



DESIGN CONFIDENCE

ESQ 1818 Panthers Pty Ltd

Livable Housing Design Guidelines
Assessment Report
Development Application

ESQ Stage 4 & 5
Panthers North Precinct
Penrith NSW 2750

Project: ESQ Stage 4 & 5
 Panthers North Precinct, Penrith NSW 2750
 Document Type: Livable Housing Design Guidelines Assessment Report
 Our Reference: P216_045-2 (LHA_STAGE 4&5) FMR

The following report register documents the development and issue of this and each subsequent report(s) undertaken by Design Confidence (Sydney) Pty Ltd.

The technical and intellectual content contained herein remain the property of Design Confidence (Sydney) Pty Ltd and have been prepared and may only be used for the development / buildings being the subject of this report.

Revision History—

OUR REFERENCE	REMARKS	ISSUE DATE
P216_045-1 (LHA_STAGE 4&5) FMR	Draft report issued to client for review and comment	08 November 2021
P216_045-2 (LHA_STAGE 4&5) FMR	Report updated to reflect latest architectural documentation and issued as FINAL for DA submission	16 December 2021

CONTENTS

1.0	INTRODUCTION.....	4
1.1	General	4
1.2	Basis of Assessment	4
1.3	Documentation Provided for Assessment.....	4
1.4	Limitations	4
1.5	Report Exclusions.....	4
1.6	Interpretation Notes.....	4
2.0	DEVELOPMENT DESCRIPTION.....	6
2.1	General	6
2.2	Purpose of Report	6
2.3	Development Description.....	7
3.0	LHA GUIDELINES ASSESSMENT SUMMARY	11
3.1	General	11
3.2	Schedule of Livable Housing Design Guidelines	11
4.0	LHA GUIDELINES DETAILED ASSESSMENT	12
4.1	General	12
4.2	Detailed Assessment.....	12
4.2.1	Dwelling Access	12
4.2.2	Dwelling Entrance.....	13
4.2.3	Internal Doors & Corridors	13
4.2.4	Toilet.....	14
4.2.5	Shower.....	14
4.2.6	Reinforcement of Bathroom & Toilet Walls	15
4.2.7	Internal Stairways	16
5.0	CONCLUSION	17
5.1	General	17
	APPENDIX 1 – Documentation Provided for Assessment	18

1.0 INTRODUCTION

1.1 General

This Livable Housing Design Guidelines (LHA) has been prepared at the request of CABA on behalf of ESQ 1818 Panthers and relates to the proposed mixed-use development located at Panthers North Precinct NSW 2750, specifically Stage 4 (buildings K & L) and Stage 5 (buildings H & J).

1.2 Basis of Assessment

This report is based upon Livable Housing Design Guidelines Fourth Edition, Livable Housing Australia, 2017.

1.3 Documentation Provided for Assessment

This Livable Housing Design Guidelines (LHA) assessment is based upon the architectural documentation prepared by Turner 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 P216_045-2 (ACCESS_STAGE 4&5) FMR];

- (iii) For an assessment of the adaptable housing (AS4299-1995) provisions, refer to the report prepared by Design Confidence [reference P216_045-2 (AS4299_STAGE 4&5) FMR].

2.0 DEVELOPMENT DESCRIPTION

2.1 General

The concept of Livable Housing Design is to provide guidelines for the design of new homes (of Classes 1a, 1b, 2, 3 and 4 buildings as defined in Part 3 of the BCA) which will reduce the need for future costly modifications.

The assessment undertaken relates to ensuring compliance with the *Livable Housing Design Guidelines Fourth Edition* as prepared by Livable Housing Australia (LHA).

It should be understood that only a registered LHA Design Guideline Assessor is authorised to submit the Assessment Form to LHA in order to obtain compliance with the desired LHA Performance Level.

2.2 Purpose of Report

The purpose of this report is to identify the extent to which the architectural design documentation complies with the provisions of Livable Housing Design Guidelines (LHA).

