



Building Code of Australia 2019 Amendment 1

BCA ASSESSMENT REPORT



Brentwood Aged Care
28 Glebe St, Parramatta, 2150

Prepared for: Midson Group Pty Ltd | Issue date: 6/05/2021.

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Authorisation

Revision	Comment / Reason for Issue	Issue Date	Prepared by	Reviewed by
1	DA Submission	6.5.2021		
			William Burke	Seb Howe
				BPB2420

Revision History

Revision	Comment / Reason for Issue	Issue Date	Prepared By
1	Schematic Design Review	23.2.2021	William Burke
2	DA Submission	6.5.2021	William Burke

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1 Executive Summary

Modern Building Certifiers as the appointed Certifier for the proposed development, have reviewed architectural design documents prepared by Group GSA (refer appendix A) for compliance with the National Construction Code - Building Code of Australia Volume One 2019 Amendment 1.

1.1 Performance Solutions - Fire & Life Safety

The assessment of the design documentation has revealed that the following areas are required to be assessed against the relevant Performance Requirements of the BCA in accordance with Clause 25 of the Building and Development Certifiers Regulation 2020. The submission for a Construction Certificate will need to include verification from a Certifier – Fire Safety, where determined permissible under A2.1 of the BCA, for the following aspects: -

DTS Clause	Description of Non-Compliance	Performance Requirement
C2.5	Class 9a and 9c buildings – Smoke compartments exceed 500m ²	CP3
C3.4	Openings between adjacent fire compartments in the residential areas not protected in accordance with C3.4	CP3
D1.4	Extended Travel Distances	DP4
D1.7	Travel via fire isolated exits	DP5

Any Performance Solution relating to category 2 items (CP9, EP1.3, EP1.4, EP1.6, EP2.2, EP3.2) will be subject to consultation and approval by Fire and Rescue NSW as part of the Construction Certificate process.

1.2 Design Details Required

The assessment of the design documentation has revealed that the following areas require further details to demonstrate compliance with the prescriptive provisions of the BCA

DTS Clause	Description
D3.1	6 Accessible units are required to be provided. Accessible units are currently not indicated on the plans assessed.

The documentation will need further detailing such as door hardware, construction specifications, services design and manufacturer's details, as outlined in Appendix D of this report.

The application for Construction Certificate shall be assessed under the relevant provisions of the Environmental Planning & Assessment Act 1979 (As Amended) and the Environmental Planning & Assessment Regulation 2000.

2 Introduction

Modern Building Certifiers (MBC) have been engaged as the appointed Certifier for the development subject of this report by Midson Group. This report is based upon a desktop review of architectural details (as listed in Appendix A) against the applicable provisions of the National Construction Code - Building Code of Australia Volume One 2019 Amendment 1.

2.1 Purpose

The purpose of this report is to assess the current design proposal against the Deemed-to-Satisfy (DtS) provisions of the BCA.

2.2 Methodology

The methodology applied in undertaking this assessment has included: -

- A desktop review of architectural plans, as listed in Appendix A
- Detailed assessment of Sections C, D, E, F, G, H and J (as applicable / relevant) of the BCA
- Discussions with the design development team to gain an understanding of the development proposed.

2.3 Limitations

This report does not include or imply any detailed assessment for design, compliance or upgrading for:

- the structural adequacy or design of the building;
- the inherent derived fire-resistance ratings of any proposed structural elements of the building (unless specifically referred to); and
- the design basis and/or operating capabilities of any proposed
 - electrical
 - mechanical
 - hydraulic
 - fire protection services.

This report does not include, or imply compliance with:

- the National Construction Code – Plumbing Code of Australia Volume 3
- the Disability Discrimination Act 1992 including the Disability ((Access to Premises – Buildings) Standards 2010 – unless specifically referred to)
- The deemed to satisfy provisions of Part D3 and F2.4 of BCA 2019 Amendment 1
- The deemed to satisfy provisions of Section J of BCA 2019 Amendment 1
- Demolition Standards not referred to by the BCA;
- Work Healthy and Safety Act 2011;
- An out of cycle change to the Building Code of Australia.
- Requirements of other Regulatory Authorities including, but not limited to, Telstra, Telecommunications Supply Authority, Water Supply Authority, Electricity Supply Authority, Work Cover, Roads and Maritime Services (RMS), Roads and Transport Authority, Local Council, ARTC, Department of Planning and the like; and

- Conditions of Development Consent issued by the Local Consent Authority.

This report has been prepared by MBC in the capacity as the appointed Certifier for the proposed development. This report is an assessment of the proposed development against the DtS provisions of the applicable BCA.

2.4 Current Legislation

The applicable legislation governing the design of buildings in NSW is the Environmental Planning and Assessment Act 1979.

Applicable Building Code of Australia (BCA)

The proposed development will be subject to compliance with the relevant requirements of the BCA as in force at the time that the application for the Construction Certificate is made.

In this regard it is assumed that the Construction Certificate application will be made prior to the 1st May 2022, as such this report is based upon the Deemed-to-Satisfy provisions of BCA 2019 amendment 1.

Should the application for Construction Certificate be made after 1st May 2022, this report will be required to be updated to reflect any changes made and now required by the BCA.

Should an *out of cycle* change occur to the Building Code of Australia, then this report is required to be updated to reflect any applicable changes made and now required by the BCA.

Legislative Provisions for the Upgrade of Existing Buildings

Any new work shall comply with the BCA, that being BCA 2019 Amendment 1.

The consent authority, when assessing the development application, may require that the existing building be brought into partial or full compliance with the current provisions of the BCA. The triggers for upgrade include:

- Where the building works, together with any other works completed or authorised within the previous 3 years, represents more than half the total volume of the building; or

Council are not satisfied that the measures contained within the building are adequate for the purposes of life safety or the prevention of spread of fire to adjacent buildings.

3 Development Description & Assessment Information

3.1 Proposed Development

The proposed development comprises of a new residential aged care facility located at 28 Glebe st Parramatta. The building consists of ground floor car parking, staff and ancillary spaces. Three additional stories house residential aged care units and facilities.

