



DESIGN CONFIDENCE

Dunn & Hillam Architects

NCC Design Assessment Report

Library & Community Hub

30-32 Miller Street
Gilgandra NSW 2827

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Project: Library & Community Hub, 30 - 32 Miller Street Gilgandra
 Document Type: BCA Design Assessment Report
 Report Number: P220_458-3 (BCA) LB

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Revision History:

OUR REFERENCE	REMARKS	ISSUE DATE
P220_458-1 (BCA) LB	DRAFT report issued to stakeholders for review and comment	18 May 2021
P220_458-2 (BCA) LB	Report updated to reflect updated drawings and issued as FINAL	4 June 2021
P220_458-3 (BCA) LB	Report updated to reflect hydraulic consultant comments	8 June 2021

EXECUTIVE SUMMARY

This BCA Design Assessment Report has been prepared by Design Confidence at the request of Dunn & Hillam Architects and relates to the proposed Library & Community Hub located at 30-32 Miller Street, Gilgandra.

With respect to the assessment undertaken the following areas in particular need further review as the project develops –

NO.	ITEMS FOR FURTHER CONSIDERATION	RESPONSIBILITY
1.	Architectural drawings are to be updated to include the following essential fire safety measures – i. Fire Hose reel enclosures / cabinets	Project Architect
2.	Facilities that serve the building (internal facilities) that are not a unisex accessible facility must either be nominated as male or female as male and females are not permitted to share facilities.	Project Architect
3.	A test report from a Registered Testing Authority or performance solution report must be provided to certify that the façade / external walls achieve compliance with BCA FP1.4 and FV1.	Project Architect

Based upon our detailed review of the proposed architectural drawings, it is the opinion of this office that the subject development is capable of complying with the performance provisions of the BCA. Compliance would be achieved with the relevant deemed-to-satisfy requirements as outlined within the BCA.

INTRODUCTION

1.0 General

This BCA Design Assessment Report has been prepared by Design Confidence at the request of Dunn & Hillam Architects and relates to the proposed Library & Community Hub located at 30-32 Miller Street, Gilgandra.

1.1 Purpose of Report

The purpose of this report is to identify the extent to which the architectural design documentation complies with the relevant prescriptive provisions of the Building Code of Australia (BCA) Volume 1, edition 2019 (Amendment 1).

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.

1.2 Documentation Provided for Assessment

This assessment is based upon the Architectural documentation prepared by Dunn + Hillam Architects and listed within Appendix 1.

1.3 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) Work Health & Safety Act and Regulations;
- (ii) WorkCover Authority requirements;
- (iii) Structural and Services Design Documentation;
- (iv) The individual requirements of service authorities (i.e. Telecommunication Carriers, Sydney Water, Energy Australia);
- (v) The Disability (Access to Premises - Buildings) Standards 2010;
- (vi) The Disability Discrimination Act (DDA) 1992; and
- (vii) The relevant Accessibility and Energy Efficiency Provisions as contained within the BCA.

2.0 DEVELOPMENT DESCRIPTION

2.1 General

In accordance with the BCA, the assessment undertaken relates to the proposed Library & Community Hub located at 30-32 Miller Street, Gilgandra.

For the purpose of the BCA the subject development may be described as contained below.

2.2 Building Description

Table 2 – Building Characteristics

DESCRIPTION OR REQUIREMENT		
Building Classification	Assembly Building	9b
Rise in Storeys	One (1)	
Construction Type	Type C	
Effective Height	Nil	
Floor Area	Assembly Building	~520m ²
Volume	Within limitations	
Climate Zone:	Climate Zone 5	

2.3 BCA Assessment – Interpretation Notes

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

- (i) The proposed kitchen is considered as a ancillary to the assembly building; and
- (ii) There are no proposed stage or backstage area which would require the building to have sprinkler protection; and
- (iii) The closet pan within bath 01 has been considered as a urinal for the purpose of the F2.3 sanitary facility calculations; and
- (iv) The space located outside of the male, female and bath 01 sanitary compartments is considered to be a hallway; and
- (v) The male, female and accessible sanitary bath 01 facilities will be available at all times and for all parts of the building when occupied;

3.0 BCA ASSESSMENT SUMMARY – CLASS 2-9 BUILDINGS

3.1 General

The following table summarises the compliance status of the architectural design in terms of each *applicable* prescriptive provision of the BCA and indicates a capability for compliance with the BCA.

