Date: 4 July 2023
Our Ref: P230109

NSW Land and Housing Corporation,
Locked Bag 4009
Ashfield NSW BC 1800
Att: Mr Van Huynh

Dear Van,

RE: Dwellings 5 to 10, 98-102 Albert Street, Revesby
BCA COMPLIANCE ASSESSMENT

Please find enclosed our BCA Compliance Report prepared in respect of the proposed attached dwellings within the above listed property.

In reviewing the content of this Report, particular attention is drawn to the content of Part 3 as Part 3 details the compliance status of the proposed design in terms of each prescriptive provision of the BCA.
The inclusion of this summary enables an immediate understanding of the compliance status of the proposed design to be obtained.

Should you require any further information, please do not hesitate to contact me on the number provided.

Yours faithfully

Kieran Tobin
Director

BCA COMPLIANCE ASSESSMENT

PREPARED FOR

NSW Land and Housing Corporation

REGARDING

Dwellings 5 to 10, 98-102 Albert Street, Revesby

Prepared By

BCA vision

REPORT REGISTER

The following report register documents the development and issue of this report and project as undertaken by this office, in accordance with the *Quality Assurance* policy of BCA Vision Pty Ltd.

Our Reference	Issue No.	Remarks	Issue Date
P230109	1	BCA COMPLIANCE ASSESSMENT	4 July 2023

(ii)

CONTENTS PAGE

1.0 INTRODUCTION 5

1.1 GENERAL 5

1.2 REPORT BASIS 5

1.2 EXCLUSIONS 5

1.3 REPORT PURPOSE 6

2.0 BUILDING DESCRIPTION 7

2.1 GENERAL 7

2.2 RISE IN STOREYS (CLAUSE C1.2) 7

2.3 BUILDING CLASSIFICATION (CLAUSE A3.2) 7

2.4 BUSHFIRE PRONE LAND 7

3.0 COMPLIANCE PATHWAY 8

3.3. COMPLIANCE PATHWAYS WITHIN THE BCA 8

2.3 ADDITIONAL PRE CONSTRUCTION DOCUMENTATION 8

3.1 PART H1 - STRUCTURE 10

3.2 PART H2 – DAMP AND WEATHERPROOFING 10

3.3 PART H3 – FIRE SAFETY 10

3.4 PART H4 – HEALTH AND AMENITY 11

3.5 PART H5 – SAFE MOVEMENT AND ACCESS 11

3.6 PART H6 – ENERGY EFFICIENCY 11

3.7 PART H7 – ANCILLARY PROVISIONS 11

4.0 BCA ASSESSMENT – STATEMENT 12

4.1 SUMMARY 12

We have reviewed the referenced plans and Certificates and in our opinion the subject unauthorised works comply with the Building Code of Australia 2022 Volume 2. 12

3.1 PART H1 - STRUCTURE 12

3.1 PART H2 – DAMP AND WEATHERPROOFING 21

3.1 PART H3 – FIRE SAFETY 24

3.1 PART H4 – HEALTH AND AMENITY 24

1.0 INTRODUCTION

1.1 GENERAL

This "BCA Compliance Assessment" report has been prepared at the request of NSW Land and Housing Corporation and relates to Dwellings 5 to 10, 98-102 Albert Street, Revesby.

The project proposal is for 6 attached residential dwellings.

1.2 REPORT BASIS

The content of this report reflects –

(a) The principles and provisions of BCA 2022, Volume 2;
(b) Architectural Plans Revision A, prepared by Barry Rush and Associates and dated 19/02/21;
(c) Access Report prepared by Sydney Access Consultants dated 24/09/20;
(d) BASIX Certificate number: 582396M-04 prepared by Building Sustainability Assessments and dated 22/09/20;
(e) NatHERS Certificate/s prepared Building Sustainability Assessments and dated 04/09/20
(f) Structural Plans prepared by Michael Ell Consulting and dated 22/09/20;
(g) Structural Certificate prepared by Michael Ell Consulting and dated 30/09/20;
(h) Electrical Design Certificate prepared by JN Responsive Engineering and dated 28/09/20;
(i) Electrical Design Plans prepared by JN Responsive Engineering and dated 23/09/20;
(j) Hydraulic Design Certificate prepared by JN Responsive Engineering and dated 28/09/20;
(k) Hydraulic Design Plans prepared by JN Responsive Engineering and dated 23/09/20;
(l) Street Hydrant Coverage Plans prepared by JN Responsive Engineering and dated 02/10/20;
(m) Stormwater Design Certificate prepared by Michael Ell Consulting and dated 30/09/20;
(n) Stormwater Design Certificate prepared by Michael Ell Consulting and dated 21/09/20;
(o) Landscape Plans prepared by Greenland Design and dated 22/09/20.

1.2 EXCLUSIONS

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

(a) Structural and services design documentation;
(b) General building services (i.e. passenger lifts);
(c) The individual requirements of service providers (i.e. Telstra, Water Supply, Energy Australia);
(d) The individual requirements of the Workcover Authority;

1.3 REPORT PURPOSE

The purpose of this report is to identify the extent to which the architectural design documentation complies with the relevant prescriptive provisions of the BCA 2022. The status of the design is summarised within Part 3 of this report.

2.0 BUILDING DESCRIPTION

2.1 GENERAL

In the context of the Building Code of Australia (BCA) 2022, the subject development is described within items 2.2 – 2.6 below.

2.2 RISE IN STOREYS (CLAUSE C1.2)

The Dwellings are proposed to have a rise in storeys of one (1)

2.3 BUILDING CLASSIFICATION (CLAUSE A3.2)

The buildings incorporate the following classifications: -

Class 1A	3 residential Dwellings

2.4 BUSHFIRE PRONE LAND

An RFS Search indicates that the property is NOT considered to be Bushfire Prone Land and will require a Bushfire Assessment Report.

3.0 COMPLIANCE PATHWAY

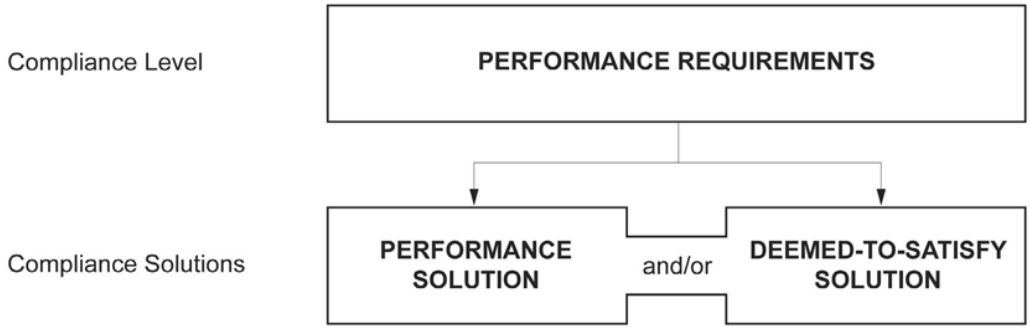
3.3. COMPLIANCE PATHWAYS WITHIN THE BCA

Compliance with the NCC is achieved by complying with—
(1) the Governing Requirements of the NCC; and
(2) the *Performance Requirements*.

A2.1 Compliance with the Performance Requirements

Performance Requirements are satisfied by one of the following, as shown in Figure 1:
(1)A *Performance Solution*.
(2)A *Deemed-to-Satisfy Solution*.
(3)A combination of (1) and (2)**.**

Figure 1: NCC compliance option structure



2.3 ADDITIONAL PRE CONSTRUCTION DOCUMENTATION

The following table provides a list of additional items which may be required by the PCA:-

Seq	Requirement
1.	Copy of Structural Engineers Design Compliance Certificate and Services Plans Confirm compliance with:- AS 3600 Concrete Structures AS 3700 Masonry Structures AS 1684 Timber Framed Construction
2.	Copy of Final Mechanical Services Engineers Regulated Design Certificate and Revised Services Plans (as required)
3.	Copy of Final Hydraulic Services Engineers Design Compliance Certificate and Services Plans Note the Certificate must reference compliance with Clause E12D2, AS 2419.1 – 2021
4.	Copy of Final Civil Stormwater Services Engineers Design Compliance Certificate and Services Plans
5.	Copy of Electrical Services Engineers Design Compliance Certificate and Services Plans *Automatic Smoke Detection and Alarm System* Part E2 of the BCA and Specification 20 AS 3786-2014; AS 1670 - 2018

	Emergency Lighting and Exit Signs BCA Part E4 of the BCA, and the relevant provisions of AS/NZS 2293.1-2018. Artificial Lighting - AS/NZS 1680.0.

ASSESSMENT – SUMMARY

3.1 PART H1 - STRUCTURE

Clause	Requirement	Complies	Detail Req'd	Not Applicable
H1D1	Deemed to Satisfy Provisions		✓	
H1D2	Structural Provisions		✓	
H1D3	Site Preparation		✓	
H1D4	Footings and Slabs		✓	
H1D5	Masonry		✓	
H1D6	Framing		✓	
H1D7	Roof and Wall Cladding		✓	
H1D8	Glazing		✓	
H1D9	Earthquake Areas			✓
H1D10	Flood Areas		✓	
H1D11	Attachment of framed decks and balconies to external walls of buildings using a waling plate			✓
H1D12	Piled Footings			✓

3.2 PART H2 – DAMP AND WEATHERPROOFING

Clause	Requirement	Complies	Detail Req'd	Not Applicable
H2D1	Deemed to Satisfy Provisions		✓	
H2D2	Drainage		✓	
H2D3	Footings and slabs		✓	
H2D4	Masonry		✓	
H2D5	Subfloor Ventilation		✓	
H2D6	Roof and Wall Cladding		✓	
H2D7	Glazing		✓	
H2D8	External Waterproofing		✓	

3.3 PART H3 – FIRE SAFETY

Clause	Requirement	Complies	Detail Req'd	Not Applicable
H3D1	Deemed to Satisfy Provisions	✓		
H3D2	Fire Hazard Properties and Non Combustible Building elements	✓		
H3D3	Fire Separation of External Walls	✓		
H3D4	Fire Protection of Separating Walls and Floors	✓		
H3D5	Fire Separation of garage top dwellings			✓
H3D6	Smoke Alarms and Evacuation Lighting		✓	

3.4 PART H4 – HEALTH AND AMENITY

Clause	Requirement	Complies	Detail Req'd	Not Applicable
H4D1	Deemed to Satisfy Provisions		✓	
H4D2	Wet Areas		✓	
H4D3	Materials and Installation of Wet Area Components and Systems		✓	
H4D4	Room Heights	✓		
H4D5	Facilities	✓		
H4D6	Light	✓		
H4D7	Ventilation	✓		
H4D8	Sound Insulations	✓		
H4D9	Condensation Management		✓	

3.5 PART H5 – SAFE MOVEMENT AND ACCESS

Clause	Requirement	Complies	Detail Req'd	Not Applicable
H5D1	Deemed to Satisfy Provisions			✓
H5D2	Stairway and Ramp Construction			✓
H5D3	Barriers and Handrails			✓

3.6 PART H6 – ENERGY EFFICIENCY

Clause	Requirement	Complies	Capable of Complying	Not Applicable
H6D1	Deemed to Satisfy Provisions	✓		
H6D2	Application of Part D6	✓		

3.7 PART H7 – ANCILLARY PROVISIONS

Clause	Requirement	Complies	Detail Req'd	Not Applicable
H7D1	Deemed to Satisfy Provisions			✓
H7D2	Swimming Pools			✓
H7D3	Construction In Alpine Areas			✓
H7D4	Construction in Bushfire Prone Areas			✓
H7D5	Heating Appliances			✓

4.0 BCA ASSESSMENT – STATEMENT

4.1 SUMMARY

We have reviewed the referenced plans and Certificates and in our opinion the subject unauthorised works comply with the Building Code of Australia 2022 Volume 2.