3.2 BCA Classification (Clause A3.2)

The proposed development shall contain the following classifications: -

- Class 7a: being a carpark building or part
- Class 9c: being an aged care facility

3.3 Rise in Storeys (Clause C1.2)

The proposed development has been assessed to have a *rise in storeys* of 4

3.4 Effective Height (Clause A1.1)

The proposed development has been assessed to have an *effective height* of 10.5m. This is measured from ground floor to the floor level of level 3

Please note the definition of effective height of a building was changed 1 May 2016. The BCA now defines effective height as: -

“Effective height means the vertical distance between the floor of the lowest storey included in a determination of rise in storeys and the floor of the topmost storey (excluding the topmost storey if it contains only heating, ventilating, lift or other equipment, water tanks or similar service units).”

3.5 Type of Construction Required (Clause C1.1 / Table C1.1)

The proposed development is required to be Type A / B / C Construction. Specification C1.1 outlines the fire resistance required by certain building elements. This has also been provided in Appendix B.

3.6 Floor Area and Volume Limitations (Clause C2.2 / Table C2.2)

The development is limited to the following floor area and volume compartment limitations: -

Class		Type A	Type B	Type C
5, 9b or 9c	Max floor area -	8,000m ²	5,500m ²	3,000m ²
	Max volume -	48,000m ³	33,000m ³	18,000m ³
6, 7, 8 or 9a	Max floor area -	5,000m ²	3,500m ²	2,000m ²
	Max volume -	30,000m ³	21,000m ³	12,000m ³

3.7 Building Data Summary

Summary of Construction and Building	
Use(s)	Residential Aged care and ancillary car parking
Classification(s)	7a, 9c
Number of Storeys contained	4
Rise in Storeys	4
Type of Construction	Type A
Effective Height	10.5m

4 Proposed Fire Safety Schedule

The following is a draft Fire Safety Schedule for the proposed building, listing the likely measures and standards of performance required, this schedule shall be subject of further development and review as part of the Performance Solutions assessment: -

Fire Safety Schedule

Clause 168 of the Environmental Planning and Assessment Regulation 2000

Premises: Brentwood Aged care
Address: 28 Glebe St, Parramatta.

The following essential fire safety measures shall be implemented in the whole of the building premises and each of the fire safety measures must satisfy the standard of performance listed in the schedule which, for the purposes of Clause 168 of the Environmental Planning and Assessment Regulation 2000, is deemed to be the current fire safety schedule for the building.

SCHEDULE – Base Building BCA Year 2019-Amendment 1
Type of Construction A
Effective height = 10.5m

	Measure	Status	Existing Performance Standard
1.	Access panels, doors and hoppers to fire-resisting shafts	N	BCA 2019 Amd. 1 Clause C3.13, AS 1905.1-2015, AS1905.2-2005 & Manufacturer's specifications
2.	Self-closing, automatic closing and latching mechanisms	N	BCA 2019 Amd. 1 Clause C3.4, C3.5, C3.6, C3.7, C3.8, C3.11, Spec C3.4
3.	Automatic fail safe devices	N	BCA 2019 Amd. 1 Clause D2.19, D2.21, D2.22, Clause C3.6, Spec C3.4, AS 2118.1-2017, AS 1670.1-2018
4.	Automatic fire detection and alarm system	N	BCA 2019 Amd. 1 Clause E2.2a, Spec. E2.2a Clause 4, 5, 6, Spec. G3.8, AS 3786-2014, AS 1670.1-2018, AS 1603 suite

	Measure	Status	Existing Performance Standard
5.	Automatic fire suppression system	N	BCA 2019 Amd. 1 Clause E1.5, Spec. E1.5, Spec E1.5a FPAA101D, FPAA101H AS 2118.1-2017, AS 2118.4-2012, AS 2118.6-2012 (Combined System)
6.	Emergency lighting	N	BCA 2019 Amd. 1 Clause E4.2, E4.3 E4.4, AS 2293.1-2018
7.	Exit and directional signage	N	BCA 2019 Amd. 1 Clause E4.5, NSW E4.6 & E4.8, Spec E4.8 AS 2293.1-2018
8.	Emergency warning and intercommunication systems	N	BCA 2019 Amd. 1 Clause E4.9, G3.8, AS 1670.4-2018
9.	Fire alarm monitoring system	N	BCA 2019 Amd. 1 Spec E2.2a Clause 8, AS 1670.3-2018
10.	Fire & Smoke dampers	N	BCA 2019 Amd. 1 Clause E2.2, C2.5, C3.12, C3.15, Spec E1.8, Spec E2.2, Spec C2.5, Spec G3.8 AS/NZS 1668.1-2015, AS 1682.1-2015, AS 1682.2-2015, Manufacturer's specifications
11.	Fire doors	N	BCA 2019 Amd. 1 Clause C2.12, C2.13, C3.4, C3.6, C3.8, C3.11, Spec C3.4, AS 1905.1-2015
12.	Fire hose reel systems	N	BCA 2019 Amd. 1 Clause E1.4, AS 2441-2005
13.	Fire hydrant systems	N	BCA 2019 Amd. 1 Clause E1.3, AS 2419.1-2005, AS 2118.6-2012 (Combined System)

