BUILDING CODE OF AUSTRALIA Volume 1 2016
ASSESSMENT REPORT

PROPOSED MIXED USE DEVELOPMENT
COMMERCIAL RETAIL AND APARTMENTS
35 HONEYSUCKLE DRIVE
NEWCASTLE NSW 2300

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Project No.: 2018-0441

Date: 1 June 2018

Issue: 1

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Report Revision History

Issue	Date	Prepared by
1	1 June 2018	Scott McGufficke

1.0 INTRODUCTION

This report comprises a preliminary assessment of plans for a mixed use development comprising ground floor retail premises, 91 residential apartments and basement carparks in two nine (9) storey buildings plus a single storey retail building to be located on land at 35 Honeysuckle Drive, Newcastle, NSW, for Doma Group Pty Ltd against the deemed-to-satisfy (DTS) provisions of the National Construction Code of Australia 2016, Building Code of Australia (the BCA), Volume 1 with NSW Variations.

As a preliminary assessment this report identifies the key BCA DTS requirements that will need to be more thoroughly addressed through more comprehensive design plans and specifications at the Construction Certificate stage of the development process which, at that stage, may or could, also incorporate 'performance solutions' in lieu of the DTS provisions of the BCA in order to meet any specified performance requirement.

1.1 Referenced Documents

The report is based on the review of the following documents:

- Building Code of Australia 2016
- Guide to the Building Code of Australia 2016
- Preliminary Architectural drawings prepared by SJB Architects for 42 Honeysuckle Drive, – Honeysuckle Newcastle, Project No: 5711, dated 11th May 2018

Sheet Title	Sheet Number	Revision
Floor Plan Basement 02	DA-A-0201	02
Floor Plan Basement 01	DA-A-0202	02
Floor Plan Ground Floor	DA-A-0203	02
Floor Plan Level 01	DA-A-0204	02
Floor Plan Level 02	DA-A-0205	02
Floor Plan Level 03	DA-A-0206	02
Floor Plan Level 04-06	DA-A-0207	02
Floor Plan Level 05	DA-A-0208	-
Floor Plan Level 06	DA-A-0209	-
Floor Plan Level 07	DA-A-0210	02
Roof Plan	DA-A-0211	02
Elevations Sheet 01	DA-A-0501	02
Elevations Sheet 02	DA-A-0502	02
Building Sections Sheet 01	DA-A-0601	02
Building Sections Sheet 02	DA-A-0602	02

1.2 Limitations

a) This report comprises an assessment of the drawings against the BCA 2016, inclusive of relevant NSW variations, being the version of NSW State Building Laws in force at the date of the assessment. It must be noted that the BCA is to be amended tri-annually from 2016 and that this assessment may not comply with, or differ from, any future or past versions of the BCA.

b) This assessment does not include an assessment for compliance with any of the following Sections of the BCA:-

- Section B Structure
- Section I Maintenance
- Section J Energy Efficiency inclusive of NSW BASIX variation for Class 2 buildings.

c) This report does not include any assessment in relation to:

i. the Occupational Health and Safety Act; or

ii. the requirements of other Regulatory Authorities including, but not limited to, Telstra, Hunter Water Corporation, Electricity Supply Authority, RMS, Local Council and the like; or

iii. the Local Government Act; or

iv. Workcover Authority requirements; or

v. The Disability Discrimination Act, 1992, inclusive of The Disability (Access to Premises – Buildings) Standards, 2010.

d) AcroCert Pty Ltd does not guarantee acceptance of this report by the NSW Department of Planning, NSW Fire Brigades or any other relevant approval authorities.

2.0 BUILDING CHARACTERISTICS

BCA Classifications: Clause A3.3 – Each part of a building must be classified separately and where parts have different purposes – if not more than 10% of the floor area of a storey, being the minor use, is used for a purpose which is a different classification, the classification applying to the major use may apply to the whole storey other than for Class 2 or 3 parts. If a building has parts of different classification, each part must comply with all the relevant provisions for its classification. Clause A3.1 – The classification of a building or part of a building is determined by the purpose for which it is designed, constructed or adapted to be used.	Class 2 – A building containing 2 or more sole-occupancy units each being a separate dwelling. Class 6 (NSW variation) *inter alia* – A shop or other building for the sale of goods by retail or the supply of services direct to the public, including an eating room, café, restaurant, milk or soft-drink bar, dining room or bar. Class 7a – A building which is a carpark, being a building that is used for parking of motor vehicles but is neither a private garage nor used for the servicing of vehicles, other than washing, cleaning or polishing.
Rise in Storeys:	9
General floor area limitations for any 'fire compartment' or atrium – Clause C2.2:	Class 6 and 7 – maximum size – not to exceed 5,000m².
General volume limitations for any 'fire compartment' or atrium – Clause C2.2	Class 6 and 7 – maximum size – not to exceed 30,000m³
Carpark exempt	In accordance with Clause C2.1 the general floor area and volume limitations of Clause C2.2 do not apply to a carpark provided with a sprinkler system complying with Specification E.5.
Fire Compartment	Means either the total space of the entire building or, when referred to in the DTS provisions, any part of the building separated from the remainder by walls and/or

	floors each having a Fire Resistance Level (FRL) not less than that required for a fire wall for that type of construction and where all openings in the separating construction are protected in accordance with the DTS provisions of the relevant Part.
Type of Construction Required:	Type A
Compartmentation and Separation – Clause C2.7 – Separation of fire compartments by 'fire walls'.	Different parts within the building may be treated as separate fire compartments when separated by a fire wall that is constructed in accordance with Clause C2.7 (a) and extends to the underside of a floor having an FRL required for a fire wall or the roof covering. Fire wall means a wall with an appropriate resistance to the spread of fire that divides a storey or building into fire compartments. This building must be compartmentalised and separated into fire compartments that do not exceed the general floor area and volume limitations if it is to meet the DTS provisions.
Horizontal exits	Means any doorway required between 2 parts of a building separated from each other by a fire wall.
Fire Source Features	• Far boundary of Honeysuckle Drive • Each side and rear boundary, and • An external wall of another building on the allotment which is not a Class 10 building. where the distance from any fire-source feature to any building element is as prescribed within Table 3 to Specification C1.1 notwithstanding the general requirements and concessions as may be found within Clauses 2 & 3 of Specification C1.1
Effective height: means the vertical distance between the floor of the lowest storey included in the calculation 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)	24m
Climate zone:	5

3.0 KEY COMPLIANCE ISSUES

The following is a summary of the key BCA DTS compliance issues noted from an assessment of the plans and the information provided. Please refer to the clause-by-clause assessment in Appendix A for full details of all relevant BCA provisions.

BCA Clause	Details / Comments
Part B1 Non-Compliance	Structural design must comply with the relevant provisions of Part B1. Design Plans from suitably qualified engineers will be required for:- • Structural Footings and Frame Design inclusive of geotechnical certification. • Hydraulic Plans inclusive of water supply, sewerage, stormwater and fire services (hydrant and hose reel coverage and sprinkler installation)
C1.1 - Table C1.1 Non-Compliance	Type A Construction required. Design Plans should indicate the following:- • Fire protection for support of another part, • The FRL of Lintels where required, • The use of any combustible materials attached to the building such as finishes, linings, signage, sunscreens or blinds, awnings or any other attachment, including planters and plantings, to a building element that is required to have a FRL. • Any concessions that may apply to steel or timber columns, structures on the roof, curtain or panel walls and balconies and verandahs. • The FRL of shaft enclosures. • The required FRL of building elements including:- ○ External walls including any column and other building element incorporated therein for loadbearing and non-loadbearing parts, ○ External columns, ○ Common walls and fire walls ○ Internal walls:- ▪ Fire-resisting lift and stair shafts, ▪ Bounding public corridors, public lobbies and the like,

BCA Clause	Details / Comments
	▪ Between or bounding sole-occupancy units, ▪ Ventilating, pipe, garbage and like shafts. ○ Floors, ○ Roofs. The separate single storey retail building located within 18m of any other building on the lot provides a fire source feature and vice versa.
C1.8	If 'lightweight construction' is to be used it must comply with Clause C1.8 and Specification C1.8
C1.10 (NSW Variation)	The fire hazard properties of all floor linings, floor coverings, wall linings and ceiling linings, air handling ductwork, lift cars, non-required non fire-isolated stairways or pedestrian ramps, sarking type materials, attachments to floors, ceilings, internal walls and the internal linings of external walls, other materials including insulation materials other than sarking-type materials must comply with Specification C1.10. Paint or fire-retardant coatings must not be used in order to make a material comply with a required fire hazard property, except in respect of a material referred to in NSW Specification C1.1, NSW Table 4 and to which Notes 4 and 5 are applicable.
C2.1	Clause C2.2 does not apply to a carpark fitted with a sprinkler system complying with Specification E1.5
C2.2 Non-Compliance	The size of any fire compartment in a Class 6 and/or 7 building must not exceed the maximum floor area nor the maximum volume set out in Table C2.2. Notwithstanding Clause C2.1, the volume of the Class 6 and Class 7 parts of the building need to be indicated.
C2.3	The building has not been considered as a large isolated building given it contains Class 2 parts.
C2.6	The vertical separation of openings in external walls are required to be protected in accordance with Clause C2.6(a) noting Clause C2.6(b)(iii) where this requirement does not apply to a building fitted throughout with a sprinkler system complying with Clause E1.5.
C2.7 Non-Compliance	The construction of fire walls must comply with Clause C2.7 (a). In order to meet the DTS provisions the building is required to meet the compartmentation and separation of fire compartments in accordance with Clause C2.7(c).
C2.8	Where the building has parts of different classifications located alongside one another they need to be separated by either:-

