

**PSE ACCESS CONSULTING**

Access/Built Environment  
Architectural Advice/Training  
Adaptation/Certification/B.C.A  
ACAA Accredited.

## **ACCESS/COMPLIANCE REPORT**



### **ACCESS/ADAPTABILITY & SECURITY/ACCESSIBILITY SEPARATION**

**DISABILITY DISCRIMINATION ACT 1992 (DDA)**

**BUILDING CODES AUSTRALIA (BCA) 2014,**

**NATIONAL CONSTRUCTION CODE (NCC)-2014.**

**Disability (Access to Premises-Buildings) Standard-2010, (DAatP-BS-2010).**

**KU-RING-GAI LOCAL CENTRES, DCP 2012 PART 8.**

**SUBJECT; MIXED USE RESIDENTIAL UNIT DEVELOPMENT.**

**SITE ADDRESS; 23-41 Lindfield Ave and 7, 11 Havilah Lane, Lindfield.**

**REPORT BY; PETER SIMPSON.**

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27<sup>th</sup> March 2015.

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**SITE ADDRESS; 23-41 Lindfield Ave and 7, 11 Havilah Lane, Lindfield.**

**Access requirements for people with disability.**

This report is in regard to the residential development complying with the Building Codes Australia (BCA- National Construction Code (NCC) 2014 & specifically Part D3), and related Australian Standards/KU-RING-GAI LOCAL CENTRES, DCP PART 8 *Mixed Use Development Controls* Point C5 *Apartment Mix and Sizes* in addressing the requirements of Disability Discrimination Act 1992 (DDA) pertaining to access to and housing for people with disability.

**COMPOSITION OF PROPOSED RESIDENTIAL DEVELOPMENT;**

The proposed modifications to the development comprise the integration of Lot D in DP 347906 and Lot 4 in DP 713505 (39 and 41 Lindfield Avenue) into the development site and resulting amendments to the design of the mixed use development. Accordingly the modified description of development is summarised as follows:

1. demolition of existing structures on the site;
2. excavation of the site;
3. construction of a mixed use development with a maximum gross floor area (GFA) of 15,540m<sup>2</sup>, comprising:
  - 2,720m<sup>2</sup> GFA retail floorspace at ground floor within a single storey retail podium;
  - 141 residential apartments in two (2) towers above the retail podium;
  - Four (4) levels of parking for 255 vehicles;
  - 898m<sup>2</sup> of communal open space at podium level between the two towers;
  - associated landscaping, servicing and infrastructure; and
  - fit-out and use of the proposed major retail tenancy as a supermarket.
4. FSR at 3.91:1.

This proposed residential development at this address will consist of;

1. Three levels of residential basement car parking with entrance from Havilah Lane.
2. Access from the “Lower ground floor” (retail car parking) to the “Ground level” commercial/retail area is provided by travelators and public lift.
3. Lower ground level residential entry lobbies from Havilah Lane.
4. The “Ground level” comprises a “Major retail” (supermarket) and seven retail tenancies with street front entrance, and for residents, from Lindfield Avenue and from Kochia Lane.
5. The street front entrance, principal public entrance, from Kochia Lane incorporates a 1:20 ramp to the retail mall level with a lift and travelator systems for access to Lower Ground car parking. The entry to the retail mall from Lindfield Avenue is at grade and level with the footpath.
6. Level One comprises the first level of residential units in two blocks and common use open communal area.

7. The remaining levels including Level One comprise 141 self-contained residential apartments in both towers.  
Apartments No. 105A, 112A, 205A, 212A, 305A, 312A, 405A, 412A, 105B, 108B, 205B, 206B, 208B, 305B & 308B would be the “typical” one and two bedroom adaptable apartments with fifteen finished, as built, to Council’s “Access” requirements (DCP No. 31 *Access*) and KU-RING-GAI LOCAL CENTRES, DCP PART 8 *Mixed Use Development Controls* Point C5 *Apartment Mix and Sizes* as well as being fully compliant with the enhanced requirements/features of **AS4299-1995 Adaptable housing**.

The plans/drawings (Drawing phase ADAZ) relied upon for this assessment/  
review are by Crone Partners and consist of but not limited to,

1. Drawing phase ADAZ Drawing No. 1000 Issue K – Basement 3 Plan
  2. Drawing phase ADAZ Drawing No. 1001 Issue K – Basement 2 Plan
  3. Drawing phase ADAZ Drawing No. 1002 Issue K – Basement 1 Plan
  4. Drawing phase ADAZ Drawing No. 1003 Issue L – Lower Ground Floor Plan
  5. Drawing phase ADAZ Drawing No. 1004 Issue N – Ground Floor Plan
  6. Drawing phase ADAZ Drawing No. 1005 Issue M – Level 1 Floor Plan
  7. Drawing phase ADAZ Drawing No. 1006 Issue M – Level 1 Floor Plan
  8. Drawing phase ADAZ Drawing No. 1007 Issue M – Level 1 Floor Plan
  9. Drawing phase ADAZ Drawing No. 1008 Issue N – Level 1 Floor Plan
  10. Drawing phase ADAZ Drawing No. 1009 Issue N – Level 1 Floor Plan
  11. Drawing phase ADAZ Drawing No. 1010 Issue M – Level 1 Floor Plan
  12. Drawing phase ADAZ Drawing No. 1011 Issue N – Level 1 Floor Plan
  13. Drawing phase ADAZ Drawing No. 3000 Issue H – Sections
  14. Drawing phase ADAZ Drawing No. 6001 Issue G – Pre/Post Adaption.
8. This development is situated in close proximity (within the 400metre radius to transport nodes/rail stipulated by Government) to public transport on Lindfield Avenue which is, to the degree required by Disability Standards for Accessible Public Transport 2002, wheelchair accessible with the reliance on private transport still paramount for residents and visitors.
9. Provided is access “*where a passenger lift is installed to the entrance doorway of each sole-occupancy located on the levels serviced by the lift*” unit as per BCA/NCC-2014 Part D3 Table 3.1 Class 2 (a) and DAtP-BS-2010.

## **ACCESS COMPLIANCE FOR PEOPLE WITH DISABILITY.**

### **REFERANCING;**

#### **➤ Disability Discrimination Act 1992.**

#### **Part 3 Objects**

The objects of this Act are:

- (a) to **eliminate**, as far as possible, **discrimination** against persons on the ground of disability in the areas of:
  - (i) work, **accommodation**, education, **access to premises**, clubs and sport; and
  - (ii) the provision of goods, facilities, services and land; and
  - (iii) existing laws; and
  - (iv) the administration of Commonwealth laws and programs; and
- (b) to ensure, as far as practicable, that persons with disabilities have the same rights to equality before the law as the rest of the community; and
- (c) to promote recognition and acceptance within the community of the principle that persons with disabilities have the same fundamental rights as the rest of the community.

#### **Part 23 Access to premises**

*Disability Discrimination Act 1992*

#### **Part 4 Interpretation**

*premises* includes:

- (a) a structure, building, aircraft, vehicle or vessel; and
  - (b) a place (whether enclosed or built on or not); and
  - (c) a part of premises (including premises of a kind referred to in paragraph (a) or (b)).
- (1) It is unlawful for a person to discriminate against another person on the ground of the other person's disability or a disability of any of that other person's associates:
    - (a) by refusing to allow the other person access to, or the use of, any premises that the public or a section of the public is entitled or allowed to enter or use (whether for payment or not); or
    - (b) in the terms or conditions on which the first-mentioned person is prepared to allow the other person access to, or the use of, any such premises; or
    - (c) in relation to the provision of means of access to such premises; or
    - (d) by refusing to allow the other person the use of any facilities in such premises that the public or a section of the public is entitled or allowed to use (whether for payment or not); or
    - (e) in the terms or conditions on which the first-mentioned person is prepared to allow the other person the use of any such facilities; or
    - (f) by requiring the other person to leave such premises or cease to use such facilities.
  - (2) This section does not render it unlawful to discriminate against a person on the ground of the person's disability in relation to the provision of access to premises if:
    - (a) the premises are so designed or constructed as to be inaccessible to a person with a disability; and
    - (b) any alteration to the premises to provide such access would impose unjustifiable hardship on the person who would have to provide that access.

## Part 25 Accommodation

- (1) It is unlawful for a person, whether as principal or agent, to discriminate against another person on the ground of the other person's disability or a disability of any of that other person's associates:
- (a) by refusing the other person's application for accommodation; or
  - (b) in the terms or conditions on which the accommodation is offered to the other person; or
  - (c) by deferring the other person's application for accommodation or according to the other person a lower order of precedence in any list of applicants for that accommodation.
- (2) It is unlawful for a person, whether as principal or agent, to discriminate against another person on the ground of the other person's disability or a disability of any of the other person's associates:

### *Disability Discrimination Act 1992*

#### Section 25

- (a) by denying the other person access, or limiting the other person's access, to any benefit associated with accommodation occupied by the other person; or
- (b) by evicting the other person from accommodation occupied by the other person; or
- (c) by subjecting the other person to any other detriment in relation to accommodation occupied by the other person; or
- (d) by refusing to permit the other person to make reasonable alterations to accommodation occupied by that person if:
  - (i) that person has undertaken to restore the accommodation to its condition before alteration on leaving the accommodation; and
  - (ii) in all the circumstances it is likely that the person will perform the undertaking; and
  - (iii) in all the circumstances, the action required to restore the accommodation to its condition before alteration is reasonably practicable; and
  - (iv) the alteration does not involve alteration of the premises of any other occupier; and
  - (v) the alteration is at that other person's own expense.

