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22-24 Carawa Road, Cromer

BCA Assessment Report

Prepared for: MM Atelier Architects
Project No: W538
13 November 2018

I N D E X

REPORT REVISION STATUS		
REVISION	**DATE**	**STATUS**
1	22 October 2018	Preliminary for Comment
2a	13 November 2018	Final for DA submission

Signature .....
Graham Scheffers
GRS Building Reports Pty Ltd
Accreditation No. 0364 (BPB)
Date: 13 November 2018

Executive Summary

The building works proposed comprise two (2) separate 3 storey residential buildings located at 22 to 24 Carawa Road, Cromer. The site has a street frontage to Carawa Road to the south. The site has adjoining premises to the north, west and eastern boundaries.

The proposal is two (2) separate residential buildings. Each building contains a Basement carpark and four (4) residential units. The Ground Floor of each building has an entry foyer and 2 residential units with another 2 residential units at First Floor level.

The main access to each building is via an external pathway from Carawa Road with an enclosed stairway providing access to the Basement carpark and an open stair connecting Ground and First Floor level of the building. A separate lift is provided in each building providing access to each level. The Basement carpark is provided with a second means of egress via an external stair and pathway.

An assessment of the proposed building works detailed in the Architectural Plans reviewed has been undertaken in accordance with the relevant provisions of the Building Code of Australia 2016 (BCA).

Table 3.1 of this Report provides details of the fire rating required for Type A Construction. Provisions where further clarification or documentation is necessary for submission with the Development Application / Construction Certificate is to be detailed in Annexure A of this Report.

The Report is to includes the following Annexures:

1. Annexure A – BCA Clause by Clause Deemed-To-Satisfy Assessment (DtS) of the subject building.
2. Annexure B – Schedule of Essential Fire Safety Measures.

1. Introduction

1.1 Background

The building works proposed comprise two (2) separate 3 storey residential buildings located at 22 to 24 Carawa Road, Cromer.

GRS Building Reports Pty Ltd has been engaged by MM Atelier Architects to undertake a BCA Assessment Report for the subject building works for the purposes of reviewing the Development Application Architectural Design Drawings.

1.2 Aim

The aim of this Report is to:

1. Undertake an assessment of the proposed building works detailed in the Development Application Architectural Design Drawings for the purposes of submission with the DA in accordance with the relevant provisions of the Building Code of Australia 2016, (BCA), ie. Undertake a BCA Clause-by-Clause assessment as detailed in Annexure A.

2. Identify existing and proposed Essential Fire Safety Measures applicable to the subject building as detailed in Annexure B.

1.3 Documentation

The following documentation was relied upon when preparing this Report:

- Building Code of Australia 2016, (BCA).
- Architectural documentation prepared by MM Atelier Architects, Drawing Nos. Nos. DA-00, DA-01, DA-10, DA-11, DA12, DA-13, DA-20, DA-21, DA-30 (Revision G), dated 12 November 2018.

1.4 Reporting Team

This Report was prepared on behalf of GRS Building Reports Pty Ltd by Graham Scheffers, an accredited Grade A1 Certifier (NSW BPB) and Building Code Consultant.

1.5 BCA Terms and Definitions

The following terms are based on BCA definitions;

- ***Fire Source Feature:*** means-
  - (a) The far boundary of a road, river, lake or the like adjoining the allotment; or
  - (b) A side or rear boundary of the allotment; or
  - (c) An external wall of another building on the allotment which is not a Class 10 building.
- ***Open Space*** means a space on the allotment, or a roof or similar part of a building adequately protected from fire, open to the sky and connected directly with a public road.
- ***Public corridor*** means an enclosed corridor, hallway or the like which—
  - (a) serves as a means of egress from 2 or more sole-occupancy units 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.

- ***Sole Occupancy Unit (SOU)*** means a room or other part of a building for occupation by one or joint owner, lessee, tenant, or other occupier to the exclusion of any other owner, lessee, tenant, or other occupier and includes-
  a) A dwelling; or
  b) A room or suite of rooms in a Class 3 building which includes sleeping facilities; or
  c) A room or suite of associated rooms in a Class 5, 6, 7, 8 or 9 building.
- ***Storey*** means a space within a building which is situated between one floor level and the floor level next above, or if there is no floor above, the ceiling or roof above, but not—
  (a) a space that contains only—
    (i) a lift shaft, stairway or meter room; or
    (ii) a bathroom, shower room, laundry, water closet, or other sanitary compartment; or
    (iii) accommodation intended for not more than 3 vehicles; or
    (iv) a combination of the above; or
  (b) a mezzanine
- ***Rise in Storeys*** means the greatest number of storeys calculated in accordance with C1.2.

1.6 Limitations and Exclusions

The limitations of this report are as follows:

- The Report is based on the new works only as detailed herein and is issued for the purpose of reviewing the Development Application Architectural Design Drawings.
- The Certifying Authority is to determine that the relevant documentation satisfies the BCA for the purposes of issuing a Construction Certificate. This BCA Report is an assessment of the Development Application Architectural Design Drawings only, therefore is not intended to provide verification that the entire design documents satisfy the BCA as this is beyond the scope of GRS Building Report Pty Ltd and must be undertaken by the Certifying Authority.