BCA Clause	Details / Comments
	a. Each building element having the higher FRL prescribed by Specification C1.1 Table 3 for the classification concerned; or b. A fire wall having an FRL of not less than that prescribed by Table 3 of Specification C1.1 for the Classification/s concerned. Where a carpark is to be separated and it is protected with a sprinkler system complying with Specification E1.5 it need only comply with the FRLs prescribed by Table 3.9 of Specification C1.1
C2.9	Where parts of different classifications are situated above one another in adjoining storeys that must be separated in accordance with Clause 3 of Specification C1.1.
C2.10	Any lift connecting more than 2 storeys, or more than 3 if the building is sprinklered, (other than lifts wholly within an atrium) must be separated from the rest of the building by enclosure in a shaft with an FRL prescribed by Specification C1.1.
C2.11	A stairway and a lift cannot be in the same shaft if either the stairway or lift shaft is required to be fire rated.
C2.12	Lift motors and lift control panels, emergency generators used to sustain emergency equipment operating in the emergency mode, a central smoke control plant, boilers or any batteries installed having greater than 24 volts and 10 ampere hours, must be separated from the remainder of the building by fire resisting construction complying with Clause C2.12(d).
C2.13	An electricity substation located within the building must:- a. Be separated from any other part of the building by construction having an FRL of not less than 120/120/120; and b. Have any doorway in that construction protected with a self-closing fire door with an FRL of not less than -/120/30. A main switchboard in the building that sustains emergency equipment operating in emergency mode must:- a. Be separated from any other part of the building by construction having an FRL of not less than 120/120/120; and b. Have any doorway in that construction protected with a self-closing fire door with an FRL of not less than -/120/30. Electrical conductors that supply a substation or switchboard described above must:- a. Have a classification in accordance with AS/NZS 3013 of not less than WS52W; (or WS53S if located in a position that could be damaged by motor vehicles); or b. Be enclosed or otherwise protected by construction having an

BCA Clause	Details / Comments
	FRL of not less than 120/120/120. All switchboards for "required emergency equipment" must be constructed so that emergency equipment switchgear is separated from non-emergency switchgear by metal partitions designed to minimise the spread of a fault from the non-emergency switchgear. Required emergency equipment includes, but is not limited to:- i. fire hydrant booster pumps, ii. pumps for automatic sprinkler systems, water spray, chemical fluid suppression systems or the like, iii. air handling systems designed to exhaust and control the spread of fire and smoke, iv. control and indicating equipment, v. sound systems and intercom systems for emergency purposes.
C2.14 Non-Compliance	Within the Class 2 parts of the building, if a public corridor is more than 40m in length, it must be divided at intervals of not more than 40m with smoke-proof walls complying with Clause 2 of Specification C2.5. Design Plans need to indicate the installation of smoke-proof walls. Public Corridor means; *"an enclosed corridor, hallway or the like which –* *a. serves as a means of egress from 2 or more SOUs to a required exit from the storey concerned; or* *b. is required to be provided as a means of egress from any part of a storey to a required exit,"*
C3.2 and C3.4 Non-Compliance	Any opening in any external wall that is required to have an FRL must be protected, if the distance between the opening and the fire-source feature is less than:- i. 3m from a side or rear boundary; or ii. 6m from the far boundary of a road adjoining the allotment when located in a storey at or near ground level; or iii. 6m from another building on the allotment other than a class 10; as follows for:- i. Doorways – a. wall-wetting sprinklers used with doors that are self-closing or automatic closing; or b. -/60/30 fire doors that are self-closing or automatic closing.

<table>
<tr><th>BCA Clause</th><th>Details / Comments</th></tr>
<tr><td></td><td>ii. Windows –

a. wall-wetting sprinklers used with windows that are automatic closing or permanently fixed in the closed position; or

b. -/60/- fire windows that are automatic closing or permanently fixed in the closed position; or

c. -/60/- automatic closing fire shutters.

iii. Other openings –

a. excluding voids – wall-wetting sprinklers; or

b. construction having an FRL not less than -/60/-.

Fire doors, fire windows and fire shutters must comply with Specification C3.4.

Wall-wetting sprinklers must be located externally.

Any opening required to be protected must not occupy more than 1/3 of the area of the external wall of the storey in which it is located.</td></tr>
<tr><td>C3.3</td><td>The distance between parts of external walls and any openings within them in different fire compartments must not be less than that set out in Table C3.3 unless those parts of each wall have an FRL of not less than 60/60/60 and any openings are protected in accordance with Clause C3.4.

Table C3.3 DISTANCE BETWEEN EXTERNAL WALLS AND ASSOCIATED OPENINGS IN DIFFERENT FIRE COMPARTMENTS

<table><tr><th></th><th>Angle between walls</th><th>Min. Distance</th></tr><tr><td></td><td>0° (walls opposite)</td><td>6 m</td></tr><tr><td></td><td>more than 0° to 45°</td><td>5 m</td></tr><tr><td></td><td>more than 45° to 90°</td><td>4 m</td></tr><tr><td></td><td>more than 90° to 135°</td><td>3 m</td></tr><tr><td></td><td>more than 135° to less than 180°</td><td>2 m</td></tr><tr><td></td><td>180° or more</td><td>Nil</td></tr></table></td></tr>
<tr><td>C3.5 and C3.6

Non-Compliance</td><td>If a fire wall is provided to separate classifications and/or fire compartments then any doorway within that fire wall must comply with Clause C3.5 in regard to the aggregate width of the openings for doorways, the required FRL and the method of closing for any door or shutter. Any sliding door fitted in a fire wall must also comply with Clause C3.6

Fire Doors and Fire Walls not indicated.</td></tr>
<tr><td>C3.7</td><td>Doorways that form part of any horizontal exit must be protected in accordance with Clause C3.7</td></tr>
</table>

BCA Clause	Details / Comments
C3.8	Any doorways opening to any fire-isolated exit, other than doorways opening directly to a road or open space, must be protected by -/60/30 fire doors that are self-closing or automatic closing. An automatic closing operation must be initiated by the activation of a smoke detector, or any other detector deemed suitable in accordance with AS1670, located not more than 1.5m horizontal distance from the approach side of the doorway. Activation of any other fire alarm system, including the sprinkler system, installed within the building must also initiate the automatic closing operation. A window in an external wall of a fire-isolated stairway, fire-isolated passageway or fire-isolated ramp must be protected in accordance with Clause C3.4 if it is within 6m of, and exposed to, a window or other opening in a wall of the same building, other than in the same fire-isolated enclosure.
C3.9	Fire- isolated exits must not be penetrated by any services other than:- a. electrical wiring permitted by Clause D2.7(e) being:- i. a lighting, detection, or pressurisation system serving the exit; or ii. a security, surveillance or management system serving the exit; or iii. an intercommunication system or an audible or visual alarm system; or iv. the monitoring of hydrant or sprinkler isolating valves, or b. ducting associated with a pressurisation system provided it does open into any other part of the building or it is constructed of material having an FRL of not less than -/120/60 where it does pass through any other part of the building, or c. water supply pipes for fire services.
C3.10	An entrance doorway to a fire-isolated lift shaft must be protected by -/60/- fire doors that comply with AS1735.11 and are set to remain closed except when discharging or receiving passengers or goods. A lift call panel, indicator panel or other panel in the wall of a fire-isolated lift shaft must be backed by construction having an FRL of not less than -/60/60 if it exceeds 35,000mm² in area.
C3.11 (NSW variation)	Any doorway within the Class 2 parts of the building that provide access from a sole occupancy unit (SOU) to – i. a public corridor, public lobby, or the like; or