Standards/Legislation called into effect by the DDA;

- National Construction Code (NCC)-2014. (BCA)
- AS1428.1-2009 *Design for access and mobility*
- AS2890.6-2009, *Off Street Parking*.
- AS1735.12 Lifts, Escalators and Moving Walkways.
- AS4299-1995 *Adaptable Housing*.

The required proportion of the **proposed residential apartments** will have implemented **the technical specifications/requirements of AS4299 1995 *Adaptable housing*** in catering for housing for people with disability in addressing Part 25 of DDA and KU-RING-GAI LOCAL CENTRES, DCP PART 8 *Mixed Use Development Controls* Point C5 *Apartment Mix and Sizes*.

➤ **Building Codes Australia (BCA) Part D3. Access for People with disability.**

**National Construction Code (NCC) 2014**

The Building Codes Australia (BCA)/ National Construction Code (NCC) 2014 clearly specifies, Part D3 *Access for people with disabilities* Part D3.2 *General building access requirements* (c) (i) from the allotment boundary at the main **points of entry**, access compliant with AS1428.1 is to be provided to people with disabilities.

The BCA/NCC-2014 calls for general access to a building to be compliant with **BCA Part D3 Table D3.2** *Requirements for access for people with disability; Class 2 building or group of buildings. (a) To and within; Common areas and unique features and services.*

**BCA/NCC-2014; Part D3 Access for People with disability**

The BCA is referred to as a 'performance based' code, describing acceptable **Performance Requirements** that **buildings** and other structures throughout Australia must meet.

**D3.1 General building access requirements**

Buildings and parts of buildings must be *accessible* as *required* by **Table D3.1**, unless exempted by **D3.4**.

**Table D3.1 REQUIREMENTS FOR ACCESS FOR PEOPLE WITH A DISABILITY**

Class of building	Access requirements
<b>Class 2</b>	
Common areas	<p>From a pedestrian entrance <i>required</i> to be <i>accessible</i> to at least 1 floor containing <i>sole-occupancy units</i> and to the entrance doorway of each <i>sole-occupancy unit</i> located on that level.</p> <p>To and within not less than 1 of each type of room or space for use in common by the residents, including a cooking facility, sauna, gymnasium, <i>swimming pool</i>, common laundry, games room, individual shop, eating area, or the like.</p> <p>Where a ramp complying with AS 1428.1 or a passenger lift is installed—</p> <ul style="list-style-type: none"> <li>(a) to the entrance doorway of each <i>sole-occupancy unit</i>; and</li> <li>(b) to and within rooms or spaces for use in common by the residents,</li> </ul> <p>located on the levels served by the lift or ramp.</p>
<b>Class 5</b>	To and within all areas normally used by the occupants.
<b>Class 6</b>	To and within all areas normally used by the occupants.
<b>Class 7a</b>	To and within any level containing <i>accessible</i> carparking spaces.



## SECTION D ACCESS AND EGRESS

### OBJECTIVE

#### DO1

The *Objective* of this Section is to—

- (a) provide, as far as is reasonable, people with safe, equitable and dignified access to—
  - (i) a building; and
  - (ii) the services and facilities within a building; and
- (b) safeguard occupants from illness or injury while evacuating in an emergency.

#### D3.2 Access to buildings

- (a) An *accessway* must be provided to a building *required* to be *accessible*—
  - (i) from the main points of a pedestrian entry at the allotment boundary; and
  - (ii) from another *accessible* building connected by a pedestrian link; and
  - (iii) from any *required accessible* carparking space on the allotment.
- (b) In a building *required* to be *accessible*, an *accessway* must be provided through the principal pedestrian entrance, and—
  - (i) through not less than 50% of all pedestrian entrances including the principal pedestrian entrance; and
  - (ii) in a building with a total *floor area* more than 500 m<sup>2</sup>, a pedestrian entrance which is not *accessible* must not be located more than 50 m from an *accessible* pedestrian entrance,

Compliance with the BCA/NCC-2014 will encompass the basement car parking levels and all other levels including the residential “adaptable” apartments of this development. The residential “adaptable” apartments will have additional requirements to comply with Councils DCP and relevant standards/legislation.

A proportion (not less than 10%) of the residential units will have implement the technical specifications/requirements of AS4299 1995 *Adaptable housing* in catering for accommodation for people with disability and addressing Part 25 of DDA.

#### ➤ KU-RING-GAI LOCAL CENTRES, DCP 2012 PART 8,

The primary purpose of this DCP is to assist proponents and Council in ensuring the requirements for equality of access/accommodation, in addressing the Australian Disability Discrimination Act 1992, are satisfied when building work is proposed. It provides references/guidelines for access, assists in better design of buildings, ensure that new development is accessible and useable as well as compliant with relevant standards, codes and legislation.

This plan provides an assessment tool, along with the relevant Australian Standards/Codes, for both building and development application with respect to the provision of facilities (adaptable housing) for improved access and mobility.

For the purpose of this plan (DCP Part 8) the following objectives and controls apply for residential flat developments,

## VOLUME A

### 1. Objectives

The objectives contained in this DCP outline the outcomes that proposed developments are required to achieve. In order to gain consent, developments need to demonstrate that they have fulfilled the relevant objectives for each element.

**Note:** The numbering of the aims of the plan and the objectives within each part are for convenience only, and do not indicate priority.

### 2. Controls

The design controls demonstrate the preferred ways in which the objectives are to be achieved for improving site and building design. The controls focus on building performance/functionality, form, layout, sustainability and residential amenity.

## PART 8. MIXED USE DEVELOPMENT CONTROLS

Mixed use developments provide for a variety of uses and activities within a building, encouraging use of the centre outside the working day, adding vibrancy and life to the streets. Uses within the same building are best located so that retail and business activity at ground level and lower levels to assist street activation; and residential uses requiring privacy and noise mitigation, located on upper levels.

### 8C.5 APARTMENT MIX AND SIZES

#### Objectives

1. *To ensure the provision of a range of apartment types, sizes and layouts for housing choice.*
2. *To encourage the provision of smaller apartments in the urban centres.*
3. *To increase housing choice for seniors and people with disabilities.*
4. *To provide housing that caters for peoples housing needs now and into the future.*

#### Controls

- 1 A range of apartment sizes and types must be included within the development.
- 2 Apartments are to be a minimum size (GFA) of:
  - i) 38.5m<sup>2</sup> for studios and one bedroom apartments;
  - ii) 70m<sup>2</sup> for two bedroom apartments;
  - iii) 95m<sup>2</sup> for three bedroom apartments.
- 3 The residential component of mixed use buildings must contain at least one apartment for each 10 apartments (or part thereof) designed as adaptable housing in accordance with the provisions of AS4299-1995: *Adaptable Housing Class C*.
- 4 Each adaptable housing apartment must be provided with at least one disabled car parking space designed in accordance with AS2890.6.
- 5 At least 70% of apartments are to be "visitable" in accordance with the definition in *Volume C Part 3R.11 of this DCP*.

## VOLUME C

### 2R.1 ADAPTABLE HOUSING

Adaptable housing is housing that is designed with basic accessible features which can easily be complemented with further features to meet an individual's needs over time. The dwelling can be easily adapted, if required, to cater for the changing needs and capabilities of older persons or of persons with a disability, and then be readapted to a conventional unit should that occupant vacate the unit.



**"Visitable housing unit" is to be visitable by people who use wheelchairs, in that there must be at least one wheelchair accessible entry and path of travel to the living area and to a toilet that is either accessible (A toilet complying with the floor space requirements described in AS1428.1) or visitable (A toilet which has a space of minimum 1.25m in front of the toilet is either accessible or visitable).**

Adaptable housing requires design consideration – including floor levels, entrances/doorways/circulation space/sanitary facility/kitchen/bedroom/living areas, laundries, floors, lighting, fixtures and fittings. To obtain approval of an adaptable housing unit, detailed plans and description of the pre-adaptation and post-adaptation unit are to be provided.

Visitable housing is an important part of maintaining a connected community in which people are able to go to see family members and friends at home. Groups who benefit from visitable housing include families with strollers or prams for young children, older and frail aged people and persons with disability. Visitable housing is to provide a continuous path of accessible travel from the property frontage or carparking area to the living area and to a toilet that is either accessible or visitable and common areas within the building.

At a minimum no less than ten percent (>10%) of the units meet, as built, the technical specifications/requirements of AS4299-1995 as required by Council DCP.

There is proposed to be fifteen (of 141 units) accessible/adaptable unit, which is the requirements of Councils DCP, to be finished at construction to comply with the **enhanced features required by AS4299-1995 Adaptable Housing**. These enhanced features provides for accessibility/adaptability and liveability, for a person with disability, without restrictions (as far as possible) to their daily life routine.

The process of adaptation are all varying/needs specific parts of the adaptation process and are individual person oriented with no one adaptation suiting all.

## ➤ Accessible Housing;

### **What is an accessible and adaptable home?**

An **accessible** home is easy for people with access needs to live in or visit through simple changes like wider doors and hallways.