3.1 PART H1 - STRUCTURE

CLAUSE	CLAUSE REQUIREMENT	ACTION/RECOMENDATION
H1D1	**Deemed-to-Satisfy Provisions** (1)Where a Deemed-to-Satisfy Solution is proposed, Performance Requirements H1P1 and H1P2 are satisfied by complying with H1D2 to H1D11. (2)Where a Performance Solution is proposed, the relevant Performance Requirements must be determined in accordance with A2G2(3) and A2G4(3) as applicable.	For Reference
H1D2	**Structural provisions** A Class 1 or Class 10 building must be constructed in accordance with— (a)Section 2 of the ABCB Housing Provisions; or (b)the relevant provisions of H1D3 to H1D12; or any combination thereof.	Structural Engineers Advice is required. Provide Structural Engineers Details & Structural Design Certificate prior to Crown compliance Certificate A Compliance Certificate will be required on completion of works on site
H1D3	**Site preparation** (1)Performance Requirement H1P1 is satisfied for earthworks associated with the construction of a building or structure if they are in accordance with Part 3.2 of the ABCB Housing Provisions, provided that the site is classified as A, S, M, H or E in accordance with 4.2.2 of the ABCB Housing Provisions and the work is undertaken in normal site conditions. (2)Performance Requirement H1P1 is satisfied for an earth retaining structure associated with the construction of a building or structure if it is designed and	Provide construction method in Project plans prior to Crown compliance Certificate

	constructed in accordance with AS 4678. QLD H1D3(3) (3)Compliance with Part 3.4 of the ABCB Housing Provisions satisfies Performance Requirement H1P1 for termite risk management.	
H1D4	**Footings and slabs** (1)Performance Requirement H1P1 is satisfied for footings and slabs if they are installed in accordance with either (a) or (b): (a)One of the following: (i)AS 2870 except that for the purposes of Clause 5.3.3.1 of AS 2870 a damp-proofing membrane is required to be provided. (ii)AS 3600 except that barriers installed beneath slab on ground construction must have a high resistance to damage during construction. Subject to (2), Section 4 of the ABCB Housing Provisions. (2)Section 4 of the ABCB Housing Provisions may only be used where— (a)the footing is on a Class A, S or M site (classified in accordance with AS 2870) with a uniform bearing capacity; and (b)any slab— (i)is not more than 18 m long or wide; and (ii)does not contain permanent joints excluding construction joints; and (iii)is of a geometric shape containing only external right angles, other than a slab in (c); and (c)any footing and slab in (b) has not more than one re-entrant corner; and (d)the footing and slab are not constructed on soil classified as an aggressive soil type; and (e)the structure supported by the footing does not contain— (i)more than two trafficable floors; or (ii)a wall height exceeding 8 m, excluding any gable; and (f)the footing does not support more than one concrete slab; and (g)the building does not include wing walls or masonry arches unless they are detailed for movement in accordance with Cement Concrete and Aggregates Australia TN 61; and (h)single leaf earth or stone masonry walls do not exceed 3 m in height; and (i)the site is considered to be normal as defined in Part 3.2 of the ABCB Housing Provisions; and (j)the site is not located in an alpine area; and the building is one for which Appendix A of AS 1170.4 contains no specific earthquake design requirements.	Structural Engineers Advice is required. Provide Structural Engineers Details & Structural Design Certificate prior to Crown compliance Certificate A Compliance Certificate will be required on completion of works on site

H1D5	**Masonry** (1)Performance Requirement H1P1 is satisfied for masonry veneer if it is designed and constructed in accordance with— (a)AS 3700; or AS 4773.1 and AS 4773.2; or (c)Part 5.2 of the ABCB Housing Provisions provided— (i) the building is located in an area with a wind class of not more than N3; and (ii)masonry veneer walls— (A)are constructed on footings and/or slabs that comply with H1D4; and (B)comply with Part 5.6 using components that comply with Part 5.7 of the ABCB Housing Provisions; and (iii)the building site soil classification is A, S or M in accordance with AS 2870; and (iv)the framing that the masonry wall is tied to complies with H1D6; and (v)the building is not constructed in an alpine area; and (vi)the building is one for which Appendix A of AS 1170.4 contains no specific earthquake design requirements. (2)Performance Requirement H1P1 is satisfied for cavity brick unreinforced masonry if it is designed and constructed in accordance with: (a)AS 3700; or (b)AS 4773.1 and AS 4773.2; or (c)Part 5.3 of the ABCB Housing Provisions provided— (i)the building is located in an area with a design wind speed of not more than N3; and (ii)cavity masonry walls— (A)are constructed on footings and/or slabs that comply with H1D4; and (B)comply with Part 5.6 using components that comply with Part 5.7 of the ABCB Housing Provisions; and (iii)the building site soil classification is A, S or M in accordance with AS 2870; and (iv)the building is not constructed in an alpine area; and (v)the building is one for which Appendix A of AS 1170.4 contains no specific earthquake design requirements. (3)Performance Requirement H1P1 is satisfied for single leaf unreinforced masonry if it is designed and constructed in accordance with: (a)AS 3700; or (b)AS 4773.1 and AS 4773.2; or (c)Part 5.4 of the ABCB Housing Provisions provided— (i)the building is located in an area with a design wind speed of not more than N3; and	Structural Engineers Advice is required. Provide Structural Engineers Details & Structural Design Certificate prior to Crown compliance Certificate A Compliance Certificate will be required on completion of works on site

	(ii)single leaf unreinforced masonry walls— (A)are constructed on footings and/or slabs that comply with H1D4; and (B)comply with Part 5.6 using components that comply with Part 5.7 of the ABCB Housing Provisions; and (iii)the building site soil classification is A, S or M in accordance with AS 2870; and (iv)the building is not constructed in an alpine area; and (v)the building is one for which Appendix A of AS 1170.4 contains no specific earthquake design requirements. (4)Performance Requirement H1P1 is satisfied for reinforced masonry if it is designed and constructed in accordance with: (a)AS 3700, except— (i)‘(for piers—isolated or engaged)’ is removed from clause 8.5.1(d); and (ii)where clause 8.5.1 requires design as for unreinforced masonry in accordance with Section 7, the member must also be designed as unreinforced masonry in accordance with Table 10.3 and 4.1(a)(i)(C) of AS 3700; or (b)AS 4773.1 and AS 4773.2. (5)Performance Requirement H1P1 is satisfied for an isolated masonry pier system if it is designed and constructed in accordance with one of the following, as appropriate: (a)AS 3700, except— (i)‘(for piers—isolated or engaged)’ is removed from clause 8.5.1(d); and (ii)where clause 8.5.1 requires design as for unreinforced masonry in accordance with Section 7, the member must also be designed as unreinforced masonry in accordance with Table 10.3 and 4.1(a)(i)(C) of AS 3700. (b)AS 4773.1 and AS 4773.2. (c)Part 5.5 of the ABCB Housing Provisions provided— (i)the building is located in an area with a wind class of not more than N3; and (ii)isolated piers are constructed on footings and/or slabs that comply with H1D4; and (iii)masonry units comply with 5.6.2(4) of the ABCB Housing Provisions and have a minimum compressive strength of— (A)6.2 MPa for solid or cored units; or (B)15 MPa for hollow units; and (iv)the roof structure and any walls provide the required lateral bracing for the top of the isolated pier when determined in accordance with AS 3700, except—	

	(A)‘(for piers—isolated or engaged)’ is removed from clause 8.5.1(d); and (B)where clause 8.5.1 requires design as for unreinforced masonry in accordance with Section 7, the member must also be designed as unreinforced masonry in accordance with Table 10.3 and 4.1(a)(i)(C) of AS 3700; and (v)the building site soil classification is A, S or M in accordance with AS 2870; and (vi)the building is not constructed in an alpine area; and (vii)the building is one for which Appendix A of AS 1170.4 contains no specific earthquake design requirements. (6)Performance Requirement H1P1 is satisfied for masonry accessories if they are constructed and installed in accordance with: (a)AS 3700; or (b)AS 4773.1 and AS 4773.2. (c)Part 5.6 of the ABCB Housing Provisions provided— (i)the building is located in an area with a wind class of not more than N3; and (ii)the building is not constructed in an alpine area; and the building is one for which Appendix A of AS 1170.4 contains no specific earthquake design requirements	
H1D6	**Framing** (1)Diagrams depicting framing members and associated terminology used to describe them are set out in Figures H1D6c, H1D6d and H1D6e, and in most cases are applicable for both steel and timber frame members. (2)Terminology and spacing for structural steel members are set out in Tables H1D6a and H1D6b, and Figures H1D6a, H1D6b and H1D6f. (3)Performance Requirement H1P1 is satisfied for steel framing if it is designed and constructed in accordance with one of the following: (a)Residential and low-rise steel framing: (i)Design: NASH Standard ‘Residential and Low-Rise Steel Framing’ Part 1. (ii)Design solutions: NASH Standard ‘Residential and Low-Rise Steel Framing’ Part 2. (b)Steel structures: AS 4100. (c)Cold-formed steel structures: AS/NZS 4600. (4)Performance Requirement H1P1 is satisfied for timber framing if it is designed and constructed in accordance with the following, as appropriate: (a)Design of timber structures: AS 1720.1.	Structural Engineers Advice is required. Provide Structural Engineers Details & Structural Design Certificate prior to Crown compliance Certificate A Compliance Certificate will be required on completion of works on site