The Report does not address issues in relation to the following:

1. Assessment of documentation other than the Development Application Architectural Design Drawings.
2. The structural adequacy of the building including the fire resistance levels of any building elements (unless specifically referred to).
3. The design, maintenance or operation of any electrical, mechanical, hydraulic or fire protection services.
4. Works outside the boundaries /lease area, building elements or services that extend outside the boundaries and works associated with external ancillary services, structures or civil works required by relevant authorities.
5. Development Consent conditions of approval issued by the Local Authority or Land & Environment Court.
6. Environmental Planning and Assessment Act and Regulations, Local Government Act and Regulations unless where nominated.
7. Work Health and Safety Act and Regulations.
8. WorkCover Authority requirements.
9. Water, drainage, gas, telecommunications and electricity supply authority requirements.
10. The provisions of the Disability Discrimination Act, National Premises Standards, Council Policy relating to Access for People with Disabilities as this is beyond the scope of the BCA.
11. GRS Building Reports Pty Ltd cannot guarantee acceptance of this Report by the Statutory Authorities such as Local Council, Fire & Rescue NSW or other approval authorities.

2. Building Description

2.1 Building

The building works proposed comprise two (2) separate 3 storey residential buildings located at 22 to 24 Carawa Road, Cromer. The site has a street frontage to Carawa Road to the south. The site has adjoining premises to the north, west and eastern boundaries.

The proposal is two (2) separate residential buildings. Each building contains a Basement carpark and four (4) residential units. The Ground Floor of each building has an entry foyer and 2 residential units with another 2 residential units at First Floor level.

The main access to each building is via an external pathway from Carrawa Road with an enclosed stairway providing access to the Basement carpark and an open stair connecting Ground and First Floor level of the building. A separate lift is provided in each building providing access to each level. The Basement carpark is provided with a second means of egress via an external stair and pathway.

2.2 Classification

For the purposes of the BCA, each building is classified as follows based on the proposed use:

- Class 2 (Residential Sole Occupancy Units)
- Class 7a (Carparking

2.3 Rise in Storeys

The building has a rise in storeys of three (3). Note: This is based on the carpark being counted as a storey in the Rise in Storeys.

2.4 Type of Construction

The building is required to be of Type A Construction.

2.5 Effective Height

The building has an effective height of less than 25m.

2.6 Floor Area / Volume

No floor area or volume limitations apply to a Class 2 building.

Maximum size of fire compartment.

Classification		**Type A**
6, 7 or 8	Max floor area	5,000m²
	Max volume	30,000m³

2.7 Fire Source Feature

The distances to the nearest Fire Source Feature is estimated to be:

- Northern - > 6.0 metres between buildings & to rear boundary.
- Southern - > 6.0 metres to far side of Carrawa Road & > 6.0 between buildings.
- Eastern - > 3.0 metres.
- Western - < 3.0 metres (approx. 2.7m Front Building) & > 3.0 m (Rear Building).

3. BCA Assessment

An assessment of the proposed building has been undertaken in accordance with the provisions of the Building Code of Australia 2016, (BCA). Provisions where further clarification or documentation is necessary for submission with the Construction Certificate (CC) is detailed in Annexure A of this Report. Where compliance with the BCA DtS provisions is not readily achieved, these issues may be included in a Building Solution (ie Alternative Solution) Report for consideration at the CC Stage.

Section 3.1 below details the relevant Fire Resistance Levels.

3.1 Section C – Fire Resistance Levels

As a result of the proposed works, the building is required to be of Type A Construction as set out in Specification C1.1 and Table 3 of the BCA as follows:

BUILDING ELEMENT	Class 2	Class 7a
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 1.5m	90/90/90	120/120/120
1.5m to less than 3m	90/60/60	120/90/90
3m or more	90/60/30	120/60/30
For non-loadbearing parts		
less than 1.5m	-/90/90	-/120/120
1.5 to less than 3m	-/60/60	-/90/90
3m or more	-/-/-	-/-/-
EXTERNAL COLUMN not incorporated in an external wall,		
Loadbearing parts	90/-/-	120/-/-
Non-loadbearing parts	-/-/-	-/-/-
COMMON WALLS & FIRE WALLS-	90/90/90	120/120/120
INTERNAL WALLS		
Between or bounding SOU's. Bounding public corridors, public lobby or the like–		
• Loadbearing parts	90/90/90	120/-/-
• Non-loadbearing parts	-/60/60	-/-/-
Fire resisting Lift and stair shafts –		
• Loadbearing parts	90/90/90	120/120/120
• Non-loadbearing parts	-/90/90	-/120/120
Ventilation, pipe, garbage and like shafts not used for hot products of combustion –		
• Loadbearing parts	90/90/90	120/90/90
• Non-loadbearing parts	-/90/90	-/90/90
OTHER LOADBEARING INTERNAL WALLS AND COLUMNS		
Internal walls & columns, except in storey below roof	90/-/-	120/-/-
FLOORS	90/90/90	120/120/120
ROOFS	90/60/30	120/60/30

Table 3.1 – Fire Resistance Levels

The following additional information is provided:

(a) External walls must be of non-combustible construction.

(b) Internal loadbearing walls must be of concrete or masonry construction.

(c) Internal walls required to have an FRL must extend to the underside of the floor next above, or the underside of a ceiling with a resistance to the incipient spread of fire of not less than 60 minutes or to the underside of a non-combustible roof covering in accordance with subclause (e) and (g) below.

(d) Non-loadbearing walls required to have an FRL must be non-combustible construction.

(e) Roof need not have an FRL where its covering is non-combustible and the ceiling immediately below the roof has a resistance to the incipient spread of fire to the roof space of not less than 60 minutes.

(f) In the storey immediately below the roof, internal columns and internal walls (other than shaft walls) may have an FRL of 60/60/60. Applies to load-bearing columns and walls.

(g) Where the top floor fire rated walls are proposed to extend to the underside of the roof covering that is non-combustible, then except for roof battens with dimensions of 75mm x 50mm or less or sarking material, must not be crossed by timber or other combustible building elements.

Recommendation: That the architectural and structural engineering plans, specification and certification is to confirm the above fire rating is achieved and included in the design documentation.