	Measure	Status	Existing Performance Standard
14.	Fire seals (protecting openings and service penetrations in fire resisting components of the building)	N	BCA 2019 Amd. 1 Clause C3.15, Spec C3.15, AS 4072.1-2005, AS 1530.4-2014, Manufacturer's specifications
15.	Openings in fire-isolated lift shafts	N	BCA 2019 Amd. 1 Clause C3.10, AS 1735.11-1986
16.	Occupant warning system	N	BCA 2019 Amd. 1 Clause E2.2, Spec. E2.2a Clause 7, AS 1670.1-2018
17.	Path of travel for stairways, passageway and ramps	N	Clauses 183-186 of the Environmental Planning and Assessment Regulation 2000
18.	Portable fire extinguishers	N	BCA 2019 Amd. 1 Clause E1.6, AS 2444-2001
19.	Pressurising systems	N	BCA 2019 Amd. 1 Clause E2.2a, AS/NZS 1668.1-2015
20.	Required automatic exit doors	N	BCA 2019 Amd. 1 Clause D2.19, D2.21
21.	Smoke doors	N	BCA 2019 Amd. 1 Clause C2.5, C2.14, Spec C3.4,
22.	Smoke-proof walls	N	BCA 2019 Amd. 1 NSW Clause C2.5(b), Spec C2.5
23.	Warning and operational signs	N	BCA 2019 Amd. 1 Clause C3.6, D2.23, E3.3, Spec E1.8, Clause 183 of the Environmental Planning and Assessment Regulation 2000

Notes

* Indicate whether the measure is new (N), existing (E) or Modified (M)

5 BCA Assessment – Clause by Clause

BCA Clause	Compliance Provisions	Status	Assessment commentary
Part B - Structural			
B1 – Structural Provisions			
B1.1	Resistance to Action		Any new structural works are to comply with the applicable requirements of BCA Part B1, including AS/NZS 1170.0-2002, AS/NZS 1170.1-2002, AS/NZS1170.2-2011, AS/NZS1170.3-2003, AS1170.4-2007 and any other applicable Australian Standards.
B1.2	Determination of individual Actions		New structural works are to comply with the applicable requirements of BCA Part B1, verification method BV2, and AS/NZS 1170.0-2002, AS/NZS 1170.1, AS/NZS1170.2 and AS1170.4 Glazing is to comply with AS1288-2006, and AS2047-2014
B1.4	Determination of Structural resistance of materials and form of construction		Provide certification that the construction materials and forms of construction will comply with B1.4 of the BCA and the applicable Australian Standards. Any deviations from B1.4 or applicable Australian Standards will need to be addressed as a performance solution. Confirm where FRL's are required to structural elements that the prescribed FRL has been achieved in accordance with Specification C1.1 of the BCA and the Fire Engineering Report where FRL's have been rationalised.
Part C – Fire Resistance			
C1 - Fire Resistance			
C1.0	Deemed-to-Satisfy Provisions		
C1.1	Type of Construction Required	Noted	Type A Construction is required
C1.2	Calculation of Rise in storeys	Noted	4
C1.8	Lightweight Construction	Further Details Required	Any lightweight construction must comply to Specification C1.8 provisions within the BCA. Please provide details to confirm compliance to this clause.

C1.9	Non-combustible building elements	Further Details Required	<p>The following building elements and their components must be non-combustible:</p> <p>(i) External walls and common walls, including all components incorporated in them including the facade covering, framing and insulation.</p> <p>(ii) The flooring and floor framing of lift pits.</p> <p>(iii) Non-loadbearing internal walls where they are required to be fire-resisting.</p> <p><u>Combustible Materials</u></p> <p>The following materials be used wherever a non-combustible material is required:</p> <ul style="list-style-type: none"> • Plasterboard. • Perforated gypsum lath with a normal paper finish. • Fibrous-plaster sheet. • Fibre-reinforced cement sheeting. • Pre-finished metal sheeting having a combustible surface finish not exceeding 1 mm thickness and where the Spread-of-Flame Index of the product is not greater than 0. • Sarking that does not exceed 1mm in thickness and has a flammability index less than 5 • Bonded laminated materials where - <ul style="list-style-type: none"> (i) each laminate is non-combustible; and (ii) each adhesive layer does not exceed 1 mm in thickness; and (iii) the total thickness of the adhesive layers does not exceed 2 mm; and (iv) the Spread-of-Flame Index and the Smoke-Developed Index of the laminated material as a whole does not exceed 0 and 3 respectively.
C1.10 & NSW Variation	Fire Hazard Properties	Compliance Readily Achievable	<p>All floor, wall and ceiling lining materials shall comply with C1.10 and Specification C1.10. Design Compliance Statement to be provided by relevant architect prior to issue of CC.</p>
C1.14	Ancillary elements	Further Details Required	<p>Ancillary elements fixed, installed, or attached to internal parts or external face of an external wall that is required to be non-combustible must also be non-combustible unless exempted by NCC C1.14</p>

C2 - Compartmentation and Separation			
C2.2	General Floor area and volume limitations	Compliance Readily Achievable	Limitations not exceeded Maximum Fire Compartment for a Class 9c, Type A is - 8,000m ² & 48,000m ³ .
C2.5 & NSW Variation	Class 9a and 9c Buildings	Performance Solution Proposed	Smoke compartments within the building exceed 500m ² . To be addressed by the project fire engineer for suitability. Details of bounding construction for walls bounding the SOU's and public corridor is required. Wall linings and construction is required to comply with NSW variation C2.5. Further review will be conducted as the design develops.
C2.7	Separation in fire walls	Further Details Required	The fire walls between each fire compartment must be constructed in accordance with; (i) The fire wall has the relevant FRL prescribed by Specification C1.1 for each of the adjoining parts, and if these are different, the greater FRL. (ii) Any openings in a fire wall must not reduce the FRL required by Specification C1.1 for the fire wall, except where permitted by the Deemed-to-Satisfy Provisions of Part C3, i.e. fire doors & fire collars. (iii) Building elements, other than roof battens with dimensions of 75 mm x 50 mm or less or sarking-type material, must not pass through or cross the fire wall unless the required fire resisting performance of the fire wall is maintained.
C2.8	Separation of classifications in the same storey	Compliance Readily Achievable	Two options to achieve compliance; A – provide each building element in the storey with the higher FRL, in this case class 5 office FRLs = 120 minutes while 7b storage FRLs = 240 minutes. OR B – Separate the uses with a compliant fire wall. Typically option A is adopted.
C2.9	Separation of classifications in different storeys	Further Details Required	The car park is to be fire separated from the residential apartments above with construction achieving an FRL of 120 minutes
C2.10	Separation of Lift Shafts	Further Details Required	The walls of the lift shaft are required to be fire separated from the remainder of the building with construction achieving 120 minutes.