Although, it should be recognised that instances exist where 'Prescriptive non-compliance' occurs, or 'Additional design input' is required.

Such instances should not necessarily be considered BCA deficiencies; but matters which need to be considered by the design team and any assessment authority at relevant stages of design and/or assessment.

For those instances of either 'prescriptive non-compliance' or 'additional design input', a detailed analysis and commentary is provided within Part 4 of this report.

3.2 Section B - Structure

BCA CLAUSE	COMPLIES	DOES NOT COMPLY	DESIGN DETAIL
B1.1 resistance to actions			✓
B1.2 determination of individual actions			✓
B1.4 determination of structural resistance of materials and forms of construction			✓

3.3 Section C - Fire Resistance

BCA CLAUSE	COMPLIES	DOES NOT COMPLY	DESIGN DETAIL
C1.1 fire resisting construction			✓
C1.8 structural tests for lightweight construction			✓
C1.10 Fire hazard properties			✓
C2.2 general floor area and volume limitations	✓		
C2.12 separation of equipment			✓
C2.13 electricity supply system			✓
C3.2 protection of openings in external walls		✓	
C3.17 columns protected with lightweight construction to achieve an FRL			✓

3.4 Section D - Access and Egress

BCA CLAUSE	COMPLIES	DOES NOT COMPLY	DESIGN DETAIL
D1.2 number exits required	✓		
D1.4 exit travel distances	✓		
D1.5 distance between alternative exits	✓		
D1.6 dimensions of exits and paths of travel to exits			✓
D1.10 discharge from exits			✓

BCA CLAUSE	COMPLIES	DOES NOT COMPLY	DESIGN DETAIL
D1.13	Number of persons accommodated	✓	
D2.7	Installations in exits and paths of travel		✓
D2.13	goings and risers		✓
D2.14	landings		✓
D2.15	thresholds		✓
D2.17	handrails		✓
D2.19	doorways and doors		✓
D2.20	swinging doors		✓
D2.21	operation of latch		✓

3.5 Section E - Services and Equipment

BCA CLAUSE	COMPLIES	DOES NOT COMPLY	DESIGN DETAIL
E1.3	fire hydrants		✓
E1.4	fire hose reels		✓
E1.6	portable fire extinguishers		✓
E2.2	general provisions		✓
E4.2	emergency lighting requirements		✓
E4.5	exit signs		✓
E4.6	direction signs		✓

3.6 Section F - Health & Amenity

BCA CLAUSE	COMPLIES	DOES NOT COMPLY	DESIGN DETAIL
F1.0	weatherproofing of external walls		✓
F1.1	Stormwater drainage		✓
F1.4	external above ground membranes		✓
F1.5	roof coverings		✓
F1.6	sarking		✓
F1.7	waterproofing of wet areas in buildings		✓
F1.9	damp-proofing		✓
F1.10	damp-proofing of floors on the ground		✓
F1.13	Glazed assemblies		✓
F2.3	Facilities in class 3 to 9 buildings		✓
F2.5	construction of sanitary compartments		✓
F3.1	heights of rooms and other spaces		✓
F4.1	Provision of natural light		✓
F4.4	artificial lighting		✓
F4.5	ventilation of rooms		✓
F4.8	restriction of position of water closets and urinals	✓	
F6.1	pliable building membranes		✓
F6.2	flow rate and discharge of exhaust systems		✓
F6.3	ventilation of roof spaces		✓

4.0 BCA DETAILED ASSESSMENT – CLASS 2-9 BUILDINGS

4.1 General

With reference to the 'BCA Assessment Summary' contained within Part 3.1 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 BCA.

4.2 Section B – Structure

B1.1 The resistance the new components of the building or structure shall be greater than the most critical action effect determined by B1.2 of the BCA, AS/NZS 1170.0-2002 and B1.4 of the BCA.

If the proposed new structure relies on existing elements of the building then it must be ensured the existing is capable of complying with the current structural provisions.

B1.2 The structural design of the building are required to be determined in accordance with the varying "actions" considerations contained within this clause (i.e. permanent actions, imposed actions, wind / snow / earthquake actions).

