Where vinyl type products are specified, avoid the selection of vinyl with a hospitalised or institutional appearance.</li> <li>Carpet is not a preferred option.</li> </ul>	RIPL Requirement																																			
Bathrooms	The slip resistance of all internal & external floor surfaces shall achieve a 'Pendulum Classification W or V' (using AS 4586 Classification 2004) or 'Pendulum Classification P4 or P5' (using AS 4586 Classification 2013) and 'BPN' greater or equal to 45 (using Slider 96) using a Wet Pendulum Testing method – Refer following table.	RIPL Requirement																																			
	<table border="1"> <thead> <tr> <th colspan="2">Pendulum* mean BPN</th> <th rowspan="2">AS4586 Classification - 2013</th> <th rowspan="2">AS4586 Classification - 2004</th> <th rowspan="2">A/NZS 4663:2004 Notional† contribution of the floor surface to the risk of slipping when water wet</th> </tr> <tr> <th>Slider 96</th> <th>Slider 55</th> </tr> </thead> <tbody> <tr> <td>&gt; 54</td> <td>&gt; 44</td> <td>P5</td> <td>V</td> <td>Very low</td> </tr> <tr> <td>45 - 54</td> <td>40 - 44</td> <td>P4</td> <td>W</td> <td>Low</td> </tr> <tr> <td>35 - 44</td> <td>35 - 39</td> <td>P3</td> <td>X*</td> <td>Moderate</td> </tr> <tr> <td>25 - 34</td> <td>20 - 34</td> <td>P2</td> <td>Y*</td> <td>High</td> </tr> <tr> <td>12 - 24</td> <td>&lt; 20</td> <td>P1</td> <td rowspan="2">Z*</td> <td rowspan="2">Very high</td> </tr> <tr> <td>&lt; 12</td> <td>-</td> <td>P0</td> </tr> </tbody> </table>	Pendulum* mean BPN		AS4586 Classification - 2013	AS4586 Classification - 2004	A/NZS 4663:2004 Notional† contribution of the floor surface to the risk of slipping when water wet	Slider 96	Slider 55	> 54	> 44	P5	V	Very low	45 - 54	40 - 44	P4	W	Low	35 - 44	35 - 39	P3	X*	Moderate	25 - 34	20 - 34	P2	Y*	High	12 - 24	< 20	P1	Z*	Very high	< 12	-	P0	
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	* refers to slider 96 only																																				
	The floor shall be stepless at the shower recess and self-draining at a grade between 1:60 and 1:80 (falling away from the shower seat).	AS 1428.1 (2009) Clause 15.5.2																																			
	The remainder of the bathroom floor shall grade between 1:80 and 1:100	AS 1428.1 (2009) Clause 15.5.2 (d)																																			
	Vinyl floors shall be covered at all perimeter wall junctions and joinery kick rails using a coving bead, with the bottom row of wall tiles overlapped on top of the vinyl (with junction silicon sealed behind the tile).	RIPL Requirement																																			
Kitchens	Floor finishes shall extend under kitchen cabinetry to enable cupboards to be moved without affecting the flooring. Where fixtures cannot be easily removed, e.g. ovens which are built-in, the floor finishes should not be continued.	LHDG 8 (Platinum)																																			

# 6. DOORS, WINDOWS & CORRIDORS

## 6.1 Doors

Performance Statement ***“A door that is cumbersome or difficult to open is an access barrier. A door that is appropriately placed, designed and installed serves a useful purpose without compromising accessibility.”***