BCA Clause	Details / Comments
	ii. a room not within a SOU; or iii. the landing of an internal non-fire isolated stairway that serves as a required exit; or iv. another SOU; and any doorway providing access from a room not within a SOU to:- v. a public corridor, public lobby, or the like; or vi. the landing of an internal non-fire isolated stairway that serves as a required exit; must be protected by a self-closing -/60/30 fire door. A door may be automatic-closing in accordance with the following:- i. The automatic-closing operation must be initiated by the activation of a smoke detector, or any other detector deemed suitable under AS1670.1, and located not more than 1.5m horizontal distance from the approach side of the doorway. ii. Where any other required fire alarm system, including a sprinkler system, is installed in the building, activation of the system must also initiate the automatic-closing operation.
C3.12	Where a service passes through— (i) a floor that is required to have an FRL with respect to integrity and insulation; or (ii) a ceiling required to have a resistance to the incipient spread of fire, the service must be installed in accordance with the following:- (i) a shaft that will not reduce the fire performance of the building elements it penetrates; or (ii) in accordance with C3.15.
C3.13	Any opening in a wall providing access to a ventilating, pipe, garbage or other service shaft must be protected:- i. if it is in a sanitary compartment – a door or panel which, together with its frame, is non-combustible or has an FRL of not less than -/30/30; or ii. a self-closing -/60/30 fire door or hopper; or iii. an access panel having an FRL of not less than -/60/30; or iv. if the shaft is a garbage shaft – a door or hopper on non-combustible construction.
C3.15	Any electrical, electronic, plumbing, mechanical ventilation, air-conditioning or other service penetrating a building element (other than an external wall or roof) that is required to have an FRL with respect to integrity or insulation or a resistance to the incipient spread of fire, must comply with Clause C3.15(a), (b) or (c).

BCA Clause	Details / Comments
D1.2 (NSW variation)	In addition to any horizontal exit, the building must have not less than 2 exits from each storey.
D1.3	Every stairway or ramp serving as a required exit must be fire-isolated.
D1.4 Non-Compliance	Within the Class 2 parts the entrance doorway of any SOU must not be more than:- a. 6m from an exit or from a point from which travel in different directions to 2 exits is available; or b. 20m from a single exit serving the storey at the level of egress to a road or open space; and no point on the floor of a room which is not a SOU must be more than 20m from and exit or from a point at which travel in different directions to 2 exits is available. Within the Class 6 and 7 parts no point on a floor must be more than 20m from an exit, or a point from which travel in different directions to 2 exits is available, in which case the maximum distance to one of those exits must not exceed 40m although within a Class 6 part the distance to a single exit serving a storey at the level of access to a road or open space may be increased 30m. Exit travel distances to required exits not indicated.
D1.5	Alternative exits must be distributed as uniformly as practicable within or around the storey in accordance with Clause D1.5.
D1.6 (NSW Variation)	In a required exit or path of travel to an exit:- a. the unobstructed height throughout must be not less than 2m, except for doorways which may be reduced to 1980mm; and b. the unobstructed width, except for doorways, must be not less than 1m and in a public corridor not less than 1.5m and 1.8m for the full width of the doorway providing access into a sole occupancy unit or communal bathroom. c. The unobstructed width of a doorway must be not less than:- i. 1070mm where it opens from a public corridor to a sole occupancy unit; or ii. 870mm in other resident use areas; or iii. 800mm in non-resident use areas, and where the doorway is fitted with two leaves and one leaf is secured in the closed position, the other leaf must permit an unobstructed opening not less than 870mm wide in resident use areas and 800mm wide in non-resident use areas, and iv. in any other case except where it opens to a sanitary compartment or bathroom – 750mm wide. The unobstructed width of a required exit must not diminish in the direction of travel to a road or open space. The width of a stairway must be measured clear of all obstructions such as handrails, projecting parts of barriers and the like and extend without

BCA Clause	Details / Comments
	interruption, except for ceiling cornices, to a height not less than 2m vertically above a line along the nosings of the treads of the floor surface or landing.
D1.7	A doorway from a room must not open directly into any stairway, passageway or ramp that is required to be fire-isolated unless it is from a public corridor, public lobby or the like, a SOU which occupies all of a storey or a sanitary compartment, airlock or the like. Every fire-isolated stairway or ramp must provide independent egress from each storey served and must discharge directly (or by means of its own fire-isolated passageway) to a road or open space. Alternatively, it may discharge to a point in any storey or space within the confines of the building which is used only for pedestrian movement, car parking or the like, which is open for at least two-thirds of its perimeter and from which an unimpeded 20m path of travel to a road or open space is available. A fire-isolated stairway or ramp may also discharge directly into a covered area that:- a. adjoins a road or open space; and b. is open for at least one-third of its perimeter; and c. has an unobstructed clear height throughout, including perimeter openings, of not less than 3.0m; and d. provides an unimpeded 6.0m path of travel to the point of discharge. If a path of travel from a point of discharge passes within 6.0m of any external wall of the same building (measured horizontally at right angles to the path of travel) then that part of the wall must have; for a distance of 3.0m above or below the level of the path of travel, or for the height of the wall (whichever is the lesser):- a. an FRL of not less than 60/60/60; and b. any openings protected internally in accordance with Clause C3.4. If more than 2 access doorways; other than from a sanitary compartment or the like, open to a required fire-isolated exit on the same storey then a smoke lobby must be provided in accordance with Clause D2.6 or the exit must be pressurised in accordance with AS/NZS 1668.1:2015.
D1.10 (NSW Variation)	An exit must not be blocked at the point of discharge and where necessary, suitable barriers must be provided to prevent vehicles from blocking the exit. The discharge point of alternative exits must be located as far apart as practicable.
D1.11 Non-Compliance	A horizontal exit cannot be counted as a required exit between SOUs. Horizontal exits must not comprise more than half of the required exits from any part of a storey divided by a fire wall. Horizontal exits must have a clear area on the side of the fire wall to which occupants are evacuating, to accommodate the total number of persons served by the horizontal exit (i.e. all the occupants of the fire compartment being evacuated) of not less than 0.5m² per person. Horizontal exits and Fire Walls not indicated.

BCA Clause	Details / Comments
D2.2	A stairway or ramp, inclusive of landings, required to be within a fire-resisting shaft must be constructed of non-combustible materials and such that, should a local failure occur, it does not impair or cause any structural damage to the fire-resistance of the shaft.
D2.4	In a fire-isolated stairway serving as a required exit there must be no direct connection between rising and descending stair flights.
D2.13	All stairways must comply with Clause 2.13 in relation to the dimensions and numbers of goings and risers.
D2.14	Landings must have a maximum gradient of 1:50 may be used in any building to limit the number of risers in each flight and each landing must— (i) be not less than 750 mm long, and where this involves a change in direction, the length is measured 500 mm from the inside edge of the landing; and (ii) have a non-slip finish throughout or an adequate non-skid strip near the edge of the landing where it leads to a flight below
D2.16	Balustrades to stairs and balconies must comply with D2.16.
D2.17	Handrails must comply with D2.17.
D2.21	All latching to doors 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 single hand downward action or pushing action on a single device which is located between 900mm and 1100mm from the floor. This does not apply to internal parts of SOU's.
D3.1	Class 2 parts of a building are required to be 'accessible' (meaning having features to enable use by people with a disability) as follows:- a. in common areas:- i. From a required accessible entrance to at least one floor containing SOUs and to the entrance doorway of each SOU located on that level. ii. To and within not less than 1 of each type of room or space for use in common by the residents, including a cooking facility, sauna, gym, swimming pool, individual shop, eating area or the like. iii. Where an accessible ramp or passenger lift is installed – A. to the entrance doorway of each SOU, and B. to and within rooms or spaces for use in common by the residents, located on the levels served by the lift or the ramp.

BCA Clause	Details / Comments
	b. SOUs – not more than 2 required accessible SOUs may be located adjacent to each other and, where more than 2 accessible SOUs are required, they must be representative of the range of rooms available. c. In a building containing any number of SOUs, accessible SOUs must be provided with access to and within each SOU according to the following:- i. 1 to 10 SOUs = 1 accessible SOU ii. 11 to 40 SOUs = 2 accessible SOUs iii. 41 to 60 SOUs = 3 accessible SOUs iv. 61 to 80 SOUs = 4 accessible SOUs v. 81 to 100 SOUs = 5 accessible SOUs vi. 101 to 200 SOUs = 5 accessible SOUs plus 1 for every 25 units or part thereof in excess of 100 vii. 201 to 500 SOUs = 9 accessible SOUs plus 1 for every 30 units or part thereof in excess of 200 viii. More than 500 SOUs = 19 accessible SOUs plus 1 for every 50 units or part thereof in excess of 500. Class 6 parts are required to be accessible to and within all areas normally used by the occupants of these parts. Class 7a parts are required to be accessible to and within any level containing accessible car parking spaces.
D3.2	An accessway must be provided to the building – **i.** From the main points of a pedestrian entry at the allotment boundary; and **ii.** From any other accessible building connected by a pedestrian link; and **iii.** From any required accessible carparking space on the allotment. A continuous accessible path of travel and any circulation spaces shall have a slip-resistant surface. The texture of the surface shall be traversable by people who use a wheelchair and those with an ambulant or sensory disability. Walkways and landings having gradients in the direction of travel shallower than 1 in 33 shall have a camber or crossfall not steeper than 1 in 40 for shedding of water, except that bitumen surfaces shall have a camber or crossfall no steeper than 1 in 33.