C2.12	Separation of equipment	Compliance Readily Achievable	<p>The following equipment must be separated from the remainder of the building -</p> <ul style="list-style-type: none"> (i) lift motors and lift control panels; or (ii) emergency generators used to sustain emergency equipment operating in the emergency mode; or (iii) central smoke control plant; or (iv) boilers; or (v) a battery or batteries installed in the building that have a voltage exceeding 24 volts and a capacity exceeding 10 ampere hours. <p>Separating construction must have—</p> <ul style="list-style-type: none"> (i) except as provided by (ii)— (A) an FRL as required by Specification C1.1, but not less than 120/120/120; and (B) any doorway protected with a self-closing fire door having an FRL of not less than -/120/30; or (ii) when separating a lift shaft and lift motor room, an FRL not less than 120/-/-.
C2.13	Electricity supply system	Compliance Readily Achievable	Electrical substations, main switchboards etc., must be separated from the remainder of the building by construction achieving and FRL of 120/120/120.
C3 – Protection of Openings			
C3.2	Protection of openings in external walls	Not Applicable	Openings are not believed to be exposed to fire source features by less than the dimensions prescribed in BCA.
C3.4	Acceptable methods of protection	Performance Solution Proposed	<p>Openings between adjacent fire compartments will require protection in accordance with C3.4 or be addressed by the project fire engineer:</p> <p>Acceptable methods of protection include:</p> <ul style="list-style-type: none"> - Wall Wetting Sprinklers - -/60/30 Fire doors or windows which are <i>automatic</i> closing or <i>self-closing</i>. - Windows - -/60/-- <i>automatic</i> closing fire shutters. <p>Fire doors, Fire Windows and Fire Shutters must comply with Spec. C3.4</p>
C3.5	Doorways in fire walls	Compliance Readily Achievable	<p>Doors in firewalls must achieve an FRL of not less than that required by Specification C1.1 for the fire wall except that each door have an insulation level of at least 30. i.e. 240/240/30</p> <p>Fire doors in firewalls must be self-closing or automatic closing. Automatic closing must be triggered by activation of smoke detection system in both fire compartments the fire wall is separating.</p>

C3.8	Openings in fire-isolated exits	Compliance Readily Achievable	Doorways in fire-isolated exits must be protected by --/60/30 fire doors which are self-closing or automatic closing (detection activation).
C3.9	Service penetrations in fire isolated exits	Compliance Readily Achievable	Fire-isolated exits must not be penetrated by any services other than— (a) electrical wiring permitted by D2.7(e) to be installed within the exit; or (b) ducting associated with a pressurisation system if it— (i) is constructed of material having an FRL of not less than --/120/60 where it passes through any other part of the building; and (ii) does not open into any other part of the building; or (c) water supply pipes for fire services.
C3.10	Openings in fire-isolated lift shafts	Compliance Readily Achievable	Doors to lifts must be protected by --/60/-- fire doors which comply with AS 1735.11 and are set to remain closed except when discharging/receiving passengers. Life indicator panels must be backed by construction having an FRL of not less than --/60/-- if it exceeds 35,000mm ² , i.e. 175mm x 200mm.
C3.12	Openings in floors and ceilings for services	Compliance Readily Achievable	Are any service riser shafts proposed through the building? If so, the shaft must be constructed in accordance with Spec. C1.1.
C3.13	Openings in shafts	Compliance Readily Achievable	Openings in shafts are required to be protected by a self-closing --/60/30 fire door or hooper or an access panel having an FRL of --/60/30.
C3.15	Openings for service installations	Compliance Readily Achievable	Any new proposed penetrations must comply with provisions of C3.15 and Spec. C3.15. At OC stage a detailed schedule of every penetration is required to be produced. Advise engaging specialist fire stopping company.
C3.16	Construction joints	Compliance Readily Achievable	Any proposed joint construction is to comply with the provisions of C3.16 and in accordance to AS 1530.4
C3.17	Columns protected with lightweight construction to achieve an FRL	Further Details Required	Any lightweight construction must be with a method and materials identical with a tested prototype which has achieved the required FRL. Details to be submitting demonstrating compliance prior to CC.

Specifications			
Spec C1.1	Fire-Resisting Construction	Compliance Readily Achievable	Refer to specification
Spec C1.8	Structural Tests for Lightweight Construction	Further Details Required	See Clause C1.8 and C3.17.
Spec C1.10 & NSW Variation	Fire Hazard Properties	Compliance Readily Achievable	
Spec C2.5	Smoke-Proof Walls in Health-Care and Aged Care Buildings	Further Details Required	Smoke proof walls are to comply with the requirements of NCC specification C2.5.
Spec C3.4	Fire Doors, Smoke Doors, Fire Windows and Shutters	Compliance Readily Achievable	Fire Doors, Fire Windows and Fire Shutters must comply with Spec. C3.4.
Spec C3.15	Penetration of Walls, Floors and Ceilings by Services	Compliance Readily Achievable	Fire Seals etc. must comply with Spec. C3.15.
Part D - Access and Egress			
D1 - Provision for Escape			
D1.0	Deemed-to-Satisfy Provisions	Noted	Noted
D1.1	Application of Part	Noted	This part is applicable
D1.2 & NSW Variation	Number of exits required	Compliance Readily Achievable	Two (2) exits are required from all levels containing sleeping areas in a 9c building.
D1.3	When fire-isolated stairways and ramps are required	Compliance Readily Achievable	Fire isolated exits are required to be provided. Fire stairs are to achieve an FRL of 120 minutes.
D1.4	Exit travel distances	Performance Solution Proposed	Extended travel distances have been noted on the drawings as follows: - Ground Floor - 40m to an exit with no point of choice from HW Plant room. - Level 1, 2 and 3 - 32m to an exit and point of choice in lieu of 20m to a point of choice and 40m to an exit. Fire engineer to address extended travel distances
D1.5	Distance between alternative exits	Compliance Appears Achieved	Distances between exits and have been checked and comply.
D1.6 & NSW Variation	Dimensions of exits and paths of travel to exits	Compliance Readily Achievable	Dimensions of exits and paths of travel appear compliant with provisions in D1.6 of the BCA.