	Requirements	Building Codes
All doors	All doors shall have a level landing (maximum 1:40) with sufficient level circulation space to allow for their operation. Circulation spaces compliant with AS 1428.1 (2009) Clause 13.3 are strongly preferred where practically possible.	AS 1428.1 (2009) Clause 13.3
	Doors shall be 950mm clear opening width (typically a 1020mm door is required). Please note that this requirement is in excess of LHA (Platinum) and AS 1428.1 (2009).	RIPL Requirement
	Where glazing panels are provided, the size and height of the panels shall allow for viewing by a wheelchair user.  Glazing panels at the main front entrance shall be obscured if an external camera and/or intercom is provided at the main entrance.	RIPL Requirement
	Appropriate visual indication shall be installed to all frameless or fully glazed doors and windows capable of being mistaken for a doorway or opening.	RIPL Requirement
	All doors shall be of solid or semi-solid core construction.	RIPL Requirement
	When door closers are fitted, operating forces to all doors shall meet the requirements of AS 1428.1 (2009) Clause 13.5.2 (e).	AS 1428.1 (2009) Clause 13.5.2 (e)
	Provide door stops to swing doors.	RIPL Requirement
	Door stops shall be installed at the top of the door rather on the floor if it may contribute to being a trip hazard. The door stop shall not restrict the door opening clearance.	RIPL Requirement
	Allowance shall be made for the provision of future automation of all external doors. This shall include door lintel/trimmer suitable for future fixing of door operator above the door opening and electric strike.	RIPL Requirement
	Ensure rear access door hardware has a snib latch on internal side, that releases when single action lever is operated therefore preventing tenant being inadvertently locked outside.	RIPL Requirement

	Requirements	Building Codes
Door Handles	Door handles and related hardware shall be located at a uniform height between 900mm - 1100mm above finished floor level.	LHDG 12 (Platinum)
	Doorways shall feature lever or D-pull style door hardware.	AS 1428.1 (2009) Clause 13 LHDG 12 (Platinum)
	<b>The handle clearances for D-pull style door hardware should be the same as AS1428.1. This is the most relevant set of specifications aimed at providing the greatest access to the greatest number of people, and as such is an appropriate standard to reference for this Element.</b>	
	The door handle and related hardware shall allow for the door to be unlocked and opened with one hand.	AS 1428.1 (2009) Clause 13.5.2 (a)
	Door handles shall possess a contrast to their background.	RIPL Requirement
External Doors	Preference is for three accessible external doors, located at the entrance, bedroom and living area.	RIPL Requirement
	A level landing area of 1500mm x 1500mm shall be provided at the level (step free) entrance to the main front entrance door. A level landing area at the entrance door should be provided on the arrival side of the door.	AS 1428.1 (2009) Clause 13.3 LHDG 2 (Platinum)

## 6.2 Windows

Performance Statement ***Window sills shall be installed at a height that enables home occupants to view the outdoor space from either a seated or standing position.***

	Requirements	Building Codes
General	Window sills, in all areas excluding wet areas, shall be a minimum of 300mm and a maximum of 1000mm above floor level. (Concession is reasonable within the kitchen, bathroom and utility areas.)	AS 4299 (1995) Clause 4.6.2 LHDG 14 (Platinum)
	Window controls shall be easy to operate with one hand, and located within easy reach from either a seated or standing position.	LHDG 14 (Platinum)
	Wind-out awning type windows are required to enable the window control to be located and operated within an easy reach range.	RIPL Requirement
	Appropriate visual indication shall be installed to all frameless or fully glazed windows capable of being mistaken for a doorway or opening.	AS 1428.1 (2009) Clause 6.6
	Fly wire screens shall be provided to all openable windows.	RIPL Requirement
	Motorised block out blinds shall be provided to all external windows (unless otherwise approved).	RIPL Requirement

## 6.3 Corridors

	Requirements	Building Codes
Internal corridors / passage ways	Internal corridors / passageways to doorways shall provide a minimum clear width of 1200mm (measured between skirtings or other obstructions).	LHDG 3 (Platinum)

# 7. SERVICES

## 7.1 Supply

Performance Statement

**Services shall be:**

- **Safe, legible and easy to use.**
- **Allow for flexibility and changes in use.**
- **Energy and resource efficient.**

	Requirements	Building Codes
General	Power, gas and water shall be individually metered to each unit.  Gas and water meters shall be located on external walls or landscaped areas so as not to impinge on accessible pathways and shall be accessible to meter readers.  If power, gas or water is provided for common areas, this usage shall be separately metered.	RIPL Requirement
	Home automation components to be located inside the unit, in a separate lockable cupboard.	RIPL Requirement