	(b)Design of nailplated timber roof trusses: AS 1720.5. (c)Residential timber-framed construction – non-cyclonic areas: AS 1684.2 or AS 1684.4. (d)Residential timber-framed construction – cyclonic areas: AS 1684.3. (e)Installation of particleboard flooring: AS 1860.2. (5)Performance Requirement H1P1 is satisfied for structural steel sections if they are designed and constructed in accordance with one of the following: (a)Steel structures: AS 4100. (b)Cold-formed steel structures: AS/NZS 4600. (c)For structural stability, strength and deflection, and subject to (6), Part 6.3 of the ABCB Housing Provisions. (d)For corrosion protection, clause 6.3.4 of Part 6.3 of the ABCB Housing Provisions. (6)For the purposes of (5)(c), Part 6.3 of the ABCB Housing Provisions may only be used where— (a)the building is located in an area with a wind class of not more than N3; and (b)the first dimension of steel sections is installed vertically; and (c)all loads are evenly distributed (unless otherwise noted or allowed for); and (d)the building is one for which Appendix A of AS 1170.4 contains no specific earthquake design requirements; and (e)the structural steel members are not subject to snow loads; and (f)the structural steel members are in buildings within geometric limits set out in clause 1.2 of AS 4055. (7)The use of structural software is subject to the following: (a)Structural software used in computer aided design of a building or structure, that uses design criteria based on the Deemed-to-Satisfy Provisions of Section H, including its referenced documents, for the design of steel or timber trussed roof and floor systems and framed building systems, must comply with the ABCB Protocol for Structural Software. (b)Structural software referred to in (a) can only be used for buildings within the following geometric limits: (i)The distance from ground level to the underside of eaves must not exceed 6 m. (ii)The distance from ground level to the highest point of the roof, neglecting	

	chimneys, must not exceed 8.5 m. (iii)The building width including roofed verandahs, excluding eaves, must not exceed 16 m. (iv)The building length must not exceed five times the building width. (v)The roof pitch must not exceed 35 degrees. (c)The requirements of (a) do not apply to design software for individual frame members such as electronic tables similar to those provided in— (i)AS 1684; or NASH Standard – Residential and Low-Rise Steel Framing, Part 2.	
H1D7	**Roof and wall cladding** (1)Diagrams depicting relevant roofing and supporting members and associated terminology used to describe them are set out in Figure H1D7a and Figure H1D7b. (2)Performance Requirement H1P1 is satisfied for sheet roofing if it complies with one or a combination of the following: (a)Metal roofing: (i)AS 1562.1; and (ii)in wind regions C and D in accordance with Figure 2.2.3 in Section 2 of the ABCB Housing Provisions (cyclonic areas), metal roof assemblies, their connections and immediate supporting members must be capable of remaining in position notwithstanding any permanent distortion, fracture or damage that might occur in the sheet or fastenings under the pressure sequences A to G defined in Table H1D7. (b)Plastic sheet roofing: AS 1562.3. (c)Metal sheet roofing: Part 7.2 of the ABCB Housing Provisions, provided the building is located in an area with a wind class of not more than N3. (3)Performance Requirement H1P1 is satisfied for roof cladding if it complies with one or a combination of the following: (a)Terracotta, fibre-cement and timber slates and shingles: AS 4597. (b)For roof tiles— (i)AS 2050; or (ii)Part 7.3 of the ABCB Housing Provisions, provided— (A)the building is located in an area with a wind class of not more than N3; and (B)the roof tiles comply with AS 2049; and (C)the roof has a pitch of not less than 15 degrees and not more than 35 degrees. (4)Performance Requirement H1P1 is satisfied for timber and composite wall cladding if it is designed and constructed in accordance with— (a)for autoclaved aerated concrete wall cladding, AS 5146.1; or	Provide construction method in Project plans prior to Crown compliance Certificate.

	(b)for wall cladding, Part 7.5 of the ABCB Housing Provisions. (5)Performance Requirement H1P1 is satisfied for a metal wall cladding if it is designed and constructed in accordance with AS 1562.1.	
H1D8	**Glazing** (1)Performance Requirement H1P1 is satisfied for glazing and windows if they are— (a)designed and constructed in accordance with AS 2047 for glazed assemblies in an external wall including— (i)windows, other than those listed in (2); and (ii)sliding and swinging glazed doors with a frame, including French and bi-fold doors with a frame; and (iii)adjustable louvres; and (iv)window walls with one-piece framing; and (b)installed such that they comply with— (i)AS 2047; and Part 8.2 of the ABCB Housing Provisions, provided that they are— (A) in buildings that are within the geometric limits set out in clause 1.2 of AS 4055; and (B)located in an area with a wind class of not more than N3. (2)Performance Requirement H1P1 is satisfied for glazing in glazed assemblies if it— (a)complies with Part 8.3 of the ABCB Housing Provisions; or (b)is designed and constructed in accordance with AS 1288 for all glazed assemblies not covered by (1) and the following glazed assemblies: (i)All glazed assemblies not in an external wall. (ii)Revolving doors. (iii)Fixed louvres. (iv)Skylights, roof lights and windows other than in the vertical plane. (v)Sliding and swinging doors without a frame. (vi)Windows constructed on-site and architectural one-off windows, which are not design tested in accordance with AS 2047. (vii)Second-hand windows, re-used windows and recycled windows. (viii)Heritage windows. (ix)Glazing used in balustrades and overhead glazing. (3)Performance Requirement H1P1(4) is satisfied for glazed assemblies at risk of	Provide construction method in Project plans prior to Crown compliance Certificate.

	human impact if they— (a)are designed, constructed and installed in accordance with— (i)for glass, AS 1288; and (ii)for windows, AS 2047; or (b)comply with Part 8.4 of the ABCB Housing Provisions.	
H1D10	**Flood hazard areas** Performance Requirement H1P2 for a Class 1 building constructed in a flood hazard area is satisfied if the building is constructed in accordance with the ABCB Standard for Construction of Buildings in Flood Hazard Areas.	For reference

3.1 PART H2 – DAMP AND WEATHERPROOFING

CLAUSE	CLAUSE REQUIREMENT	ACTION/RECOMENDATION
H2D1	**Rainwater management** (1)Surface water, resulting from a storm having an annual exceedance probability of 5% and which is collected or concentrated by a building or sitework, must be disposed of in a way that avoids the likelihood of damage or nuisance to any other property. (2)Surface water, resulting from a storm having an annual exceedance probability of 1% must not enter the building. (3)A drainage system for the disposal of surface water resulting from a storm having an annual exceedance probability of— (a)5% must— (i)convey surface water to an appropriate outfall; and (ii)avoid surface water damaging the building; and 1% must avoid the entry of surface water into a building. **Weatherproofing** A roof and external wall (including openings around windows and doors) must prevent the penetration of water that could cause— (a) unhealthy or dangerous conditions, or loss of amenity for occupants; and undue dampness or deterioration of building elements. **Rising damp** Moisture from the ground must be prevented from causing— (a)unhealthy or dangerous conditions, or loss of amenity for occupants; and undue dampness or deterioration of building elements. **Drainage from swimming pools** A swimming pool must have adequate means of draining the pool in a manner which will not— (a)cause illness to people; or affect other property.	Hydraulic Engineers Details will be required prior to the Crown Certificate
H2D2	Drainage Performance Requirement H2P1 is satisfied for drainage if it is designed and constructed in accordance with — (a)AS/NZS 3500.3; or (b)provided the stormwater drainage system otherwise complies with (a), Part 3.3	Hydraulic Engineers Details will be required prior to the Crown Certificate

	of the ABCB Housing Provisions for drainage of— (i)roofs in areas subject to 5 minute duration rainfall intensities of not more than 255 mm per hour over an annual exceedance probability of 5% (as per Table 7.4.3d to Table 7.4.3k of the ABCB Housing Provisions) where a drainage system is required; and (ii) sub-soil areas where excessive soil moisture problems may occur; and A(iii)land adjoining and under buildings.	
H2D3	**Footings and slabs** Performance Requirement H2P3 is satisfied for footings and slabs if they are installed in accordance with H1D4(1)(a) or (b).	Provide construction method in Project plans prior to Crown compliance Certificate.
H2D4	**Masonry** (1)H2D4(2)— (a)applies to every external wall (including the junction between the wall and any window or door) of a Class 1 building; and (b)does not apply to any Class 10 building except where its construction contributes to the weatherproofing of the Class 1 building. (2)Performance Requirements H2P2 and H2P3 are satisfied for weatherproofing of masonry if it is carried out in accordance with the appropriate provisions of one of the following: (a)AS 3700. (b)AS 4773.1 and AS 4773.2. (c)Part 5.7 of the ABCB Housing Provisions provided masonry walls are constructed in accordance with H1D5 and the requirements of Part 5.7.	Provide construction method in Project plans prior to Crown compliance Certificate.
H2D6	**Roof and wall cladding** (1)Performance Requirement H2P1 is satisfied for gutters and downpipes if they are designed and constructed in accordance with one of the following: (a)Subject to (2), AS/NZS 3500.3. (b)Subject to (2) and (3), Part 7.4 of the ABCB Housing Provisions. (2)The requirements of (1) do not apply to the removal of surface water from a storm having an annual exceedance probability of 1% for a Class 10 building where in the particular case there is no necessity for compliance. VIC H2D6(3) (3)Part 7.4 of the ABCB Housing Provisions— (a)may only be used provided the roof drainage system is connected to a stormwater drainage system that complies with H2D2; and (b)excludes box gutters.	Provide construction method in Project plans prior to Crown compliance Certificate.

	(4)Performance Requirement H2P2 is satisfied for roof and wall cladding if it is in accordance with H1D7(2), (3), (4) or (5) as appropriate.	
H2D7	**Glazing** [2019: 3.6] Performance Requirement H2P2 is satisfied for weatherproofing for glazing if it is in accordance with H1D8(1).	Provide construction method in Project plans prior to Crown compliance Certificate.
H2D8	**External waterproofing** (1)Performance Requirement H2P2 is satisfied for the design and construction of external waterproofing for roofing systems on flat roofs, roof terraces, balconies and terraces and other similar horizontal surfaces located above internal spaces of a building provided— (a)membranes used in the external waterproofing system comply with AS 4654.1; and (b)the design and installation of the external waterproofing system is in accordance with AS 4654.2. (2)The requirements of (1) apply to— (a)roofing systems other than those complying with H1D7(2) and (3); and (b)terraces, balconies and the like other than— (i)a concrete slab that has a minimum step-down of 50 mm below the internal floor level; or (ii)a suspended concrete slab— (A)where the subfloor space is not used for habitable or non-habitable purposes; and (B)that has a minimum step-down of 50 mm below the internal floor level; or (iii)spaced decking in conjunction with framing members that are suitable for external use.	Provide construction method in Project plans prior to Crown compliance Certificate.

3.1 PART H3 – FIRE SAFETY

CLAUSE	CLAUSE REQUIREMENT	ACTION/RECOMENDATION
H3D6	**Smoke alarms and evacuation lighting** [2019: 3.7.5] (1)Compliance with Part 9.5 of the ABCB Housing Provisions satisfies Performance Requirement H3P2 for smoke alarms and evacuation lighting. (2)For the purposes of (1), a Class 1 building includes a Class 10a private garage located above or below the Class 1 building.	Smoke alarm installation must comply with AS 3786. Provide construction method in Project Specification prior to Crown compliance Certificate

3.1 PART H4 – HEALTH AND AMENITY

CLAUSE	CLAUSE REQUIREMENT	ACTION/RECOMENDATION
H4D1	**Deemed-to-Satisfy Provisions** (1)Where a Deemed-to-Satisfy Solution is proposed, Performance Requirements H4P1 to H4P7 are satisfied by complying with H4D2 to H4D9. (2)Where a Performance Solution is proposed, the relevant Performance Requirements must be determined in accordance with A2G2(3) and A2G4(3) as applicable.	For Reference
H4D2	**Wet areas** Compliance with AS 3740 or Part 10.2 of the ABCB Housing Provisions satisfies Performance Requirement H4P1 for wet areas provided the wet areas are protected in accordance with the appropriate requirements of 10.2.1 to 10.2.6 and 10.2.12 of the ABCB Housing Provisions.	Provide construction method in Project Specification prior to Crown compliance Certificate.
H4D3	**Materials and installation of wet area components and systems** Performance Requirement H4P1 is satisfied for materials and the installation of wet area components and systems if— (a)building elements in wet areas are water resistant or waterproof in accordance with clauses 10.2.1 to 10.2.6 of the ABCB Housing Provisions; and (b)they comply with either— (i)AS 3740 and clause 10.2.12 of the ABCB Housing	Provide construction method in Project Specification prior to Crown compliance Certificate.