4. Conclusion

An assessment of the proposal has been undertaken having regard to the existing building in accordance with the provisions of the Building Code of Australia 2016 (BCA).

Annexure A contains an assessment of the proposed works. It should be noted the new works are subject to compliance with the BCA to be reviewed and confirmed by the Accredited Certifier prior to issuing the Construction Certificate.

It is therefore concluded that the proposal is capable of readily achieving compliance with the BCA either by satisfying the BCA Deemed-to-Satisfy Provisions or addressed in an Alternative Solution Report for consideration at the Construction Certificate Stage.

ANNEXURE A

Building Code of Australia 2016
Deemed-To-Satisfy Assessment (Clause by Clause)
(Class 2-9 Buildings)

Classification of Building or Part:	2, 7a
Rise in Storeys:	Three (3)
Type of Construction:	Type A
Effective height	< 25m

Key:

Complies The building works proposed generally complies with this Clause or there are no significant deficiencies.

DNC The works proposed does not comply with this Clause or proposed works impacts on the existing building.

? Further documentation/ investigation required.

CR Certification or verification required that the building works proposed complies with this Clause prior to BCA Certification being issued.

(**Note: BCA Certification will require Structural, architectural and services drawings, specification with certification nominating all relevant BCA Clauses and the Australian Standards including the year of the standard**).

NA This Clause is not applicable to the building works proposed or to this assessment.

Noted The contents of this Clause is noted for reference.

AS. Alternative (Building) Solution using Performance Requirements is relevant in relation to the works proposed.

Section A	**General Provisions**	
Part A3.2	**CLASSIFICATION**	Class 2 (Residential SOU's), Class 7a (Carpark)

Section C	**Fire Resistance**	**Comment**
Part C1	**FIRE RESITANCE AND STABILITY**	
C1.1	**Type of Construction**	Type A
C1.2	**Calculation of Rise In Storeys**:- Greatest number of storeys at any part of the external walls of the building above the finished ground at that part	Three (3). Note: Carpark is partly out of ground and by > 1.0m, therefore is counted as a storey in the Rise in Storeys.
C1.3	**Buildings of Multiple Classification:-** Type of construction required is determined by the classification of the top storey applies to all storeys	Noted.
C1.4	**Mixed Types of Construction:-** Separation of the building by a fire wall (complying with clause C2.7) may permit mixed type of construction for a building.	Noted. Entire building to satisfy FRL's required for designated Type of Construction, ie Type A.

Section C	Fire Resistance	Comment
C1.5	**Two Storey Class 2, 3 or 9c buildings:-** A building with a rise in storeys of 2 may be Type C construction where: • Each SOU of Class 2 or 3 building has access to at least 2 exits; or its own access to road or open space; • Class 9c building not exceeding 3,000m^2 FA	NA
C1.6	**Class 4 Parts of Buildings**:- Class 4 part of a building requires the same FRL and fire separation from the remaining parts as a Class 2 part in similar circumstances.	NA
C1.7	**Open Spectator Stands & Indoor Sports Stadiums**:- May be of Type C Construction if: • Only 1 tier of seating; • Non-combustible material; and • Only sanitary facilities/change rooms below the tiers.	NA
C1.8	**Lightweight Construction**:- May be used for fire rating of elements if it is in accordance with Specification C1.8.	NA
C1.10	**Early Fire Hazard Properties**:- Materials and assemblies used in the building must comply with the requirements of Specification C1.10.	CR. Details to be provided with Construction Certificate documentation.
C1.11	**Performance of External Walls**:- Concrete external walls that could collapse as complete panels in building of 2 storeys or less must comply with Specification C1.11.	NA
C1.12	**Non-Combustible Material** – the following materials may be used where non-combustible materials are required: • Plasterboard; • Perforated gypsum; • Fibrous plaster sheeting; • Fire reinforced cement sheeting; • Pre-finished metal sheeting; • Bonded laminate materials	Noted
C1.13	**Fire Protected Timber: Concession –** Fire-protected timber may be used in a Class 2, 3 or 5 building where an element is required to be non-combustible if; • The building is a separate building, or a part of a building separated from the remainder by a Fire Wall or similar construction; and • The building has an effective height not more than 25m, and. • The building has a sprinkler system throughout (as per E1.5), and • Any insulation installed in the cavity of the timber element required to have an FRL is non-combustible, and • Cavity barriers are protected in accordance with Spec C1.13.	Noted

Section C	Fire Resistance	Comment
Part C2	**FIRE RESISTANCE**	
C2.2	**General Floor Area Limitations**:	Complies
C2.3	**Large Isolated Buildings**:- Larger fire compartments may be permissible in certain circumstances. Buildings closer than 6m are regarded as one building and must collectively comply with clause C2.3.	NA
C2.4	**Requirements for open space**:- Open space and vehicular access capable of supporting emergency vehicles, area 6m wide and not more than 18m from the building.	NA
C2.5	**Class 9a and class 9c buildings**:- Requirements for compartmentation for the control of smoke and fire within health care and aged care building must comply with the requirements of this clause and also specification C2.5	NA
C2.6	**Vertical separation of openings in external walls**:- Applicable to buildings of Type A construction and not sprinkler protected. Openings in external walls of a building of Type A Construction must be separated from openings in the storey next below either by 900mm high vertical spandrel panels or 1100mm horizontal projections no less than 450mm beyond the relevant openings. Spandrel construction must be fire rated to achieve an FRL of 60/60/60.	**CR. Confirmation is required that fire rated spandrel construction is to be provided as required to South Elevation where First Floor bedroom and ensuite windows are above Ground Floor bedroom and ensuite windows, i.e. requires fire rated construction beneath these First Floor windows. Construction to be at least 900mm in height (including slab thickness) and must have an FRL of at least 60/60/60.** **It is assumed the remainder of the external walls are fire rated construction as required.** **Details to be provided with Construction Certificate documentation.**
C2.7	**Separation by fire walls**:- A part of a building separated by a fire wall may be considered a separate building for the purposes of Parts C, D and E. A part of a building separated from the remainder of the building by a fire wall may be treated as a separate fire compartment if it is constructed in accordance with Cl C2.7 (a) and Specification C1.1 and extends to the underside of a floor having an FRL required for a fire wall or the roof covering.	NA
C2.8	**Separation of classifications in the same storey**:- Building parts to be separated in the storey by a fire wall or each building element to adopt the higher FRL as required in Specification C1.1 of the BCA.	NA