A level entry and wider doors can benefit a family with young children, while extra circulation space in the corridors and kitchen will benefit those who use wheelchairs. Access in the home can be improved through measures such as:

- stepless entry
- minimum clear door openings of 850mm
- minimum corridor widths of 1000mm
- easy grip door handles
- an accessible toilet on the ground level of the home
- no step into the shower
- car parking close to an accessible entrance

### ➤ Visitable Housing;

- 39 visitable apartments are provided in this development including 15 fully adaptable apartments = **27.7%** of all apartments. We also note that Council's DCP does not strictly apply to this development.
- Visitable housing is important to ensure that everyone can visit the homes of relatives, friends and neighbours.
- Everyone benefits from being able to readily visit others in their home or for everyone to be able to live temporarily in their home with a disability.
- Visitable dwellings allow everyone (including wheelchair users) to visit with dignity, stay overnight, and for an occupant with a disability to reside temporarily.
- In visitable dwellings the following is provided:
  - Access to and through the front door (i.e. wider door and no step)
  - Access into all rooms (i.e. wider doors and no steps) and adequate circulation space throughout
  - Appropriate door furniture such as lever door handles and reachable switches, outlets and controls.
  - All areas essential for visitability are located at the **entry level(s)** of a dwelling or are accessible via a lift or stair lift. This includes
    - Access to a living room, food preparation and eating area,
    - A bathroom with a hobbless (i.e. step free) shower, toilet,
    - A room for staying overnight.
- **Entry level (s)** is the level at which all people can enter a dwelling, including wheelchair users. There may be more than one entry level (e.g. with a lift) or the entry level may not be at street level (e.g. where the dwelling is on a slope and access is possible at another level).
- **AS4299 Adaptable housing.**

1.4.12 Visitable toilet – a toilet which has a space of minimum 1250 mm in front of the toilet × 900 mm wide clear of door swings and fixtures. (See Figure 1.1.)

### ➤ AS4299-1995 Adaptable housing;

The concept of 'Adaptable housing' or "barrier free/accessible" design has traditionally been considered 'special'- separate from mainstream housing design. Custom designed housing to meet the needs of people with disabilities can be expensive because they fall outside common design and building practices.

Adaptable design, or universal design, involves a move away from designing special accommodation for different community groups with different needs. It is design which avoids the personal and economic costs that accompany social dislocation.

**The objectives of 'Adaptable housing' standards are**

- a) That **housing is designed and constructed or altered** in a way which **satisfies the performance requirements for adaptable housing** enumerated in Clause 2.2 in having visitability, avoidance of level changes, manoeuvrability for occupants & visitors as well as ease of further adaptation.

- b) That housing is designed in such a way that **later alterations to suit individual requirements can be achieved at minimal extra initial cost.**
- c) That they are designed in such a way that it will adapt **to suite the widest range of lifetime needs.**
- d) The **initial design will allow** for visitability through an **accessible path of travel** to the living room and toilet.
- e) These units to meet the “adaptable housing” criteria must ensure that they are **capable of being adapted** with **relative ease** and at **minimal inconvenience** and cost (*AS4299 Foreword, principals (b).*

### **AS 4299 Adaptable housing;**

#### **Clause 2.2 Performance requirements.**

- (d) **Ease of adaptation** If the design for adaptation requires further demolition of walls then these walls shall be non load-bearing and free of electrical and plumbing services.

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**2.3 POTENTIAL FOR ADAPTATION** To obtain certification as an adaptable housing unit, ‘as built’ drawings showing the housing unit in its pre-adaptation and post-adaptation stages shall be provided. A description of how the adaptation is to be achieved shall also be provided.

The AS4299-1995 *Adaptable housing* “schedule of features for adaptable housing” should be provided as part of the “description of how the adaptation is to be achieved” for certification.

The AS4299-1995 *Adaptable housing* “schedule of features for adaptable housing” is also critical in ensuring that the appropriate requirements are in place at construction and final detail. This gives the schedule of features for completion to enable later adaptation without unforeseen complications and expenses.

The process of adaptation are all varying/needs specific parts of the adaptation process and are individual person oriented with no one adaptation suiting all people with disability.

### ➤ **Disability (Access to Premises-Buildings) Standard-2010.**

#### ***Purpose of the Premises Standards***

- 4. The purpose of the Premises Standards is to provide:
  - a nationally applicable set of provisions that detail what must be done to provide for non-discriminatory access to public buildings for people with disability
  - the first and perhaps the most significant step in the development of consistent and uniform requirements for non-discriminatory building access — bringing together the access requirements under the DDA and building law, and

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Premises Standards would harmonise the requirements of the Building Code and the Disability Discrimination Act in relation to access to buildings through incorporation of the Access Code into the Building Code. The Access Code forms Schedule 1 of the Premises Standards and contains its technical requirements.

## Part 2 Scope of Standards

### 2.1 Buildings to which Standards apply

- (1) Subject to subsection (2), these Standards apply to the following:
- (a) a new building, to the extent that the building is:
    - (i) a specified Class 1b building; or
    - (ii) a Class 2 building that has accommodation available for short-term rent; or

Access Code for Buildings      Schedule 1  
Access for people with a disability      Part D3

Class of building	Access requirements
<b>Class 2</b>	
Common areas in buildings where one or more <del>sole-occupancy units are made</del> available for short-term rent	<p>From a pedestrian entrance <i>required</i> to be accessible to at least one floor containing <i>sole-occupancy units</i> and to the entrance doorway of each <i>sole-occupancy unit</i> located on that level.</p> <p>To and within not less than one of each type of room or space for use in common by the residents, including a cooking facility, sauna, gymnasium, <i>swimming pool</i>, common laundry, games room, individual shop, eating area, or the like.</p> <p>Where a ramp complying with AS 1428.1 or a passenger lift is installed-</p> <ul style="list-style-type: none"> <li>(a) to the entrance doorway of each sole-occupancy unit; and</li> <li>(b) to and within rooms or spaces for use in common by the residents,</li> </ul> <p>located on the levels served by the lift or ramp.</p>
<b>Class 5</b>	To and within all areas normally used by the occupants.
<b>Class 6</b>	To and within all areas normally used by the occupants.

### ➤ STATE ENVIRONMENTAL PLANNING POLICY No 65 Design Quality of Residential Flat Development.

#### Aims of Policy:

The aims of this Policy are as follows:

- (a) improve the design quality of residential flat development in New South Wales,
- (b) recognises that the design quality of residential flat development is of significance for environmental planning for the State due to the economic, environmental, cultural and social benefits of high quality design,
- (c) Improving the design quality of residential flat development aims:
  - (a) to ensure that it contributes to the sustainable development of New South Wales:
    - (i) by providing sustainable housing in social and environmental terms, and
    - (ii) by being a long-term asset to its neighbourhood, and
    - (iii) by achieving the urban planning policies for its regional and local contexts,

- (d) to employ a balanced approach between obligations for retaining and mitigating the loss of existing affordable rental housing, and incentives for the development of new affordable rental housing,
- (e) to achieve better built form and aesthetics of buildings and of the streetscapes and the public spaces they define, and,
- (f) to better satisfy the increasing demand, the changing social and demographic profile of the community, and the needs of the widest range of people from childhood to old age, including those with disabilities, and

Adaptable design, or universal design, involves a move away from designing special accommodation for different community groups with different needs. It is design which avoids the personal and economic costs that accompany social dislocation.

➤ Best practice in today's residential infrastructure development is to provide ease of access for the highest level of "disadvantaged people" by the installation of access mediums such as ramps/accessible paths of travel/level entries and usable/adaptable interiors.

- ❖ These "disadvantaged people" include people with disability, the aging population and included (as they are disadvantaged by the use of steps only and narrow doorways etc) parents with prams.
- ❖ Parents with prams would also be considered disadvantaged as the difficulties encountered negotiating stairs with prams/pram occupants and other items are substantial. There is a greater degree of accessibility for a good proportion of their journey with ramp access to at least the entry foyer.
- ❖ Ramps and accessible paths of travel can be implemented, with zero or minimal extra cost of construction if designed into the development and not added on at a later date.


### **Adaptable Housing Component of development;**

At a minimum no less than ten percent (>10%) of the apartments are to the full technical specifications/requirements of AS4299 1995 *Adaptable housing* to Class B specifications as well as addressing that called for by KU-RING-GAI LOCAL CENTRES, DCP PART 8 *Mixed Use Development Controls* Point C5 *Apartment Mix and Sizes* distributed throughout the buildings.

As well as the required compliant "adaptable" units a percentage of the remaining units are "adaptable" to a level of, but not fully, the technical specifications of AS4299 *Adaptable housing*. Items like the clear turning area between "*opposing base kitchen cupboards*" as built may be the only obstacle to full technical compliance however is achievable in the adaptation process.

