



DESIGN CONFIDENCE

MHNDUnion  
Adaptable Housing Assessment Report

Development Application

17-19 Sydney Road  
Manly NSW 2095

Project: 17-19 Sydney Road, Manly  
Document Type: Adaptable Housing Assessment Report  
Our Reference: P221\_387-2 (AS4299) KG

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Revision History—

OUR REFERENCE	REMARKS	ISSUE DATE
P221_387-1 (AS4299) KG	Draft report issued to client	15 November 2022
P221_387-2 (AS4299) KG	FINAL report issued to client	6 December 2022

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## 1.0 INTRODUCTION

### 1.1 General

This Adaptable Housing Assessment Report has been prepared at the request of MHNDUNION and relates to the proposed mixed-use development located at 17-19 Sydney Road, Manly.

### 1.2 Basis of Assessment

This report is based upon This report is based upon *Class C essential provisions*, as required by *Australian Standard AS4299-1995 Adaptable Housing*, Standards Australia, 1995.

The concept of The Adaptable Housing Code is to provide guidelines for adaptable housing that can be modified easily in the future to become accessible to both occupants and visitors at little personal and economic cost.

### 1.3 Documentation Provided for Assessment

This adaptable housing assessment is based upon the architectural documentation prepared by MHNDUNION and listed within **Appendix 1**.

### 1.4 Limitations

This report is based upon, and limited to, the information depicted in the documentation provided for assessment and does not make any assumptions regarding design intention or the like.

### 1.5 Report Exclusions

It is conveyed that this report should not be construed to infer that an assessment for compliance with the following has been undertaken—

- (i) The National Construction Code 2019, Volume One, Building Code of Australia Class 2 to Class 9 Buildings, The Australian Building Codes Board; and
- (ii) Work Health & Safety Act and Regulations; and
- (iii) Work Cover Authority requirements; and
- (iv) Structural and Services Design Documentation; and
- (v) The Disability Discrimination Act (DDA) 1992; and
- (vi) The individual requirements of service authorities (i.e. Telecommunication Carriers, Sydney Water, Energy Australia).

### 1.6 Interpretation Notes

To provide the reader with additional context the following information regarding assessment methodology used in this assessment is provided below—

- (i) Movable furniture is the ongoing responsibility of the occupants who should maintain appropriate circulation spaces between and around furnishings;
- (ii) For an assessment of the accessibility provisions as required by the BCA 2019 Amendment 1, refer to the report prepared by Design Confidence [reference P221\_387-2 (ACCESS) KG]

## 2.0 DEVELOPMENT DESCRIPTION

### 2.1 Purpose of Report

The purpose of this report is to identify the extent to which the architectural design documentation complies with the provisions of AS4299-1995, specifically the Class C requirements.

In accordance with AS4299-1995 *Adaptable Housing*, adaptable housing units shall be designed and constructed to meet the following Performance Requirements:

- (i) **Visitability:** to ensure there is at least one accessible entry and path of travel to the living area and to a toilet;
- (ii) **Avoidance of level changes:** to have no steps where possible;
- (iii) **Manoeuvrability:** to ensure suitable circulation to manoeuvre a wheelchair within the living area, kitchen, bedroom and bathroom/toilet;
- (iv) **Ease of adaptation:** to ensure any walls proposed to be demolished to be non-loadbearing and free of electrical and plumbing services;
- (v) **Ease of reach:** to ensure controls (such as light switches and taps) and shelves/cupboards at suitable levels for people who use wheelchairs; and
- (vi) **Future laundry facilities:** to ensure laundry facilities after adaptation will be accessible to people who use wheelchairs.

Northern Beaches Council requires adaptable housing to be provided at a rate of 25%. It is understood that variation to 25% provision is given due to the constrained nature of the site. Requirement for adaptable units is subject to confirmation from planning consultant.