## 7.2 Controls

	Requirements	Building Codes
Controls  (Switches, Power Points, Door Handles and the like)	Controls shall be located as per the following: <ul style="list-style-type: none"> <li>• Light switches shall be located at a height of between 900mm – 1100mm and horizontally aligned with door handles.</li> <li>• Low level general purpose power outlets (i.e. those not at benchtops) shall be located at a height of 400mm. Not less than 500mm from internal corners.</li> <li>• In the bedroom, two-way light switches shall be provided; one located at the planned bed position.</li> </ul>	AS 1428.1 (2009) Clause 14  LHDG 11 (Platinum)
	Rocker action, toggle or push pad switches with a size of no less than 35 x 35mm shall be used to enable operation by people with severe hand or finger impairments.	LHDG 11 (Platinum)
	Consideration shall be given to the luminance contrast between controls and switches and their background surfaces.	RIPL Requirement

## 7.3 Electrical Power

	Requirements	Building Codes
General	35% spare capacity shall be provided to switchboards.	RIPL Requirement
	The number and location of power outlets should be as per the following table:	RIPL Requirement

Room Type	Minimum number of <u>double</u> outlets	Comments
Doorways	Refer comments	Provide power and signal above all internal and external doors for future installation of auto door openers. All power outlets above doors to be on a common circuit that is capable of having an Uninterruptable Power Supply (UPS) plugged into that circuit.
Corridors, Passages	1	Not greater than 3 metres between outlets.
Kitchens	2 + 1 single	<ul style="list-style-type: none"> <li>At least 1 single behind fridge location.</li> <li>At least 2 with a horizontally accessible reach over a work surface at a maximum of 300mm from the front edge of the bench.</li> <li>Others as necessary for installation of all appliances.</li> </ul>
Bathrooms	2	<ul style="list-style-type: none"> <li>At least 1 as close to and above the vanity benchtop as practicable.</li> <li>At least 1 in storage space beside vanity.</li> </ul>
Living Areas	4	<ul style="list-style-type: none"> <li>At least 2 located with regard to proposed television location.</li> <li>At least 2 located with regard to locations of telephones and computers.</li> </ul>
Main Bedroom	8	<ul style="list-style-type: none"> <li>At least 2 on the wall of the bed (each side) where the bedhead is likely to be located (4 double GPO's total)</li> <li>At least 2 on opposing walls.</li> <li>At least 1 single where an overhead hoist may be located.</li> <li>At least 1 in walk-in robe for charging of equipment</li> </ul>
Secondary Bedrooms	3	<ul style="list-style-type: none"> <li>At least 2 on the wall of the bed (1 double GPO each side) where the bedhead is likely to be located.</li> <li>At least 1 on the opposing wall.</li> </ul>
Laundry	2	<ul style="list-style-type: none"> <li>At least 1 on the wall at an accessible benchtop.</li> <li>At least 1 for the washing machine and dryer.</li> </ul>
External Storage Area	1	<ul style="list-style-type: none"> <li>At least 1 for charging of equipment.</li> </ul>
Externally	2	<ul style="list-style-type: none"> <li>At least 1 external grade waterproof power point to external courtyard</li> <li>At least 1 external grade waterproof power point to car port</li> </ul>

## 7.4 Hot Water

	Requirements	Building Codes
General	Install a thermostatic mixing valve to enable the temperature to be set at 45°C. Please check that future adjustments to the temperature can be made by a licenced plumber (as opposed to the manufacturer of the appliance).	RIPL Requirement VBA – Hot Water Safety Guideline issued April 2014

## 7.5 Lighting

	Requirements	Building Codes
Internal Lighting	Lighting shall be LED and dimmable unless otherwise approved.	RIPL Requirement
	Consider concealing light fittings to minimise glare.	RIPL Requirement

	Requirements	Building Codes
External Lighting	<p>External lighting shall provide sufficient night time lighting levels to maintain safety and security on site, while not being excessive or intruding into internal residential areas or disrupting other residents. Include shall be:</p> <ul style="list-style-type: none"> <li>• lighting along paths of travel in common areas operated by photo-electric sensor.</li> <li>• switched lighting (located securely inside units) to private outdoor spaces.</li> <li>• lighting activated by motion detectors and a switch at: <ul style="list-style-type: none"> <li>– the main front entrance to the unit, and</li> <li>– under cover accessible vehicle parking areas.</li> </ul> </li> </ul>	RIPL Requirement