LHA Performance levels are based on 15 Livable Housing Design Elements—

1. Dwelling access;
2. Dwelling entrance;
3. Internal doors and corridors;
4. Toilet;
5. Shower;
6. Reinforcement of bathroom and toilet walls;
7. Internal stairs;
8. Kitchen space;
9. Laundry space;
10. Ground (or entry level) bedroom space;
11. Switches and power points;
12. Door and tap hardware;
13. Family/living room access to external areas;
14. Windowsills; and
15. Flooring.

Based upon the above design elements there are three (3) levels of performance (Silver, Gold and Platinum) ranging from basic requirements through to best practice in Livable home design. The levels identified within the LHD Guidelines are as follows—

Silver Level

Seven core Livable housing design elements focussing on key structural and spatial elements to ensure flexibility and adaptability. The seven core elements are as follows—

1. A safe continuous and step free path of travel from the street entrance and / or parking entrance to a dwelling entrance that is level;
2. At least one, level (step free) entrance into the dwelling;
3. Internal doors and corridors that facilitate comfortable and unimpeded movement between spaces;
4. A toilet on the ground (or entry) level that provides easy access;
5. A bathroom that contains a hobless shower recess;
6. Reinforced walls around the toilet, shower and bath to support the safe installation of grabrails at a later date;
7. Stairways are designed to reduce the likelihood of injury and also enable future adaptation.

Silver level Livable housing concerns itself with design elements 1-7.

Gold Level

Enhanced requirements for most of the core Livable housing design elements plus additional elements allowing for more generous dimensions. Gold level Livable housing concerns itself with design elements 1-12.

Platinum Level

Further enhanced requirements for the core Silver and Gold Livable housing design elements plus all remaining elements. Platinum level Livable housing concerns itself with design elements 1-15 (all design elements).

2.3 Development Description

It is understood that Penrith Council requires livable housing – Silver level to be provided at a rate of 20% under the DCP/ADG.

Requirement for livable units is subject to confirmation from planning consultant.

A total of 334 residential units are proposed within the subject development, being seventy-seven (77, hence ~23%) designated as adaptable units, as follows:

STAGE 4 – Total 156 units

- (i) Building K: 13 units
- (ii) Building L: 22 units;

STAGE 5 – Total 178 units

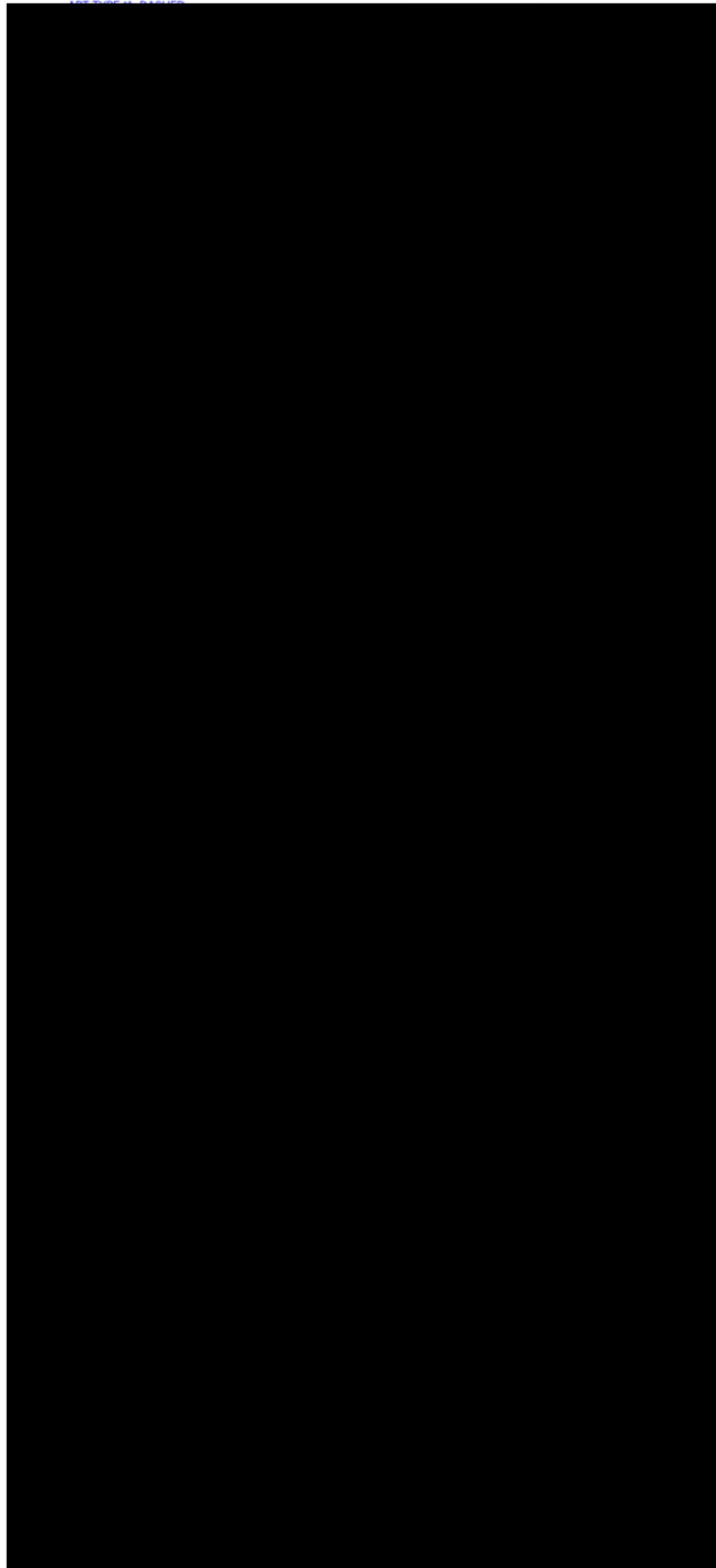
- (iii) Building H: 12 units;
- (iv) Building J: 30 units.