Section C	Fire Resistance	Comment
C2.9	**Separation of classifications in different storeys**:- The separating floors must have an FRL; • Type A Construction – not less than that required for the lower storey use. • Type B or C Construction – if one of the adjoin parts of Class 2, 3 or 4 a) Resistance to the incipient spread of fire to the space above itself of not less than 60 minutes, or b) Construction having an FRL of 30/30/30, or c) Ceiling with fire protective covering (eg 13mm fire grade plasterboard).	Noted: Clause 2.8 of BCA Specification C1.1 permits carpark to have same FRL's as Class 2 part.
C2.10	**Separation of lift shafts**:- Lift to be enclosed in a fire rated shaft when connecting more than 2 storeys (or more than 3 storeys in a sprinklered building).	CR. Lift shaft to be fire rated with details to be provided with Construction Certificate documentation.
C2.11	**Stairways and lifts in one shaft**:- Not to be in the same shaft if either is to be fire isolated.	Complies.
C2.12	**Separation of equipment**:- Lift motors, emergency generators, smoke control exhaust fans, boilers or batteries are to be enclosed by construction achieving an FRL of 120/120/120.	NA. No such details included in plans reviewed.
C2.13	**Electricity supply system**:- If the electrical substation is to be located within the building it must be separated from another part of the building by construction achieving an FRL of 120/120/120 with self-closing -/120/30 fire doors. The main switchboard that houses the emergency equipment operating in emergency mode must be separated from another part of the building by construction achieving an FRL of 120/120/120 with self-closing -/120/30 fire doors.	NA. No such details included in plans reviewed.
C2.14	**Public corridors in Class 2 & 3 buildings**:- Public corridor >40m long to be divided into intervals of <40m by smoke proof walls complying with Clause 2 of Specification C2.5, ie:- • Smoke walls that are non-combustible and extend to the underside of the floor above, a non-combustible roof or fire rated ceiling, and • Any glazed areas is safety glass as defined by AS1288-2006, and • Doorways must satisfy BCA Specification C3.4, and • Penetrations and junctions suitably smoke sealed.	Complies
PART C3	**PROTECTION OF OPENINGS**	

Section C	Fire Resistance	Comment
C3.2	**Protection of openings in external walls**:- Openings in external walls that are required to have an FRL are to be protected if they are exposed to a fire source feature in accordance with Clause C3.4 if: • Wall is less than 3m from a side or rear boundary; • Less than 6m from the far boundary of a road, if not located in a storey at or near ground level; or • Less than 6m from another building on the same allotment	**CR / AS. Proposed windows in the external walls < 3.0m (i.e. approximately 2.7m) from the western boundary require protection in accordance with BCA Clause C3.4 and includes;** • **Ground Floor Unit 1 – Bedroom 1, 2 & 3 windows.** • **First Floor Unit 3 – Bedroom 1, 2 & 3 windows.**
C3.3	**Separation of openings in different fire compartments**:- External walls of different fire compartments are to be separated by a fire wall with FRL not less than 60/60/60 and any openings within the prescribed distances to be protected in accordance with Clause C3.4.	NA
C3.4	**Acceptable methods of protection**:- Fixed fire rated glass; self-closing or automatic closing windows with drenchers; automatic fire shutters; automatic closing fire rated windows. Doors to be self-closing or automatic closing.	**CR / AS. <u>Methods to be considered include</u>;** • **Fire rated glass blocks having FRL of -/60/-, subject to the means of ventilation to be considered, or** • **Fixed windows with external drencher. Possible option where second window provided that can be openable and is >3.0m from boundary, or** • **Automatic closing windows with external drencher. Note: Verification of closing operation and method of activation to be confirmed, or** • **Automatic closing fire shutter having FRL of -/60/-, or** • **Obtain alternative Building Solution from Accredited Fire Engineer to enable use of fixed radiation attenuation screens with / without drenchers. Subject to assessment. Screens would enable windows to be openable for ventilation and provide means to protect windows [Ref D2.24].**
C3.5	**Doorways in fire walls**:- Doorways in a fire wall (that is not part of an horizontal exit) must not exceed ½ the length of the fire wall, and • Have the FRL required for the fire wall, and • Be self-closing or automatic closing upon activation of a smoke/fire detector	NA.
C3.6	**Sliding fire doors in fire walls**:- If open when the building is in use they must fail safe in the closed position and be provided with warning devices and flashing lights	NA.
C3. 7	**Protection of doorways in horizontal exits**:- To be self-closing or automatic closing fire doors	NA.