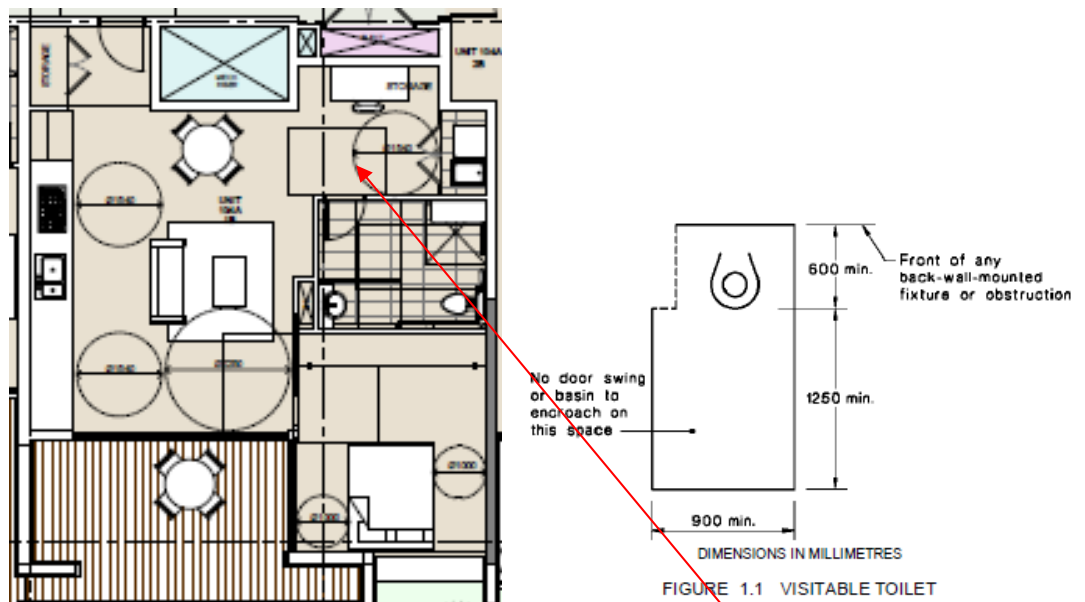
❖ **Example of adaption:** Apartments listed have the dimensions required to comply with AS4299 Adaptable housing.

1. The bathroom has the required dimensions to allow full adaption with the fitting of shower seat/grab rails and clear turning areas compliant fully with AS4299 or AS1428.2.
2. The bedroom has the required dimensions to allow full adaption with the wardrobe allowing the required clear 1540mm turning areas.
3. The living area has the required dimensions to allow full compliance.

Typical “Post adaption” showing 1540mm & 1000mm clear circulation spaces. 

Typical One Bedroom Unit Layout: Units 105A, 112A, 205A, 212A, 305A, 312A, 405A, 412A, & 206B.

Typical Two Bedroom Unit Layout: Units 105B, 108B, 205B, 208B, 305B, & 308B.




Plans show  for circulation space at doorways/hall width approaching a doorway.

Diagram shows Typical Example of Visitable bath room in One Bedroom Apartments; Example, Units 105A, 112A, 205A, 212A, 305A, 312A, 405A, 412A, & 206B.

The “adaptable” apartments are the number required by KU-RING-GAI LOCAL CENTRES, DCP PART 8 *Mixed Use Development Controls* Point C5 *Apartment Mix and Sizes* as shown above. Access to and within the adaptable apartments are called for in this document and BCA is provided as documented along with the provisions to satisfy the relevant standards,



- Each of the nominated “Adaptable” apartments has access to it by an uninterrupted path of travel from the street frontage and dedicated resident’s car parking spaces (via a lift) compliant with the requirements of **AS4299 Clause 3.3.2 Accessible pathway** and BCA Part D3.2 (c) (ii) and Council’s DCP Point C5 *Apartment Mix and Sizes*.
- Access is available to any common/communal areas courtyard/car wash bay, lift lobbies and its letterbox area as called for in **AS4299 Clause 3.3.3 Residential development (a).6**
- The entrance door, to each of these apartments, and their circulation area are of a dimension mandated by **AS1428.1 Clause 7.2 & 7.3**. The doors have a clear opening dimension of minimum 850mm & 820mm which is compliant with **AS4299 Clause 4.3 entrances, doorways & circulation spaces** as well as with AS1428.1 Clause 7.2 & Figure 11 and door circulation space dimensions are compliant with AS1428.1 Clause 7.3 & Figure 12.
- The entrance door hardware and locking mechanism as fitted are technically compliant with the requirements of AS4299 Clause 4.3.4 *Door handles and hardware*.
- Access for a wheelchair user to the private balcony of each of these units would be, if required by the adaptor, achieved by the use of a step ramp or other appropriate methods for other people with disability.

#### **Bathroom;**

- The bathroom is designed **to be “capable of adaption”** depending on the requirements of the adaptor. The highest degree of adaptation has the potential to meet the requirements of **AS4299-1995 Adaptable housing**.
- The bathroom has **the potential to comply** with AS1428.1 as specified in AS4299 Clause 4.4 *Sanitary facilities Part 1 General, All sanitary facilities and components shall be adaptable, at minimum cost, to potentially comply with AS1428.1 preferably with AS1428.2*.

The technical specifications for the bathroom are as follows,

- i. The entry door will be compliant with AS1428.1-2009 Clause 13.2 *Clear opening of doorways* with a minimum 850mm clear opening dimension.
- ii. The toilet pan is **able to be repositioned** in the adaptation process, **if required**, into the correct position as per **AS1428.1-2009 Clause 15.2.2 WC pan clearances & Figure 38 Water closet pan clearances, seat height and width** at 800mm to front of pan & 450mm centre from the side wall & the seat 470mm high. These are the same specifications set out in **AS4299 Figure 4.3**. This is also person specific to meet their own needs.
- iii. The grab rails/shower seat, if required in the adaptation process, will be **able to be fitted** correctly for position and design compliant with **AS1428.1-2009 Clause 15.2.7 & Figure 42 Position of grab rails in water closet** along with all other fittings and fixtures such as the basin/vanity and mirror etc adapted for adaptors requirements.
- iv. The clear turning circle requirement of 1540mm is present/achievable in the adaptation process to comply with **AS1428.2 Clause 6.2**

- v. It will be built with a hobbless shower area of the dimensions required and walls capable of having grab rails mounted in a manner to satisfy AS1428.1 Clause 10.2.8 & Figure 21. The currently installed shower screen is of a type easily removed if required in the adaptation process
- vi. Light frame walls with 12mm structural plywood reinforcing in required areas (AS4299 Clause 4.4.4 *Bathroom* (h) & Figure 4.5-4.7) are **capable of** having grab rails/shower seat mounted to satisfy AS1428.1 Clause 10.2.8 & Figure 21.

#### **Living area/Kitchen;**

- The required access to and within all living areas is provided or is achievable (if required & to extent required) in the adaptation process with the required circulation space in all area to satisfy the requirements of **AS4299 Clause 4.5.2 & 4.7.1**.
- The kitchen work surface/cupboard configuration has the potential to be adaptable to comply with the requirements/specifications of **AS4299 Clause 4.5.5**, and Figure 4.8.
- The required 1550mm clear turning area between opposing base kitchen cupboards is present to satisfy the requirements of AS4299 Clause 4.5.2 *Circulation prior to adaption* and thus AS1428.1 for guidance.

#### **Bedroom;**

- The bedroom has the potential to be adaptable to meet the requirements of **AS4299 Clause 4.6 Bedrooms** in being able to accommodate a queen size bed and wardrobe with the circulation space required of AS1428.2 Clause 6.2. The bedroom will accommodate a Queen size bed with the required clearances 1000mm to walls and a clear turning circle dimension between the bed and wardrobe fixtures of 1540mm as stipulated.
- The GPOs/light switches/telephone outlets/television outlets and other fittings/fixtures are installed in accordance with the specifications of AS4299 Clause 4.6.2 to Clause 4.6.7.

#### **Laundry area;**

- There is present the required clearance in front of appliances in the laundry area to be compliant with the requirements of AS4299 Clause 2.3 in that it has the “POTENTIAL FOR ADAPTION” to meet the specific needs of the adaptor.
- There is the “POTENTIAL” for the required clear turning area (AS4299 Clause 4.8 Laundry area Notes (1)) to be achieved on adaptation.
- For people with disability/occupant with disability (wheelchair users) the use of “clear floor space parallel approach” to the appliances, after adaption of the laundry has occurred, will in some cases be needed. Following is elaborated the technical detail.
  - It is proposed the AS1428.1 Clause 5.1.2 *Continuous path of travel*, of not less than 1000mm and using the requirements/specifications of AS1428.2 *Design for access and mobility, Enhanced and Additional*, Clause 22 *Reach ranges*, Part 2 *Side reach-Wheelchair users* for “clear floor space parallel approach” for allowances.

**4.8 LAUNDRY AREAS** If a separate room is used for a laundry, circulation spaces at doors shall be in accordance with AS 1428.1. Provision for adequate circulation space shall be made in front of or beside appliances and under or adjacent to the tub to enable people who use wheelchairs to use all the facilities.

NOTES:

- 1 An area of 1550 mm diameter will satisfy this requirement.
  - 2 For a work surface height of 870 mm a tub of maximum depth 210 mm is necessary to allow knee space underneath. Where a full depth laundry tub is provided knee space shall be provided beside it.
- 

### **RESIDENTIAL Basement Car parks:**

Typical under the building is a common basement car park for the residents of the apartments and visitors, and parking for commercial areas and is accessed from the abutting street, Havilah Lane.