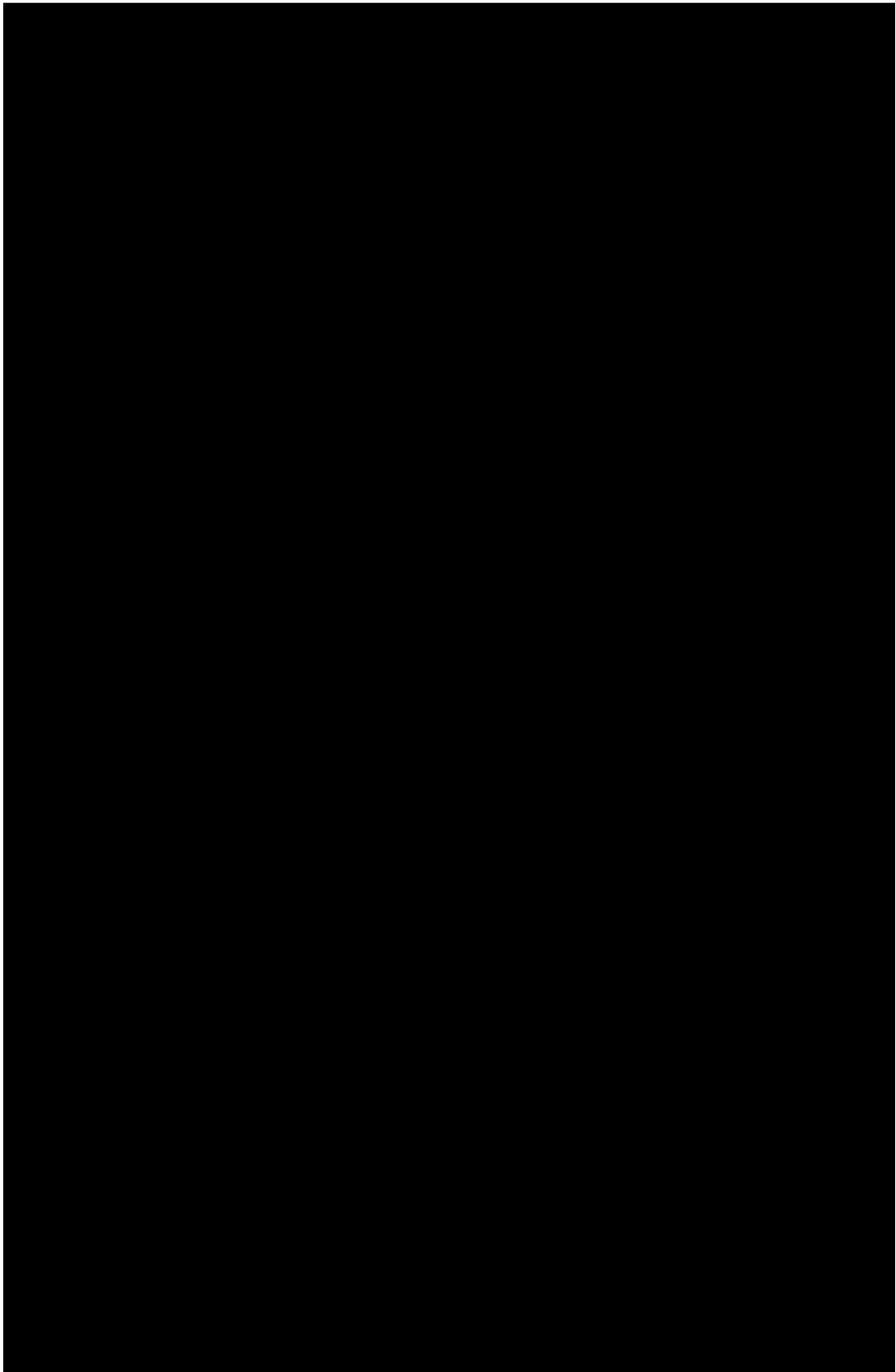
Some of these unit types are proposed to achieve compliance with the livable housing requirements (Silver), as well as adaptable housing requirements (Class C). See Table 1 below for information on which unit types are designated as adaptable, livable or both.