D1.7	Travel via fire-isolated exits	Performance Solution Proposed	<p>Where a path of travel from a fire-isolated exit necessitates passing within 6 m of any part of an external wall of the same building, measured, that part of the wall must have—</p> <p>(i) an FRL of not less than 60/60/60; and</p> <p>(ii) any openings protected internally in accordance with C3.4, for a distance of 3 m above, the level of the path of travel.</p> <ul style="list-style-type: none"> - Fire stair discharge involves passing within 6m of an external wall of the building it serves with unprotected openings. - The fire stair currently discharges into a covered area. <p>To be addressed by the project fire engineer.</p>
D1.10 & NSW Variation	Discharge from exits	Compliance Readily Achievable	Exits must not obstructed by potential vehicle blockage by placement of bollards.
D1.13 & NSW Variation	Number of persons accommodated	Compliance Readily Achievable	<p>Ground floor - Ancillary spaces to residential care areas. Staff numbers to be nominated by the client.</p> <p>Residential levels - 36 beds provided per level.</p>
D1.16	Plant rooms, lift machine rooms and electricity network substations: Concession	Compliance Readily Achievable	Ladders may be provided to plants rooms and the like if not more than 100m ² .
D1.17	Access to lift pits	Compliance Readily Achievable	Where the pit depth is not more than 3 m, be through the lowest landing doors; or where greater than 3m be through specific access complying with D1.17.
D2 – Construction of Exits			
D2.0	Deemed-to-Satisfy Provisions	Compliance Readily Achievable	Noted
D2.1 & NSW Variation	Application of Part	Compliance Readily Achievable	This part is applicable
D2.2	Fire-isolated stairways and ramps	Compliance Readily Achievable	<p>Fire-isolated stairs must be:</p> <p>(a) of <i>non-combustible</i> materials; and</p> <p>(b) so that if there is local failure it will not cause structural damage to, or impair the fire-resistance of, the shaft.</p>
D2.7	Installations in exits and paths of travel	Compliance Readily Achievable	Electrical cupboards to have non-combustible construction with smoke seals in accordance with D2.7.

D2.8	Enclosure of space under stairs and ramps	Compliance Readily Achievable	If the space below a required fire-isolated stairway or fire-isolated ramp is within the fire-isolated shaft, it must not be enclosed to form a cupboard or similar enclosed space.
D2.13 & NSW Variation	Treads and risers	Compliance Readily Achievable	Risers and goings must comply with D2.13 and have slip resistance as per table D2.14. Architect to cover in Design Compliance Statement.
D2.14	Landings	Compliance Readily Achievable	750mm landings to be provided at bottom and top of stairs as per D2.14 and landings and stairs nosing's throughout to have a slip resistance as per table D2.14. Architect to cover in Design Compliance Statement.
D2.15 & NSW Variation	Thresholds	Compliance Readily Achievable	No steps are to be located closer to the doors threshold than the width of the door unless the door leads to open space; a step ramp compliant with AS1428.1-2009 can be incorporated.
D2.16 & NSW Variation	Barriers	Compliance Readily Achievable	Compliant balustrades not less than 1m high with no climbable features between 150mm and 760mm are to be provided wherever it is possible to fall 1m or more. Architect to cover in Design Compliance Statement.
D2.17	Handrails	Further Details Required	Handrails are to be provided to either side of stairs (one side in fire isolated stairs) in accordance with AS1428.1-2009. Handrail extensions to be provided and noted on plans for review. Handrails are to be provided to both sides of the public corridors used by the residents in accordance with NCC part D2.17. Architect to cover in Design Compliance Statement.
D2.18	Fixed platforms, walkways, stairways and ladders	Compliance Readily Achievable	A fixed platform, walkway, stairway, ladder and any going and riser, landing, handrail or barrier attached thereto may comply with AS 1657 in lieu of D2.13, D2.14, D2.16 and D2.17 if it only serves: (a) machinery rooms, boiler houses, lift-machine rooms, plantrooms, attics and the like
D2.20.	Swinging doors	Compliance Readily Achievable	Doors forming part of a required exit must not encroach at any part of its swing more than 500mm on the required width of the exit, i.e. F.I.S landings.

D2.21 & NSW Variation	Operation of latch	Compliance Readily Achievable	Doors shall be readily openable without a key from the side that a person may seek egress by a single-handed downward action on a single device located between 900mm and 1100mm.
D2.22	Re-entry from fire-isolated exits	Further Details Required	Doors from the fire isolated exit must not be locked from the inside in a 9c building.
D2.23	Signs on doors	Compliance Readily Achievable	Signage to be provided on exit and fire door; for a self-closing door— "FIRE SAFETY DOOR DO NOT OBSTRUCT DO NOT KEEP OPEN"; or for a door discharging from F.I.S "FIRE SAFETY DOOR—DO NOT OBSTRUCT"