BCA Clause	Details / Comments
	The ground surface abutting the sides of the accessway shall provide a firm and level surface of a different material to that of the accessway at the same level of the accessway, follow the grade of the accessway and extend horizontally for a minimum of 600mm unless one of the following is provided – **i.** A kerb complying with Figure 18 of AS1428.1:2009; or **ii.** A kerb rail and handrail complying with Figure 19 of AS1428.1:2009; or **iii.** A wall not less than 450mm in height. A continuous accessible path of travel from the main pedestrian entry at the allotment boundary to the entrance doorway must be "uninterrupted". It must not include a step, stairway or other impediment.
D3.3	a. An external ramp must comply with clause 10 of AS 1428.1-2009 b. The passenger lifts must comply with Clause E3.6 c. The clear width of accessways must be a minimum of 1000mm. d. Ground surfaces must comply with cl. 7 of AS1428.1-2009.
D3.5	One accessible carparking space must be provided for every 100 (or part thereof) carparking spaces. The accessible carparking space must comply with AS/NZS 2890.6:2009 Off-street Parking for People with Disabilities. An angle parking space must comply with the following – **i.** A dedicated (non-shared) space 2400mm wide x 5400mm long. **ii.** A shared area on one side (either left or right) of the dedicated space 2400mm wide x 5400mm long. **iii.** A shared area at either the front or the rear of the dedicated space 2400mm long x 2400mm wide. **iv.** The dedicated and shared areas shall be at the same level. **v.** A bollard shall be provided within the shared area to the side of the dedicated space centrally located 850mm from the front of the space. **vi.** The angle-parking angle shall be between 45° and 90° The parking space and wheelchair unloading area shall comprise a firm plane surface with a fall not exceeding 1:40 in any direction except where the surface is out of doors and bitumen sealed in which case the maximum fall shall not exceed 1:33. The dedicated space shall be identified by means of a white, 800mm to

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	1000mm symbol of access placed in a blue rectangle with no side more than 1200mm, located as a pavement marking in the centre of the space between 500mm and 600mm from its entry point. The dedicated space shall be outlined with yellow, slip resistant unbroken lines 80mm to 100mm wide on all sides excepting any side delineated by a kerb, barrier or wall. Vacant non-trafficked areas shall be outlined with yellow, unbroken lines 80mm to 100mm wide on all sides excepting any side delineated by a kerb, barrier or wall, and marked with diagonal stripes 150mm to 200mm wide with spaces 200mm to 300mm between the stripes. The stripes shall be at an angle 45°±10° to the side of the space.
D3.6	Braille and tactile signage complying with Specification D3.6 and incorporating the international symbol of access or deafness, as appropriate, must identify each sanitary facility. Signage must identify each door required by Clause E4.5 to be provided with an exit sign and state 'Exit' and 'Level'. Signage including the international symbol for deafness in accordance with AS1428.1 must be provided within a room containing a hearing augmentation system identifying the type of hearing augmentation, the area covered within the room and if receivers are being used, where those receivers can be obtained. Signage in accordance with AS1428.1 must be provided for accessible unisex sanitary facilities to identify if the facility is suitable for left or right handed use. Signage to identify an ambulant toilet accessible sanitary facility in accordance with AS1428.1 must be located on the door of the facility. Where a pedestrian entrance is not accessible, directional signage incorporating the international symbol of access, in accordance with AS1428.1, must be provided to direct a person to the location of the nearest accessible pedestrian entrance. 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 AS1428.1 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. Signs must be designed and installed as follows:- a. Braille and tactile components of a sign must be located not less than 1200mm and not higher than 1600mm above the floor or ground surface. b. Signs with single lines of characters must have the line of tactile characters not less than 1250mm and not more than 1350mm above the floor or ground surface.

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	c. Signs must be located:- i. On the wall of the latch side of the door with the leading edge of the sign located between 50mm and 300mm from the architrave, and ii. Where the above is not possible, the sign may be placed on the door itself. d. Where a required exit is provided with an Exit Sign, signs must be located:- i. On the side that faces a person seeking egress; and ii. On the wall of the latch side of the door with the leading edge of the sign located between 50mm and 300mm from the architrave, and Where the above is not possible, the sign may be placed on the door itself.
D3.8	Tactile Indicators complying with Sections 1 and 2 of AS/NZS 1428.4:2009 are required to warn people who are blind or have a vision impairment that they are approaching any ramp (other than a step ramp or kerb ramp) and at the meeting point of any accessway and vehicular way adjacent to any pedestrian entrance to the building. In the absence of any other suitable barrier, tactile indicators must also be provided at any overhead obstruction less than 2.0m above floor level, other than at a doorway.
D3.11	On an accessway a series of connected ramps must not have a combined vertical rise of more than 3.6m and a landing for a step ramp must not overlap a landing for another step ramp or ramp.
D3.12	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 AS1428.1. The contrasting line shall be not less than 75 mm wide and shall extend across the full width of the glazing panel. The lower edge of the contrasting line shall be located between 900 mm and 1000 mm above the plane of the finished floor level.
E1.3	A fire hydrant system installed in accordance with AS2419.1 must be installed to serve the building.
E1.4	A fire hose reel system must be provided to serve the whole building where one or more internal fire hydrants are installed or, if internal fire hydrants are not installed, to serve any fire compartment with a floor area of greater than 500m².

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	A fire hose reel system must be installed in accordance with AS2441
E1.5 Non-Compliance	A sprinkler system complying with Specification C1.5 may be installed throughout the building. A clear indication as to the provision of a sprinkler system throughout the building is required.
E1.6	Portable fire extinguishers must be provided as listed in Table E1.6 and selected, located and distributed in accordance with Sections 1, 2, 3 and 4 of AS2444.
E1.8	A fire control centre facility must be provided complying with Specification E1.8
E2.2 & Table E2.2a and E2.2b (NSW Variation)	An air-handling system which does not form part of a smoke hazard management system and which recycles air from one fire compartment to another or which may operate in a manner that unduly contributes to the spread of smoke from one fire compartment to another must:- a. be designed and operate as a smoke control system in accordance with AS/NZS 1668.1; or b. be arranged such that the air-handling system is shut down automatically by smoke detectors and where the air-handling ducts penetrate any elements separating fire compartments, incorporate smoke dampers which also close automatically upon the activation of a smoke alarm. Note: for the purposes of this provision each SOU within the Class 2 parts are treated as a separate fire compartment. Any fire-isolated stairway (including any associated fire-isolated passageway or fire isolated ramp) that serves any storey above an effective height of 25m plus any fire-isolated passageway or fire isolated ramp with a length of travel of more than 60m to a road or open space must be provided with an automatic air pressurisation system for fire isolated exits in accordance with AS/NZS 1668.1 or open access ramps or balconies in accordance with Clause D2.5.
E2.3	Additional smoke hazard management measures not addressed in Tables E2.2a and E2.2b may be necessary due to the:- a. special characteristics of the building; or b. special function or use of the building; or c. special type or quantity of materials stored, displayed or used in a building; or d. special mix of classifications within a building or fire compartment.