	Provisions; or 10.2.7 to 10.2.32 of the ABCB Housing Provisions.	
H4D9	**Condensation management** Compliance with Part 10.8 of the ABCB Housing Provisions satisfies Performance Requirement H4P7 for condensation management.	Provide construction method in Project Specification prior to Crown compliance Certificate.

Author
KIERAN TOBIN

REGISTERED CERTIFIER NO 0409 4 July 2023

Date: 4 July 2023
Our Ref: P230109

NSW Land and Housing Corporation,
Locked Bag 4009
Ashfield NSW BC 1800
Att: Mr Van Huynh

Dear Van,

RE: Units 1 to 4 and 11 to 18, 98-102 Albert Street, Revesby
BCA COMPLIANCE ASSESSMENT

Please find enclosed our BCA Compliance Report prepared in respect of the proposed design contained within the architectural documentation provided.

In reviewing the content of this Report, particular attention is drawn to the content of Parts 2, 3 and 4, as: –

- Part 3 Provides a Key point summary

- Part 4 summarizes the compliance status of the proposed design in terms of each prescriptive provision of the BCA.

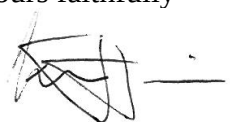
  The inclusion of this summary enables an immediate understanding of the compliance status of the proposed design to be obtained.

- Part 5 contains a detailed analysis of the proposed design, and provides informative commentary & recommendation in respect of each instance of prescriptive non-compliance and area of preliminary only (design) detail, as applicable.

  This commentary enables the project team to readily identify and understand the nature and extent of information required within the Construction Certificate application to demonstrate the attainment of BCA compliance.

Should you require any further information, please do not hesitate to contact me on the number provided.

Yours faithfully



Kieran Tobin
Director

BCA COMPLIANCE ASSESSMENT

PREPARED FOR

NSW Land and Housing Corporation

REGARDING
Units 1 to 4 and 11 to 18, 98-102 Albert St, Revesby

Prepared By

BCA vision

REPORT REGISTER

The following report register documents the development and issue of this report and project as undertaken by this office, in accordance with the *Quality Assurance* policy of BCA Vision Pty Ltd.

Our Reference	Issue No.	Remarks	Issue Date
P230109	1	Design Compliance Report	4 July 2023
Author		Kieran Tobin Senior NCC Consultant Registered Building Surveyor - Fair Trading no 0409 Grad Dip Building Surveying UWS	

CONTENTS PAGE

1.0 INTRODUCTION 1

1.1 General 1

1.2 Report Basis 1

1.3 Exclusions 1

1.4 Report Purpose 2

2.0 MATTERS IDENTIFIED / RECOMMENDATIONS 3

2.1 Compliance Pathways within the BCA 3

2.2 KEY COMPLIANCE ISSUES IDENTIFIED 3

2.3 ADDITIONAL PRE CC DOCUMENTATION 3

3.0 BUILDING DESCRIPTION 5

3.1 General 5

3.1 Rise in Storeys (Clause C1.2) 5

3.2 Building Classification (Clause A3.2) 5

3.4 Type of Construction (Table C1.1) 5

3.5 General Floor Area Limitations (Table C2.2) 6

3.6 Part B1 - Structural provisions 6

4.0 BCA ASSESSMENT – SUMMARY 7

4.1 General 7

4.2 Section C – Fire resistance 7

4.3 Section D – Access and Egress 8

4.4 Section E – Services and Equipment 10

3.1. SECTION F – HEALTH AND AMENITY 12

3.1. SECTION J – ENERGY EFFICIENCY 13

5.0 BCA ASSESSMENT – DETAILED ANALYSIS 1

5.1 GENERAL 1

5.3 SECTION D – ACCESS AND EGRESS 1

5.4 SECTION E – SERVICES AND EQUIPMENT 7

5.5 SECTION F – HEALTH AND AMENITY 14

1.0 INTRODUCTION

1.1 GENERAL

This "BCA Compliance Assessment" report has been prepared at the request of NSW Land and Housing Corporation, and relates to the premises located at Units 1 to 4 and 11 to 18, 98-102 Albert Street, Revesby.

The project proposal is for construction of 2 new two storey residential unit building containing 10 units.

1.2 REPORT BASIS

The content of this report reflects –

(a) The principles and provisions of BCA 2022, Parts B, C, D, E, F and J;
(b) Architectural Plans Revision A, prepared by Barry Rush and Associates and dated 19/02/21;
(c) Access Report prepared by Sydney Access Consultants dated 24/09/20;
(d) BASIX Certificate number: 582396M-04 prepared by Building Sustainability Assessments and dated 22/09/20;
(e) NatHERS Certificate/s prepared Building Sustainability Assessments and dated 04/09/20
(f) Structural Plans prepared by Michael Ell Consulting and dated 22/09/20;
(g) Structural Certificate prepared by Michael Ell Consulting and dated 30/09/20;
(h) Electrical Design Certificate prepared by JN Responsive Engineering and dated 28/09/20;
(i) Electrical Design Plans prepared by JN Responsive Engineering and dated 23/09/20;
(j) Hydraulic Design Certificate prepared by JN Responsive Engineering and dated 28/09/20;
(k) Hydraulic Design Plans prepared by JN Responsive Engineering and dated 23/09/20;
(l) Street Hydrant Coverage Plans prepared by JN Responsive Engineering and dated 02/10/20;
(m) Stormwater Design Certificate prepared by Michael Ell Consulting and dated 30/09/20;
(n) Stormwater Design Certificate prepared by Michael Ell Consulting and dated 21/09/20;
(o) Landscape Plans prepared by Greenland Design and dated 22/09/20.

1.3 EXCLUSIONS

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

(a) Structural and services design documentation;
(b) General building services;
(c) The individual requirements of service providers (i.e. Telstra, Water Supply, Energy Australia);
(d) The individual requirements of the Workcover Authority;
(e) Disability Discrimination Act (DDA);

(f) Assessment of any structural elements or geotechnical matters relating to the building, including any;
(g) Consideration of any fire services operations (including hydraulic, electrical or other systems);
(h) Assessment of plumbing and drainage installations, including stormwater;
(i) Assessment of mechanical plant operations, electrical systems or security systems;
(j) Heritage significance;
(k) Consideration of energy or water authority requirements;
(l) Consideration of Council's local planning policies;
(m) Environmental or planning issues;
(n) Requirements of statutory authorities;
(o) Sections G, H or I of the BCA are not considered;
(p) This report has been prepared for the exclusive use of the client referred to on the cover sheet of this report. We do not warrant or accept liability for the reliance upon or use of this report by anyother party.
(q) The report considers matters of a significant nature only and should not be considered exhaustive.
(r) The report does not consider structural adequacy of the building.

1.4 REPORT PURPOSE

The purpose of this report is to identify the extent to which the proposed plans may comply with the relevant prescriptive provisions of BCA 2022, Parts B, C, D, E, F and J

Assessment of the proposed design considers each prescriptive BCA provision, and identifies such as either: –

(a) Being complied with; or
(b) Not being complied with; or
(c) Requiring the provision further detail with the future Building Permit or other application or
(d) Not being relevant to the particular building works proposal.

The status of the design, in terms of these four (4) categories, is summarised within Part 3 of this report.

Where prescriptive non-compliance is identified, suitable recommendations to remedy the non-compliance shall be detailed in Part 4.

In instances where preliminary only detail exists, summary of the information required from the project team for inclusion within future applications (i.e. Construction Certificate) shall also be outlined in Part 4.

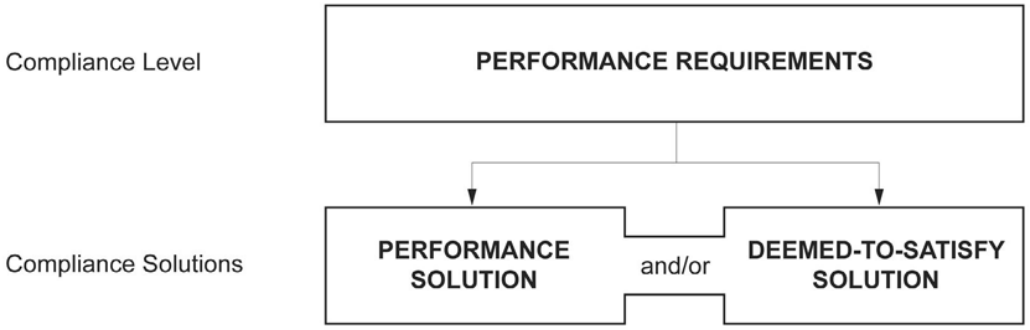
2.0 MATTERS IDENTIFIED / RECOMMENDATIONS

2.1 COMPLIANCE PATHWAYS WITHIN THE BCA

Compliance with the NCC is achieved by complying with—
(1) the Governing Requirements of the NCC; and
(2) the *Performance Requirements*.

A2.1 Compliance with the Performance Requirements
Performance Requirements are satisfied by one of the following, as shown in Figure 1:
(1)A *Performance Solution*.
(2)A *Deemed-to-Satisfy Solution*.
(3)A combination of (1) and (2)**.**

Figure 1: NCC compliance option structure



2.2 KEY COMPLIANCE ISSUES IDENTIFIED

The following table provides a list of key compliance issues within the proposed design.

2.3 ADDITIONAL PRE CC DOCUMENTATION

The following table provides a list of additional items which may be required by the PCA:-

Seq	Requirement
1.	Copy of Structural Engineers Design Compliance Certificate and Services Plans Confirm compliance with:- AS 3600 Concrete Structures AS 3700 Masonry Structures AS 1684 Timber Framed Construction
2.	Copy of Final Mechanical Services Engineers Regulated Design Certificate and Revised Services Plans (as required)
3.	Copy of Final Hydraulic Services Engineers Design Compliance Certificate and Services Plans Note the Certificate must reference compliance with

	Clause E12D2, AS 2419.1 – 2021
4.	Copy of Final Civil Stormwater Services Engineers Design Compliance Certificate and Services Plans
5.	Copy of Electrical Services Engineers Design Compliance Certificate and Services Plans *Automatic Smoke Detection and Alarm System* Part E2 of the BCA and Specification 20 AS 3786-2014; AS 1670 - 2018 *Emergency Lighting and Exit Signs* BCA Part E4 of the BCA, and the relevant provisions of AS/NZS 2293.1-2018. Artificial Lighting - AS/NZS 1680.0.