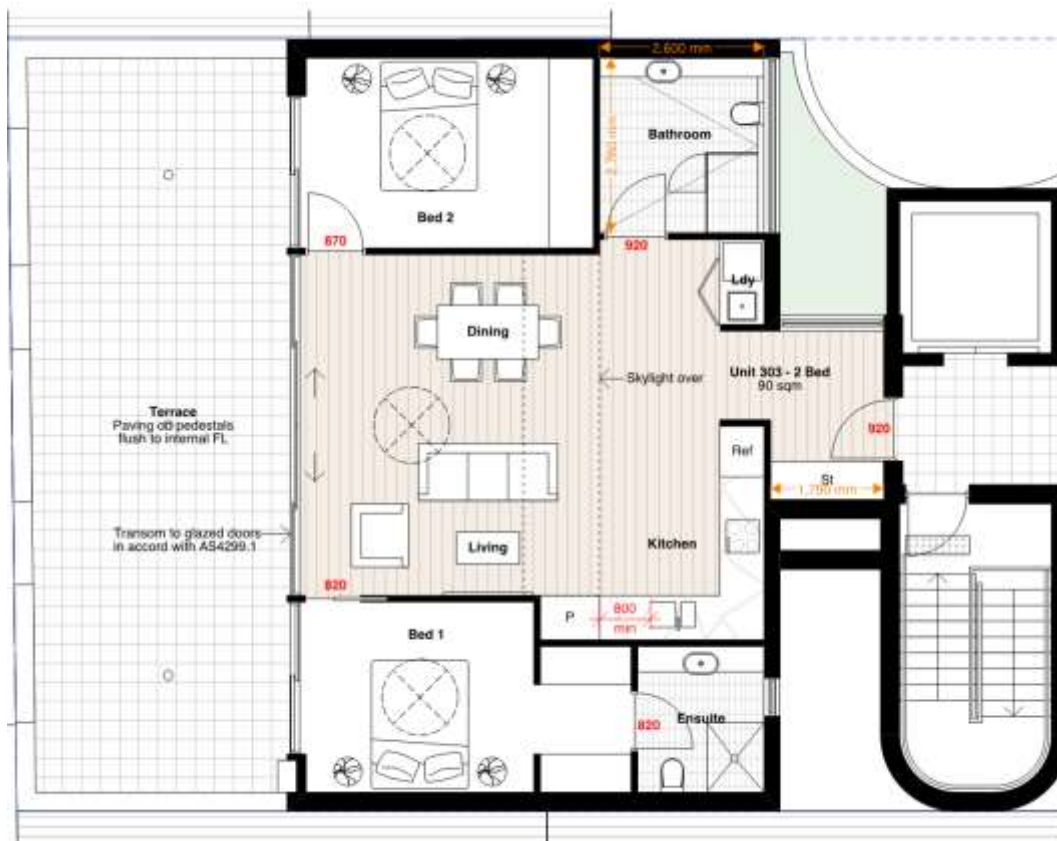
### 2.2 Development Description

A total of 11 residential units are proposed within the subject development, being one (9.1%) designated as adaptable units, as follows:

- (i) Unit Type 1 - Unit 303 has been designated as Class C adaptable unit, as shown below in **Figure 01 to 02.**



**Figure 1 - Unit type 1 (pre-adaptation)**



**Figure 2 - Unit type 1 (post-adaptation)**

## 3.0 AS4299-1995 ASSESSMENT SUMMARY

### 3.1 General

The following table summarises the compliance status of the architectural design in terms of the prescriptive provisions of each *Essential* Feature within AS4299 – 1995 and indicates a **capability for compliance** ('COMPLIES') with Class C requirements.

A detailed analysis and commentary are provided in **Section 4.0** of this report in the instance that prescriptive non-compliance occurs ('DOES NOT COMPLY') or further 'DESIGN DETAIL' is required.

Such instances should not necessarily be considered design deficiencies, but rather matters which need to be considered by the design team, the certifying authority and all other relevant stakeholders as design progresses.

### 3.2 Schedule of Essential Features – Class C

AS4299-1995 CLAUSE	COMPLIES	DOES NOT COMPLY	DESIGN DETAIL
2.3 Drawings			✓
3.3.2 Siting			✓
3.6 Security			✓
3.7.2 Private car accommodation		N/A	
3.8 Letterboxes			✓
4.3 Accessible entry			✓
4.2 Interior - general			✓
4.7 Living areas			✓
4.5 Kitchen			✓
4.6.1 Main bedroom			✓
4.4 Sanitary facilities			✓
4.8 Laundry			✓
4.11 Ancillary items			✓

## 4.0 AS4299-1995 DETAILED ASSESSMENT

### 4.1 General

With reference to the AS4299-1995 Assessment Summary contained in **Section 3.0** above, the following analysis and commentary is provided.

This commentary is formulated to enable the design documentation to be further progressed, for the purpose of evidencing the attainment of compliance with the relevant provisions of AS4299-1995, specifically Class C Essential Features.

### 4.2 Detailed Assessment

#### 4.2.1 Drawings

Drawings have been provided for one (01) adaptable unit type, demonstrating both pre-adaptation and post-adaptation layouts, in accordance with AS4299-1995.

#### 4.2.2 Siting

Reference is made to the Access Design Assessment Report prepared by Design Confidence [ref. P221\_387-2 (ACCESS) KG].