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E3.1	An electric passenger lift installation and an electrohydraulic passenger lift installation must comply with Specification E3.1.
E3.3	A warning sign must displayed complying with Figure E3.3 near every call button for the passenger lifts.
E3.5	Access and egress to and from liftwell landings must comply with the DTS provisions of Section D.
E3.7	Where lifts serve any storey above an effective height of 12m a fire service recall control switch complying with Clause E3.9 and a lift car fire service drive control switch complying with Clause E3.10 must be installed.
E3.9 & E3.10	Each group of lifts required to comply with Clause E3.7 must be provided with one fire service recall control switch installed in accordance with the requirements of Clause E3.9. The lift car fire service drive control switch required by Clause E3.7 must be installed in accordance with the requirements of Clause E3.10.
E4.2 and E4.4	An emergency lighting system must be installed throughout the building in accordance with Clause E4.2 and E4.4.
E4.5, E4.6 (NSW Variation) & E4.8	Exit signs and direction signs must be installed throughout the building in accordance with Clauses E4.5, E4.6 and E4.8. Note: In accordance with Clause E4.7, Clause E4.5 does not apply to a Class 2 building in which every door referred to is clearly and legibly labelled on the side remote from the exit or balcony or to an entrance door of a SOU in a Class 2 building.
F1.1	Stormwater drainage must comply with AS/NZS 3500.3:2015
F1.4	Waterproofing membranes for external above ground use must comply with AS 4654 Parts 1 and 2.
F1.5(d)	Metal roof sheeting must comply with AS1562.1:1992.
F1.6	Sarking-type materials used for weatherproofing of roofs and walls must comply with AS/NZS 4200 Parts 1 and 2.
F1.7	All building elements in wet areas, 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 Table F1.7; and b. comply with AS 3740:2010.
F1.9	Moisture from the ground must be prevented from reaching the walls above the damp-proof course and the underside of a suspended floor, including its supporting beams or girders, and where a damp-proof course is provided, it must consist of a material that complies with

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	AS/NZS 2904:1995 or impervious sheet material in accordance with AS 3660.1:2014.
F1.10	Where the floor of any room is laid directly 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 2870:2011. Damp-proofing need not be provided if 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.
F1.11	Any bathroom or laundry located at any level above a SOU or public space within a Class 2 part must have a floor waste and the floor graded to the floor waste to permit drainage.
F1.13	Windows, sliding and swinging glazed doors with a frame, adjustable louvres and window walls with one piece framing located in an external wall must comply with AS 2047:2014 requirements for resistance to water penetration. The following glazed assemblies need not comply with the above:- I. any glazed assembly not in an external wall, II. fixed louvres, III. skylights, roof lights and windows other than the vertical plane, IV. sliding and swinging glazed doors without a frame, V. windows constructed on site and architectural one-off windows, which are not design tested in accordance with AS 20147:2014, VI. second hand windows, re-used windows and recycled windows, and VII. heritage windows.
F2.1	Sanitary and other facilities must be provided in accordance with Table F2.1 for all Class 2 parts.
F2.3	Sanitary and other facilities must be provided in accordance with Table F2.3 for all Class 6 and 7 parts of the building.
F2.4	Accessible unisex sanitary compartments must be provided in accessible parts of the building in accordance with Table F2.4 (a). Accessible unisex showers must be provided in accordance with Table F2.4 (b).
F2.4(c)	On each level where there is more than one toilet in addition to an accessible unisex sanitary compartment at a bank of toilets, a sanitary compartment complying with AS1428.1:2009 suitable for a person with

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	an ambulant disability must be provided for use by males and females. a. Grabrails shall be installed in accordance with Clause 17. I. Grabrails shall be not less than 30mm and not more than 40mm outside diameter; or they shall have a sectional shape within the limits of 30mm to 40mm diameter. II. Exposed edges and corners shall have a radius of not less than 5mm. III. The fastenings and materials and construction shall be able to withstand a force of 1100N applied at any position in any direction without deformation or loosening or rotation of the fastenings or fittings. IV. The clearance between the grabrail and the adjacent wall surface shall be not less than 50mm and not more than 60mm. The clearance above a horizontal grabrail shall extend above the top of the grabrail by not less than 600mm. The clearance below a horizontal or angles rail shall be a minimum of 50mm except at fixing points. V. Grabrails shall be fixed so that there is no obstruction to the passage of the hand along the top 270° arc of horizontal and angled grabrails. There shall be no obstruction to the passage of the hand for the full length of vertical grabrails. b. Doors shall have openings with a minimum clear width of 700mm. c. Doors shall be provided with an in-use indicator and a bolt or catch. Where a snib catch is used, the snib handle shall have a minimum length of 45mm from the centre of the spindle. The latch mechanism shall be openable from the outside in an emergency. d. A coat hook shall be provided at a height of between 1350mm and 1500mm from the floor. The compartment shall comply with the dimensions and circulation spaces specified within Figures 53(A) and 53(B).
F2.4(e)	The circulation spaces, fixtures and fittings within accessible sanitary facilities must comply with the requirements of Clause 15 of AS1428.1:2009. Clause 15.2.1 Water taps shall comply with the following – i. Taps shall have lever handles, sensor plates, or other similar controls. ii. Lever handles shall have not less than 50mm clearance from an

BCA Clause	Details / Comments
	adjacent surface. iii. Where separate taps are provided for hot and cold water, the hot water tap shall be placed to the left of the cold water tap for horizontal configurations, or above the cold water tap for vertical configurations. iv. Where hot water is provided, the water shall be delivered through a mixing spout. Clause 15.2.2 WC pan clearances, including set-out, seat height and seat width shall be as shown in Figure 38 of AS1428.1:2009. Clause 15.2.3 The toilet seat on accessible toilets shall – i. Be of the full-round type, (i.e. not open fronted) and with minimal contours to the top surface; ii. Be securely fixed in position when in use; iii. Have seat fixings that create lateral stability for the seat when in use; iv. Be load-rated to 150kg; and v. Have a minimum luminance contrast of 30% with the background (e.g. pan, wall or floor against which it is viewed) Clause 15.2.4 A backrest shall be provided on all accessible toilets. The backrest shall – i. Be capable of withstanding a force in any direction of 1100N; ii. Have a height, at the lower edge of backrest to the top of the WC seat, of 120mm to 150mm, as shown in Figure 39(a); iii. Have a vertical height of 150-200mm and a width of 350-400mm, as shown in Figure 39(a); and iv. The front edge of the centre of the backrest be positioned to achieve an angle of between 95° to 100° back from the seat hinge (Figure 39(b)) Clause 15.2.5 Flushing controls shall be user activated, either hand operated or automatic. Where hand-operated flushing controls are used, they shall be located within the zone shown in Figure 40, or centred on the centre-line of the toilet, wholly within the vertical limits of that zone. The position of the flushing control within this zone shall not be within the area required for any grabrails or backrest. The flushing control shall be proud of the surface and shall activate the flush before the button becomes level with the surrounding surface. Clause 15.2.6 The outlet for the toilet paper dispenser shall be located within the zone specified in Figure 41. The toilet paper dispenser shall not

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	encroach upon the clearance required around the grabrails. Clause 15.2.7 Where a concealed or high-level cistern or flush valve is used, a continuous grabrail, as specified in Clause 17, shall be provided across the rear wall and side wall nearest the WC pan, as shown in Figure 42. Where a low-level non-concealed cistern or flush valve is used, the grabrail shall be terminated at each side of the cistern, as shown in Figure 42. Clause 15.2.8.1 For each WC, the unobstructed circulation space from the finished floor to a height of not less than 2000mm shall be as shown in Figure 43, except for the following, which are allowed to intrude into the circulation space: i. The toilet paper dispenser (see Clause 15.2.6). ii. Grabrails (see Clause 15.2.7). iii. Washbasin limited to 100mm intrusion as shown in Figure 43. iv. Hand dryers and towel dispensers. v. Soap dispensers (see Clause 15.4.3). vi. Shelves (see Clause 14.4.2). vii. Wall cabinets, where provided, which shall not protrude more than 150mm into the circulation space. The mounting of wall cabinets shall be at least 900mm above the floor level and the top shelf shall be a maximum of 1250mm above floor level. viii. Clothes hanging devices (see Clause 15.4.4). ix. Portable sanitary disposal unit as shown in Figure 43. x. Other wall mounted fixtures, such as dispensing units and sharps disposal units, which shall have 900mm minimum height clearance from the finished floor level and a maximum projection of 150mm from the finished wall surface. The overlapping of circulation spaces shall be in accordance with Clause 15.6. Clause 15.2.8.2 Where installed, baby change tables shall – i. Not encroach into the circulation space of any other toilet facility when in the folded up position; and ii. Have a maximum height of 820mm and a minimum clearance underneath of 720mm when in the open position. Clause 15.2.9 WC doors may be either hinged or sliding. WC doors shall comply with the following: i. Outward-opening doors shall have a mechanism that holds the

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	door in a closed position without the use of a latch. ii. Doors shall be provided with an in-use indicator and a bolt or catch. Where a snib catch is used, the snib handle shall have a minimum length of 45mm from the centre of the spindle. In an emergency, the latch mechanism shall be openable from the outside. iii. The force required to operate the door shall be in accordance with Clause 13.5.2(e). iv. Door handles and hardware shall be in accordance with Clause 13.5. Clause 15.3.1 The installation of washbasins shall comply with the following: i. The washbasin shall be outside the pan circulation space as shown in Figure 43. ii. Water taps shall comply with Clause 15.2.1 iii. Exposed hot water supply pipes shall be insulated or located so as to not present a hazard. iv. The projection of the washbasin from the wall and the position of the taps, bowl and drain outlet shall be determined in accordance with Figures 44(A) and 44(B). v. Water supply pipes and waste outlet pipes shall not encroach on the required clear space under the washbasin. For each washbasin fixture, the unobstructed circulation space shall be as shown in Figure 46. The washbasin fixture and its fittings are the only fixtures permitted in this space. Clause 15.4.1 In all sanitary facilities, the mirror shall be located either above or adjacent to the washbasin. Where provided, a vertical mirror with a reflective surface not less than 350mm wide shall extend from a height of not more than 900mm to a height of not less than 1850mm above the plane of the finished floor. Where provided, a second vertical mirror shall extend from a height not less than 600mm to a height of not less than 1850mm above the plane of the finished floor. Note: Angled or tilted mirrors should not be used since they do not work for all users or accessible facilities. Clause 15.4.2 Shelf space shall be provided adjacent to the washbasin in one of the following ways: i. As a vanity top at a height of 800mm to 830mm and a minimum width of 120mm and depth of 300mm to 400mm without encroaching into any circulation space. ii. As a separate fixture –