3.0 BUILDING DESCRIPTION

3.1 GENERAL

In the context of the Building Code of Australia (BCA), the subject development is described within items 2.2 – 2.6 below.

3.1 RISE IN STOREYS (CLAUSE C1.2)

The building has a rise in storeys of two (2).

3.2 BUILDING CLASSIFICATION (CLAUSE A3.2)

The Building will contain the following classifications

Class	Description
2	Class 2 building is a building containing two or more sole-occupancy units
10a	A Carport

3.3 Effective Height (Clause A1.1)

The buildings have an effective height of 12m.

3.4 TYPE OF CONSTRUCTION (TABLE C1.1)

Specification 5 - Type B Construction

TYPE B CONSTRUCTION: FRL OF BUILDING ELEMENTS

Building element	
EXTERNAL WALL (including any column and other building element incorporated within it) or other external building element, where the distance from any *fire-source feature* to which it is exposed is—	
	Class 2
less than 1.5 m	90/ 90/ 90
1.5 to less than 3 m	90/ 60/ 30
3 to less than 9 m	90/ 30/ 30
9 to less than 18 m	90/ 30/–
18 m or more	–/–/–
For non-*loadbearing* parts—	
less than 1.5 m	–/ 90/ 90
1.5 to less than 3 m	–/ 60/ 30
3 m or more	–/–/–
EXTERNAL COLUMN not incorporated in an *external wall*, where the distance from any *fire-source feature* to which itis exposed is—	
For *loadbearing* columns—	
less than 18 m	90/–/–
18 m or more	–/–/–
For non-*loadbearing* columns—	
For non-*loadbearing* columns—	–/–/–
COMMON WALLS and FIRE WALLS—	90/ 90 / 90
INTERNAL WALLS—	
Fire-resisting lift and stair *shafts*—	
Loadbearing	90/ 90/ 90
Fire-resisting stair *shafts*—	
Non-*loadbearing*	–/ 90/ 90
Bounding *public corridors*, public lobbies and the like—	
Loadbearing	60/ 60/ 60

Non-*loadbearing*	–/ 60/ 60
Between or bounding *sole-occupancy units*—	
Loadbearing	60/ 60/ 60
Non-*loadbearing*	–/ 60/ 60
OTHER LOADBEARING INTERNAL WALLS and COLUMNS—	60/–/–
ROOFS	–/–/–

3.5 GENERAL FLOOR AREA LIMITATIONS (TABLE C2.2)

Note – Not applicable to residential portion

3.6 PART B1 - STRUCTURAL PROVISIONS

Structural Engineers Details prepared by an Appropriately qualified Structural Engineer will be required within the Construction Certificate Documentation.
Confirmation will be required that the design achieves compliance with the following standards (where relevant):-

- AS 1170.0 – 2002 – General Principles
- AS 1170.1 – 2002 – Certification of Barriers to Prevent Falls (Dead and Live Loads)
- AS 1170.2 – 2011 – Wind Loads
- AS 1170.4 – 2007 – Earthquake Actions
- AS 3700 – 2018 – Masonry Structures
- AS 3600 – 2018 – Concrete Structures
- AS 4100 – 1998 – Steel Structures
- AS 4600 – 2018 – Cold Formed Steel Structures
- AS 2519- 2009 – Piling Design and Installation
- AS 1720.1 – 2010 – Design of Timber Structures
- AS/NZS 1664.1 and 1664.2 – 1997 – Aluminium Construction
- AS 2047 – 2014 – Windows and External Glazed Doors in Buildings
- AS 1288 – 2006 – Glass In Buildings Selection and Installation
- A building in a *flood hazard area* must comply with the ABCB Standard for Construction of Buildings in Flood Hazard Areas.

4.0 BCA ASSESSMENT – SUMMARY

4.1 GENERAL

The tables contained within items 3.2 – 3.5 below summarise the compliance status of the proposed architectural design in terms of each prescriptive provision of the Building Code of Australia.

For those instances of either "prescriptive non-compliance" or "preliminary only detail", a detailed analysis and commentary is provided within Part 4.

4.2 SECTION C – FIRE RESISTANCE

BCA reference	Complies	Does not comply	Constrct Stage	Not relevant
C2D1 - Deemed-to-Satisfy Provisions	✓			
C2D4 - Buildings of multiple classification				✓
C2D5 - Mixed types of construction				✓
C2D6 - Two storey Class 2, 3 or 9c buildings				✓
C2D7 - Class 4 parts of buildings				✓
C2D8 - Open spectator stands and indoor sports stadiums				✓
C2D9 - Lightweight construction				✓
C2D10 - Non-combustible building elements	✓			
C2D11 - Fire hazard properties	✓			
C2D12 - Performance of external walls in fire				✓
C2D13 - Fire-protected timber: Concession	✓			
C2D14- Ancillary elements	✓			
C2D15-Fixing of bonded laminated cladding panels	✓			
C3D3 - General floor area and volume limitations				✓
C3D4 - Large isolated buildings				✓
C3D5 - Requirements for open spaces and vehicular access				✓
C3D6 - Class 9 buildings				✓
C3D7 - Vertical separation of openings in external walls				✓
C3D8 - Separation by fire walls				✓
C3D9 - Separation of classifications in the same storey				✓
C3D10 - Separation of classifications in different storeys				✓
C3D11 - Separation of lift shafts				✓
C3D12 - Stairways and lifts in one shaft				✓
C3D13 - Separation of equipment				✓
C3D14 - Electricity supply system				✓
C3D15 - Public corridors in Class 2 and 3 buildings				✓
C4D3 - Protection of openings in external walls	✓			
C4D4- Separation of external walls and associated openings in different fire compartments				✓
C4D5- Acceptable methods of protection				✓
C4D6- Doorways in fire walls				✓
C4D7-Sliding fire doors				✓
C4D8- Protection of doorways in horizontal exits				✓
C4D9- Openings in fire-isolated exits				✓
C4D10- Service penetrations in fire-isolated exits				✓
C4D11- Openings in fire-isolated lift shafts			✓	
C4D12- Bounding construction: Class 2 and 3 buildings and Class 4 parts			✓	
C4D13- Openings in floors and ceilings for services			✓	
C4D14- Openings in shafts			✓	
C4D15- Openings for service installations			✓	
C4D16- Construction joints			✓	
C4D17- Columns protected with lightweight construction to achieve an FRL			✓	

4.3 SECTION D – ACCESS AND EGRESS

BCA reference	Complies	Does not comply	Constrct Stage	Not relevant
D2D3 - Number of exits required	✓			
D2D4 - When fire-isolated stairways and ramps are required				✓
D2D5 - Exit travel distances	✓			
D2D6 - Distance between alternative exits				✓
D2D7 - Height of exits, paths of travel to exits and doorways	✓			
D2D8 - Width of exits and paths of travel to exits	✓			
D2D9 - Width of doorways in exits or paths of travel to exits	✓			
D2D10 - Exit width not to diminish in direction of travel				
D2D12 - Travel via fire-isolated exits	✓			
D2D13 - External stairways or ramps in lieu of fire-isolated exits	✓			✓
D2D14 - Travel by non-fire-isolated stairways or ramps	✓			
D2D15 - Discharge from exits	✓			
D2D16 - Horizontal exits				✓
D2D17 - Non-required stairways, ramps or escalators				✓
D2D18 - Number of persons accommodated				✓
D2D19 - Measurement of distances				✓
D2D20 - Method of measurement				✓
D2D21 - Plant rooms, lift machine rooms and electricity network substations: Concession				✓
D2D22 - Access to lift pits				✓
D2D23 - Egress from primary schools				✓
D3D3 - Fire-isolated stairways and ramps				✓
D3D4 - Non-fire-isolated stairways and ramps	✓			
D3D5 - Separation of rising and descending stair flights				✓
D3D6 - Open access ramps and balconies				✓
D3D7 - Smoke lobbies				✓
D3D8 - Installations in exits and paths of travel				✓
D3D9 - Enclosure of space under stairs and ramps				✓
D3D10 - Width of required stairways and ramps				✓
D3D11 - Pedestrian ramps				✓
D3D12 - Fire-isolated passageways				✓
D3D13 - Roof as open space				✓
D3D14 - Goings and risers	✓			
D3D15 - Landings	✓			
D3D16 - Thresholds	✓			
D3D17 - Barriers to prevent falls	✓			
D3D18 - Height of barriers	✓			
D3D19 - Openings in barriers	✓			
D3D20 - Barrier climbability	✓			
D3D21 - Wire barriers				✓
D3D22 - Handrails	✓			
D3D23 - Fixed platforms, walkways, stairways and ladders				✓
D3D24 - Doorways and doors				✓
D3D25 - Swinging doors	✓			
D3D26 - Operation of latch			✓	
D3D27 - Re-entry from fire-isolated exits				✓
D3D28 - Signs on doors				✓
D3D29 - Protection of openable windows			✓	
D3D30 - Timber stairways: Concession				✓
D4D2 -General building access requirements	✓			
D4D3-Access to buildings	✓			
D4D4 -Parts of buildings to be accessible	✓			
D4D5 -Exemptions	✓			
D4D6 -Accessible carparking	✓			
D4D7 -Signage			✓	
D4D8 -Hearing augmentation				✓
D4D9 -Tactile indicators			✓	
D4D10- Wheelchair seating spaces in Class 9b assembly buildings				✓
D4D11-Swimming pools				✓

D4D12-Ramps				✓
D4D13-Glazing on an accessway			✓	

4.4 SECTION E – SERVICES AND EQUIPMENT

BCA reference	Complies	Does not comply	Detail Required	Not relevant
E1D2 - Fire hydrants			✓	
E1D3 -Fire hose reels				✓
E1D4 - Sprinklers				✓
E1D5 - Where sprinklers are required: all classifications				✓
E1D6 - Where sprinklers are required: Class 2 and 3 buildings other than residential care buildings				✓
E1D7 -Where sprinklers are required: Class 3 building used as a residential care building				✓
E1D8 - Where sprinklers are required: Class 6 building				✓
E1D9 - Where sprinklers are required: Class 7a building, other than an open-deck carpark				✓
E1D10 -Where sprinklers are required: Class 9a health-care building used as a residential care building, Class 9c buildings				✓
E1D11 - Where sprinklers are required: Class 9b buildings				✓
E1D12 - Where sprinklers are required: additional requirements				✓
E1D13 -Where sprinklers are required: occupancies of excessive hazard				✓
E1D14 -Portable fire extinguishers				✓
E1D15 -Fire control centres				✓
E1D16 -Fire precautions during construction				✓
E1D17 -Provision for special hazards				✓
E2D3 -General requirements			✓	
E2D4 -Fire-isolated exits				✓
E2D5 -Buildings more than 25 m in effective height: Class 2 and 3 buildings and Class 4 part of a building				✓
E2D6 -Buildings more than 25 m in effective height: Class 5, 6, 7b, 8 or 9b buildings				✓
E2D7 -Buildings more than 25 m in effective height: Class 9a buildings				✓
E2D8 -Buildings not more than 25 m in effective height: Class 2 and 3 buildings and Class 4 part of a building			✓	
E2D9 -Buildings not more than 25 m in effective height: Class 5, 6, 7b, 8 and 9b buildings				✓
E2D10 -Buildings not more than 25 m in effective height: large isolated buildings subject to C3D4				✓
E2D11 -Buildings not more than 25 m in effective height: Class 9a and 9c buildings				✓
E2D12 -Class 7a buildings				✓
E2D13 -Basements (other than Class 7a buildings)				✓
E2D14 -Class 6 buildings – in fire compartments more than 2000 m2: Class 6 building (not containing an enclosed common walkway or mall serving more than one Class 6 sole-occupancy unit)				✓
E2D15 -Class 6 buildings – in fire compartments more than 2000 m2: Class 6 building (containing an enclosed common walkway or mall)				✓
E2D16 -assembly buildings: nightclubs, discotheques and the like				✓
E2D17 - assembly buildings: exhibition halls				✓
E2D18 - assembly buildings: theatres and public halls				✓
E2D19 -Class 9b – assembly buildings: theatres and public halls (not listed in E2D18) including lecture theatres and cinema/auditorium complexes				✓
E2D20 -Class 9b assembly buildings: other assembly buildings (not listed in E2D16 to E2D19)				✓
E2D21 -Provision for special hazards				✓
E3D2 - Lift installations				✓
E3D3 - Stretcher facility in lifts				✓
E3D4 - Warning against use of lifts in fire				✓
E3D5 - Emergency lifts				✓
E3D6 -Landings				✓
E3D7 -Passenger lift types and their limitations				✓