Section C	Fire Resistance	Comment
C3.8	**Openings in fire isolated exits**:- To be -/60/30 self-closing fire doors Windows in external walls of fire-isolated exits to be protected in accordance with C3.4 if within 6.0m and exposed to another opening in the same building.	NA.
C3.9	**Service penetrations in fire Isolated exits**:- Fire isolated exits must not be penetrated by services other than electrical wiring permitted by clause D 2.7; mechanical ducting for pressurization systems; and water supply pipes for fire hydrants, etc.	NA.
C3.10	**Openings in fire isolated lift shafts**:- • Doors to be -/60/- fire doors in accordance with AS 1735.11; • Lift indicator panels to be constructed with -/60/60 backing if the lift exceeds 35,000mm^2	CR. Lift shaft to be fire rated with details to be provided with Construction Certificate documentation.
C3.11	**Bounding construction Class 2, 3 and 4 buildings**:- Doors from sole occupancy units, and doors from rooms not within a SOU that open to an enclosed public corridor are to be: • -/60/30 for Type A construction; • tight fitting self-closing solid core doors not less than 35mm thick for Type B and C construction The path of travel from a sole occupancy unit must be protected if there is no alternative exit and passes an external wall of another sole occupancy unit or room.	CR. Fire rated doors required to each SOU entry door and to doors separating carpark from entry foyer area required with details to be provided with Construction Certificate documentation.
C3.12	**Openings in floors for services**:- To be enclosed in fire rated shaft with FRL in accordance with Specification C1.1	CR. Details to be provided with Construction Certificate documentation.
C3.13	**Openings in shafts**:- Openings to shafts must be protected with a self-closing -/60/30 fire door or hopper.	CR. Details to be provided with Construction Certificate documentation.
C3.15	**Openings for service installations**:- Electrical, plumbing, mechanical ventilation shafts not to impair the FRL of fire rated building elements	CR. Details to be provided with Construction Certificate documentation.
C3.16	**Construction Joints**:- Fire resisting materials to be provided to construction joints to be identical with prototype tested in accordance with AS1530.4 to achieve the required FRL	CR. Details to be provided with Construction Certificate documentation.
C3.17	**Columns protected with lightweight construction to achieve an FRL**	NA

Section C	Fire Resistance	Comment
Specification C1.1	**Fire Resisting Construction:-** The building is required to be designed in accordance with Table 3 (Type A Construction) of the BCA	**CR. Separating wall between top floor units and between units / common stairs must be taken to the underside of either: -** • **A fire rated ceiling having a resistance to the incipient spread of fire of not less than 60 minutes, or** • **To the underside of a non-combustible roof covering for each unit / common stairway, subject to the separating wall being taken to the higher part of roof and not containing windows (e.g. wall separating top floor units 3 & 4 or separating 7 & 8).** **CR. Confirmation of fire rating (See Section 3.1 of this Report) to be incorporated in Structural Engineering drawings or architectural plans, specification and certification of the works. Details required with Construction Certificate documentation.**
Specification C3.4	**Fire Doors, Smoke Doors, Fire Windows and Shutters** A required fire door must comply with AS 1905.1 – 2015 and not fail by radiation through any glazed part during the period specified for integrity in the required FRL.	CR. Details to be provided with Construction Certificate documentation.

Section D	Access and Egress	Comment
PART D1	**PROVISION FOR ESCAPE**	
D1.1	**Application of part**:- DTS provisions do not apply to internal parts of a SOU in Class 2, 3 or 4	Noted.
D1.2	**Number of exits required**:- Every building must have a least one exit from each storey, and a minimum of 2 exits are required in particular circumstances. Basements must be provided with 2 exits where the vertical rise within the building is more than 1.5m, unless the floor area of the storey is not > 50m^2 and the distance to a single exit is not > 20m. Without passing through another sole occupancy unit every occupant of a storey or part must have access to either an exit, or at least 2 exits if 2 or more are required.	Complies

Section D	Access and Egress	Comment
D1.3	**When Fire isolated exits are required**:- Generally, every required exit must be fire isolated if it connects, passes by or passes through: • more than 3 storeys of a class 2; • more than 2 storeys of a classes 3 to 9. And one additional storey may be included if it is solely for motor vehicles or other ancillary purposes or entire building is sprinkler protected.	NA.
D1.4	**Exit Travel Distances**:- Class 2, 3 buildings – Entrance doorway of SOU to be not more than 6m from an exit, or 6m from a point of choice between 2 exits. A single exit serving the storey at the level of egress to a road or open space may be 20m. Class 5 – 9 buildings. 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 travel distance to 1 of those exits not to exceed 40m. Class 5/6 building – the distance to a single exit serving the storey at the level of access to a road or open space may be increased to 30m.	Complies
D1.5	**Distances between alternative exits**:- Exits required as alternative exits must be distributed as uniformly as possible; not less than 9m apart; not more than 60m apart (45m apart for class 2, 3 and 9a health care); located so alternative paths do not converge to less than 6m.	Complies
D1.6	**Dimensions of exits**:- • Unobstructed height of an exit not less than 2m (1980mm for doorways); • 1m minimum width of a single exit; and increased where applicable for populations, eg; • if the storey or mezzanine accommodates more than 200 persons the aggregate unobstructed width of the exit must not be less than 1m plus 250mm for every person in excess of 100 • door width to be a minimum of 800mm clear unobstructed area (in accordance with AS 1428.1) • width of exit must not diminish in direction of travel to an exit • required width of a stairway or ramp is to be measured clear of all obstructions and extend a minimum 2m above line of nosings or ramp	CR. Details to be provided with Construction Certificate documentation.