B1.4 The structural resistance of materials and forms of construction shall be determined in accordance with the following:

- (i) Masonry - AS3700-2018
- (ii) Concrete construction - AS3600-2018
- (iii) Footings and slabs – AS2870-2011
- (iv) Steel construction - AS4100-1998 or AS/NZS 4600-2005
- (v) Termite Risk Management - AS3660.1-2014
- (vi) Piling - AS2159-2009
- (vii) Glazed assemblies - AS2047-2014-amendments 1 & 2 (external), and/or AS1288-2006 (internal)

4.3 Section C – Fire Resistance

C1.1 The building elements are required to achieve the nominated FRLs as nominated within BCA Spec C1.1 as applicable, these FRLs have been summarised within Table A2.1 as contained within Appendix 2.

Given the proximity of the building and being type C construction no internal or external building elements are required to have an FRL

C1.8 Any lightweight construction to internal walls required to achieve an FRL or protection to steel columns required achieve an FRL are required to be tested for resistance in accordance with this clause.

C1.10 The fire hazard properties for materials proposed to be provided have been summarised within Table A3.1 as contained within Appendix 3.

C2.2 The maximum floor area and volume limitations of a fire compartment as nominated in the deemed to satisfy provisions are as follows:

Classification		Type of Construction		
		A	B	C
5, 9b or 9c aged care building	Max floor area (m ²)	8,000	5,500	3,000
	Max volume (m ³)	48,000	33,000	18,000
6, 7, 8 or 9a (except for patient care areas)	Max floor area (m ²)	5,000	3,500	2,000
	Max volume (m ³)	30,000	21,000	12,000

The proposed is well under the above limitations being approximately 520m².

C2.12 The following equipment must be separated from the remainder of the building:

- (i) Emergency generators used to sustain emergency equipment operating in the emergency mode; or
- (ii) Central smoke control plant; or
- (iii) Boilers; or
- (iv) a battery system installed in the building that has a total voltage of 12 volts or more and a storage capacity of 200kWh or more.

The above equipment is required to be separated with construction achieving an FRL of 120/120/120 and any access doorway is required to be protected with a self-closing fire door having an FRL of --/120/30.

Any on-site fire pumps are required to be separated in accordance with AS2419.1-2005.

- C2.13
- (i) If the main electrical switchboard is to sustain any emergency equipment, then the switchboard is required to be separated with construction achieving an FRL of 120/120/120 and have any access doorway protected with a self-closing fire door having an FRL of --/120/30; and
 - (ii) All switchboards in the electrical installation, which sustain the electricity supply to the emergency equipment, must be constructed so that emergency equipment switchgear is separated from non-emergency equipment switchgear by metal partitions designed to minimise the spread of a fault from the non-emergency switchgear.

For the purposes of the above, emergency equipment includes:

- (i) Fire hydrant booster pumps;
- (ii) Air handling systems designed to exhaust and control the spread of fire and smoke; and
- (iii) Control and indicating equipment.

C3.2 Generally, throughout the development openings are located more than 3m from the side allotment boundaries and more than 6m from the far boundary of the road, therefore no openings are required to be protected under the requirements of this the clause

C3.4 Where protection is required, doorways, windows and other openings must be protected as follows:

- (i) External wall-wetting sprinklers used with windows that are automatically closing or permanently fixed in the closed position; or
- (ii) Fire windows having an FRL -/60/- that are automatically closing or permanently fixed in the closed position; or
- (iii) External wall-wetting sprinklers used with doors that are self-closing or automatic closing; or
- (iv) Self-closing fire door having an FRL of --/60/30; or
- (v) Fire shutter achieving an FRL of --/60/--;

Given the nature of the building, it is anticipated none of the above will need to be implemented.

C3.15 Any openings for service installations (electrical, mechanical, plumbing, etc.) that penetrates a building element which is required to be of fire resisting construction is required to be protected (i.e. fire seals).

C3.16 Construction joints, spaces and the like in and between building elements required to be fire-resisting with respect to integrity and insulation are required to be protected in a manner identical with a prototype tested in accordance with AS1530.4-2014 to achieve the required FRL.

C3.17 Where a column is protected by lightweight construction to achieve the required FRL defined by C1.1 passes through a building element that is also required to have an FRL it is required to be installed using a method and materials identical with the prototype assembly of the construction which has achieved the required FRL.

4.4 Section D – Access and Egress

D1.2 An assessment of the proposed floor layout shows that at least 2 exits are provided all areas of the development and complies with the provisions of this clause.