E3D8 -Accessible features required for passenger lifts				✓
E3D9 -Fire service controls				✓
E3D10 -Residential care buildings				✓
E3D11 -Fire service recall control switch				✓
E3D12 -Lift car fire service drive control switch				✓
E4D2 -Emergency lighting requirements			✓	
E4D3 -Measurement of distance			✓	
E4D4 -Design and operation of emergency lighting			✓	
E4D5 -Exit signs			✓	
E4D6 -Direction signs			✓	
E4D7 -Class 2 and 3 buildings and Class 4 parts: exemptions				✓
E4D8 -Design and operation of exit signs			✓	
E4D9 -Emergency warning and intercom systems				✓

3.1. SECTION F – HEALTH AND AMENITY

BCA reference	Complies	Does not comply	Detail required	Not relevant
F1D3 - Stormwater drainage			✓	
F1D4 - Exposed joints			✓	
F1D5 - External waterproofing membranes			✓	
F1D6 - Damp-proofing			✓	
F1D7 - Damp-proofing of floors on the ground			✓	
F1D8 - Subfloor ventilation				✓
F2D2 - Wet area construction			✓	
F2D3 - Rooms containing urinals				✓
F2D4 - Floor wastes			✓	
F3D2 - Roof coverings			✓	
F3D3 - Sarking			✓	
F3D4 - Glazed assemblies			✓	
F3D5 - Wall cladding			✓	
F4D1 - Calculation of number of occupants and facilities				✓
F4D2 - Facilities in Class 2 buildings	✓			
F4D4 - Accessible sanitary facilities				✓
F4D5 - Accessible unisex sanitary compartments				✓
F4D6 - Accessible unisex showers				✓
F4D7 - Construction of sanitary compartments	✓			
F4D8 - Interpretation: urinals and washbasins				✓
F4D9 - Microbial (legionella) control				✓
F4D10 - Waste management				✓
F4D12 - Accessible adult change facilities				✓
F5D2 - Height of rooms and other spaces	✓			
F6D2 Provision of natural light	✓			
F6D3 Methods and extent of natural light	✓			
F6D4 Natural light borrowed from adjoining room				✓
F6D5 Artificial lighting	✓		✓	
F6D6 Ventilation of rooms	✓		✓	
F6D7 Natural ventilation	✓		✓	
F6D8 Ventilation borrowed from adjoining room				✓
F6D9 Restriction on location of sanitary compartments	✓			
F6D10 Airlocks				✓
F6D11 Carparks				✓
F6D12 Kitchen local exhaust ventilation				✓
F7D3 Determination of airborne sound insulation ratings	✓			
F7D4 Determination of impact sound insulation ratings	✓			
F7D5 Sound insulation rating of floors	✓			
F7D6 Sound insulation rating of walls	✓			
F7D7 Sound insulation rating of internal services	✓			
F7D8 Sound isolation of pumps	✓			

3.1. SECTION J – ENERGY EFFICIENCY

BCA reference	Complies	Does not comply	Detail required	Not relevant
Part J0 Energy Efficiency	✓			
Part J1 Building Fabric	✓			
J3.1 Application of Part	✓			
J3.2 Chimneys and Flues				✓
J3.3 Roof Lights				✓
J3.4 Windows and Doors	✓			
J3.5 Exhaust Fans	✓			
J3.6 Ceiling wall and roof construction	✓			
J3.7 Evaporative Coolers				✓
J5.2 Air-conditioning system control				✓
J5.3 Mechanical ventilation system control				✓
J5.4 Fan systems				✓
J5.5 Ductwork insulation				✓
J5.6 Ductwork sealing				✓
J5.7 Pump systems				✓
J5.8 Pipework insulation				✓
J5.9 Space heating				✓
J5.10 Refrigerant chillers				✓
J5.11 Unitary air-conditioning equipment				✓
J5.12 Heat rejection equipment				✓
J6.2 Artificial lighting	✓			
J6.3 Interior artificial lighting and power control				✓
J6.4 Interior decorative and display lighting				✓
J6.5 Exterior artificial lighting			✓	
J6.6 Boiling water and chilled water storage units				✓
J6.7 Lifts				✓
J6.8 Escalators and moving walkways				✓
J7.2 Heated water supply	✓			
J7.3 Swimming pool heating and pumping				✓
J7.3 Swimming pool heating and pumping				✓
J7.4 Spa pool heating and pumping				✓

5.0 BCA ASSESSMENT – DETAILED ANALYSIS

5.1 GENERAL

With reference to the "BCA Assessment Summary" contained within Part 3 above, 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.
In our opinion compliance with the Building Code of Australia 2022, Volume 1,Parts C, D, E and F can be achieved subject to the implementation of the following details into the Construction documentation.

5.3 SECTION D – ACCESS AND EGRESS

CLAUSE	CLAUSE REQUIREMENT	ACTION/RECOMENDATION
D3D26	**Operation of latch** (1)A door in a *required exit*, forming part of a *required exit* or in the path of travel to a *required exit* must be readily openable without a key from the side that faces a person seeking egress, by— (a)a single hand downward action on a single device which is located between 900 mm and 1.1 m from the floor and if serving an area *required* to be *accessible* by Part D4— (i)be such that the hand of a person who cannot grip will not slip from the handle during the operation of the latch; and (ii)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 35 mm and not more than 45 mm; or (b)a single hand pushing action on a single device which is located between 900 mm and 1.2 m from the floor. (2)Where the latch operation device referred to in (1)(b) is not located on the door leaf itself— (a)manual controls to power-operated doors must be at least 25 mm wide, proud of	Further Detail is required within the Construction Documentation

	the surrounding surface and located— (i)not less than 500 mm from an internal corner; and (ii)for a hinged door, between 1 m and 2 m from the door leaf in any position; and (iii)for a sliding door, within 2 m of the doorway and clear of a surface mounted door in the open position; and (b)braille and tactile signage complying with S15C3 and S15C6 must identify the latch operation device. (3)The requirements of (1) and (2) do not apply to a door that— (a)serves a vault, strong-room, *sanitary compartment*, or the like; or (b)serves only, or is within— (i)a *sole-occupancy unit* in a Class 2 building or a Class 4 part of a building; or (ii)a *sole-occupancy unit* in a Class 3 building (other than an entry door to a *sole-occupancy unit* of a boarding house, guest house, hostel, lodging house or backpacker accommodation); or (iii)a *sole-occupancy unit* with a *floor area* not more than 200 m2 in a Class 5, 6, 7 or 8 building; or (iv)a space which is otherwise inaccessible to persons at all times when the door is locked; or (c)complies with (4) and serves— (i)Australian Government Security Zones 4 or 5; or (ii)the secure parts of a bank, *detention centre*, mental health facility, *early childhood centre* or the like; or (d)is fitted with a fail-safe device which *automatically* unlocks the door upon the activation of any sprinkler system (other than a FPAA101D system) complying with Specification 17 or smoke, or any other detector system deemed suitable in accordance with AS 1670.1 installed throughout the building, and is readily openable when unlocked; or (e)is in a Class 9a or 9c building and— (i)is one leaf of a two-leaf door complying with D2D9(1)(a) or D2D9(1)(d) provided that it is not held closed by a locking mechanism and is readily openable; and (ii)the door is not *required* to be a fire door or smoke door.	

	(4)A door referred to in (3)(c) must be able to be immediately unlocked— (a)by operating a fail-safe control switch, not contained within a protective enclosure, to actuate a device to unlock the door; or (b)by hand by a person or persons, specifically nominated by the owner, properly instructed as to the duties and responsibilities involved and available at all times when the building is lawfully occupied so that persons in the building or part may immediately escape if there is a fire. (5)The requirements of (1) and (2) do not apply in a Class 9b building (other than a *school*, an *early childhood centre* or a building used for religious purposes) to a door in a *required exit*, forming part of a *required exit* or in the path of travel to a *required exit* serving a *storey* or room accommodating more than 100 persons, determined in accordance with D2D18, in which case it must be readily openable— (a)without a key from the side that faces a person seeking egress; and (b)by a single hand pushing action on a single device such as a panic bar located between 900 mm and 1.2 m from the floor; and (c)where a two-leaf door is fitted, the provisions of (a) and (b) need only apply to one door leaf if the appropriate requirements of D2D9 are satisfied by the opening of that one leaf.	
D3D29	**Protection of openable windows** (1)A window opening must be provided with protection, if the floor below the window is 2 m or more above the surface beneath in— (a)a bedroom in a Class 2 or 3 building or Class 4 part of a building; or (b)a Class 9b *early childhood centre*. (2)Where the lowest level of the window opening is less than 1.7 m above the floor, a window opening covered by (1) must comply with the following: (a)The openable portion of the window must be protected with— (i)a device capable of restricting the window opening; or (ii)a screen with secure fittings. (b)A device or screen *required* by (a) must— (i)not permit a 125 mm sphere to pass through	Further Detail is required within the Construction Documentation

	the window opening or screen; and (ii)resist an outward horizontal action of 250 N against the— (A)window restrained by a device; or (B)screen protecting the opening; and (iii)have a child resistant release mechanism if the screen or device is able to be removed, unlocked or overridden. (3)A barrier with a height not less than 865 mm above the floor is *required* to an openable window— (a)in addition to window protection, when a child resistant release mechanism is *required* by (2)(b)(iii); and (b)where the floor below the window is 4 m or more above the surface beneath if the window is not covered by (1). (4)A barrier covered by (3) except for (5) must not— (a)permit a 125 mm sphere to pass through it; and (b)have any horizontal or near horizontal elements between 150 mm and 760 mm above the floor that facilitate climbing. (5)A barrier *required* by (3) to an openable window in— (a)*fire-isolated stairways, fire-isolated ramps* and other areas used primarily for emergency purposes, excluding external stairways and external ramps; and (b)Class 7 (other than *carparks*) and Class 8 buildings and parts of buildings containing those classes,	
D4D7	**Signage** (1)In a building *required* to be *accessible*— (a)braille and tactile signage complying with Specification 15 must— (i)incorporate the international symbol of access or deafness, as appropriate, in accordance with AS 1428.1 and identify each— *occupancy unit* in a Class 3 or Class 9c building; and sanitary facility, except a sanitary facility associated with a bedroom in a Class 1b building or a (A)*sole-* (B)space with a hearing augmentation system; and	Further Detail is required within the Construction Documentation