## 7.6 Telephone Points

	Requirements	Building Codes
General	<p>One phone point shall be provided to the following areas:</p> <ul style="list-style-type: none"> <li>• To the open plan kitchen/dining/living area.</li> <li>• To the main bedroom.</li> </ul>	RIPL Requirement

## 7.7 Television Outlets & Antennas

	Requirements	Building Codes
General	<p>Aerial points complete with cable to the roof shall be provided as follows:</p> <ul style="list-style-type: none"> <li>• To all living areas.</li> <li>• To the main bedroom.</li> <li>• To the second bedroom.</li> </ul>	RIPL Requirement
	<p>One adequately sized, tuned antenna shall be supplied and installed as required (preference to be located inside the roof space).</p>	RIPL Requirement

## 7.8 Heating, Cooling & Ventilation

	Requirements	Building Codes
General	A climate control system (i.e. heating and air-conditioning) shall be provided.	RIPL Requirement
	The home shall be well ventilated with openable windows. Exhaust fans shall be provided in bathrooms, toilets, laundries and kitchens.	RIPL Requirement
	Consideration shall be given to the location of condenser units to ensure the enjoyment of outdoor spaces is not impacted.	RIPL Requirement
	The home shall be well designed for local climatic conditions and incorporate best practice design for energy efficiency and passive solar design.	RIPL Requirement

## 7.9 Assistive Technology

	Requirements	Building Codes
General	Every tenant unit shall incorporate assistive technology.	RIPL Requirement
	The user interface shall be intuitive and be able to be adapted or customised to suit the ability of the user. (Users will most likely have either an acquired brain injury, spinal cord injury, or a combination of both.) Such injury shall sometimes severely limit the user's ability to coordinate their use of a particular user interface.  Assistive technology interface: <ul style="list-style-type: none"> <li>• One fixed wall tablet to be provided per unit/apartment. Wall tablet to be located near the unit/apartment entrance (internally) and at a height of 1350 mm AFFL.</li> <li>• Assistive technology shall be capable of being operated from any Android or iOS device.</li> <li>• The tablets in the support unit shall be capable of operating all assistive technology functions in all units on the site.</li> </ul>	RIPL Requirement
	The assistive technology system shall incorporate an Uninterruptible Power Supply (UPS) that shall have a minimum of two hour capacity. The UPS shall provide backup power for all communications infrastructure.	RIPL Requirement
	Every unit/apartment shall include the following assistive technology components: <ul style="list-style-type: none"> <li>• <b>Climate control</b> – full control of all functions via tablet</li> <li>• <b>Windows</b> – power and signal to be provided to the base of all windows near the winder to allow for future automation.</li> <li>• <b>Window furnishings</b> (blinds) – motorised blinds shall be provided to all windows in tenant units. Control to be provided via wall switches and tablet (including full open/close and percentage open/close).</li> <li>• <b>Internal doors</b> – power and signal to be provided above all doors for future installation of an automatic door opener (including a UPS). Assistive technology system shall be capable of controlling the door opener.</li> <li>• <b>Lighting</b> – on/off and dimming functions. Full control via tablet and on/off control via wall switches.</li> </ul>	
	<ul style="list-style-type: none"> <li>• <b>Security</b> – intercom with integrated camera to be provided and mounted externally at the main front door with ability to view and communicate with visitors via tablet.</li> </ul> <p>Each unit shall incorporate a home alarm system with visual and audible alarms within and outside of each unit that is interfaced with the assistive technology system.</p>	RIPL Requirement