- The appropriate “headroom” is present in the car park to satisfy the requirements of AS/NZS2890.6:2009 *Parking facilities-Off street parking for people with disability* Clause 2.4 *Headroom* for a general “floor to an overhead obstruction” measurement of 2200mm.
- The dedicated accessible (disabled) car parking spaces with 2500mm clearance above the majority of that area as detailed in Clause 2.4 & Figure 2.7 *Headroom required above car space*.
- The dedicated accessible (disabled) car spaces are provided at/in close proximity to the lift which services all level of the buildings. These, as stated, are for the nominated “adaptable” units as a person with disability would usually also require an accessible parking space. The location (NOT specified in AS2890.6-2009) of these dedicated spaces satisfies the requirements of **AS2890.1-2004, Off Street Parking, Part 2.4.5 (d)** in being in a location near a wheelchair accessible lift and are of the required technical dimension set out in **AS4299-1995 Adaptable housing** (parking space specifications applicable to the “Adaptable housing” BCA Class 2 buildings).
- The provision, numerically wise, of accessible (disabled) car parking spaces for the nominated “adaptable” units is in accordance with **AS4299-1995 Adaptable housing** which requires a length of six meters, width of 3.8 metres with an internal vertical clearance of 2.5 metres is achieved to satisfy these and all the requirements of AS2890.1-2002 *Off Street Parking*, Part 2.4.5 & Figure 2.6.
- The accessible (disabled) car parking space for each of the adaptable units and visitor spaces is proposed to be technically and feature designed to comply with the AS2890.2009 Part 6 *Parking facilities-Off street parking for people with disability* and Figure 22.
  - i. The parking space is proposed to be technically and feature designed to comply with the AS2890.2009 Part 6 *Parking facilities-Off street parking for people with disability* Section 2.2 *Parking space-dimensions* Point 1 *Angle parking spaces*.

This meets the requirements of AS4299-1995 *Adaptable housing* Clause 3.7 if being applied.

### 3.7 CAR PARKING

**3.7.1 General** Private car parking spaces shall be large enough to enable a person with a wheelchair to get in and out of both the car and the parking space. A car parking space width of 3.8 m minimum is necessary to enable a driver to alight, open the passenger side door, and assist a person with a disability into a wheelchair, or for a side-loading ramp. A 3.8 m, minimum width is also required for a driver with a disability to unload a wheelchair and to alight. A roof to the car parking space is desirable.

NOTE: If it is required to unload the wheelchair within the garage, an internal vertical clearance of 2.5 m is necessary to operate a car roof wheelchair unit.

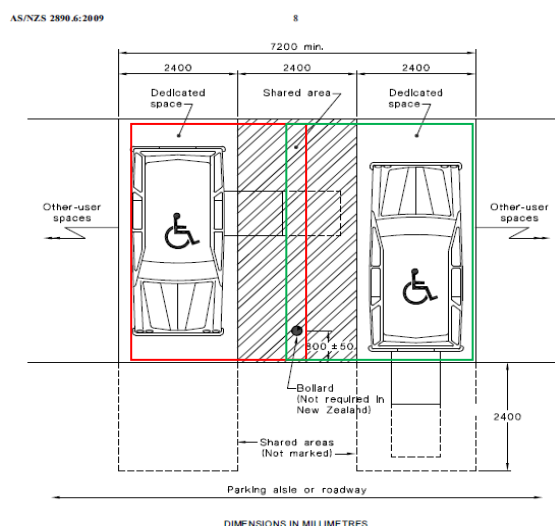


FIGURE 2.3 EXAMPLE OF TWO PARKING SPACES WITH A COMMON SHARED AREA—DIMENSIONS FOR AUSTRALIA ONLY\*

#### 1.3.2 Shared area

An area adjacent to a dedicated space provided for access or egress to or from a parked vehicle and which may be shared with any other purpose that does not involve other than transitory obstruction of the area, e.g. a walkway, a vehicular aisle, dual use with another adjacent dedicated space.

- This arrangement is a more usable configuration for all users (those with disability, 1 or 2 users, and need the wider spacing and those who do not) and pedestrians.
- The wheelchair accessible lift is provided for access to all levels of the building and has a lift car size no less than that required to be compliant with **AS1735.12 Lifts Escalators and Moving Walks, Section 2** (minimum 1400mm X 1600mm and door opening of 900mm). This will allow an unobstructed path of travel from the dedicated accessible (disabled) car parking spaces in this development for a person with disability.
- The lift car has the appropriate controls/grab rails and emergency phone/intercom system for operation by a person with disability satisfying the requirements of AS1735.12 Part 7.2 *Provision in lift cars*, Part 7.3 *Location* & Part 7.4 *Design*.

## **COMMON FEATURES.**

- There is proposed lift to provide access to all units level one as required by KU-RING-GAI LOCAL CENTRES, DCP PART 8 *Mixed Use Development Controls* Point C5 *Apartment Mix and Sizes* from residential parking and street front entrances to the entrance door of all units.
  - Access is provided (BCA/NCC-2014 Part D3.2 (a) (i) & (ii) for all residents “*from the main points of a pedestrian entry (Lindfield Avenue and Havilah Lane) at the allotment boundary*” and “*from another accessible building connected by pedestrian link*” by continuous accessible paths of travel, pedestrian links which are compliant with AS1428.1-2009 Clause 6 *Continuous accessible paths of travel* including from “drop off bays”.
  - The “Adaptable” apartments (all apartments) have access to them (“*to at least one floor (Ground Level) containing sole-occupancy units*” and “*to and main within not less than one of each type of room or space for use in common by the residents*”) by an uninterrupted accessible path of travel from the street frontages “*from the main points of a pedestrian entry (Lindfield Avenue and Havilah Lane) at the allotment boundary*” and dedicated resident’s car parking spaces (via lift) compliant with the requirements of AS4299 Clause 3.3.2 *Accessible pathway* and BCA/NCC Part D3.2 (c) (ii).
  - Provided is “a high level of accessibility to and within the development” meeting the “Objectives” of Council DCP including “*where a passenger lift is installed to the entrance doorway of each sole-occupancy*” unit as per BCA/NCC-2014 Part D3 Table 3.1 Class 2 (a).
  - Access is provided (BCA/NCC-2014 Part D3 Table 3.1 for all residents “*to and within not less than 1 of each type of room or space for use in common by the residents*” including the common room/outdoor terraces by continuous accessible paths of travel, pedestrian links which are compliant with AS1428.1-2009 Clause 6.
  - Access, via lift to all levels, is provided “to the entrance doorway of each sole-occupancy unit” in each of the residential units by continuous accessible paths of travel, pedestrian links compliant with AS1428.1-2009 Clause 6 and COUNCIL DCP.
    - A resident or prospective resident with disability would be aware of any anomalies of, due to the location/geographic factors gradient/topography of site, access/wheelchair accessible station, continuous accessible paths of travel which is provided “**to the maximum extent possible**” and their decision to accept these in becoming a resident.
    - The requirements of BCA/NCC-2014 Section D *Access and egress*, Part D3 *Access for people with disability* have been addressed.

Dimensions refer to finished surfaces (e.g., face of wall tiles and floor finishes).

Unless otherwise indicated, limiting dimensions for an inclined surface on a continuous accessible path of travel shall be taken as horizontal and vertical only.

## **6 CONTINUOUS ACCESSIBLE PATHS OF TRAVEL**

### **6.1 General**

A continuous accessible path of travel shall not include a step, stairway, turnstile, revolving door, escalator, moving walk or other impediment.

### **6.2 Heights of a continuous accessible path of travel**

The minimum unobstructed height of a continuous accessible path of travel shall be 2000 mm or 1980 mm at doorways (see Figure 2).

### **6.3 Width of a continuous accessible path of travel**

Unless otherwise specified (such as at doors, curved ramps and similar), the minimum unobstructed width (see Figure 2) of a continuous accessible path of travel shall be 1000 mm and the following shall not intrude into the minimum unobstructed width of a continuous accessible path of travel:

1. Direct street access or ramps, to the ground floor level retail and major retail (supermarket) areas is available from Lindfield Avenue, Kochia Lane and Havilah Lane (Parking entrance for non-residents) for the apartment lift foyers to hallways, staircases/lift lobbies and units.
  2. All residential floors are accessed by lift/stairs from the residential street front entrance foyers and from the basement levels of car parking.
- All stairways/walkways on the accessible paths of travel to and within the development, where applicable, are compliant with the requirements of AS1428.1-2009 (called upon by BCA) in their technical specifications.
  - All stairways, where applicable, are compliant in design and construction with **AS1428.1 Clause 9.1 Stair construction** and **Clause 9.2 Stairway handrails** and Figure 17.
  - All staircases/ramps are to comply with AS1428.1-2009 Clause 10.3 *Ramps*, Figure 14-19 & Clause 11 *Stairways*, Figure 26-29 in finish and construction detail as called for by KU-RING-GAI COUNCIL Development Control Plan No. 31 *Access* Clause 12 *Parking for disabled* Point 1.
  - All walkways/ramps have, where required, the required TGSI's at the top/intermediate and bottom landing compliant with **AS1428.4.2 Clause 2.2.3** and Figure A1.
  - All walkways/ramps and paths of travel are direct, clearly defined and without unnecessary barriers as called for by KU-RING-GAI COUNCIL Development Control Plan No. 31 *Access* Clause 12 *Parking for disabled* Point 1.
    - **These are** compliant with the design and technical specifications of AS1428.1-2009 *Design for access and mobility* Clause 10 *Walkways ramps and landings* for their gradients, surface finish and other relevant features.