Where a unit type is proposed as both livable and adaptable, these unit types have been assessed for compliance with Silver Level requirements at pre and post-adaptation stage.

For an assessment of the adaptable housing (AS4299-1995) provisions, refer to the report prepared by Design Confidence [reference P216_045-2 (AS4299_STAGE 4&5) FMR].

Refer to below **Figures 1-6** for unit types.





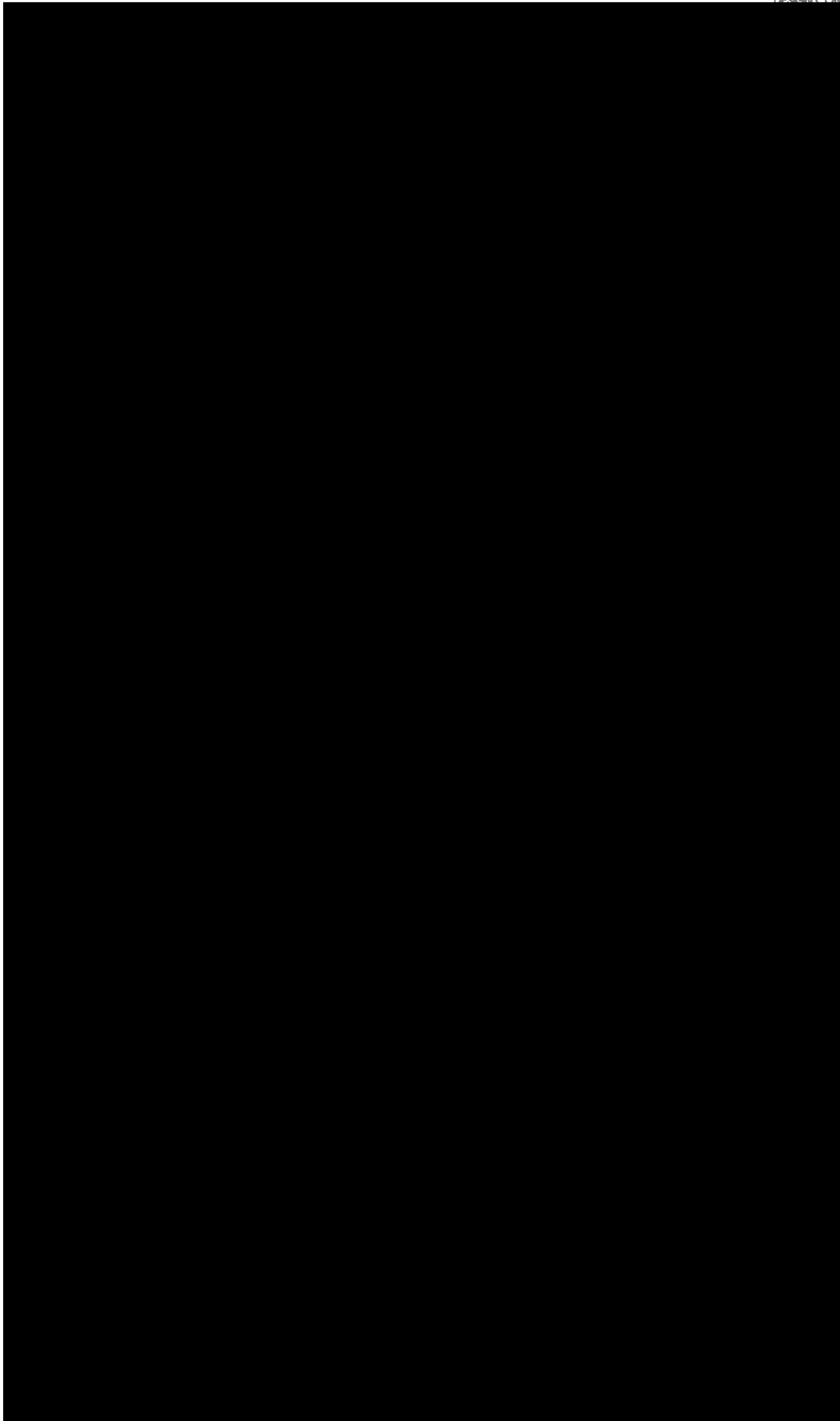


Figure 6 – Livable/Adaptable Apartment - Type 02 (pre- & post-adaptation layout)

3.0 LHA GUIDELINES ASSESSMENT SUMMARY

3.1 General

The following table summarises the compliance status of the architectural design in terms of the fifteen (15) design elements of the Livable Housing Design Guidelines.

The intent of LHD Silver level is to comply with basic structural and spatial design elements.

The intent of LHD Gold level is to comply with more generous dimensions than required at Silver level and to comply with additional design elements.

The intent of LHD Platinum level is to comply with enhanced requirements to those required at Silver and Gold level and to comply with additional design elements.

It should be recognised that in the following table instances exist where prescriptive non-compliance occurs, or design detail is required. Such instances should not necessarily be considered deficiencies; but matters which need to be considered by the design team and any assessment authority at relevant stages of construction.