	(ii)identify each door *required* by E4D5 to be provided with an *exit* sign and state— (A)"Exit"; and (B)"Level"; and (C)the floor level number or floor level descriptor, or a combination of the two. (b)signage including the international symbol for deafness in accordance with AS 1428.1 must be provided within a room containing a hearing augmentation system identifying— (i)the type of hearing augmentation; and (ii)the area covered within the room; and (iii)if receivers are being used and where the receivers can be obtained; and (c)signage in accordance with AS 1428.1 must be provided for *accessible* unisex sanitary facilities to identify if the facility is suitable for left or right handed use; and (d) signage to identify an ambulant *accessible* sanitary facility in accordance with AS 1428.1 must be located on the door of the facility; and (e)where a pedestrian entrance is not *accessible*, directional signage incorporating the international symbol of access, in accordance with AS 1428.1, must be provided to direct a person to the location of the nearest *accessible* pedestrian entrance; and (f)where a bank of sanitary facilities is not provided with an *accessible* unisex sanitary facility, directional signage incorporating the international symbol of access in accordance with AS 1428.1 must be placed at the location of the sanitary facilities that are not *accessible*, to direct a person to the location of the nearest *accessible* unisex sanitary facility. (2)In a building that is subject F4D12 and is *required* to be *accessible*, directional signage complying with Specification 15 to direct a person to the location of the nearest *accessible* adult change facility within that building must be provided at the location of each— (a)bank of sanitary facilities; and *accessible* unisex sanitary facility, other than one that incorporates an *accessible* adult change facility.	
D4D9	**Tactile indicators**	Further Detail is required within the

	(1)For a building *required* to be *accessible*, tactile ground surface indicators must be provided to warn people who are blind or have a vision impairment that they are approaching— (a)a stairway, other than a *fire-isolated stairway*; and (b)an escalator; and a passenger conveyor or moving walk; and (d)a ramp other than a *fire-isolated ramp*, step ramp, kerb ramp or *swimming pool* ramp; and (e)in the absence of a suitable barrier— (i)an overhead obstruction less than 2 m above floor level, other than a doorway; and (ii)an *accessway* meeting a vehicular way adjacent to any pedestrian entrance to a building, excluding a pedestrian entrance serving an area referred to in D4D5, if there is no kerb or kerb ramp at that point, except for areas exempted by D4D5. (2)Tactile ground surface indicators *required* by (1) must comply with sections 1 and 2 of AS/NZS 1428.4.1. (3)A hostel for the aged, nursing home for the aged, a *residential aged care building*, Class 3 accommodation for the aged, Class 9a *health-care building* or a Class 9c *aged care building* need not comply with (1)(a) and (d) if handrails incorporating a raised dome button in accordance with AS/NZS 1428.4.1 are provided to warn people who are blind or have a vision impairment that they are approaching a stairway or ramp.	Construction Documentation
D4D13	**Glazing on an accessway** On an *accessway*, where there is no chair rail, handrail or transom, all frameless or fully glazed doors, sidelights and any glazing capable of being mistaken for a doorway or opening, must be clearly marked in accordance with AS 1428.1.	Further Detail is required within the Construction Documentation

5.4 SECTION E – SERVICES AND EQUIPMENT

CLAUSE	CLAUSE REQUIREMENT	ACTION/RECOMENDATION
E1D2	**Fire hydrants** (1)A fire hydrant system must be provided to serve a building— (a)having a total *floor area* greater than 500 m2; and (b)where a *fire brigade station* is— (i)no more than 50 km from the building as measured along roads; and (ii)equipped with equipment capable of utilising a fire hydrant. (2)The fire hydrant system must be installed in accordance with AS 2419.1. (3)Notwithstanding (2), a Class 8 *electricity network substation* need not comply with clause 4.2 of AS 2419.1 if— (a)it cannot be connected to a town main supply; and (b)one hour water storage is provided for fire-fighting. (4)Where internal fire hydrants are provided, they must serve only the *storey* on which they are located except that a *sole-occupancy unit*— (a)in a Class 2 or 3 building or Class 4 part of a building may be served by a single fire hydrant located at the level of egress from that *sole-occupancy unit*; or (b)of not more than 2 *storeys* in a Class 5, 6, 7, 8 or 9 building may be served by a single fire hydrant located at the level of egress from that *sole-occupancy unit* provided the fire hydrant can provide coverage to the whole of the *sole-occupancy unit*.	Further Detail is required within the Construction Documentation
E2D3	**General requirements** (1)An air-handling system which does not form part of a smoke hazard management system in accordance with E2D4 to E2D20 and which recycles air from one *fire compartment* to another *fire compartment* or operates in a manner that may unduly contribute to the spread of smoke from one *fire compartment* to another *fire compartment* must, subject to (2), be designed and installed— (a)to operate as a smoke control system in accordance with AS 1668.1; or (b)such that it— *compartments* served; and incorporates smoke dampers where the air-handling ducts penetrate any elements separating the (i)*fire*	Further Detail is required within the Construction Documentation

	(ii)is arranged such that the air-handling system is shut down and the smoke dampers are activated to close *automatically* by smoke detectors complying with clause 7.5 of AS 1670.1. (2)For the purposes of (1), each *sole-occupancy unit* in a Class 2 or 3 building is treated as a separate *fire compartment*. (3)Miscellaneous air-handling systems covered by Sections 5 and 6 of AS 1668.1 serving more than one *fire compartment* (other than a *carpark* ventilation system) and not forming part of a smoke hazard management system must comply with these Sections of the Standard. (4)A smoke detection system must be installed in accordance with S20C6 to operate AS 1668.1 systems that are provided for zone pressurisation and *automatic* air pressurisation for fire-isolated *exits*.	
E2D8	**Buildings not more than 25 m in effective height: Class 2 and 3 buildings and Class 4 part of a building** In a Class 2 and 3 building or part of a building, or Class 4 part of a building, if the building is not more than 25 m in *effective height*— (a)it must be provided with an *automatic* smoke detection and alarm system complying with Specification 20; and (b)where a *required fire-isolated stairway* serving the Class 2 or 3 parts also serves one or more *storeys* of Class 5, 6, 7 (other than an *open-deck carpark*), 8 or 9b parts— (i)the *fire-isolated stairway*, including any associated *fire-isolated passageway* or *fire-isolated ramp*, must be provided with an *automatic* air pressurisation system for fire-isolated *exits* in accordance with AS 1668.1; or (ii)the Class 5, 6, 7 (other than an *open-deck carpark*), 8 and 9b parts must be provided with— (A)an *automatic* smoke detection and alarm system complying with Specification 20; or (B)a sprinkler system (other than a FPAA101D or FPAA101H system) complying with Specification 17; and (c)where a *required fire-isolated stairway* serving the Class 4 part also serves one or more *storeys* of Class 5, 6, 7 (other than an *open-deck carpark*), 8 or 9b parts— (i)a system complying with (b)(i) or (b)(ii) must be installed; or	Further Detail is required within the Construction Documentation

	(ii)a smoke alarm or detector system complying with Specification 20 must be provided except that alarms or detectors need only be installed adjacent to each doorway into each *fire-isolated stairway* (set back horizontally from the doorway by a distance of not more than 1.5 m) to initiate a building occupant warning system for the Class 4 part.	
E3D2	**Lift installations** An *electric passenger lift* installation and an *electrohydraulic passenger lift* installation must comply with Specification 24.	Further Detail is required within the Construction Documentation
E3D4	**Warning against use of lifts in fire** (1)A warning sign must be displayed where it can be readily seen near every call button for a passenger lift or group of lifts throughout a building. (2)The requirements of (1) do not apply to a small lift such as a dumb-waiter or the like that is for the transport of goods only. (3)Each warning sign *required* by (1) must comply with the details and dimensions of Figure E3D4 and consist of— (a)incised, inlaid or embossed letters on a metal, wood, plastic or similar plate securely and permanently attached to the wall; or letters incised or inlaid directly into the surface of the material forming the wall.	Further Detail is required within the Construction Documentation
E3D6	**Landings** Access and egress to and from lift well landings must comply with the *Deemed-to-Satisfy Provisions* of Parts D2, D3 and D4.	Further Detail is required within the Construction Documentation
E3D7	**Passenger lift types and their limitations** (1)In an *accessible* building, every passenger lift must be one of the following lift types, subject to the limitations (if any) of each lift type: (a)There are no limitations on the use of *electric passenger lifts*, *electrohydraulic passenger lifts* or *inclined lifts*. (b)*Stairway platform lifts* must not— (i)be used to serve a space in a building accommodating more than 100 persons calculated according to D2D18; or (ii)be used in a high traffic public use area such as a theatre, cinema, auditorium, transport	Further Detail is required within the Construction Documentation

	interchange, shopping centre or the like; or (iii)be used where it is possible to install another type of passenger lift; or (iv)connect more than 2 *storeys*; or (v)where more than 1 stairway lift is installed, serve more than 2 consecutive *storeys*; or (vi)when in the folded position, encroach on the minimum width of a stairway *required* by D2D8 to D2D11. (c)A *low-rise platform lift* must not travel more than 1000 mm. (d)A *low-rise, low-speed constant pressure lift* must not— (i)for an enclosed type, travel more than 4 m; or (ii)for an unenclosed type, travel more than 2 m; or (iii)be used in a high traffic public use areas in buildings such as a theatre, cinema, auditorium, transport interchange, shopping complex or the like. (e)A *small-sized, low-speed automatic lift* must not travel more than 12 m. (2)A passenger lift referred to in (1) must not rely on a constant pressure device for its operation if the lift car is fully enclosed.	
E3D8	**Accessible features required for passenger lifts** In an *accessible* building, every passenger lift must have the following features where applicable: (a)A handrail complying with the provisions for a mandatory handrail in AS 1735.12 for all lifts except— (i)a *stairway platform lift*; and (ii)a *low-rise platform lift*. (b)Lift floor dimensions of not less than 1400 mm wide x 1600 mm deep for all lifts which travel more than 12 m. (c)Lift floor dimensions of not less than 1100 mm wide x 1400 mm deep for all lifts which travel not more than 12 m, except a *stairway platform lift*. (d)Lift floor dimensions of not less than 810 mm wide x 1200 mm deep for a *stairway*	Further Detail is required within the Construction Documentation

	platform lift. Minimum clear door opening complying with AS 1735.12 for all lifts except a *stairway platform lift*. (f)Passenger protection system complying with AS 1735.12 for all lifts with power-operated doors. (g)Lift landing doors at the upper landing for all lifts except a *stairway platform lift*. (h)Lift car and landing control buttons complying with AS 1735.12 for all lifts except— (i)a *stairway platform lift*; and (ii)a *low-rise platform lift*. (i)Lighting in accordance with AS 1735.12 for all enclosed lift cars. (j)For all lifts serving more than 2 levels— (i)automatic audible information within the lift car to identify the level each time the car stops; and (ii)audible and visual indication at each lift landing to indicate the arrival of the lift car; and (iii)audible information and audible indication *required* by (i) and (ii) is to be provided in a range of between 20 - 80 dB(A) at a maximum frequency of 1500 Hz. (k)Emergency hands-free communication, including a button that alerts a call centre of a problem and a light to signal that the call has been received, for all lifts except a *stairway platform lift*.	
E4D2	**Emergency lighting requirements** An emergency lighting system must be installed— (a)in every *fire-isolated stairway*, *fire-isolated passageway* or *fire-isolated ramp*; and (b)in every *storey* of a Class 5, 6, 7, 8 or 9 building where the *storey* has an area more than 300 m2— (i)in every passageway, corridor, hallway, or the like, that is part of the path of travel to an *exit*; and (ii)in any room having a *floor area* more than 100 m2 that does not open to a corridor or space that has emergency lighting or to a road or *open space*; and (iii)in any room having a *floor area* more than 300 m2; and	Further Detail is required within the Construction Documentation