	Requirements	Building Codes
	<ul style="list-style-type: none"> <li>• <b>External doors</b> – doors shall incorporate an electric strike with the ability to unlock manually and also via a tablet.</li> <li>• <b>External gates</b> – power and signal to be provided to any external access gates to private open space to allow for future installation of automated gate opener, electric strike, push-to-exit button on inside of the gate and proximity card reader on the outside of the gate (only if gate does not exit into an adjoining tenants private outdoor space).</li> <li>• <b>Lifts</b> – where lifts are required, preference is to include provision for tablet operation of lift (in consultation with the Owners Corporation) in addition to standard push buttons.</li> <li>• <b>Audio visual</b> – the ability to interface/control audio visual systems via tablet.</li> <li>• <b>Fire detection</b> – the assistive technology system shall interface with the fire detection system. The system shall issue an alert to the support provider tablet including details of which unit triggered the alarm. The system shall also turn on all lights in all units if the fire detection system is triggered.</li> <li>• <b>Appliances</b> – full functionality of rangehood in kitchen to be provided via tablet.</li> <li>• <b>Motion sensors</b> – motion sensors shall be provided in all habitable rooms (including accessible ensuite bathroom).</li> <li>• <b>Temperature sensors</b> – temperature sensors shall be provided in all habitable rooms.</li> <li>• <b>Communication</b> – speakers and microphones shall be provided in every habitable room (including accessible ensuite bathroom) to facilitate two way voice communications from each tenant unit to the support unit via phone and tablet. Calls to be initiated via tablet or wall switch.  The support unit shall include a VOIP phone that enables two way communications with each individual tenant unit. It shall also identify the location of the person calling for assistance.  Each tablet in a tenant unit shall include a Red/Amber/Green alert system for seeking assistance from support staff. This system shall incorporate a process for support staff to acknowledge receipt of the alert via the tablet, so that a tenant has positive confirmation that a call for assistance has been received. It shall also identify the location of the person calling for assistance.  A red toggle switch shall be provided in every accessible bathroom and on each side of the bed in the master bedroom to enable a call for assistance from a tenant to the support staff as required. Refer to section 7.2 for positioning of toggle switches.  Wearable pendants shall be provided to each tenant to enable calls for assistance from support staff.</li> <li>• <b>Scenes</b> – the ability to program pre-determined ‘scenes’ such as ‘returning home’ or ‘leaving home’.</li> </ul>	
	A seamless/mesh Wi-Fi network shall be provided covering all private and public areas of the development. This shall allow tenants and support staff to use a tablet to control any assistive technology features seamlessly from any area of the development.	RIPL Requirement
	The support provider unit shall be the main hub for all main panels such as fire alarms, communications, etc.	RIPL Requirement
	Every toggle switch within each unit/apartment shall be individually programmable to enable flexibility to use switches to perform different functions. Refer to section 7.2 for positioning of toggle switches.	RIPL Requirement
	The assistive technology solution shall be an open platform to be able to interface with a variety of different components.	RIPL Requirement
	The assistive technology solution shall log all events and store these for a minimum period of 2 years to allow for auditing of use as required.	RIPL Requirement

	Requirements	Building Codes
	The assistive technology solution shall be able to be controlled or operated remotely via the internet.	RIPL Requirement
	The assistive technology solution shall be capable of issuing alerts to the support unit during nominated events such as a loss of power, site wide UPS operation, etc.	RIPL Requirement
	All assistive technology shall be thoroughly tested and commissioned prior to tenants moving in. It is essential that all systems are fully operational and reliable at project handover.	RIPL Requirement
	At a minimum, the assistive technology installer shall formulate and deliver two separate 1 hour training sessions for the support staff. Support staff will then have the primary responsibility for training the tenants in the use of the technology. Additional training sessions to be organised as required.	RIPL Requirement

## 7.10 Acoustics

	Requirements	Building Codes
General	<p>Consideration shall be given to planning of the site and individual units, and construction specification, including:</p> <ul style="list-style-type: none"> <li>• Planning of the site and internal spaces. <ul style="list-style-type: none"> <li>– Rooms required to be quiet (such as bedrooms) shall be located away from noise sources on site (such as parking and pick-up / drop-off areas, communal outdoor areas) and internally (such as laundry areas).</li> </ul> </li> <li>• The provision of sound insulating materials to reduce transmission of noise into quiet areas. For example, install insulation to the laundry to isolate noise from adjacent living areas, and to bedrooms.</li> </ul>	RIPL Requirement