For those instances of either prescriptive non-compliance or design detail, detailed analysis and commentary have been provided within **Section 4.0** of this report.

3.2 Schedule of Livable Housing Design Guidelines

	SILVER DESIGN ELEMENT	COMPLIES	DOES NOT COMPLY	DESIGN DETAIL
1	Dwelling Access			✓
2	Dwelling Entrance			✓
3	Internal Doors & Corridors			✓
4	Toilet			✓
5	Shower			✓
6	Reinforcement of Bathroom & Toilet Walls			✓
7	Internal Stairs	N/A		

4.0 LHA GUIDELINES DETAILED ASSESSMENT

4.1 General

With reference to the Livable Housing Design Guidelines Assessment Summary contained within **Section 3.0** of this report, the following detailed 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 the LHD Guidelines.

4.2 Detailed Assessment

4.2.1 Dwelling Access

The following comment is provided in regards the requirements of Design Element 1 of the Livable Housing Guidelines —

DESCRIPTION	COMMENT	RESOLUTION
Minimum requirement	The proposed levels on the accessway to the building are not yet demonstrated, assumed to be a level accessway from the site boundary to the 8 x residential building entries.	As design progresses, illustrate the proposed levels for review and comment.

Reference is also made to the Access Design Assessment Report prepared by Design Confidence [ref. P216_045-2 (ACCESS_STAGE 4&5) FMR].

A safe, continuous, step-free, level pathway from the street entrance and or parking area to a dwelling entrance is required.