D3 – Access for People with a Disability			
D3.0	Deemed-to-Satisfy Provisions	Compliance Readily Achievable	Noted
D3.1	General building access requirements	Does Not Comply	108 units have been provided. 6 Accessible sole occupancy units are required in accordance with NCC part D3.1. 6 Accessible Sole Occupancy units are to be shown on plans as the design develops.
D3.2	Access to buildings	Further Details Required	(a) An accessway must be provided to a building required to be accessible— (i) from the main points of a pedestrian entry at the allotment boundary & (ii) from another accessible building connected by a pedestrian link; and (iii) from any required accessible carparking space on the allotment. Access consultant to update report based upon detailed review of CC plans.
D3.3	Parts of buildings to be accessible	Compliance Readily Achievable	Access is to be provided to and within all areas normally used by occupants in accordance with AS 1428.1-2009. Access consultant to update report based upon detailed review of CC plans.
D3.4	Exemptions	Noted	Back of house areas may be deemed exempt under D3.4
D3.5	Accessible carparking	Compliance Readily Achievable	Accessible carparking to be provided 1 space for every 100 carparking spaces or part thereof or as stipulated by development consent (DA).
D3.6	Signage	Compliance Readily Achievable	To be provided throughout in accordance with details in D3.6. i.e., tactile and braille indicating levels, sanitary facilities etc.
D3.8	Tactile indicators	Compliance Readily Achievable	To be provided in accordance with AS 1428 throughout (except FIS) (i) a stairway, other than a fire-isolated stairway (iv) a ramp, step ramp, kerb ramp
D3.12	Glazing on an access way	Compliance Readily Achievable	Glazing to be provided visual indicators in accordance with AS1428.1-2009 when able to be confused for a doorway

Part E – Services and Equipment			
E1 – Fire Fighting Equipment			
E1.3	Fire hydrants	Further Details Required	<p>Fire hydrant system must be provided in accordance with AS2419.1 - 2005. Hydraulic consultant to provide coverage plans and certification for the system design.</p> <p>Booster location (where required) to be confirmed on plans as the design develops.</p> <p>Door to pump room is to be provided from the external wall in lieu of through car park.</p> <p>Two (2) hydrants are required to operate simultaneously and achieve minimum flow requirements as nominated in AS 2419, table 2.1.</p>
E1.4	Fire hose reels	Further Details Required	<p>FHR required to be provided in accordance with AS2441 to carpark only.</p> <p>Hydraulic Engineer to provide details and certification.</p> <p>Must be within 4m of an exit and not pass through a fire or smoke door to provide coverage.</p> <p>Fire Hose Reels to be shown on CC Plans.</p>
E1.5 & NSW Variation	Sprinklers	Further Details Required	A fire sprinkler system is required to be installed in accordance with Table E1.5
E1.6	Portable fire extinguishers	Compliance Readily Achievable	Portable fire extinguishers to be provided in accordance with AS 2441. Services consultant to provide certification.
E1.9	Fire precautions during construction	Compliance Readily Achievable	Noted.
Specifications			
E1.5	Fire Sprinkler Systems	Further Details Required	

E2 – Smoke Hazard Management			
E2.0	Deemed-to-Satisfy Provisions	Further Details Required	
E2.2	Application of Part	Further Details Required	<p>The building must be provided with—</p> <p>(a) in each required fire-isolated stairway, an automatic air pressurisation system for fire-isolated exits in accordance with AS/NZS 1668.1; and</p> <p>(b) an automatic smoke detection and alarm system complying with Specification E2.2a; or</p> <p>(c) a sprinkler system complying with Specification E1.5.</p> <p>(d) Stair pressurisation system to fire isolated exits</p> <p>Detail of the system proposed including certification from the relevant Engineer to be provided including design certification.</p>
Specifications			
Spec E2.2a & NSW Variation	Smoke Detection and Alarm Systems	Further Details Required	
E3 – Lift Installations			
E3.0	Deemed-to-Satisfy Provisions	Not Applicable	
E3.1	Lift installations	Compliance Readily Achievable	<p>An electric passenger lift installation and an electrohydraulic passenger lift installation must comply with Specification E3.1.</p> <p>Please provide details of the lifts proposed to be installed including design certification.</p>
E3.2	Stretcher facility in lifts	Further Details Required	A stretcher facility is required to be supported by the lift.
E3.3	Warning against use of lifts in fire	Compliance Readily Achievable	Warning signs must be displayed; “DO NOT USE LIFTS IF THERE IS A FIRE”. No less than 10mm high.
E3.5	Landings	Compliance Readily Achievable	Landing to be provided as per AS 1428.1-2009. Lift landings are currently compliant.
E3.6	Passenger lifts	Compliance Readily Achievable	
E3.8	Aged care buildings	Further Details Required	A lift with clear dimensions of 600mm x 2000mm x 1400mm high is required to accommodate a stretcher facility in the lift,
Specifications			
Spec E3.1	Lift Installations	Compliance Readily Achievable	

E4 – Emergency Lighting, Exit Signs and Warning Systems			
E4.0	Deemed-to-Satisfy Provisions	Compliance Readily Achievable	Noted
E4.1	*****	Not Applicable	
E4.2	Emergency lighting requirements	Compliance Readily Achievable	Emergency Lighting & Exit Signage to be provided to the building in accordance with E4 and AS 2293.1-2005. Design Certification to be provided prior to CC.
E4.3	Measurement of distance	Compliance Readily Achievable	Emergency Lighting & Exit Signage to be provided to the building in accordance with E4 and AS 2293.1-2005. Design Certification to be provided prior to CC.
E4.4	Design and operation of emergency lighting	Compliance Readily Achievable	Emergency Lighting & Exit Signage to be provided to the building in accordance with E4 and AS 2293.1-2005. Design Certification to be provided prior to CC.
E4.5	Exit signs	Compliance Readily Achievable	Emergency Lighting & Exit Signage to be provided to the building in accordance with E4 and AS 2293.1-2005. Design Certification to be provided prior to CC.
E4.6 & NSW Variation	Direction signs	Compliance Readily Achievable	Emergency Lighting & Exit Signage to be provided to the building in accordance with E4 and AS 2293.1-2005. Design Certification to be provided prior to CC.
E4.7	Class 2 and 3 buildings and Class 4 parts: Exemptions	Not Applicable	The building does not contain Class 2, 3 or 4 uses
E4.8	Design and operation of exit signs	Compliance Readily Achievable	Emergency Lighting & Exit Signage to be provided to the building in accordance with E4 and AS 2293.1-2005. Design Certification to be provided prior to CC.
E4.9	Sound systems and intercom systems for emergency purposes	Not Applicable	