Section D	Access and Egress	Comment
D1.7	**Travel via fire isolated exits**:- Door must not discharge directly into fire isolated exit unless it is from public corridor, etc; SOU occupying all of the storey; or a sanitary compartment. Stairway must discharge directly by its own fire-isolated passageway to the road or open space, and not pass within 6m of openings within the wall of the same building, unless that part of the wall has an FRL of 60/60/60 and any doors are protected in accordance with C3.4. Stair may discharge to a point— (A) in a storey or space, within the confines of the building, that is used only for pedestrian movement, car parking or the like and is open for at least 2/3 of its perimeter; and from which an unimpeded path of travel, not further than 20 m, is available to a road or open space; or (B) into a covered area that; adjoins a road or open space; and is open for at least 1/3 of its perimeter; and has an unobstructed clear height throughout, including the perimeter openings, of not less than 3 m; and provides an unimpeded path of travel from the point of discharge to the road or open space of not more than 6 m. If > 2 doors open into exit – pressurisation; or smoke lobbies to be provided.	NA.
D1.8	**External stairways or ramps in lieu of a fire isolated exit**:- External stairs may be used instead of a fire isolated exit in buildings under 25m in effective height.	NA
D1.9	**Travel by non fire isolated stairways or ramps**:- • must provide continuous means of travel by its own flights of stairs to the level at which egress to a road or open space is provided; • Class 2, 3 or 4: distance between SOU and point of egress to road/open space not to exceed 60m, or 30m if Type C construction. • Non fire-isolated stair in a Class 2 building must discharge not more than 15m from an exit door leading to open space. • Class 5-9: stair to discharge at a point no more than 20m from a door providing egress to a road or open space; or 40m from one of 2 exits if travel is in opposite directions. Total distance travelled – 80m maximum.	Complies
D1.10	**Discharge from exits**:- • Not to be blocked at the point of discharge • Path of travel to the road to be via a stair or by a ramp with gradients no steeper than 1:8 (or 1:14 of ramp required for disabled access).	CR. Details to be provided with Construction Certificate documentation.
D1.11	**Horizontal exits**:- Not counted as required exits between SOUs or in a class 9b primary/secondary school, early child hood centre.	NA
D1.12	**Non-Required stairways ramps and escalators**:- Generally, unsprinklered buildings can connect 3 stories in a class 2 building and 2 storeys in a class 3-9 building.	Noted

Section D	Access and Egress	Comment
D1.13	**Number of persons accommodated**:- In accordance with Table D1.13, unless confirmation from building owner is more accurate.	Noted
D1.14	**Measurement of distances**:- Identifies the nearest part of the exit to measure travel distance	Noted
D1.15	**Method of measurement**:- Specifies the method of measuring the distance of travel to an exit	Noted
D1.16	**Plant rooms, lift machine rooms and electrical network substations: Concession**:- A ladder may be used in lieu of a stair for egress from: • A plant room with a floor area not more than 100m^2; or • All but 1 point of egress from a plant room, a lift machine room or a Class 8 electrical network substation with a with a floor area of not more than 200m^2 where 2 or more points of egress are provided a ladder may be used from all but one of those exits. Such ladders; • may form part of an exit provided that in the case of a fire-isolated stairway is contained within the shaft. • may discharge within a storey subject to being part of the path of travel, and • must comply with AS 1657-1992 for plant rooms or Class 8 electrical network substations, and • for a lift machine room, where access is to a secondary floor within the room may be a fixed rung type ladder to comply with AS1657 provided; (a) height between floors is not greater than 2.8m, (b) ladder is inclined not less than 65^o and not more than 75^o to the horizontal, (c) distance between front face of ladder and any adjacent structure is not less than • 960mm for 65^o • 760mm for 75^o • Distance determined by interpolation for angles between 65^o and 75^o. • clear space not less than 600mm between foot of ladder and any equipment.	CR. Details to be provided with Construction Certificate documentation.

Section D	Access and Egress	Comment
D1.17	**Access to lift pits**:- Where the pit depth is < 3m access to be through the lowest landing doors. Where the pit depth is > 3m access to be through an access doorway: • In lieu of D1.6, doorway to be level with pit floor and not less than 600mm wide by 1980mm high (reduced to 1500mm if necessary to comply with following dot point). • No part of lift car or platform encroach on pit doorway entrance when car is on fully compressed buffer. • Stairway complying with AS1657. • In lieu of D2.21, doors must be horizontal sliding or outwards opening hinged; self-closing; self-locking from the outside; marked on landing side with letters not < 35mm high stating DANGER LIFTWELL – ENTRY OF UNAUTHORISED PERSONS PROHIBITED – KEEP CLEAR AT ALL TIMES.	CR. Details to be provided with Construction Certificate documentation.
PART D2	**CONSTRUCTION OF EXITS**	
D2.1	**Application of Part**:- Except for clauses D2.13, D2.14(a) and D2.16 do not apply to the internal part of a class 2 and 3 buildings (with the addition of D2.18 for class 2)	Noted
D2.2	**Fire-Isolated stairways & ramps**:- Must be within fire resisting shaft and be constructed of non-combustible materials	NA
D2.3	**Non-Fire-Isolated stairways and ramps**:- Rise in Storeys > 2, to be constructed from either: • Reinforced or prestressed concrete • 6mm thick steel • 44mm thick timber & an average density of not less than 800 kg/m^3 at a moisture content of 12%	CR. Details to be provided with Construction Certificate documentation.
D2.4	**Separation of rising and descending stair flights**:- A required fire isolated stair must have no direct connection between a flight of stairs rising from below the level of access to the road and a flight of stairs descending from a storey above that level.	NA
D2.5	**Open access ramps and balconies**:- Where an open access balcony is provided for smoke hazard management it must: • have ventilation openings to the outside air; • not be enclosed on its open sides above 1m except by eg. Grills that are >75% fee air space	NA
D2.6	**Smoke lobbies**:- Where a smoke lobby is required by Clause D1.7 it must: • have floor area 6m2 minimum; • be separated by walls impervious to smoke; • be fitted with smoke doors; • be pressurised if the adjoining exit are so required.	NA