- The entrance doors to the entrance foyers (and to the retail/commercial area/shop) and all their internal doors and their circulation area will be of a dimension mandated by **AS1428.1 Clause 7.2 & 7.3**. The doors have a clear opening dimension (Minimum 850mm for single leaf or at least one of a dual leaf door configuration) compliant with **AS1428.1 Clause 7.2** & Figure 11 and their internal and external circulation spaces compliant AS1428.1 Clause 7.3 & Figure 12.
- The entrance doorway to the entrance foyers (and to the retail/commercial area/shop) have a zero step entrance which is as called for in AS1428.1 Clause 6 *Continuous path of travel* Paragraph 3 *Accessways, walkways, ramps and landings shall be constructed with no lip or step at joints between abutting surfaces*.
- Access is available to the common/communal areas/lift foyers and its letterbox area as called for to be considered in **AS4299 Clause 3.3.3 Residential development (a)**.
- The letterboxes are centrally located, adjacent to street entry on a hard standing surface connected to an accessible path of travel compliance with AS4299 Clause 3.8 *Letterboxes*.
- Access is (BCA/NCC-2013 Table D3.1 & **DAtP-BS-2010**) provided “To and within all areas normally used by the occupant” of the retail/shop areas.
- The ground level is provided common use female/male sanitary facility compliant with BCA Part F2 *Sanitary and other facilities* and a unisex accessible (disabled) sanitary facility.
  - The technical specifications for this accessible (disabled) unisex toilet facilities which will be located in the same vicinity as the other facilities (as called for by BCA and relevant standards) will be as follows,
    - i. Located near the Female/Male toilet facilities in a central area with easy access for people with disability.
    - ii. The technical specifications (no less than the dimensions required by AS1428.1-2009 Clause 15.2 Accessible unisex sanitary facility at, typically but not limited to, 2300mm X 1900mm) for this accessible (disabled) unisex sanitary facility will be as follows,
    - iii. The entry door is compliant with **AS1428.1-2009 Clause 13.2** & Figure 30 with a minimum 850mm clear opening dimension and the maximum 5mm construction tolerance threshold specified by **AS1428.1-2009 Clause 7.2 Construction tolerances for abutting surfaces** Note: *a construction tolerance of up to 5mm is acceptable using rounded or bevelled edges*.
    - iv. The toilet pan is in the correct position as per **AS1428.1-2009 Clause 15.2.2 WC Pan clearance & Figure 28** at 800mm to front of pan & 450mm centre from the side wall & the seat 470mm high.
    - v. The grab rails are proposed to be fitted correctly (at pan) and design compliant with AS1428.1-2009 Clause 15.2.7 *Grab rails* & Figure 42 *Position of grab rails* as with all other fittings and fixtures.

- vi. The clear turning circle requirement of 1540mm and circulation spaces will be present to comply with AS1428.1-2009 Clause 15.6 *Circulation space in accessible sanitary facilities* or the called on requirements of AS1428.2-1992 Clause 6.2 Circulation space for 180° wheelchair turn with the required circulation spaces in front of the pan and basin.

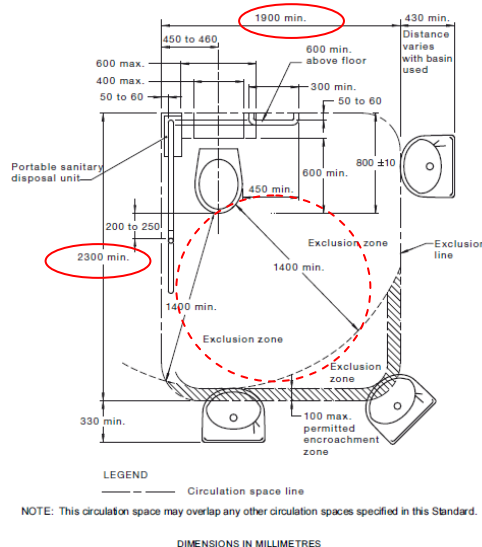


FIGURE 43 CIRCULATION SPACE FOR WC PAN—RIGHT-HAND TRANSFER  
(LEFT-HAND TRANSFER IS MIRROR REVERSED)

AS 1428.2—1992

6

**6.2 Circulation space for 180° wheelchair turn** The space required for a wheelchair to make a 180° turn shall be not less than 2070 mm in the direction of travel and not less than 1540 mm wide.

- vii. The appropriate signage is installed along with a locking mechanism on the sanitary facility entrance door for privacy.
- viii. The floor is of a slip resistant surface as specified in AS1428.1-2009 Clause 7 *Floor and ground surfaces on a continual accessible path of travel and circulation spaces.*
- Relevant sections of the surround built environment/public domain (footpaths/kerb ramps etc along adjoining roads) required to be completed as part of the development, to provide accessible paths of travel, are proposed to be compliant with KU-RING-GAI COUNCIL, DCP No. 31, ACCESS and the specifications set out in AS1428.1.
- This will provide obvious and safe pedestrian links from the site that provide accessible paths of travel to public transport services and/or local facilities/services or surrounding public spaces.
- This will satisfy the requirement of NSW Government, Department of Planning letter (Ref; MP 08-0244. File; SO8/01920-1. Dated 19<sup>th</sup> February 2009. Director General's requirements. Plans and documents, Item 5, dot point, Access report )

## **SECURITY & ACCESSIBILITY SEPARATION;**

- Access to the residential levels/sections is proposed to be appropriately restricted to residents and authorised persons with, it would be envisaged, an intercom type security system to be installed in each unit for authorising access to non-residents.
- Entry to the residential car parking basement levels is appropriately security restricted to residents and those with the appropriate authorised security clearance.

## **SUMMATION; 23-41 Lindfield Ave and 7, 11 Havilah Lane, Lindfield.**

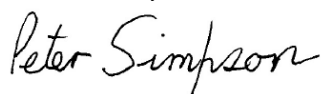
As documented above all areas, as far as possible, of compliance requirements of National Construction Code (BCA/NCC)-2014 Part D3, DDA 1992 and KU-RING-GAI LOCAL CENTRES, DCP PART 8 *Mixed Use Development Controls* Point C5 *Apartment Mix and Sizes*, KU-RING-GAI COUNCIL, DCP No. 31, *ACCESS* in regard accessibility for people with disability, have been catered for with this proposed development at 23-41 Lindfield Ave and 7, 11 Havilah Lane, Lindfield.

It is evident from the above that the requirements of Councils DCP have been implemented in the design of the dedicated “adaptable unit” and its surround built environment.

As detailed above it is proposed that overall not less than 10% of the units are adaptable (compliant with AS4299-1995 *Adaptable housing* Class B) as required by KU-RING-GAI LOCAL CENTRES, DCP PART 8 *Mixed Use Development Controls* Point C5 *Apartment Mix and Sizes* and not less than the adaptable apartments and 27.7% of apartments have a “visitable” sanitary facility with, at a minimum, the pan meeting the requirements on AS4299 *Adaptable housing* Clause 1.4.12 *Visitable toilet*.

This access is in a manner which complies with AS1428.1, AS4299 and BCA/NCC-2014 Part D3. The technical requirements called for in these standards, and related legislations/ DCPs, has been adhered to in addressing the Disability Discrimination Act 1992 legislation (and applicable technical detail for CC issuance) in regard to accessibility by, provision of appropriate housing and the rights/aspirations of people with disability.