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	a. Within any circulation space at a height of 900mm to 1000mm with a width of 120mm to 150mm and length of 300mm to 400mm; and b. External to all circulation spaces at a height of 790mm to 1000mm with a minimum width of 120mm and minimum length of 400mm. Clause 15.4.3 Where provided, soap dispensers, towel dispensers, hand dryers and similar fittings shall be operable by one hand, and shall be installed with the height of the operative component or outlet not less than 900mm and not more than 1100mm above the plane of the finished floor, and no closer than 500mm from an internal corner. Clause 15.4.4 A clothes-hanging device shall be installed 1200mm to 1350mm above the plane of the finished floor and not less than 500mm out from any internal corner. Clause 15.4.5 The sanitary disposal unit shall be located as follows: i. Portable unit as shown in Figure 43. ii. Recessed unit within 500mm from the pan. Clause 15.4.6 Where provided near the washbasin, switches and general purpose outlets shall be located in accordance with Clause 14 and as close to the shelf or worktop as practicable.
F4.1	Natural lighting must be provided to all habitable rooms in a Class 2 part.
F4.4	Artificial lighting complying with AS/NZS 1680.0 must be provided in all required stairways, passageways and ramps. If natural light is unavailable, artificial light must be provided to all sanitary compartments, bathrooms, shower rooms, airlocks and laundries within a Class 2 part and to all rooms that are frequently occupied, all spaces required to be accessible, all corridors, lobbies, internal stairways, other circulation spaces and paths of egress within the Class 6 and 7 parts of the building.
F4.11 Non-Compliance	Every storey of a carpark must have either a system of mechanical ventilation complying with AS 1668.2 or natural ventilation complying with AS 1668.4. – Section 4. Plans need to indicate the ventilation requirements for each storey of the carpark.
F4.12	A commercial kitchen must be provided with a kitchen exhaust hood complying with AS/NZS 1668.1:2015 and AS 1668.2:2012 where – a. Any cooking apparatus has – I. A total maximum electrical power input exceeding 8kW; or

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	II. A total gas power input exceeding 29MJ/h; or b. The total maximum power input to more than one apparatus exceeds – I. 0.5kW electrical power; or II. 1.8MJ gas, per m² of the floor area of the room or enclosure.
F5.1	The sound transmission and insulation requirements of Part 5 of the BCA apply to the Class 2 parts of the building.
F5.2	A form of construction required to have an airborne sound insulation rating must – a. have the required value for weighted sound reduction index (R_w) or weighted sound reduction index with spectrum adaptation term ($R_w + C_{tr}$) determined in accordance with AS/NZS 1276.1:1999 or ISO 717.1:2004 using results from laboratory measurements; or b. comply with Specification F5.2.
F5.3	A floor required to have an impact sound insulation rating must – a. have the required value for weighted normalised impact sound pressure level ($L_{n,w}$) determined in accordance with AS ISO 717.2:2004 using results from laboratory measurements; or b. comply with Specification F5.2. A wall required to have an impact sound insulation rating must be of discontinuous construction. Discontinuous construction means a wall having a minimum 20mm cavity between 2 separate leaves, and:- a. for masonry, where wall ties are required to connect leaves, the ties are of the resilient type; and b. for other than masonry, there is no mechanical linkage between leaves except at the periphery. Further to Clause F5.5 (d) any wall separating a sole-occupancy unit from a kitchen or laundry must comply with the above.
F5.4	A floor in the Class 2 parts must have an $R_w + C_{tr}$ (airborne) not less than 50 and have an R_w (airborne) not less than 50an $L_{n,w}$ (impact) not more than 62 if it separates SOUs or an SOU from a plant room, lift shaft, stairway, public corridor or the like, or parts of a different classification.
F5.5	A wall in the Class 2 parts must have an $R_w + C_{tr}$ (airborne) not less than 50

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	if it separates SOUs and have an R_w (airborne) not less than 50 if it separates an SOU from a plant room, lift shaft, stairway, public corridor or the like, or parts of a different classification. The wall must also be of discontinuous construction it separates:- a. a bathroom, sanitary compartment, laundry or kitchen in one SOU from a habitable room (other than a kitchen) in an adjoining SOU; or b. a SOU from a plant room or lift shaft. A door may be incorporated in a wall separating SOUs from a stairway, public corridor, public lobby or the like, provided the door assembly has an R_w not less than 30. Where a wall required to have sound insulation has a floor above, the wall must continue to – a. the underside of the floor above; or b. a ceiling that provides the sound insulation required for the wall. Where a wall required to have sound insulation has a roof above, the wall must continue to – a. the underside of the roof above; or b. a ceiling that provides the sound insulation required for the wall.
F5.6	If a duct, soil, waste or water supply pipe, including a duct or pipe that is located in a wall or floor cavity, serves or passes through more than one sole-occupancy unit, the duct or pipe must be separated from the rooms of any sole-occupancy unit by construction with an $R_w + C_{tr}$ (airborne) not less than – a. 40 if the adjacent room is a habitable room (other than a kitchen); or b. 25 if the adjacent room is a kitchen or non-habitable room. If a stormwater pipe passes through a sole-occupancy unit it must also be separated in accordance with the above.
F5.7	A flexible coupling must be used at the point of connection between the service pipes in the building and any circulating or other pump.
G1.2	A refrigerated or cooling chamber, strongroom or vault which is of sufficient size for a person to enter must have – a. a door which is capable of being opened by hand from inside without a key; and b. internal lighting controlled only by a switch which is located

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	inside and adjacent to the entrance doorway; and c. an indicator lamp positioned outside which is illuminated whenever the internal lighting is on; and d. an outside alarm that is controllable from within and able to achieve a sound pressure level of 90dB (A) when measured 3m from the sounding source. The required door in a refrigerated or cooling chamber must have a doorway clear width of not less than 600mm and a clear height of not less than 1.5m.
NSW G1.101	A safe manner of cleaning windows must be provided for windows located 3 or more storeys above ground level. Such safe manner is satisfied where the windows can be cleaned wholly from within the building or provision is made for the cleaning of windows by a method complying with the Work Health and Safety Act 2011 and Regulations made under that Act.
G2.2	Any boiler or pressure vessel installed within the building must comply with Specification G2.2.
Section J – Not Assessed.	The building is required to comply with all of the relevant energy efficiency provisions of Section J noting the NSW variations as they apply to Class 2 buildings subject to BASIX and Class 5 to 9 buildings under NSW Subsection J (B) Energy Efficiency.

4.0 CONCLUSION

This report contains an assessment of the referenced architectural documentation for the proposed development against the DTS provisions of the BCA

The building contains a number of different building Classifications including, Classes 2, 6, and 7.

The different uses of the building incorporate carparks, retail outlets, and apartments

In order to meet the DTS provisions for Section C, D and E of the BCA the building will be required to be clearly divided into separate fire compartments.

Additional specific detail will need to be provided prior to the issue a Construction Certificate indicating compliance with –

1. Part C1 Fire Resistance and Stability.
2. Part C2 Compartmentation and Separation.
3. Part C3 The Protection of Openings.
4. Specification C1.1 Fire Resisting Construction.

5. Part D1 Provision for Escape.
6. Part D2 Construction of Exits.
7. Part D3 Access for People with a Disability
8. Part E1 Fire Fighting Equipment
9. Part E2 Smoke Hazard Management
10. Part E3 Lift Installations
11. Part E4 Visibility in an Emergency, Exit Signs and Warnings
12. Part F1 Damp and Weatherproofing
13. Part F2 Sanitary and Other facilities
14. Part F4 Light and Ventilation
15. Part F5 Sound Transmission and Insulation
16. Part G1 Minor Structures and Components
17. Section J Energy Efficiency

It is considered that the building can generally comply with the BCA Deemed-to-Satisfy Provisions, provided the issues identified within this report are addressed in further construction documentation and / or during the construction works, as applicable.