Silver level siting specification shall detail the following—

- (i) A minimum 1000mm wide pathway from the street entrance (or from the carparking space) to the front door;
- (ii) The pathway is to have an even, firm, step-free and slip resistant surface (in accordance with HB197-1999) and a crossfall of not more than 1:40;
- (iii) If the pathway is provided via an associated carparking space the carparking bay is required to have—
 - a. A minimum width of 3200mm;
 - b. A minimum length of 5400mm;
 - c. An even, firm and slip-resistant surface; and
 - d. A level surface with a maximum gradient of 1:40 (1:33 permitted for bitumen finish).
- (iv) If the pathway incorporates a ramp, it is required to comply with the provisions of AS1428.1-2009;

- (v) Where ramps form part of the pathway they are required to have level landings of no less than 1200mm length at the head and foot of the ramp, exclusive of any door or gate swing; and
- (vi) If the doorway incorporates a step ramp, it is required to comply with the provisions of AS1428.1-2009.

4.2.2 Dwelling Entrance

The following comment is provided in regards the requirements of Design Element 2 of the Livable Housing Guidelines—

DESCRIPTION	COMMENT	RESOLUTION
Minimum requirement	Entry doors to the proposed adaptable units are proposed with 920mm door leaf, hence capable of achieving a min. 820mm clear opening as required.	Design detail – ensure step-free transition at the door from the public corridors to the unit.

At least one (1) step free entrance into the dwelling is required to enable home occupants to easily enter and exit the dwelling.

Silver level dwelling entrance specification shall detail the following—

- (i) The dwelling entrance is to be connected to the dwelling access pathway;
- (ii) The dwelling entrance doorway requires a minimum clear opening width of 820mm;
- (iii) A level (step-free) transition and threshold are to be provided. A maximum tolerance of 5mm is permitted if the lip is rounded or bevelled;
- (iv) The entrance requires reasonable shelter from the weather;
- (v) A level landing area of 1200x 1200mm is to be provided at the arrival (external) side of the entrance door.
- (vi) If a threshold exceeds 5mm and is not more than 56mm a threshold ramp may be provided; and
- (vii) The dwelling entrance is to incorporate waterproofing and termite management requirements as specified in the BCA.

4.2.3 Internal Doors & Corridors

The following comment is provided in regards the requirements of Design Element 3 of the Livable Housing Guidelines—

DESCRIPTION	COMMENT	RESOLUTION
Level access	Note that step-free access is required within the unit, hence this may require design detail such as set down slab to the wet areas.	Design detail – ensure step free access will be achieved within the units.

Internal doors and corridors are required to facilitate comfortable and unimpeded movement between spaces.

Silver level internal doors and corridor specification shall detail the following—

- (i) Doorways to entry level living, dining, bedroom, bathroom, kitchen, laundry and sanitary compartments are required to—
 - a. Have a minimum clear opening width of 820mm;
 - b. Have a level threshold with a maximum vertical tolerance of 5mm between abutting surfaces (if rounded or bevelled); and
- (ii) Internal corridors and passageways to have a minimum clear width of 1000mm.

4.2.4 Toilet

The following comment is provided in regards the requirements of Design Element 4 of the Livable Housing Guidelines—

DESCRIPTION	COMMENT	RESOLUTION
Clearance forward of the toilet pan	Sufficient clearance forward of the toilet pan is not achieved at – <ul style="list-style-type: none"> ▪ Livable Apartment - Type 04. 	A min. clear space being 900mm wide x 1200mm forward of the toilet shall be provided. Toilet partition is not allowed. Note – clearance forward of the toilet shall be achieved from the onset (the concession for shower screens is not afforded to toilet partitions).

The ground (or entry level) toilet is required to support easy access for home occupants and visitors.

Silver level toilets shall detail the following—

- (i) A minimum of 900mm to be provided between bathroom walls if toilet is located within a separate room;
- (ii) A minimum of 1200mm circulation space to be provided forward of the WC pan, exclusive of the door swing; and
- (iii) The toilet pan is to be located in the corner of the room to enable the future installation of grabrails.

4.2.5 Shower

The following comment is provided in regards the requirements of Design Element 5 of the Livable Housing Guidelines—

DESCRIPTION	COMMENT	RESOLUTION
Minimum requirement	The proposed design is capable of achieving compliance with the	Design detail – Note that shower screens shall be easily removable at

DESCRIPTION	COMMENT	RESOLUTION
	minimum requirements, being a hobless shower.	a later date if required by the resident.