	(c)in every passageway, corridor, hallway, or the like, having a length of more than 6 m from the entrance doorway of any *sole-occupancy unit* in a Class 2 or 3 building or Class 4 part of a building to the nearest doorway opening directly to— (i)a *fire-isolated stairway, fire-isolated passageway* or *fire-isolated ramp*; or (ii)an external stairway serving instead of a *fire-isolated stairway* under D2D13; or (iii)an external balcony leading to a *fire-isolated stairway, fire-isolated passageway* or *fire-isolated ramp*; or (iv)a road or *open space*; and (d)in every *required* non-*fire-isolated stairway*; and (e)in a *sole-occupancy unit* in a Class 5, 6 or 9 building if— (i)the *floor area* of the unit is more than 300 m2; and (ii)an *exit* from the unit does not open to a road or *open space* or to an external stairway, passageway, balcony or ramp, leading directly to a road or *open space*; and (f)in every room or space to which there is public access in every *storey* in a Class 6 or 9b building if— (i)the *floor area* in that *storey* is more than 300 m2; or (ii)any point on the floor of that *storey* is more than 20 m from the nearest doorway leading directly to a stairway, ramp, passageway, road or *open space*; or (iii)egress from that *storey* involves a vertical rise within the building of more than 1.5 m, or any vertical rise if the *storey* concerned does not admit sufficient light; or (iv)the *storey* provides a path of travel from any other *storey required* by (i), (ii) or (iii) to have emergency lighting; and (g)in a Class 9a *health-care building*— (i)in every passageway, corridor, hallway, or the like, serving a *treatment area* or a *ward area*; and (ii)in every room having a *floor area* of more than 120 m2 in a *patient care area*; and (h)in every Class 9c building excluding within *sole-occupancy units*; and in every *required* fire control centre.	
E4D3	**Measurement of distance** Distances, other than vertical rise, must be measured along the shortest path of travel whether	Further Detail is required within the Construction Documentation

	by straight lines, curves or a combination of both.	
E4D4	**Design and operation of emergency lighting** Every *required* emergency lighting system must comply with AS/NZS 2293.1.	Further Detail is required within the Construction Documentation
E4D5	**Exit signs** An *exit* sign must be clearly visible to persons approaching the *exit*, and must be installed on, above or adjacent to each— (a)door providing direct egress from a *storey* to— (i)an enclosed stairway, passageway or ramp serving as a *required exit*; and (ii)an external stairway, passageway or ramp serving as a *required exit*; and (iii)an external access balcony leading to a *required exit*; and (b)door from an enclosed stairway, passageway or ramp at every level of discharge to a road or *open space*; and (c)*horizontal exit*; and (d)door serving as, or forming part of, a *required exit* in a *storey required* to be provided with emergency lighting in accordance with E4D2.	Further Detail is required within the Construction Documentation
E4D6	**Direction signs** If an *exit* is not readily apparent to persons occupying or visiting the building then *exit* signs must be installed in appropriate positions in corridors, hallways, lobbies, and the like, indicating the direction to a *required exit*.	Further Detail is required within the Construction Documentation
E4D8	**Design and operation of exit signs** Every *required exit* sign must— (a)comply with— (i)AS/NZS 2293.1; or (ii)for a photoluminescent *exit* sign, Specification 25; and (b)be clearly visible at all times when the building is occupied by any person having the right of legal entry to the building.	Further Detail is required within the Construction Documentation

5.5 SECTION F – HEALTH AND AMENITY

CLAUSE	CLAUSE REQUIREMENT	ACTION/RECOMENDATION
F1D3	**Stormwater drainage** Stormwater drainage must be designed and constructed in accordance with AS/NZS 3500.3.	Further Detail is required within the Construction Documentation
F1D4	**Exposed joints** [New for 2022] Exposed joints in the drainage surface on a roof, balcony, podium or similar horizontal surface part of a building must— (a)be protected in accordance with Section 2.9 of AS 4654.2; and (b) not be located beneath or run through a planter box, water feature or similar part of the building.	Further Detail is required within the Construction Documentation
F1D5	**External waterproofing membranes** A roof, balcony, podium or similar horizontal surface part of a building must be provided with a *waterproofing membrane*— (a)consisting of materials complying with AS 4654.1; and designed and installed in accordance with AS 4654.2.	Further Detail is required within the Construction Documentation
F1D6	**Damp-proofing** (1)Except for a building covered by (3), moisture from the ground must be prevented from reaching— (a)the lowest floor timbers and the walls above the lowest floor joists; and (b)the walls above the *damp-proof course*; and (c)the underside of a suspended floor constructed of a material other than timber, and the supporting beams or girders. (2)Where a *damp-proof course* is provided, it must consist of— (a)a material that complies with AS/NZS 2904; or (b)impervious sheet material in accordance with AS 3660.1.	Further Detail is required within the Construction Documentation

	(3)The following buildings need not comply with (1): (a)A Class 7 or 8 building where in the particular case there is no necessity for compliance. (b)A garage, tool shed, *sanitary compartment*, or the like, forming part of a building used for other purposes. An *open spectator stand* or *open-deck carpark*.	
F1D7	**Damp-proofing of floors on the ground** (1)If a floor of a room is laid on the ground or on fill, moisture from the ground must be prevented from reaching the upper surface of the floor and adjacent walls by the insertion of a vapour barrier in accordance with AS 2870. (2)The requirements of (1) do not apply where— (a)weatherproofing is not *required*; or the floor is the base of a stair, lift or similar *shaft* which is adequately drained by gravitation or mechanical means.	Further Detail is required within the Construction Documentation
F2D2	**Wet area construction** (1)In a Class 2 and 3 building and a Class 4 part of a building, building elements in *wet areas* must— (a)be *water resistant* or *waterproof* in accordance with Specification 26; and (b)comply with AS 3740. (2)In a Class 5, 6, 7, 8 or 9 building, building elements in a bathroom or shower room, a slop hopper or sink compartment, a laundry or *sanitary compartment* must— (a)be *water resistant* or *waterproof* in accordance with Specification 26; and (b)comply with AS 3740, as if they were in a Class 2 or 3 building or a Class 4 part of a building.	Further Detail is required within the Construction Documentation
F2D4	**Floor wastes** (1)In a Class 2 or 3 building or Class 4 part of a building, a bathroom or laundry located at any level above a *sole-occupancy unit* or public space must have a *floor waste*. (2)Where a *floor waste* is installed— (a)the minimum continuous fall of a floor plane to the waste must be 1:80; and the maximum continuous fall of a floor plane to the waste must be 1:50.	Further Detail is required within the Construction Documentation
F3D1	**Deemed-to-Satisfy Provisions**	Further Detail is required within the

	(1)Where a *Deemed-to-Satisfy Solution* is proposed, *Performance Requirement* F3P1 is satisfied by complying with F3D2 to F3D5. (2)Where a *Performance Solution* is proposed, the relevant *Performance Requirements* must be determined in accordance with A2G2(3) and A2G4(3) as applicable. A roof must be covered with— (a)roof tiles complying with AS 2049, fixed in accordance with AS 2050; or (b)metal sheet roofing complying with AS 1562.1; or (c)plastic sheet roofing designed and installed in accordance with AS 1562.3; or (d)terracotta, fibre-cement and timber slates and shingles designed and installed in accordance with AS 4597, except in cyclonic areas; or an external waterproofing *membrane* complying with F1D5.	Construction Documentation
F3D3	**Sarking** *Sarking-type material* used for weatherproofing of roofs and walls must comply with AS 4200.1 and AS 4200.2.	Further Detail is required within the Construction Documentation
F3D4	**Glazed assemblies** (1)Subject to (2) and (3), the following glazed assemblies in an *external wall*, must comply with AS 2047 requirements for resistance to water penetration: (a)Windows. (b)Sliding and swinging glazed doors with a frame, including French and bi-fold doors with a frame. (c)Adjustable louvres. (d)Shopfronts. (e)Window walls with one piece framing. (2)The following buildings need not comply with (1): (a)A Class 7 or 8 building where in the particular case there is no necessity for compliance. (b)A garage, tool shed, *sanitary compartment*, or the like, forming part of a building used for other purposes, except where the construction of the garage, tool shed, *sanitary compartment* or the like contributes to the weatherproofing of the other part of the building. (c)An *open spectator stand* or *open-deck carpark*. (3)The following glazed assemblies need not comply with (1): (a)All glazed assemblies not in	Further Detail is required within the Construction Documentation

	an *external wall*. (b)Revolving doors. (c)Fixed louvres. (d)Skylights, roof lights and windows in other than the vertical plane. (e)Sliding and swinging glazed doors without a frame. (f)Windows constructed on site and architectural one-off windows, which are not design tested in accordance with AS 2047. (g)Second-hand windows, re-used windows and recycled windows. Heritage windows.	
F3D5	**Wall cladding** (1)External wall cladding must comply with one or a combination of the following: (a)Masonry, including masonry veneer, unreinforced and reinforced masonry: AS 3700. (b)Autoclaved aerated concrete: AS 5146.3. (c)Metal wall cladding: AS 1562.1. (2)The following buildings need not comply with (1): (a)A Class 7 or 8 building where in the particular case there is no necessity for compliance. (b)A garage, tool shed, *sanitary compartment*, or the like, forming part of a building used for other purposes, except where the construction of the garage, tool shed, *sanitary compartment* or the like contributed to the weatherproofing of another part of the building that is *required* to be weatherproofed. An *open spectator stand* or *open deck carpark.*	Further Detail is required within the Construction Documentation

Author

Kieran Tobin,
Registered Building Surveyor - Fair Trading no 0409
Grad Dip Building Surveying UWS