Scott McGufficke
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ACAA Accredited Access Consultant: 350
Livable Housing Australia Registered Assessor: 10055
Company Director AcroCert Pty Ltd

ATTACHMENTS:

- Appendix A – BCA Clause-by-Clause Assessment
- Scott McGufficke – Curriculum Vitae

Appendix A – BCA Clause-by-Clause Assessment

CLAUSE	REFERENCE	COMMENTS	Complies	Does Not Comply	Compliance Required	N/A or Information
SECTION A – GENERAL PROVISIONS						
Part A3.2	Classifications	2,6 and 7a				**x**
SECTION B – STRUCTURE						
PART B1 – STRUCTURAL PROVISIONS						
B1.2	Determination of individual actions	A structural consultant must certify that the structural design complies with B1.2 and AS/NZS 1170 series.			**x**	
B1.3	*Repealed*	-				
B1.4	Materials & Forms of Construction	The structural resistance of materials and forms of construction must be determined in accordance with the following: (a) Masonry (including masonry-veneer, unreinforced masonry and reinforced masonry): AS 3700. (b) Concrete construction (including reinforced and prestressed concrete): AS 3600. (c) Steel construction— (i) Steel structures: AS 4100. (ii) Cold-formed steel structures: AS/NZS 4600. (iii) Residential and low-rise steel framing: NASH Standard. (d) Composite steel and concrete: AS 2327.1. (e) Aluminium construction: AS/NZS 1664.1 or AS/NZS 1664.2. (g) Piling: AS 2159. (h) Glazed assemblies: AS 2047 and AS 1288 (i) Termite Risk Management: Where a *primary building element* is subject to attack by subterranean termites: AS 3660.1 (j) Roof construction AS/NZS 1562.3, AS/NZS 4256 Parts 1, 2, 3 and 5. AS 2049, AS 2050. AS/NZS 2908.1 AS/NZS 1562.3 AS 1562.1.			**x**	

CLAUSE	REFERENCE	COMMENTS	Complies	Does Not Comply	Compliance Required	N/A or Information
SECTION C – FIRE RESISTANCE						
PART C1 – FIRE RESISTANCE & STABILITY						
C1.1	Type of Construction	Type A – Must comply with Specification C1.1 Clause 3 and Table 3.				x
C1.2	Calculation of Rise In Storeys	Rise in storeys = 9				x
C1.3	Buildings of Multiple Classification	Noted.				x
C1.4	Mixed Types of Construction	Not applicable				x
C1.5	Two Storey Class 2, 3 or 9c Buildings	Not applicable				x
C1.6	Class 4 Parts of Buildings	Not applicable				x
C1.7	Open Spectator Stands & Indoor Sports Stadiums	Not applicable				x
C1.8	Lightweight Construction	If proposed, lightweight construction must comply with Specification C1.8			x	
C1.9	*Repealed*	-				
C1.10	Fire Hazard Properties	The fire hazard properties of linings, materials and assemblies in a Class 2 to 9 building must comply with Specification C1.10			x	
C1.11	Performance of External Walls	Not applicable				x
C1.12	Non-Combustible Material	Note: Materials listed in clause C1.12, though combustible or containing combustible fibres, may be used wherever a non-combustible material is required.				x
C1.13	Fire-protected Timber - Concessions	Not Applicable to a building of more than 25m effective height.				x
PART C2 – FIRE COMPARTMENTATION & SEPARATION						
C2.1	Application	Noted.				
C2.2	General Floor Area Limitations	The floor area and volume of fire compartments must not be exceeded in accordance with Table C2.2			x	
C2.3	Large Isolated Buildings	Not Applicable				x
C2.4	Requirements for open spaces and vehicular access.	Not Applicable				x

CLAUSE	REFERENCE	COMMENTS	Complies	Does Not Comply	Compliance Required	N/A or Information
C2.5 (NSW)	Class 9a & 9c Buildings	Not Applicable				x
C2.6	Vertical separation of openings in external Walls	Applies			x	
C2.7	Separation by fire walls	Applies			x	
C2.8	Separation of classifications in the same storey	Applies			x	
C2.9	Separation of classifications in different storeys	Applies			x	
C2.10	Separation of lift shafts	Applies			x	
C2.11	Stairways and lifts in one shaft	May Apply			x	
C2.12	Separation of equipment	Applies			x	
C2.13	Electricity supply system	Applies			x	
C2.14	Public corridors in Class 2 & 3 buildings	Applies			x	
PART C3 – PROTECTION OF OPENINGS						
C3.1	Application of Part	Noted				x
C3.2	Protection of openings in external walls	Applies			x	
C3.3	Separation of openings in different fire compartments	Applies			x	
C3.4	Acceptable methods of protection	Applies			x	
C3.5	Doorways in fire walls	Applies			x	
C3.6	Sliding fire doors	Applies if a sliding fire door is installed			x	
C3.7	Protection of doorways in horizontal exits	Applies			x	
C3.8	Openings in fire isolated exits	Applies			x	
C3.9	Service penetrations in fire-isolated exits	Applies			x	
C3.10	Openings in fire isolated lift shafts	Applies			x	

CLAUSE	REFERENCE	COMMENTS	Complies	Does Not Comply	Compliance Required	N/A or Information
C3.11	Bounding construction Class 2, 3 and 4 buildings	Applies			x	
C3.12	Openings in floors for services	Applies			x	
C3.13	Openings in shafts	Applies			x	
C3.14	Repealed	-				
C3.15	Openings for service installations	Applies			x	
C3.16	Construction Joints	Applies			x	
C3.17	Columns protected with lightweight construction to achieve an FRL	Not applicable (assumed).				x
SPEC C1.1 FIRE RESISTING CONSTRUCTION						
2	**General Requirements**					
2.1	Exposure to FSF	Noted				x
2.2	Fire protection for a support of another part	Noted				x
2.3	Lintels	Applies			x	
2.4	Attachments not to impair fire resistance	Noted				x
2.5	General Concessions	Noted				x
2.6	Mezzanine floors: Concession	Noted				x
2.7	Enclosure of shafts	Applies			x	
2.8	Carparks in Class 2 & 3 buildings	Not applicable				x
2.9	Residential aged care building: Concession	Not applicable				x
3	Type A Construction	Applies			x	
SECTION D – ACCESS AND EGRESS						
PART D1 – PROVISION FOR ESCAPE						
D1.1	Application	Applies			x	
D1.2	Number of exits required	Applies			x	
D1.3	When Fire isolated exits are required	Applies			x	
D1.4	Exit Travel Distances	Applies			x	
D1.5	Distances between	Applies			x	

CLAUSE	REFERENCE	COMMENTS	Complies	Does Not Comply	Compliance Required	N/A or Information
	alternative exits					
D1.6	Dimensions of exits	Applies			x	
D1.7	Travel via fire isolated exits	Applies			x	
D1.8	External stairways in lieu of fire-isolated exits	Not applicable				x
D1.9	Travel by non-fire-isolated stairways or ramps	Applies			x	
D1.10	Discharge from exits	Applies			x	
D1.11	Horizontal exits	Applies			x	
D1.12	Non-Required stairways ramps and escalators	Applies			x	
D1.13	Number of persons accommodated	Applies			x	
D1.14	Measurement of distances	Noted				x
D1.15	Method of measurement	Noted				x
D1.16	Plant rooms & lift motor rooms: Concession	May Apply				x
D1.17	Access to lift pits	Applies			x	
PART D2 – CONSTRUCTION OF EXITS						
D2.1	Application of Part	Noted.				
D2.2	Fire-Isolated stairways & ramps	Applies			x	
D2.3	Non-Fire-Isolated stairways and ramps	Applies			x	
D2.4	Separation of rising and descending stair flights	Applies			x	
D2.5	Open access ramps and balconies	Applies			x	
D2.6	Smoke lobbies	Applies			x	
D2.7	Installations in exits and paths of travel	Applies			x	
D2.8	Enclosure of space under stairs and ramps	Applies			x	
D2.9	Width of stairways and ramps	Applies			x	