Siting specification shall detail the following—

- (i) A continuous accessible path of travel, in accordance with AS1428.1-2009 is to be provided from street frontage carparking area or drop off point to all adaptable housing units; and
- (ii) The accessible path of travel to the entrance of adaptable housing units shall be continuous, slip-resistant, hard-surfaced and shall not incorporate any step, stairway or other impediment, compliant with AS1428.1-2009.

#### 4.2.3 Security

Specification shall detail the following—

- (i) An even degree of light shall be provided along main accessible pathways; and
- (ii) A minimum lighting level of 50 lux at ground level shall be provided.

#### 4.2.4 Private car accommodation

The following comment/s is/are provided in this regard—

DESCRIPTION	COMMENT	RESOLUTION
General	Nil (0) car parking spaces have been provided to proposed development.	Nil further action required. Proposed development has not been provided with car parking; therefore, nil adaptable unit car parking is required.



DESCRIPTION	COMMENT	RESOLUTION
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Car parking accommodation shall detail the following—

- (i) One car parking space per adaptable unit to be provided with dimensions in accordance with AS4299-1995 or AS/NZS 2890.6:2009;
- (ii) Adaptable car spaces and associated shared zone to have a minimum vertical clearance no less than 2500mm. The vertical clearance leading to the accessible car spaces may not be less than 2200mm; and
- (iii) Dedicated spaces and shared zones are to have space delineation in accordance with AS/NZS 2890.6:2009;
- (iv) The requirement for a symbol of access to be placed on the pavement shall not apply to any privately-owned parking space for people with disabilities associated with a single residence and intended primarily for use by occupants of that residence.

#### 4.2.5 Letterboxes

The following comment/s is/are provided in this regard—

DESCRIPTION	COMMENT	RESOLUTION
General	Letterboxes are partially located on a grade 1:20.	Level of detail provided is suitable for DA stage.  Ensure letterbox for adaptable unit is located on a hard-standing area connected to an accessible pathway to the adaptable units grade 1:40, in accordance with the requirements of AS4299-1995.

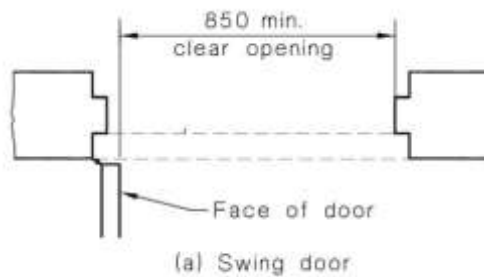
Specification shall detail the following—

- (i) External letterboxes shall be located on a hard-standing area with a maximum grade of 1:40, connected to an accessible pathway to the adaptable housing unit, in accordance with AS4299-1995.

#### 4.2.6 Accessible entry

The accessible entry shall be detailed as follows—

- (i) Entry door to have clear opening width and circulation space (hinge and latch side clearance) in accordance with AS1428.1-2009, see **Figure 03** below for door clear opening width requirements;



**Figure 2 - Clear opening of doorways**

- (ii) Where exposed to the weather, the entry door to have a level landing (an area of 1550mm diameter with a maximum 1:40 gradient) with a low threshold to exclude water, compliant with AS4299-1995;
- (iii) The operational force of entry doors to be lightweight in design to satisfy the operational requirements of AS1428.1-2009 (where provided, door closers to be adjusted to satisfy this requirement); and
- (iv) Door hardware to be operable with one hand and located at a suitable location in accordance with AS1428.1-2009—
  - a. D-pull or D-lever type handles with a return;
  - b. Have a minimum 35-45mm clearance between the handle and the backplate of the door face;
  - c. Be located between 900-1100mm above FFL.

#### 4.2.7 Interior – General

The following comment/s is/are provided in this regard—

DESCRIPTION	COMMENT	RESOLUTION
Non-designated doors	Ensure doors to other areas than rooms designated to be adaptable must be provided with minimum 820mm clear opening at pre-adaptation stage. This usually requires an 870mm wide door leaf.	N/A

The internal circulation areas shall be detailed as follows—

- (i) Floor within units is to be level throughout, if split-levels are used, they are to either incorporate scope for a ramp compliant with AS1428.1, or all essential features are to be located on one level (i.e. entry, living area, kitchen and WC);
- (ii) Circulation spaces to be capable of modification to comply with AS1428.1-2009 as a minimum;
- (iii) Doors, other than the main bedroom, main bathroom, laundry and kitchen doors, to have clear opening width of 820mm at pre-adaptation;
- (iv) Internal corridors to have a minimum width of 1000mm at pre-adaptation;
- (v) Door hardware to be operable with one hand and located at a suitable location in accordance with AS1428.1-2009—

- a. D-pull or D-lever type handles with a return;
- b. Have a minimum 35-45mm clearance between the handle and the backplate of the door face;
- c. Be located between 900-1100mm above FFL.