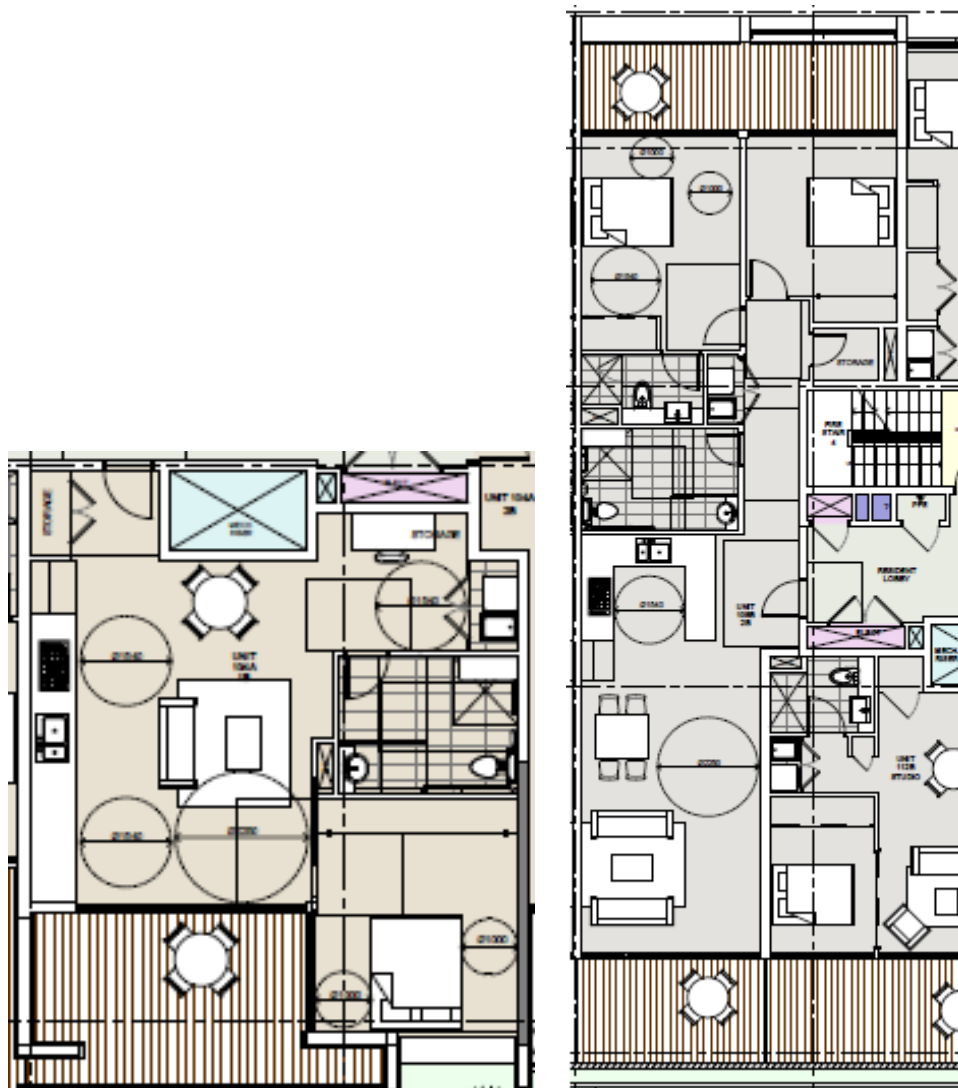
Yours sincerely



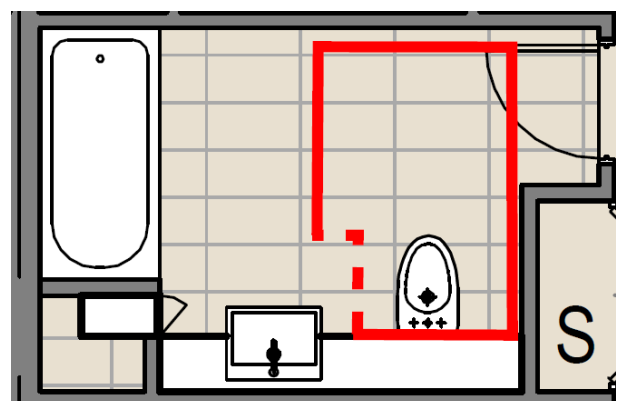
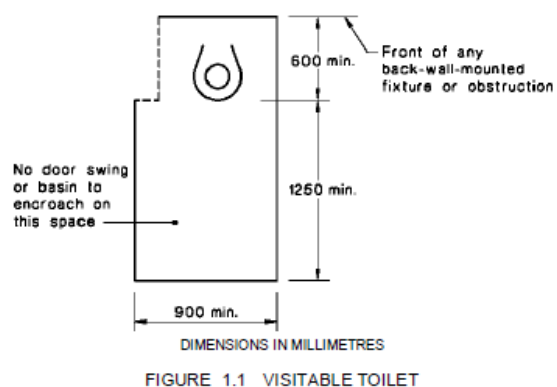
Peter Simpson

Accredited by,  
Association of Consultants in Access Australia  
Accreditation No. 185.

# APPENDIX ;

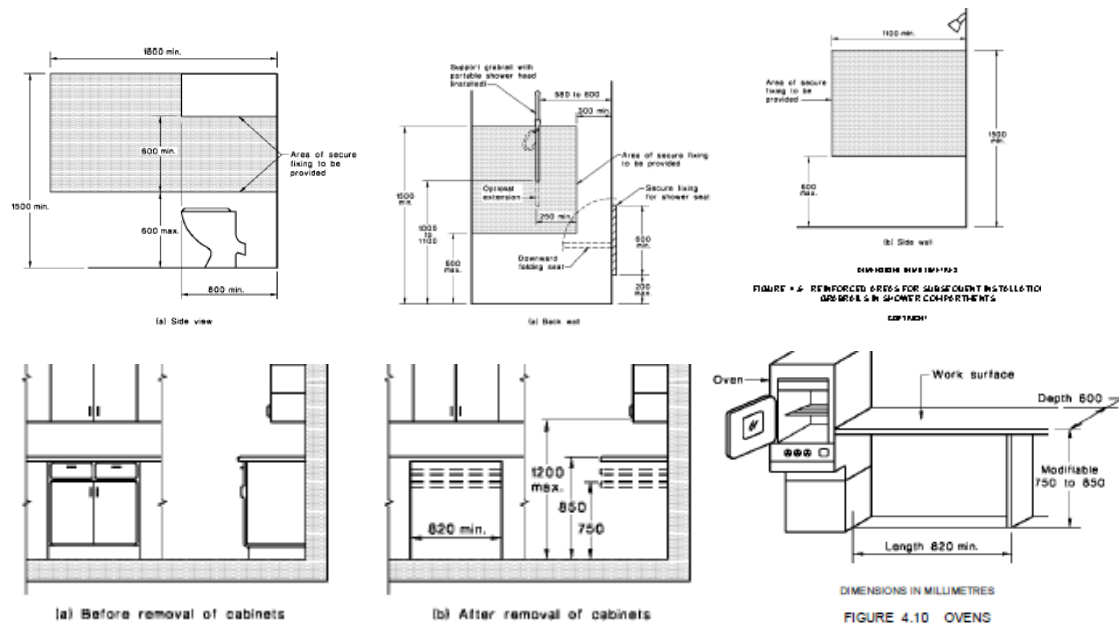


**Post Adapted Layouts for One and Two Bedroom Adaptable Apartment Types.**  
Reference Crone Partners Drawing CA 2924 ADAZ 6001 [G]



**UNIT No. 108A as EXAMPLE.**

## Reinforcing of light frame walls in bathroom.



Kitchen benches "Capable of".

APPENDIX A  
SCHEDULE OF FEATURES FOR ADAPTABLE HOUSING  
(Normative)

This schedule is a list of essential features to be incorporated into a housing unit for it to be termed an 'Adaptable House'. A higher level of 'Adaptable House' classification may be achieved by incorporating some or all of the desirable elements.

It is intended that this schedule be also used as a checklist to record the features incorporated.

**CLASSIFICATION LEVELS**

**Adaptable house class A** All essential and all desirable features incorporated.

**Adaptable house class B** All essential and 50% desirable features incorporated, including all those notated 'first priority'.

**Adaptable house class C** All essential features incorporated.

Item No.	Room/Item	Clause No.	Essential		First priority desirable		Desirable	
			Required feature	Certified by	Proposed feature	Certified by	Proposed feature	Certified by
	<b>DRAWINGS</b>							
1	Provision of drawings showing the housing unit in its pre-adaptation and post-adaptation stages	2.3	✓					
	<b>SITING</b>							
2	A level or gently sloping site with up to 1:14 gradient	3.2.2			✓			
3	A continuous accessible path of travel from street frontage and vehicle parking to entry complying with AS 1428.1	3.3.2	✓					
4	Additional paths and walkways to be continuous, slip-resistant and hard-surfaced with gradients complying with AS 1428.1	3.3.2					✓	
5	Within a residential estate development, common use facilities to be accessible	3.3.3			✓			
6	Within a residential estate development, street names with house numbers at each intersection	3.3.3					✓	
7	Within a residential estate development, internal roadways to be separate from pedestrian walkways	3.3.3			✓			
	<b>SECURITY</b>							
8	Pathway lighting shall be positioned at low height to avoid glare and to provide min. 50 lux at ground level	3.6.1			✓			
9	Clear line of sight from a well-lit vehicle drop-off point to safe pedestrian entry point	3.6.2			✓			



Item No.	Room/Item	Clause No.	Essential		First priority desirable		Desirable	
			Required feature	Certified by	Proposed feature	Certified by	Proposed feature	Certified by
	<b>LETTERBOXES IN ESTATE DEVELOPMENTS</b>							
10	Within residential estate developments, letterboxes centrally located adjacent to street entry. Lockable	3.8			✓			
11	Letterboxes to be on hard standing area connected to accessible pathway	3.8	✓					
12	Letterbox area roofed and in a well lit location	3.8			✓			
13	Parcel rack included with letterboxes	3.8			✓			
	<b>PRIVATE CAR ACCOMMODATION</b>							
14	Car parking space or garage min. area 6.0 m × 3.8 m	3.7.2	✓					
15	Roof to car parking space	3.7.1			✓			
16	Internal clearance of garage or carport 2.5 m min.	3.7.2					✓	
17	Provision for power-operated roller door to garage	3.7.2					✓	
18	Covered access to dwelling unit	3.7.3			✓			
19	Illumination level min. 50 lux	4.10			✓			
	<b>ACCESSIBLE ENTRY</b>							
20	Accessible entry	4.3.1	✓					
21	Entry protected by porch or similar	4.3.1					✓	
22	Accessible entry to be level (i.e. max. 1:40 slope)	4.3.2	✓					
23	Threshold to be low-level	4.3.2	✓					
24	Landing to enable wheelchair manoeuvrability	4.3.2	✓					
25	Accessible entry door to have 850 mm min. clearance	4.3.1	✓					
26	Weatherproofed entry door	4.3.3					✓	
27	Door lever handles and hardware to AS 1428.1	4.3.4	✓					
28	Provision for combined door/security door	4.3.5			✓			
29	Potential min. illumination level 300 lux	4.10			✓			
	<b>EXTERIOR: GENERAL</b>							
30	All external doors to be keyed alike	4.3.4					✓	
31	Provision for security screen to exterior opening or sliding windows and doors	4.7.6			✓			
	<b>INTERIOR: GENERAL</b>							
32	Internal doors to have 820 mm min. clearance	4.3.3	✓					
33	Internal corridors min. width of 1000 mm	4.3.7	✓					
34	Provision for compliance with AS 1428.1 for door approaches	4.3.7	✓					
35	Window sills at max. 730 mm above floor level to living and 600 mm above floor level to bedroom areas	4.7.2. and 4.6.2					✓	