D1.4 An assessment of the proposed floor layout shows that travel distance to a point of choice and to an exit will generally comply with the provisions of this clause.

D1.5 An assessment of the floor plans shows that alternate exit have been provided to all required areas and that they are no further than 60m apart and no less than 9m.

D1.6 The path of travel to an exit and any required exit is to have an unobstructed height throughout of not less than 2m (except a doorway, which can be 1980mm) and an unobstructed width not less than 1m (except a doorway, which can be 750mm in an area not required to be accessible and 850mm in an area required to accessible).

D1.10 The discharge points of the exits are required to have an unobstructed width of 1m (including gates) and be via a stairway, ramp or other incline having a gradient of no steeper than 1:8 or complying with AS1428.1-2009- amendment 2 (where required to be accessible for people with a disability).

- D2.7
- (i) Gas or other fuel services shall not be installed within the required exits; and
 - (ii) Any services or equipment (being electrical meters, distribution boards or the like) installed within the hallway are required to be enclosed by non-combustible construction or a fire-protective covering (i.e. 1 layer of 13mm fire-protective grade plasterboard) with doorway(s) or opening(s) suitably sealed against smoke spreading from the enclosure.

D2.13 With respect to the external steps in the landscaping, the going, riser and steepness dimension of the stairways are required to be designed within the following range:

Stairway location	Riser (R)	Going (G)	Quantity (2R + G)
Public	Max: 190mm Min: 115mm	Max: 355mm Min: 250mm	Max: 700mm Min: 550mm

- (i) The risers and goings are required to be constant throughout the flight except variations of no greater than 5mm are permitted between adjacent risers or goings and no greater than 10mm are permitted between the smallest and largest goings or risers in a flight; and
- (ii) The stair treads are required to have a surface or nosing strip achieving a slip-resistance classification of P3 or R10 in dry or P4 or R11 in wet tested in accordance with AS4586-2013 (amendment 1).

D2.14 Stair landings are required to be a minimum of 750mm long with a gradient not steeper than 1:50 and have a slip-resistance surface or strip.

The surface or strip is required to achieve a slip-resistance classification of P3 or R10 in dry or P4 or R11 in wet tested in accordance with AS4586-2013 (amendment 1).

D2.15 The threshold of a doorway is not permitted to incorporate a step or ramp at any point closer to the doorway than the width of the door leaf.

That is unless the doorway opens to a road or open space and:

- (i) In a building required to be accessible, is provided with a threshold or step ramp in accordance with AS1428.1-2009; or
- (ii) In all other cases, the door sill is not more than 190mm above the finished surface of the ground.

D2.16 Balustrades are required to be constructed as follows:

- (i) To a height not less than 865mm above the nosings of the stair treads or the floor of a ramp;
- (ii) 1000mm above the floor of any access path, balcony, landing or the like;
- (iii) Any opening does not permit a 125mm sphere to pass through it and for stairs, the space is measured above the nosings;

D2.17 Handrails are required along one (1) side of each stairway flight and ramp, unless required to assist people with a disability.

The handrails are required to be fixed at a height of not less than 865mm measured above the nosings of the stair treads or ramp and be continuous such that no obstruction on or above them will tend to break a hand hold.

D2.19 A doorway serving as a required exit or forming part of a required exit –

- (i) Must not be fitted with a revolving door;
- (ii) Must not be fitted with a roller shutter or tilt-up door unless –
 - It serves the Class 6 part with a floor area not more than 200m²; and
 - The doorway is the only required exit from the building or part; and
 - It is held in the open position while the building part is lawfully occupied; and
- (iii) Must not be fitted with a sliding door unless –
 - It leads directly to a road or open space; and
 - The door is able to be opened manually under a force of not more than 110N; and
- (iv) If fitted with a door which is power-operated –
 - It must be able to be opened manually under a force of not more than 110N if there is a malfunction or failure of the power source; and
 - If it leads directly to a road or open space it must open automatically if there is a power failure to the door or on the activation of a fire or smoke alarm anywhere in the fire compartment served by the door.