## 7.11 Energy Efficiency

	Requirements	Building Codes
General	<p>The home shall be well designed for local climatic conditions and incorporate best practice design for energy efficiency and passive solar design to heat and cool the home naturally. Consideration shall be given to:</p> <ul style="list-style-type: none"> <li>• Building shape and orientation.</li> <li>• Internal planning and layout (for example: placement of internal doors within an open plan layout, the provision for an airlock at the building entrance).</li> <li>• Window areas, type and shading.</li> <li>• Thermal mass.</li> <li>• Insulation levels.</li> <li>• Airtightness and avoiding draughts.</li> <li>• Consideration of colour of materials and surface properties.</li> <li>• Selection of efficient fittings (e.g. shower heads and lamps) and appliances.</li> </ul>	RIPL Requirement

	Requirements	Building Codes
	The home design should consider the use of resource efficient products and materials (including re-cycled) where ever possible and/or feasible.	RIPL Requirement
	Energy efficient and environmentally sustainable buildings have the opportunity to: <ul style="list-style-type: none"> <li>• Minimise on-going costs to tenants and service providers.</li> <li>• Improve the thermal comfort of the residential environment.</li> <li>• Improve other aspects of comfort and liveability within the home, for example: <ul style="list-style-type: none"> <li>– A well-insulated, air tight home shall reduce noise impinging into quiet areas.</li> <li>– Sunny living areas, with plenty of daylight shall contribute positively to the home environment.</li> </ul> </li> <li>• Be socially and environmentally responsible, minimising the resources consumed and waste / pollution produced.</li> </ul>	RIPL Requirement
	To achieve the required energy rating, the following shall be considered: <ul style="list-style-type: none"> <li>• Provision of solar power to each unit.</li> <li>• An efficient hot water system.</li> <li>• Glazing.</li> <li>• Insulation.</li> <li>• Closing mechanisms in exhaust fans.</li> <li>• Provision of water saving devices and rain water tanks for gardening and toilet flushing.</li> <li>• Recycling of domestic waste.</li> </ul>	RIPL Requirement

## 7.12 Fire Risk Management

	Requirements	Building Codes
General	In addition to the requirements of the relevant fire regulations, the following are required at a minimum: <ol style="list-style-type: none"> <li>1) Plan the housing with the most direct route possible from the bedroom (or main bedroom) to outside. Ideally there should be a door direct to outside from the bedroom, without having to pass through any other part of the house.</li> </ol>	RIPL Requirement
	2) Install AS3786 smoke alarms in all habitable parts of the house, including bedrooms and the living area.	RIPL Requirement
	<b>Note: Careful consideration should be given as to the positioning of smoke detectors in bedrooms. The location should not interfere with operation of ceiling hoists and door operators, but should also not compromise tenant's safety in their positioning to accommodate this.</b>	
	3) In developments with clusters of RIPL units, interlink the alarms within each house, so that all alarms operate simultaneously if any one of them activates.	RIPL Requirement
	4) Connect the smoke alarms to a warning in the support worker's housing and link to pagers or phones carried by staff members on site.	RIPL Requirement
	5) Install an AS 2118.4-2012 fire sprinkler system.	RIPL Requirement
	6) Ensure that the Fire Indicator Panel (FIP) has the capacity for future integration with Alarm Signalling Equipment (ASE) to generate an alert to the fire brigade.	RIPL Requirement

## 7.13 Appliances

	Requirements	Building Codes
General	<p>In considering all appliances, attention shall be given to access provision with regard to:</p> <ul style="list-style-type: none"><li>• control heights,</li><li>• control locations,</li><li>• intuitive controls,</li><li>• simplicity of use, and</li><li>• appropriate hinged sides of front face door openings to suit approach and use.</li></ul>	
Provision	<p>The following appliances shall be specified and provided as part of the base build:</p> <ul style="list-style-type: none"><li>• Dishwasher (single drawer type)</li><li>• Oven (side opening type)</li><li>• Cooktop (induction bench top type)</li><li>• Rangehood</li><li>• Microwave (to be 'built-in' to kitchen joinery)</li></ul>	RIPL Requirement

**END OF DOCUMENT**



**For more information please contact the TAC**  
Customer Service Centre on 1300 654 329,  
speak directly with your TAC support coordinator or visit  
the RIPL webpage at:  
[http://www.tac.vic.gov.au/clients/what-we-can-pay-  
for/services/assisted-living-accommodation/about-the-ripl-  
project](http://www.tac.vic.gov.au/clients/what-we-can-pay-for/services/assisted-living-accommodation/about-the-ripl-project)