Part F – Health and Safety			
F1 – Damp and Weatherproofing			
FP1.4	Deemed-to-Satisfy Provisions	Compliance Readily Achievable	No DTS Solution is provided within the BCA for compliance with the weatherproofing of external walls. A performance solution is required to be provided for the weatherproofing of external walls demonstrating compliance with FP1.4
F1.1	Stormwater drainage	Compliance Readily Achievable	To be installed in accordance with AS 3500. Drawings and design documentation will be required as the design develops.
F1.4	External above ground membranes	Compliance Readily Achievable	External membranes are required to comply with AS 4654.1 and 2. details of product choices to be provided prior to approval.
F1.5	Roof coverings	Compliance Readily Achievable	
F1.6	Sarking	Compliance Readily Achievable	Sarking is required to comply with AS 4200 and be non-combustible when tested in accordance with AS 1530.1.
F1.7	Waterproofing of wet areas in buildings	Compliance Readily Achievable	Wet areas are to be waterproofed in accordance with AS 3740.
F1.9	Damp-proofing	Compliance Readily Achievable	Damp proofing is required to be installed and comply with AS 2904 or AS 3660.
F1.10	Damp-proofing of floors on the ground	Compliance Readily Achievable	Damp proofing is required to be installed and comply with AS 2870.
F1.11	Provision of floor wastes	Compliance Readily Achievable	
F1.13	Glazed assemblies	Compliance Readily Achievable	Glazing is to comply with AS 2047 for external assemblies and AS 1288 for internal areas.

F2 – Sanitary and Other Facilities			
F2.0	Deemed-to-Satisfy Provisions	Compliance Readily Achievable	
F2.1	Facilities in residential buildings	Further Details Required	<p>Private facilities have been provided in the residential care areas.</p> <p>In addition to the private facilities, a suitable bath, either fixed or mobile, is to be provided for the residents.</p> <p>Kitchen and laundry facilities have been provided.</p>
F2.3	Facilities in Class 3 to 9 buildings	Further Details Required	<p>Employee numbers are required in order to determine if sanitary facility numbers provided are adequate for the staff.</p> <p>The facilities provided will currently cater for the following staff numbers:</p> <p>Male: 10 employees</p> <p>Female: 10 employees</p>
F2.4	Accessible sanitary facilities	Further Details Required	<p>Accessible sanitary facilities have been provided for staff and residents within the building in accordance with NCC Part F2.4.</p> <p>Detailed drawings will be required as the design develops.</p> <p>5 Accessible units are required to be provided in accordance with NCC part D3.1. Further Accessible units may be required by the Parramatta city council planning scheme.</p>
F2.7 & NSW Variation	Microbial (legionella) control	Noted	
F2.8	Waste management	Further Details Required	<p>A class 9c building is to be provided with the following facilities:</p> <ul style="list-style-type: none"> - A slop hopper or similar for every 60 beds on each storey - An appliance for the disinfection of pans or an adequate means to dispose of receptacles.

F3 – Room Heights			
F3.1	Height of rooms and other spaces	Further Details Required	A reflected ceiling plan is required in order to determine if ceiling heights are compliant with NCC part F3.1
F4 – Light and Ventilation			
F4.1	Provision of natural light	Compliance Readily Achievable	natural light is required to be provided to all residential sleeping areas in accordance with NCC Part F4.2
F4.2	Methods and extent of natural lighting	Further Details Required	windows are required to be provided to residential sleeping areas and have an aggregate area of 10% of the floor area of the room. A window and lighting schedule is required to demonstrate compliance.
F4.4	Artificial lighting	Compliance Readily Achievable	Lighting to be provided in accordance with this clause and AS 1680 to all common and staff areas. Design certification to be provided prior to CC.
F4.5, F4.6 & NSW Variation	Ventilation of rooms	Further Details Required	Natural ventilation or mechanical ventilation to be provided. Mechanical Engineer to confirm compliance with F4.5 and AS 1668.2 If compliance with DtS not achievable a Performance Solution demonstrating compliance with FP4.3 and FP4.4 may be more appropriate.
F4.11	Carparks	Further Details Required	Carpark ventilation is required to comply with the requirements of AS 1668.2
F4.12	Kitchen local exhaust ventilation	Further Details Required	The kitchen exhaust is required to comply with the requirements of AS 1668 parts 1 and 2.
F5 – Sound Transmission and Insulation			
Part F5	Sound Insulation in Residential Buildings	Further Details Required	Sound Insulation is required between the residential units, adjacent units and public corridors in accordance with NCC part F5. The walls are to be constructed in accordance with a tested system that meets the required airborne and impact insulation requirements.

G6 – Occupiable outdoor areas			
G6.1	Application of Part		<p>(a) The Deemed-to-Satisfy Provisions of this Part apply to buildings containing an occupiable outdoor area in addition to the other Deemed-to-Satisfy Provisions of the BCA.</p> <p>(b) The Deemed-to-Satisfy Provisions of this Part take precedence where there is a difference to The Deemed-to-Satisfy Provisions of Sections C, D, E, F and G.</p> <p>(c) Except for G6.2, The Deemed-to-Satisfy Provisions of this Part do not apply to-</p> <p>(i) an occupiable outdoor area of a sole-occupancy unit in a Class 2 or 3 building, class 9c building or Class 4 part of a building; or</p> <p>(ii) an occupiable outdoor area with an area less than 10m².</p>
G6.2	Fire hazard properties		<p>(a) subject to (b), a lining, material or assembly in an occupiable outdoor area must comply with C1.10 as for an internal element.</p> <p>(b) The following fire hazard properties of a lining, material or assembly in an occupiable outdoor area are not required to comply with C1.10:</p> <p>(i) Average specific extinction area.</p> <p>(ii) Smoke-Developed Index</p> <p>(iii) Smoke development rate</p> <p>(iv) Smoke growth rate index (SMOGR_{Arc})</p>
G6.3	Fire Separation		For the purpose of the Deemed-to-Satisfy Provisions of C2.7, C2.8 and C2.9, a reference to a storey includes an occupiable outdoor area, however a fire wall cannot be used to separate an occupiable outdoor area into different fire compartments.
G6.4	Provision of escape		For the purpose of the Deemed-to-Satisfy Provisions of Part D1, a reference to a storey or room includes an occupiable outdoor area.
G6.5	Construction of exits		For the purpose of the Deemed-to-Satisfy of Part D2, a reference to a storey or room includes an occupiable outdoor area
G6.6	Fire fighting equipment		Except for Clause 7(b)(i) of Specification E1.5 for the purposes of the Deemed-to-Satisfy Provisions of Part E1, a reference to a storey includes an occupiable outdoor area.
G6.8	Visibility in an emergency, exit signs and warning systems		For the purpose of the Deemed-to-Satisfy Provisions of Part E4, a reference to a storey includes an occupiable outdoor area
G6.9	Light and ventilation		For the purpose of the Deemed-to-Satisfy Provisions of F4.4, F4.8 and F4.9, a reference to a room includes an occupiable outdoor area.