#### 4.2.8 Living area

The Living Room plan and specification shall detail the following—

- (i) Provision shall be made for a circulation space to enable a 360° wheelchair turn, after furniture has been placed (2250mm diameter turning space will satisfy this requirement);
- (ii) Indicate provision for a telephone outlet adjacent a power point;
- (iii) Full height glazed panels or door units where provided shall have a transom at 600-730mm above floor level. Glazing shall be of a safety glazing material;
- (iv) GPOs shall be located not less than 500mm horizontally from internal corners; and
- (v) Potential illumination level within living areas to be a minimum 300 lux.

#### 4.2.9 Kitchen

The following comment/s is/are provided in this regard—

DESCRIPTION	COMMENT	RESOLUTION
Workspace – sink	Reduced workspace is proposed besides the cooktop.	Level of detail provided is suitable for DA stage. Provide minimum 800mm wide workspace besides the cooktop. Note that corner space cannot be included.
Continuous tiling	Ensure continuous tiling is proposed below all kitchen cabinets.	Level of detail provided is suitable for DA stage. As design progresses further detail will be required.

The kitchen plan and specification shall detail the following—

- (i) A minimum clearance of 1550mm between all opposing base cabinets and walls to be provided at the outset, to allow for a 180° turn, in accordance with AS1428.1;
- (ii) Ensure at pre-adaptation continuous tiling / floor surface is provided under all base cabinets to allow for joinery to be reconfigured and that capped services are provided where required to ensure adaptation is at minimal cost and inconvenience.
- (iii) Kitchen door to have a clear opening width of 850mm and circulation spaces in accordance with AS1428.1-2009;
- (iv) Benches to include 800mm work surface adjacent to the sink and cooktop;
- (v) Provide a workspace adjacent to the refrigerator;

- (vi) Kitchen sink to be adjustable from 750mm-850mm in height, or replaceable as a unit, plumbing shall be installed to accept supply and drainage connections for sinks mounted at the heights specified;
- (vii) The tap set shall have levers or sensor plate controls located no greater than 300mm from the front of the bench;
- (viii) The cooktop shall be provided with an isolation switch and controls which do not require reaching over hotplates and controls shall have raised cross-bars for ease of grip;
- (ix) Elevation drawings to indicate location of oven to be located adjacent to a work surface (oven to be located underneath cooktop) Where oven doors are hinged, the clear work surface to be on the opposite side to the hinge;
- (x) Provision shall be made for a microwave shelf to be installed or replaced at any height between 750mm and 1200mm above FFL;
- (xi) At least one double power point outlet within 300mm of the front of a work surface, and one provided for a refrigerator in such a position as to be easily accessible after the refrigerator is installed;
- (xii) Hot water systems to be installed to deliver hot water at a maximum of 50°C at the hot water outlet;
- (xiii) Door pulls or handles for wall cabinets shall be capable of operation without a firm grip. A minimum 50mm clearance shall be provided between the handle and any obstruction; and
- (xiv) The floor surface shall have a slip resistance wet pendulum test rating of P2, in accordance with AS/NZS4586:2004 / SA HB 198:2004.

#### 4.2.10 Main bedroom

The following comment/s is/are provided in this regard—

DESCRIPTION	COMMENT	RESOLUTION
Wall to be demolished	Drawings indicate internal wall is proposed to be demolished at post-adaptation to achieve required turning space at the foot of the bed.	All walls to be demolished shall be non-load bearing and free of any electrical, plumbing and other services.

The accessible bedroom plan and specification shall detail the following—

- (i) The main bedroom shall be capable of accommodating a queen size bed (1530 x 2030mm), a wardrobe and the circulation space requirements of AS1428.2, clear of wardrobe fixtures;
- (ii) A minimum of two double socket general purpose outlets shall be provided on the wall of the bedroom where the bedhead is likely to be located; and
- (iii) Main bedroom door to have 850mm clear opening width and circulation spaces in accordance with AS1428.1-2009.