D2.21 Any door in a required exit, forming part of a required exit or in the path of travel to a required exit are required to be readily operable without a key from the side that faces a person seeking egress and:

- (i) By a single hand pushing or downward action on a single device located between 900mm and 1100mm from the floor;
 - Be such that the hand of a person who cannot grip will not slip from the handle during the operation of the latch; and
 - Have a clearance between the handle and the back plate or door face at the centre grip section of the handle of not less than 35mm nor more than 45mm; or
 - A single hand pushing action on a single device which is located between 900mm and 1.2m above the floor.
- (ii) Where the latch operation device referred to above is not located on the door leaf itself –
 - Manual controls to power-operated doors must be at least 25mm wide, proud of the surrounding surface and located-
 - Not less than 500mm from an internal corner; and
 - For a hinged door, between 1m and 2m from the door leaf in any position; and
 - For a sliding door, within 2m of the doorway and clear of a surface mounted door in the open position

D2.21
Cnt'd

- Braille and tactile signage complying with Clause 2 and 6 of Specification D3.6 must identify the latch operation.
 - (iii) Fitted with a fail-safe device which automatically unlocks the door upon the activation of any sprinkler system or detection system deemed suitable in accordance with AS1670.1-2018 installed throughout the building.

4.5 Section E – Services & Equipment

E1.3

A fire hydrant system complying with AS2419.1-2005 is required to serve the building, including:

- (i) All points on a floor are required to be within reach of a 10 m hose stream issuing from a nozzle at the end of a 30 m length of hose laid on floor connected to the fire hydrant outlet;
- (ii) Additional hydrants can be installed in appropriate locations, where additional coverage is required;
- (iii) The fire brigade booster assembly is required to be at the boundary of the site, be within sight of the main entrance of the building, adjacent to the principal vehicular access to the site and be located 10m from the external of any building served or within the external wall of the building (if not sprinkler protected); and
- (iv) In a non-sprinkler protected building, the fire brigade booster assembly if located within the external wall of the building is required to be separated from building by construction having an FRL of 90/90/90 for a distance of not less than 2m each side of and 3m above the upper hose connections in the booster assembly.

Following advice from the hydraulic engineer it is understood the building will be served by the existing street hydrant system which is capable of meeting the DTS provisions of the BCA.

E1.4

A hose reel system complying with AS2441-2005 is required to serve the building, including:

- (i) Hose reels are required to be located within 4m of an exit; and
- (ii) All points on a floor are required to be in reach of a 4m hose stream at the end of a 36m hose length laid on the floor;
- (iii) Additional hose reels can be installed along the path of travel where additional coverage is required.

Hydraulic consultant to advise of system requirements and confirm compliance.

E1.6 Portable extinguishers must be provided in accordance with Table E1.6 to cover risk classes within the basement level and throughout the whole building where internal fire hydrants are provided.

Portable fire extinguishers complying with AS2444-2001 are required as follows:

- (i) To cover Class B (if more than 50L excluding vehicle fuel tanks is stored); and
- (ii) To cover Class AE or E fire risks associated with emergency service switchboards; and
- (iii) To cover Class F fire risks involving cooking oils and fats in kitchens.

E4.2 Emergency lighting complying with AS2293.1-2018 is required to be installed throughout.

E4.5 Exit signage complying with AS2293.1-2018 are required installed above or adjacent to any doorways serving as required exits from the building and final doors from stairways.

E4.6 If an exit is not readily apparent to persons occupying or visiting either the building, then exit signs complying with AS2293.1-2018 are required to be installed in appropriate positions in corridors, hallways, lobbies and the like, indicating the direction to a required exit.

4.6 Section F – Health & Amenity

F1.0 Weatherproofing of external wall(s) are required to comply with Verification Method FV1 (i.e. certificate of conformity). There are no Deemed-to-Satisfy Provisions for this Performance Requirement in respect of external walls..

F1.1 Stormwater drainage must comply with AS/NZS3500.3-2018.

F1.4 Waterproofing membranes for external above ground use (i.e. balconies and roof) are required to comply with AS4654-2012.

F1.5 Metal roof sheeting must comply with AS1562.1-2018.

F1.6 Any sarking-type materials used for weatherproofing of roofs and walls are required to comply with AS/NZS4200.1-2017 and AS4200.2- 2017 incorporating amendment 1.

F1.7 Building elements in wet areas must be water-resistant or waterproof in accordance with Table F1.7 and comply AS 3740-2010.

F1.9 Where a damp-proof course is provided, it must consist of a material that complies with AS/NZS2904 or impervious sheet material in accordance with AS3660.1.

F1.10 A floor laid directly onto ground or fill must be provided with a vapour barrier complying with AS2870-2011.