Section D	Access and Egress	Comment
D2.7	**Installations in exits and paths of travel**:- • Access to service shafts must not be from fire exit (unless for fire fighting services); • No openings to ducts conveying hot products of combustion; • Gas or fuel services not permitted within exit • Electrical or service equipment not permitted within fire exit – however can be in a path of travel to an exit if provided with fire protective covering and smoke seals	CR. Details to be provided with Construction Certificate documentation.
D2.8	**Enclosure of space under stairs and ramps**:- • No enclosures/cupboards permitted in a fire stair; • Space below a non-fire isolated stair to remain unenclosed, unless construction with FRL of 60/60/60 with -/60/30 fire door.	CR. Details to be provided with Construction Certificate documentation.
D2.9	**Width of stairways**:- A stairway that exceeds 2m in width is counted as having a width of only 2m unless divided by handrail.	Noted
D2.10	**Pedestrian ramps**:- Ramp serving as a required exit must: Be maximum 1:14 gradient if required for disabled access (in accordance with AS 1428.1); Maximum 1:8 gradient in other cases; Floor surfaces to have slip resistance classification in accordance with Table D2.14 and AS4586-2013	CR. Details to be provided with Construction Certificate documentation.
D2.11	**Fire Isolated passageways**:- To achieve the same FRL as required for a fire isolated stair (or otherwise a minimum FRL of 60/60/60)	CR. Details to be provided with Construction Certificate documentation.
D2.12	**Roof as open space**:- If an exit discharges to a roof of a building, the roof must: Have an FRL of 120/120/120, & Not have rooflights or other openings within 3m of the path of travel	NA.
D2.13	**Treads and risers**:- • Minimum 2 risers and maximum of 18 risers in any flight; • Riser 115mm minimum, 190mm maximum dimensions – treads 250mm going to 355 maximum going. 2R+G 550mm min and 700 maximum. • Goings and risers to be constant throughout. Constant means within each flight that variations between a) adjacent risers, or between adjacent goings is no more than 5mm, and b) the largest and smallest riser, or largest and smallest going does not exceed 10mm. • Risers not to permit a 125mm sphere to pass through; • Treads to have slip resistance classification in accordance with Table D2.14 and AS4586-2013; • No winders in lieu of a quarter landing	CR. Details to be provided with Construction Certificate documentation.

Section D	Access and Egress	Comment
D2.14	**Landings**:- In a stairway – maximum gradient of 1:50 and minimum of 750mm long. Landings to have slip resistance classification in accordance with Table D2.14 and AS4586-2013; Class 9a buildings – area of any landing to be sufficient to move a stretcher 2m long and 600mm wide at a gradient of the stairs gradient; or a clear width of not less than 1.6m and clear length of 2.7m	CR. Details to be provided with Construction Certificate documentation.
D2.15	**Thresholds**:- No step or ramp at any point closer to the doorway than the width of the door leaf, unless: • Door opens to road or open space (and door sill not more than 190mm high); • Health care and aged care buildings have concessions	CR. Details to be provided with Construction Certificate documentation.
D2.16	**Balustrades**:- A continuous barrier/balustrade to be provided along the side of any roof to with public access is provided, any stairway or ramp, any floor, corridor, hallway, balcony, veranda, mezzanine, access bridge or the like and along the side of any access path to a building if it is not bounded by a wall and the surface beneath is more than 4m for an openable window and 1m in any other case. Balustrade height to be at least 1.0m above level surfaces, 865mm above stair nosings and gaps to be not greater than 125mm (ie 125mm sphere must not pass through it). Where the floor is more than 4m above the surface beneath any horizontal elements between 150mm and 760mm must not facilitate climbing. Barriers/balustrades for fire-isolated stairs to be constructed so as not to provide rail at not more 150mm above the stair, landing and mezzanine floor, openings of not more than 300mm for balusters and not more than 460mm openings where rails provided.	CR. Details to be provided with Construction Certificate documentation.
D2.17	**Handrails**:- • Located on at least one side of ramp or stairs; • Located on two sides of stairs when in excess of 2m in width (and where required by Clause D3.3 and AS1428.1); • 865mm above the stair nosings (second handrail at 750mm for class 9b primary school buildings); • continuous between stair flight landings.	CR. Details to be provided with Construction Certificate documentation.
D2.18	**Fixed platforms, walkways stairways and ladders**: Treads, risers, handrails and balustrades in plant rooms, lift motor rooms or non-habitable parts of a class 2/4 SOU etc to comply with AS 1657	NA

Section D	Access and Egress	Comment
D2.19	**Doorways and doors**:- Doors in exits (or in patient care areas of class 9a) must not be fitted with roller door; roller shutter or tilt up door. Can only be fitted with a sliding door if it leads directly to open space and the door is able to be opened manually under a force of not more than 110N. If fitted with a power operated door must be opened manually under a force of not more than 110N and automatic fail safe open device on power failure or on activation of a smoke detector in the fire compartment served by the door.	CR. Details to be provided with Construction Certificate documentation.
D2.20	**Swinging doors**:- Must not encroach more than 500mm into the required width of the stair, or when fully open not more than 100mm into the width of the exit. Door in exit to swing in the direction of egress unless the door serves a part of the building having an area not more than 200m^2 and the door is fitted with a hold open device.	CR. Details to be provided with Construction Certificate documentation.
D2.21	**Operation of latch**:- Exit doors and doors in the path of travel to an exit to be provided with lever latch handle device located between 900mm and 1100mm above the floor and openable with a single handed downward action without recourse to a key and if serving an area required to be accessible by Part D3 of the BCA and: • be such that the hand of a person who cannot grip will not slip from the handle during the operation of the latch; and • have a clearance between the handle and the back plate or door face at the centre grip section of the handle of not < 35mm and not > 45mm. Concessions apply to a Class 5, 6, 7 or 8 building or part with a floor area not more than 200m^2 or other areas subject to certain other conditions being met.	CR. Details to be provided with Construction Certificate documentation.
D2.22	**Re-entry from fire isolated exits**:- Doors in a fire isolated exit within a class 9a health care building, a class 9c aged care building or a building with effective height of > 25m must not be locked from the inside to prevent re-entry	NA
D2.23	**Signs on doors**:- Signage is required to fire/smoke doors to alert persons that the operation of some doors must not be impaired.	NA