#### 4.2.11 Sanitary facilities

The following comment/s is/are provided in this regard—

DESCRIPTION	COMMENT	RESOLUTION
Floor falls	Drawings indicate floor falls at pre-adaptation differ to what is required for post-adaptation.	Ensure floor falls at pre-adaptations stage suit post-adaptation floor falls requirements.
Capped services	Capped services will be required as the sanitary fixtures are proposed to be relocated at post adaptation.	Level of detail provided is suitable for DA stage. As design progresses further detail will be required.
Walls – reinforcement	Ensure bathroom walls that are proposed to have grab-rails installed are provided with reinforcement.	Level of detail provided is suitable for DA stage. As design progresses further detail will be required.

The bathroom plan and specification shall detail the following—

- (i) All sanitary facilities and components shall be adaptable, at minimum cost, to potentially comply with AS1428.1 as a minimum. Any walls that are to be moved or demolished must non-loadbearing and free of electrical and plumbing services and capped services shall be provided where required;
- (ii) Each housing unit shall be provided with either a visitable toilet or an accessible toilet, in accordance with AS1428.1. Where a separate toilet and bathroom are used with the intention of future unification, the WC pan shall initially be positioned at the correct distance from fixed walls;
- (iii) Main bathroom door to have 850mm clear opening width and circulation space in accordance with AS1428.1-2009. An exception can be made to the positioning of the washbasin, which can be located a minimum of 300mm clear of the swing of the door;
- (iv) A shower shall be provided in accordance with AS1428.1. Provide a shower recess with a level area (i.e. no hob) across the compartment and waterproofed to comply with AS3740;
- (v) The washbasin shall be located so that circulation space and knee clearance can achieve compliance with AS1428.1 at post adaptation;
- (vi) Where shower, bath and WC grabrails are not provided from the outset and framed walls are used, reinforced areas for secure fixing shall be provided to support future grabrails;
- (vii) Provide a double GPO beside the mirror (in the post-adapted location);
- (viii) Tap sets throughout shall have capstan or lever handles;
- (ix) Hot water systems to be installed to deliver hot water at a maximum of 50°C at the hot water outlet; and
- (x) The floor surface shall have a slip resistance wet pendulum test rating of P2, in accordance with AS/NZS4586:2004 / SA HB 198:2004.

#### 4.2.12 Laundry

The following comment/s is/are provided in this regard—

DESCRIPTION	COMMENT	RESOLUTION
General	Doors to laundry cupboard are proposed to be removed at post-adaptation stage to allow for clear access to laundry.	Nil further action required at this stage.

The Laundry plan and specification shall detail the following—

- (i) Provision for adequate circulation space (1550mm diameter) shall be made in front of or beside appliances;
- (ii) If a separate room is provided for laundry, the door is to have 850mm clear opening width and circulation space in accordance with AS1428.1-2009;
- (iii) Provision to be made for an automatic washing machine;
- (iv) Provide a continuous accessible path of travel to a clothesline, where provided;
- (v) A double general power outlet shall be provided;
- (vi) Hot water systems to be installed to deliver hot water at a maximum of 50°C at the hot water outlet; and
- (vii) The floor surface shall have a slip resistance wet pendulum test rating of P2, in accordance with AS/NZS4586:2004 / SA HB 198:2004.

#### 4.2.13 Ancillary items

Specification shall be detailed as follows—

- (i) Light switches shall be located at a height not less than 900mm not more than 1100mm above FFL, and in line with door handles;
- (ii) Switches shall be located adjacent to door handles where practical;
- (iii) Except where elsewhere described (refer to kitchen and bathroom), GPOs shall be located at a height of not less than 600mm, with a preferred height of 1000mm above FFL, and in line with door handles; and
- (iv) GPOs shall be located not less than 500mm horizontally from internal corners.

## 5.0 CONCLUSION

### 5.1 General

Our strategy for ensuring compliance will be refined and documented during the design process in conjunction with the continual development of the architectural documentation, as required.

Based upon our assessment to date we are of the opinion that the subject development is capable of achieving compliance with the relevant *Class C* provisions of the *Australian Standard AS4299-1995 Adaptable Housing*, subject to the comments and the design detail contained in **Section 4.0**.

We trust that the above information is sufficient for the consent authority in assessing the merit of the architectural design from a planning perspective.

Report By

Verified By



Katja Gavran  
**Access Consultant**  
For Design Confidence (Sydney) Pty Ltd

Luke Sheehy  
**Principal**  
For Design Confidence (Sydney) Pty Ltd

## APPENDIX 1 – Documentation Provided for Assessment

This adaptable housing assessment was based upon the architectural documentation prepared by MHNDUnion namely—

DRAWING	REV	TITLE	DATE
DA 3002	A	Ground Floor Plan	02.12.2022
DA 7005	A	Pre + Post Adaptation Plans	02.12.2022



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