F1.13 The glazed assemblies in an external wall must comply with AS2047-2014 (amendments 1 and 2) for resistance to water penetration.

F2.3 The number of sanitary facilities provided have been determined as being adequate based on the number of persons accommodated, determined in accordance with Clause D1.13 of the BCA.

Separate facilities must be provided for male and females rather than unisex facilities (accessible unisex permitted).

Based off advice from the architect it is understood the facilities located on North side of the building serve a Class 10 area, therefore the requirements of this clause are not considered applicable.

Please see **Appendix 4** for calculations.

F2.4 Two accessible unisex sanitary compartments are provided on the ground adjacent to the banks of toilets and are to comply with Table F2.4 (a). These facilities are to be in accordance with AS1428.1.

F2.5 Sanitary compartments must have doors and partitions that separate adjacent compartments and extend 1.8m above the floor.

Notwithstanding the above, the door to a full enclosed sanitary compartment is required to:

- Open outwards;
- Slide; or
- Be readily removable from the outside of the sanitary compartment (i.e. lift-off hinges).

Unless there is a clear space of at least 1.2m between the closest pan within the sanitary compartment and the hinge side edge of the doorway.

F3.1 Unobstructed ceiling heights are required as follows:

- (i) A bathroom, sanitary facilities, tea preparation room, store room, car parking areas or the like – 2.1m;
- (ii) A commercial kitchen – 2.4m;
- (iii) A corridor, passageway or the like – 2.1m; and
- (iv) Above a stairway, ramp, landing or the like – 2m;
- (v) Except as allowed above – 2.4m.

Sections demonstrating compliance is to be provided to our office.

F4.1 Natural light must be provided to all habitable rooms.

Methods of providing natural right is to be in accordance with Clause F4.2.

F4.2 All habitable rooms are required to have natural lighting provided by either –

- (i) Window(s) having a light transmitting area of not less than 10% of the floor area of the room, which are open to the sky or face a court or other space open to the sky or an open verandah , carport or the like; or

- Roof light(s) having a light transmitting area of not less than 3% of the floor area of the room and open to the sky.
- F4.4 Where compliant natural lighting is not provided to sanitary compartments, bathrooms, laundries, stairways and the like, artificial lighting complying with AS/NZS1680.0-2009 is required.
- F4.5 Any habitable room, sanitary compartment, bathroom, laundry and any other room occupied by a person for any purpose must have either:
- (i) Natural ventilation (i.e. opening(s) having an openable area of 5% of the room being served) complying with F4.6; or
 - (ii) Mechanical ventilation complying with AS1668.2-2012 (amendment 2).
- F6.2 Where a pliable building membrane is installed in an external wall, it must comply with the requirements of this clause.
- Where a pliable membrane is not installed in an external wall, the primary water control layer must be separated from water sensitive materials by a drained cavity
- F6.3 An exhaust system installed in a kitchen, bathroom, sanitary compartment or laundry must be installed to comply with the requirements of this clause.
- F6.4 Where an exhaust system is installed in a kitchen, bathroom, sanitary compartment or laundry and discharges directly or via a shaft or duct into a roof space, the roof space must be ventilated to outdoor air through evenly distributed openings in accordance with the requirements of this clause.

5.0 CONCLUSION

Based upon our detailed review of the proposed architectural drawings, it is the opinion of this office that the subject development is capable of complying with the performance provisions of the BCA. Compliance would be achieved with the relevant deemed-to-satisfy requirements as outlined within the BCA.

Report By



Lindsay Beard
Associate | Building Regulations
For Design Confidence (Sydney) Pty Ltd

Verified By



Luke Sheehy
Principal
For Design Confidence (Sydney) Pty Ltd

APPENDIX 1

This accessibility assessment was based upon the architectural documentation prepared by Dunn & Hillam Architects namely—

DRAWING	REV	TITLE	DATE
DA01-02		Site Analysis	02.06.2021
DA01-03		Site Plan	02.06.2021
DA01-04		Demolition Plan	02.06.2021
DA01-05		Ground Floor Plan	02.06.2021
DA01-06		Section	02.06.2021
DA01-07		North + East Elevation	02.06.2021
DA01-08		South + West Elevation	02.06.2021

APPENDIX 2

The Table below represents the Fire Resistance Levels (FRLs) required in accordance with BCA 2019 Amendment 1:

TYPE C CONSTRUCTION: FRL OF BUILDING ELEMENTS

Building element	Class of building—FRL: (in minutes)			
	2/Integrity/Insulation			
	2, 3 or 4 part	5, 7a or 9	6	7b or 8
EXTERNAL WALL (including any column and other building element incorporated therein) or other external building element, where the distance from any <i>fire-source feature</i> to which it is exposed is—				
Less than 1.5 m	90/ 90/ 90	90/ 90/ 90	90/ 90/ 90	90/ 90/ 90
1.5 to less than 3 m	-/-/-	60/ 60/ 60	60/ 60/ 60	60/ 60/ 60
3 m or more	-/-/-	-/-/-	-/-/-	-/-/-
EXTERNAL COLUMN not incorporated in an <i>external wall</i> , where the distance from any <i>fire-source feature</i> to which it is exposed is—				
Less than 1.5 m	90/-/-	90/-/-	90/-/-	90/-/-
1.5 to less than 3 m	-/-/-	60/-/-	60/-/-	60/-/-
3 m or more	-/-/-	-/-/-	-/-/-	-/-/-
COMMON WALLS and FIRE WALLS—	90/ 90/ 90	90/ 90/ 90	90/ 90/ 90	90/ 90/ 90
INTERNAL WALLS-				
Bounding <i>public corridors</i> , public lobbies and the like—	60 / 60/ 60	-/-/-	-/-/-	-/-/-
Between or bounding <i>sole-occupancy units</i> —	60/ 60/ 60	-/-/-	-/-/-	-/-/-
Bounding a stair if <i>required</i> to be rated—	60/ 60/ 60	60/ 60/ 60	60/ 60/ 60	60/ 60/ 60
ROOFS	-/-/-	-/-/-	-/-/-	-/-/-

APPENDIX 3

The table below represents the fire hazard properties for building materials applicable to this development.

FLOOR LININGS AND FLOOR COVERINGS CRITICAL RADIANT FLUX (CRF IN KW/M2)	
Non-Sprinkler Protected Areas	2.2
Sprinkler Protected Areas	1.2
Fire-Isolated Exits & Fire Control Rooms	1.2
Lift Cars	2.2
WALL LININGS AND CEILING LININGS TESTED TO AS5637.1	
Fire-Isolated Exits & Fire Control Rooms	Group 1
Public Corridors – Walls	Group 1 or 2
Public Corridors – Ceilings	Group 1 or 2
Specific Areas – Walls	Group 1, 2 or 3
Specific Areas – Ceilings	Group 1, 2 or 3
Other Areas – Walls	Group 1, 2 or 3
Other Areas – Ceilings	Group 1, 2 or 3
Lift Cars	Group 1 or 2
NOTE	<p>In addition to achieving the group number above they too must comply with the following –</p> <ul style="list-style-type: none"> ▪ a smoke growth rate index not more than 100; or ▪ an average specific extinction area less than 250m²/kg
OTHER MATERIALS OR ASSEMBLIES	
Fire-Isolated Exits & Fire Control Rooms	Spread-of Flame Index 0 Smoke-Developed Index 2
Non-fire-isolated stairs & escalators and auditorium fixed seating	Spread-of Flame Index 0 Smoke-Developed Index 5
Sarking-type material	Flammability Index 0 (fire control rooms) Flammability Index 5 (other areas)
Other materials	Spread-of Flame Index 9 Smoke-Developed Index 8 (if the Spread-of Flame Index is more than 5)

APPENDIX 4

The table below represents calculation of sanitary facilities within the proposed building.

Required facilities

	WC	URINALS	WB
STAFF			
10 (5 male & 5 female)	1 (1 provided)	-	1 (1 provided)
PUBLIC			
25 Male	1 (1 provided)	1 (1 provided)	1 (1 provided)
25 Female	1 (1 provided)	-	1 (1 provided)

The above is based upon –

1. Accessible WC20 counted for staff use, one for each sex
2. Conventional Facility 21 counted for 1 female WC and 1 female wash basin
3. Conventional Facility 22 counted for 1 male WC and 1 male wash basin
4. Unisex accessible facility 19 counted towards male urinal

Design Confidence (Sydney) Pty Limited

Shop 2, 35 Buckingham Street, Surry Hills NSW 2010
ABN: 72 896 582 485

T: 2 8399 3707
E: sydney@designconfidence.com
W: www.designconfidence.com

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