Item No.	Room/Item	Clause No.	Essential		First priority desirable		Desirable	
			Required feature	Certified by	Proposed feature	Certified by	Proposed feature	Certified by
	<b>LIVING ROOM &amp; DINING ROOM</b>							
36	Provision for circulation space of min. 2250 mm diameter	4.7.1	✓					
37	Minimum 4 double GPOs	4.7.3			✓			
38	Telephone adjacent to GPO	4.7.4	✓					
39	Telephone outlet location between kitchen and living space, adjacent to GPO	4.7.4					✓	
40	Two TV antenna outlets adjacent to GPO (positioned so viewing from dining and kitchen is achievable)	4.7.5			✓			
41	Potential illumination level min. 300 lux	4.10	✓					
	<b>KITCHEN</b>							
42	Minimum width 2.7 m (1550 mm clear between benches)	4.5.2	✓					
43	Provision for circulation at doors to comply with AS 1428.1	4.5.1	✓					
44	Provision for benches planned to include at least one worksurface of 800 mm length, adjustable in height from 750 mm to 850 mm or replaceable. Refer to Figure 4.8	4.5.5	✓					
45	Refrigerator adjacent to work surface	4.5.5	✓					
46	Kitchen sink adjustable to heights from 750 mm to 850 mm or replaceable	4.5.6	✓					
47	Kitchen sink bowl max. 150 mm deep	4.5.6	✓					
48	Tap set capstan or lever handles or lever mixer	4.5.6(e)	✓					
49	Tap set located within 300 mm of front of sink	4.5.6(e)	✓					
50	Installation of thermostatic mixing valve	4.5.6(f)			✓			
51	Cooktops to include either front or side controls with raised cross bars	4.5.7	✓					
52	Cooktops to include isolating switch	4.5.7	✓					
53	Worksurface min. 800 mm length adjacent to cooktop at same height	4.5.7	✓					
54	Oven located adjacent to an adjustable height or replaceable work surface	4.5.8	✓					
55	Provision for microwave oven at height of 750 mm–1200 mm above floor	4.5.9					✓	
56	Central light with second light over sink. Potential illumination level min. 300 lux with 550 lux over work surfaces	4.10			✓			
57	Adjustable shelving: depth 600 mm max. up to 800 mm above floor; depth 450 mm max. from 800 to 1500 mm above floor; depth 300 mm max. above 1500 mm	4.5.10					✓	

Item No.	Room/Item	Clause No.	Essential		First priority desirable		Desirable	
			Required feature	Certified by	Proposed feature	Certified by	Proposed feature	Certified by
58	Locate handles towards the top of below bench cupboards and towards the bottom of overhead cupboards. Provide 'D' pull handles	4.5.10			✓			
59	GPOs to comply with AS 1428.1. At least one double GPO within 300 mm of front of worksurface	4.5.11	✓					
60	GPO for refrigerator to be easily reachable when the refrigerator is in its operating position	4.5.11	✓					
61	Slip-resistant floor surface	4.5.4	✓					
	<b>MAIN BEDROOM</b>							
62	At least one bedroom of area sufficient to accommodate queen size bed and wardrobe and circulation space requirements of AS 1428.2	4.6.1	✓					
63	Two double GPOs on wall where bedhead is likely to be	4.6.3			✓			
64	Minimum of one GPO on opposite wall	4.6.3					✓	
65	Telephone outlet next to bed on the side closest to door (with GPO adjacent to telephone outlet)	4.6.5			✓			
66	TV antenna point and double GPO on opposite wall to bedhead	4.6.6			✓			
67	2-way light switches, one located above bed. 1000 mm high above floor	4.6.4			✓			
68	Potential illumination level 300 lux	4.10			✓			
69	Sliding doors on wardrobe with full length mirror	4.6.7					✓	
	<b>OTHER BEDROOMS</b>							
70	Two double GPOs on one wall. Minimum of one GPO on opposite wall	4.6.3			✓			
71	Two-way light switch	4.6.4			✓			
72	Telephone outlet next to double GPO	4.6.5			✓			
73	TV antenna point adjacent to one GPO	4.6.6			✓			
74	Potential illumination level 300 lux	4.10			✓			
	<b>BATHROOM</b>							
75	Provision for bathroom area to comply with AS 1428.1	4.4.1	✓					
76	Slip-resistant floor surface	4.4.2	✓					
77	Shower recess-no hob. Minimum size 1160 × 1100 to comply with AS 1428.1. (Refer Figures 4.6 and 4.7)	4.4.4(f)	✓					
78	Shower area waterproofed to AS 3740 with floor to fall to waste	4.4.4(f)	✓					
79	Recessed soap holder	4.4.4(f)	✓					
80	Shower taps positioned for easy reach to access side of shower sliding track	4.4.4(f)	✓					
81	Shower waste min. 80 mm diameter	4.4.4(f)					✓	

Item No.	Room/Item	Clause No.	Essential		First priority desirable		Desirable	
			Required feature	Certified by	Proposed feature	Certified by	Proposed feature	Certified by
82	Provision for adjustable, detachable hand held shower rose mounted on a slider grabrail or fixed hook (plumbing and wall-strengthening provision)	4.4.4(h)	✓					
83	Provision for grabrail in shower (Refer to Figure 4.7) to comply with AS 1428.1	4.4.4(h)	✓					
84	Provision for additional grabrail	4.4.4(h)			✓			
85	Provision for folding seat in shower to comply with AS 1428.1	4.4.4(h)					✓	
86	Tap sets to be capstan or lever handles with single outlet	4.4.4(c)	✓					
87	Installation of thermostatic mixing valve	4.4.4(b)			✓			
88	Provision for washbasin with clearances to comply with AS 1428.1	4.4.4(g)	✓					
89	Wall cabinet with light over or similar	4.4.4(d)			✓			
90	Double GPO beside mirror	4.4.4(d)	✓					
91	Potential illumination level 300 lux generally with 600 lux task lighting	4.10			✓			
	<b>TOILET</b>							
92	Provision of either 'visitable toilet' or accessible toilet	4.4.3	✓					
93	Provision to comply with AS 1428.1	4.4.1	✓					
94	Location of WC pan at correct distance from fixed walls	4.4.3	✓					
95	Provision for grab rail zone. (Refer Figure 4.6)	4.4.4(h)	✓					
96	Slip resistant floor surface. (Vitreous tiles or similar)	4.4.2	✓					
97	Recessed toilet roll holder	4.4.3					✓	
	<b>LAUNDRY</b>							
98	Circulation at doors to comply with AS 1428.1	4.8	✓					
99	Provision for adequate circulation space in front of or beside appliances (min. 1550 mm depth)	4.8	✓					
100	Provision for automatic washing machine	4.8(e)	✓					
101	Provision for drier	4.8(f)			✓			
102	Where clothes line is provided, an accessible path of travel to this	4.8(a)	✓					
103	Installation of thermostatic mixing valve	4.8(d)			✓			
104	Taps positioned at side of tub	4.8(c)					✓	
105	Double GPO	4.8(g)	✓					
106	Provision of shelf for soaps and similar, 1200 mm max. height	4.8(h)					✓	
107	Potential illumination level 300 lux generally with 550 lux task lighting	4.10			✓			
108	Slip-resistant floor surface	4.9.1	✓					

Item No.	Room/Item	Clause No.	Essential		First priority desirable		Desirable	
			Required feature	Certified by	Proposed feature	Certified by	Proposed feature	Certified by
	<b>STORAGE</b>							
109	Linen cupboard min. 600 mm wide with adjustable shelving	4.11.5			✓			
	<b>DOOR LOCKS</b>							
110	Door hardware operable with one hand, located 900–1100 mm above floor	4.3.4	✓					
	<b>FLOOR COVERINGS</b>							
111	Slip resistant surfaces — balconies and external paved areas. (Vitreous tile or similar)	4.9.1			✓			
	<b>ANCILLARY ITEMS</b>							
112	Switches located 900–1100 mm above floor in line with door handles	4.11.1			✓			
113	GPOs located not less than 600 mm above floor	4.11.1			✓			
114	Electrical distribution board located inside housing unit	4.11.2					✓	
115	Window controls located in an accessible position	4.11.4					✓	
	<b>GARBAGE</b>							
116	Provision for bin in an accessible location	4.11.6			✓			
117	Provision for external wheelchair storage	4.11.6					✓	
118	Provision for external battery charging facility	4.11.6					✓	
119	Guide dog accommodation	4.11.6					✓	

**IMPLEMENTATION** The Table indicates essential/desirable categories and the level required of the feature noted. All essential items are pre-checked in the 'essential' features column. The independent certifier must initial the second column to confirm the item has been incorporated into the building.

The developer/builder shall indicate which 'first priority desirable' and 'desirable' features are intended to be incorporated in the 'adaptable house' by checking the relevant boxes. The independent certifier must initial the second column to confirm the item has been incorporated into the building.

Upon addition of the number of 'first priority desirable' and 'desirable' features provided, and conversion to a percentage of the total possible desirable features, the classification level can be ascertained.

The certifier should sign the checklist as to the class of adaptable housing achieved.

No. of desirable features incorporated

Add number of first priority desirable features

Total

$$\begin{array}{|c|} \hline \\ \hline \\ \hline \\ \hline \end{array} = \begin{array}{|c|} \hline \\ \hline \end{array} \% \text{ of } 64 \text{ possible desirable features}$$

NOTE: Minimum 50% must be achieved for class B certification; 100% must be achieved for class A certification.