CLAUSE	REFERENCE	COMMENTS	Complies	Does Not Comply	Compliance Required	N/A or Information
D2.10	Pedestrian ramps	Applies			x	
D2.11	Fire Isolated passageways	Applies			x	
D2.12	Roof as open space	May Apply				x
D2.13	Treads and risers	Applies			x	
D2.14	Landings	Applies			x	
D2.15	Thresholds	Applies			x	
D2.16	Balustrades	Applies			x	
D2.17	Handrails	Applies			x	
D2.18	Fixed platforms, walkways stairways and ladders	May Apply				x
D2.19	Doorways and doors	Applies			x	
D2.20	Swinging doors	Applies			x	
D2.21	Operation of latch	Applies			x	
D2.22	Re-entry from fire isolated exits	Applies			x	
D2.23	Signs on doors	Applies			x	
PART D3 – ACCESS FOR PEOPLE WITH A DISABILITY						
D3.1	General building access requirements	Applies			x	
D3.2	Access to buildings	Applies			x	
D3.3	Parts of buildings to be accessible	Applies			x	
D3.4	Exemptions	May Apply				x
D3.5	Accessible Car Parking	Applies			x	
D3.6	Signage	Applies			x	
D3.7	Hearing augmentation	Not Applicable				x
D3.8	Tactile Indicators	Applies			x	
D3.9	Wheelchair seating spaces in class 9b assembly buildings	Not Applicable				x
D3.10	Swimming pools	Not Applicable				x
D3.11	Ramps	Applies			x	
D3.12	Glazing on an accessway	Applies			x	

CLAUSE	REFERENCE	COMMENTS	Complies	Does Not Comply	Compliance Required	N/A or Information
SECTION E – SERVICES AND EQUIPMENT						
PART E1 – FIRE FIGHTING EQUIPMENT						
E1.1	-	-				
E1.2	-	-				
E1.3	Fire Hydrants	Applies			x	
E1.4	Hose Reels	Applies			x	
E1.5	Sprinklers	If installed – must comply with Specification E1.5			x	
E1.6	Portable Extinguishers	Applies			x	
E1.7	Repealed	-				x
E1.8	Fire Control Centres	Applies			x	
E1.9	Fire precautions during construction	Applies			x	
E1.10	Provision for special hazards	Not applicable				x
PART E2 – SMOKE HAZARD MANAGEMENT						
E2.1	Application of Part	Noted				x
E2.2	General requirements (including Tables E2.2a & b)	Applies				x
Table E2.2a	Fire-isolated exits	Applies			x	
Table E2.2a	Buildings more than 25m in effective height	Not Applicable				x
Table E2.2a	Buildings NOT more than 25m in effective height	Applies			x	
E2.3	Provision for special hazard	Not applicable				x
SPEC E2.2a	**SMOKE DETECTION AND ALARM SYSTEMS**	Applies			x	
PART E3 – LIFT INSTALLATIONS						
E3.1	Repealed	-				
E3.2	Stretcher facility in lifts	Not Applicable				x
E3.3	Warning against use of lifts in fire	Applies			x	
E3.4	Emergency lifts	Not Applicable				x

CLAUSE	REFERENCE	COMMENTS	Complies	Does Not Comply	Compliance Required	N/A or Information
E3.5	Landings	Applies			x	
E3.6	Passenger lifts	Applies			x	
E3.7	Fire Service Controls	Applies			x	
E3.8	Aged Care Buildings	Not Applicable				x
PART E4 – EMERGENCY LIGHTING, EXIT SIGNS AND WARNING SYSTEMS						
E4.1	Repealed	-				
E4.2	Emergency Lighting	Applies			x	
E4.3	Measurement of distances	Noted.				x
E4.4	Design and operation of emergency lighting	Applies			x	
E4.5	Exit signs	Applies			x	
E4.6	Direction signs	Applies			x	
E4.7	Class 2 and 3 Buildings and Class 4 parts exemptions	Applies				x
E4.8	Design and operation of exit signs	Applies			x	
E4.9	SISEP (EWIS) System	Applies			x	
SECTION F – HEALTH AND AMENITY						
PART F1 – DAMP & WEATHERPROOFING						
F1.1	Stormwater drainage	Applies			x	
F1.2	Repealed	-				
F1.3	Repealed	-				
F1.4	Repealed	-				
F1.5	Roof coverings	Applies			x	
F1.6	Sarking	Applies.			x	
F1.7	Waterproofing of wet areas in buildings	Applies			x	
F1.8	Repealed	-				x
F1.9	Damp-proofing	Required to comply			x	
F1.10	Damp-proofing of floors on the ground.	Required to comply			x	
F1.11	Provision of floor wastes	Applies				x
F1.12	Sub-floor ventilation	Not applicable				x
F1.13	Glazed assemblies	Applies			x	

CLAUSE	REFERENCE	COMMENTS	Complies	Does Not Comply	Compliance Required	N/A or Information
PART F2 – SANITARY & OTHER FACILITIES						
F2.1	Facilities in residential buildings	Applies			x	
F2.2	Calculation of number of occupants and fixtures	Applies			x	
F2.3	Facilities in Class 3 to 9 Buildings, Table F2.3	Applies			x	
F2.4	Accessible sanitary facilities	Applies			x	
F2.5	Construction of sanitary compartments	Required to comply			x	
F2.6	Interpretation: urinals and wash basins	Noted				x
F2.7	Microbial control	Clause F2.7 does not apply in NSW.				x
F2.8	Waste management	Not applicable				x
PART F3 – ROOM HEIGHTS						
F3.1	Height of rooms	Applies			x	
PART F4 – LIGHT & VENTILATION						
F4.1	Provision of Natural light	Applies			x	
F4.2	Methods and extent of natural lighting	Applies			x	
F4.3	Natural light borrowed from adjoining room	May Apply				x
F4.4	Artificial lighting	Applies			x	
F4.5	Ventilation of rooms	Applies			x	
F4.6	Natural ventilation	Applies			x	
F4.7	Ventilation borrowed from adjoining rooms	May Apply				x
F4.8	Restriction on position of water closets and urinals	Applies			x	
F4.9	Airlocks	Applies			x	
F4.10	Repealed	-				x
F4.11	Carparks	Applies			x	
F4.12	Kitchen local exhaust ventilation	Applies			x	
PART F5 – SOUND TRANSMISSION & INSTALLATION						
F5.0	Deemed-to-Satisfy	Noted				x

CLAUSE	REFERENCE	COMMENTS	Complies	Does Not Comply	Compliance Required	N/A or Information
	Provisions					
F5.1	Application of Part	Applies			x	
F5.2	Determination of airborne sound insulation ratings	Noted				x
F5.3	Determination of impact sound insulation ratings	Noted				x
F5.4	Sound insulating rating of floors	Applies			x	
F5.5	Sound insulating rating of walls	Applies			x	
F5.6	Sound insulation rating of internal services	Applies			x	
F5.7	Sound insulation of pumps	Noted – compliance required if applicable			x	
SECTION G – ANCILLARY PROVISIONS						
G1.1	Swimming pools	Not Applicable				x
G1.2	Coolrooms, strongrooms etc.	Applies			x	
G1.101	Provision for cleaning of windows	Applies			x	
G2	Heating Appliances	Applies if boilers or pressure vessels installed			x	
G3	Atriums	Not Applicable				x
SECTION I	**MAINTENANCE**	**ESSENTIAL FIRE SAFETY MEASURES MUST BE MAINTAINED IN ACCORDANCE WITH THE PROVISIONS OF THE ENVIRONMENTAL PLANNING & ASSESSMENT REGULATIONS 2000.**			x	
SECTION J	**ENERGY EFFICIENCY**				x	

Appendix B – SCOTT McGUFFICKE

Curriculum Vitae:-

- **Education:-**
    - Masters Degree in Public Health, University of New South Wales
    - Graduate Diploma of Building Surveying, University of Western Sydney
    - Graduate Certificate of Management, University of Western Sydney
    - Bachelor of Applied Science, Environmental Health, University of Western Sydney
    - Diploma of Access Consulting, Institute of Access Training Australia
    - Associate Diploma, Health & Building Surveying, NSW TAFE.
    - Certificate IV of Access Consulting, Institute of Access Training Australia

- **Positions Held:-**
    - Sergeant Health Inspector, Australian Army, 1978 -1986.
    - Captain Health Officer (Army Reserve) 1987 - 1998
    - Health & Building Surveyor, Muswellbrook Shire Council, 1987 – 1993.
    - Senior Health & Building Surveyor, Cessnock City Council, 1993-1998.
    - Manager Environmental Health Services, Far West Area Health Service, Broken Hill, 1998-2000.
    - Director Planning, Building & Health, Christmas Island Shire Council, 2000-2001.
    - Senior Building Coordinator, Maitland City Council – 2001-2004
    - Company Director, AcroCert Pty Ltd, Maitland – 2004 to present

- **Accreditations:-**
    - National Accredited Building Surveyor, Australian Institute of Building Surveyors, Accreditation Number 7071.

- National Accredited Access Consultant, Australian Association of Access Consultants, Accreditation Number 350
- National Liveable Housing Registered Assessor, Number 1005

- **Memberships:-**
  - Australian Institute of Building Surveyors
  - Association of Accredited Access Consultants
  - Association of Accredited Certifiers
  - World Organisation of Building Officials
  - Master Builders Association
  - Housing Industry of Australia
  - Lake Macquarie Yacht Club
  - 2/4 Battalion Royal Australian Regiment Association