The bathroom and shower is to be designed for easy and independent access for all home occupants.

Silver level showers shall detail the following—

- (i) One (1) bathroom is required to provide a slip-resistant (in accordance with HB197-1999), hobless shower recess. Shower screens are permitted provided they can be removed at a later date; and
- (ii) The shower is to be located in the corner of the room to enable the installation of grabrails at a future date.

4.2.6 Reinforcement of Bathroom & Toilet Walls

The following comment is provided in regards the requirements of Design Element 6 of the Livable Housing Guidelines—

DESCRIPTION	COMMENT	RESOLUTION
Minimum requirement	Bathroom walls shall be reinforced to allow for grabrails to be installed at a later date to suit the residents' needs.	<p>Design detail – where a unit is proposed as adaptable and livable, the reinforcement of bathroom walls shall be as follows:</p> <ul style="list-style-type: none"> ▪ At pre-adaptation shower & toilet location: reinforcement of bathroom walls shall be in accordance with Livable Housing requirements; ▪ At pre-adaptation bath location: reinforcement of bathroom walls shall be in accordance with Livable Housing requirements; ▪ At post-adaptation shower & toilet location: reinforcement of bathroom walls shall be in accordance with Adaptable Housing requirements (refer to Figure 4.5 and 4.6 of AS4299-1995). <p>Where a unit is proposed as livable only –</p> <ul style="list-style-type: none"> ▪ At the toilet, shower and bath, in accordance with Design Element 6, refer to Figures 6-8 of the LHA.

Bathroom and toilet walls are to be built to enable grabrails to be safely and economically installed.

Reinforcement for **all LHA levels** shall detail the following—

- (i) Walls (other than solid masonry or concrete) around the shower and bath (if provided) to be reinforced to provide a fixing surface for the safe installation of grabrails;
- (ii) Walls around the toilet, bath (if provided) and shower are to be reinforced by installing—
 - a. Noggins with a thickness of at least 25mm; or
 - b. Sheeting with a thickness of at least 12mm; and
- (iii) Wall reinforcement to be capable of withstanding a force of 1100N applied in any position and in any direction.

Detail shall be provided within future design progression for compliance assessment and comment by this office.

4.2.7 Internal Stairways

Not applicable – all proposed livable units are single storey.

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 *Silver Level* provisions of the *Livable Housing Design Guidelines Fourth Edition*, Livable Housing Australia, 2017, subject to the comments and the design detail contained in **Section 4.0**.

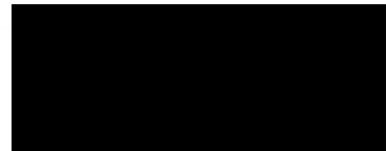
We trust that the above information is sufficient for the consent authority in assessing the merit of the architectural design from a planning perspective.

Report By



Fatima Mendes Raposo
Consultant | Accessibility
For Design Confidence (Sydney) Pty Ltd

Verified By



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 Turner, namely—

DRAWING	REV	TITLE	DATE
DA-110-006	01	GA Plans – Basement 02	16.12.2021
DA-110-007	01	GA Plans – Basement 01	16.12.2021
DA-110-008	01	GA Plans – Ground Level	16.12.2021
DA-810-001	01	Livable / Adaptable Apartments	16.12.2021
DA-810-002	01	Livable / Adaptable Apartments	16.12.2021
DA-810-003	01	Livable / Adaptable Apartments	16.12.2021
DA-810-004	01	Livable / Adaptable Apartments	16.12.2021
DA-810-005	01	Livable / Adaptable Apartments	16.12.2021
DA-810-006	01	Livable / Adaptable Apartments	16.12.2021

Design Confidence Pty Limited

Shop 2, 35 Buckingham Street, Surry Hills NSW 2010

ABN: 72 896 582 485

T: (02) 8399 3707

E: sydney@designconfidence.com

W: www.designconfidence.com

This document is and shall remain the property of Design Confidence. The technical and intellectual content contained herein may only be used for the purpose for which it was commissioned and in accordance with the Terms of Engagement for the commission.

Unauthorised use of this document in any form whatsoever is prohibited.