G6.10	Fire orders		For the purpose of the Deemed-to-Satisfy Provisions of G4.9, a reference to a storey includes an occupiable outdoor area.
Part J – Energy Efficiency			
J0.0	Deemed-to-Satisfy Provisions	Further Details Required	Part J Report to be provided by Architect or ESD Consultant. ESD Consultant or Architect to certify CC Plans achieve compliance with Part J.

6 Appendix A – Architectural Plans Reviewed

The following documentation, prepared by Group GSA was used in the assessment and preparation of this report: -

DRAWING LIST			
Package	Sheet Number	Sheet Name	Current Revision
DA	A0000	TITLE PAGE	H
DA	A0001	DRAWING LIST	H
DA	A1000	DEMOLITION PLAN	D
DA	A1100	SITE PLAN	C
DA	A2002	GROUND FLOOR PLAN	I
DA	A2003	LEVEL 1	H
DA	A2004	LEVEL 2	G
DA	A2005	LEVEL 3	G
DA	A2006	ROOF	H
DA	A3000	WEST ELEVATION (GLEBE ST.)	E
DA	A3001	SOUTH ELEVATION	E
DA	A3004	NORTH ELEVATION	E
DA	A3100	SECTION AA	D
DA	A3101	SECTION BB	D
DA	A3102	SECTION CC	D
DA	A3103	SECTION DD	D
DA	A3104	INDICATIVE DRIVEWAY SECTION	E
DA	A4000	GFA SEPP CALCULATION	C
DA	A4001	GFA LEP CALCULATION	C
DA	A4002	LANDSCAPE (SEPP) DIAGRAM	C
DA	A4003	LANDSCAPE (LEP) DIAGRAM	C
DA	A4004	DEEP SOIL DIAGRAM	C
DA	A4005	TPZ DIAGRAM	B
DA	A4100	SHADOW DIAGRAM	B
DA	A4101	SHADOW DIAGRAM	B
DA	A4102	SHADOW DIAGRAM	A
DA	A4103	SHADOW DIAGRAM	A
DA	A5000	MATERIAL SCHEDULE - FRONT ELEVATION	B
DA	A5001	MATERIAL SCHEDULE - SOUTH ELEVATION	B
DA	A5002	MATERIAL SCHEDULE - EAST ELEVATION	B
DA	A5003	MATERIAL SCHEDULE - NORTH ELEVATION	B
DA	A6000	ARTIST IMPRESSION	A
DA	A6001	ARTIST IMPRESSION - WITH TREES	A
DA	N0001	NOTIFICATION PLAN	A

7 Appendix B – Table 3 of Specification C1.1

Below is an abridged version of Table 3 of Specification C1.1. These are the Deemed to Satisfy requirements and do not take into consideration any reduction in FRL's sought via a performance-based solution or any concessions afforded by Part 3 of Specification C1.1

Building element	Class of building — FRL: (in minutes)		
	Structural adequacy/Integrity/Insulation		
	5 / 7a / 9b	6	7b
EXTERNAL WALL (including any column and other building element incorporated therein) or other external building element, where the distance from any fire-source feature to which it is exposed is—			
For loadbearing parts—			
less than 1.5 m	120/120/120	180/180/180	240/240/240
1.5 to less than 3 m	120/ 90/ 90	180/180/120	240/240/180
3 m or more	120/ 60/ 30	180/120/90	240/180/ 90
For non-loadbearing parts—			
less than 1.5 m	–/120/120	–/180/180	–/240/240
1.5 to less than 3 m	–/ 90/ 90	–/180/120	–/240/180
3 m or more	–/–/–	–/–/–	–/–/–
EXTERNAL COLUMN not incorporated in an external wall, where the distance from any fire-source feature to which it is exposed is—			
less than 3 m	120/–/–	180/–/–	240/–/–
3 m or more	–/–/–	–/–/–	–/–/–
COMMON WALLS and FIRE WALLS—			
All	120/120/120	180/180/180	240/240/240
INTERNAL WALLS—			
Fire-resisting lift and stair shafts—			
Loadbearing	120/120/120	180/120/120	240/120/120
Non-loadbearing	–/120/120	–/120/120	–/120/120
Bounding public corridors, public lobbies and the like—			
Loadbearing	120/–/–	180/–/–	240/–/–
Non-loadbearing	–/–/–	–/–/–	–/–/–
Between or bounding sole-occupancy units—			
Loadbearing	120/–/–	180/–/–	240/–/–
Non-loadbearing	–/–/–	–/–/–	–/–/–
Ventilating, pipe, garbage, and like shafts not used for the discharge of hot products of combustion—			
Loadbearing	120/ 90/ 90	180/120/120	240/120/120
Non-loadbearing	–/ 90/ 90	–/120/120	–/120/120

OTHER LOADBEARING INTERNAL WALLS, INTERNAL BEAMS, TRUSSES and COLUMNS—			
All	120/-/-	180/-/-	240/-/-
FLOORS			
Any	120/120/120	180/180/180	240/240/240
ROOFS			
Any	120/ 60/ 30	180/60/30	240/ 90/ 60



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