Section D	Access and Egress	Comment
D2.24	**Protection of openable windows**:- (a) A window opening must be provided with protection if the floor below the window is 2m or more above the surface beneath in a Class 9b early childhood centre or in a bedroom of a Class 2, 3 or 4 part. (b) Where the lower level of the window opening is less than 1.7m above the floor, a window must be protected with a device to restrict the window opening or a screen with secure fittings. (c) A barrier with a height not less than 865mm above the floor is required to an openable window:- • In addition to window protection when a child resistant screen release mechanism is required, & • For openable windows 4m or more above the surface of the window if not included in (a) above. (d) A barrier required by (c), except for (e) above must not permit a 125mm sphere to pass through and must have no horizontal or near elements between 150mm and 760mm above the floor that facilitates climbing. (e) A barrier required by (c) to an openable window in:- • Fire-isolated stairs/ramps and other areas used primarily for emergency purposes, excluding external stairs/ramps, and • Class 7 (other than carparks) and Class 8 buildings and parts containing those classes; Must not permit a 300mm sphere to pass through it.	CR. Details to be provided with Construction Certificate documentation.
D2.25	**Timber Stairways: Concession –** Notwithstanding D2.2, timber treads, landings and supporting framework may be used in a fire-isolated exit if it is at least 44mm thick timber & an average density of not less than 800 kg/m^3 at a moisture content of 12%, subject to:- • The building has a sprinkler system throughout including in the fire-isolated exit (as per E1.5), and • Fire protection (ie 13mm fire grade plasterboard of fire protective covering) is provided to the underside of stair flights and landings located immediately above a landing i. which is at or near the level of egress, or ii. provides direct egress to a carpark.	Noted
NSW D2.101	**Doors in path of travel in an entertainment venue** In a Class 9B entertainment venue a doorway in a path of travel must comply with NSW Clause D2.19 (B) (V)	NA
PART D3	**ACCESS FOR PEOPLE WITH DISABILITIES**	
D3.1	**General building access requirements**:- Buildings are required to be accessible in accordance with AS 1428.1-2009. subject to compliance with satisfying AS1428.1. Access is required; From the pedestrian entrance required to be accessible to at least 1 floor containing SOU's and to each entrance doorway of each SOU on that level. Where a lift is installed access is required to the entrance doorway of each SOU located on the levels served by the lift.	**Refer to separate Access Consultant Report.** **Details required at Construction Certificate stage**

Section D	Access and Egress	Comment
D3.2	**Access to buildings** Access is required from: • the main points of pedestrian entry at the allotment boundary. If building is > 500m^2 the secondary entrance must be accessible if more than 50m from the accessible entrance. • other accessible buildings connected by a pedestrian link. • any required accessible carparking space. In a building required to be accessible, an accessway must be provided through the principal pedestrian entrance.	**Refer to separate Access Consultant Report.** **Details required at Construction Certificate stage**
D3.3	**Parts to be accessible**:- New works including circulation spaces, stairway handrails, gradients, door latches etc to be in accordance with AS1428.1-2009, including; • Ramps and stairways, except where exempt. • Stair nosings to have sharp intersection, be rounded up to 5mm radius; or be chamfered up to 5mm x 5mm. • Each stair tread is to have a strip no < 50mm & not > 75mm across full width with minimum luminance contrast of 30% to background. • Fire isolated stairs are to have suitable contrast stair nosings (Ref: Clause 11.1 (f) & (g) of AS1428.1). • Non-fire isolated stairs. Handrail terminating at bottom of each flight must extend at least one tread depth plus 300mm from the last riser. Handrail to extend 300mm past nosing of top riser. Where continuous, the 300mm extension is not required, ie only one tread depth extension. (Ref: Clause 11.2 of AS1428.1). • Accessways must have passing spaces, turning spaces as required. • Where stair intersection is at an internal corridor, the stair must be setback as shown in Figure 1. • Turning space in corridors at maximum 20m intervals and within 2.0m of the end of corridors where it is not possible to continue along the accessway. • Doorways to have minimum luminance contrast of 30% between; a) Door leaf & door jamb; b) Door leaf & adjacent wall; c) Architrave & wall; d) Door lead & architrave; or e) Door jamb & adjacent wall. Minimum width area of contrast must be 50mm. • Lift access where required must comply with clause E3.6. • Carpet pile height to be in accordance with AS1428.1-2009, except as modified by Cl D3.3 (g) and (h).	**Refer to separate Access Consultant Report.** **Details required at Construction Certificate stage**
D3.4	**Exemptions**:- Not necessary to provide access to: An area that would pose a health or safety risk; or, any area that is inappropriate due to its use and any path of travel providing access to one of these areas.	Noted.

Section D	Access and Egress	Comment
D3.5	**Car Parking**:- Spaces to be provided in accordance with AS/NZS 2890.6-2009 at the rate specified in Table D3.5.	**Refer to separate Access Consultant Report.** **Details required at Construction Certificate stage**
D 3.6	**Signage**:- Clear and legible Braille and tactile signage complying with Spec D3.6 is required to identify each accessible sanitary facility (except within SOU), each accessible space with a hearing augmentation system and each door required by E4.5 having an exit sign. Signage / symbols in accordance with AS1428.1-2009.	**Refer to separate Access Consultant Report.** **Details required at Construction Certificate stage**
D 3.7	**Hearing augmentation**:- Where an inbuilt amplification system (other than one used for emergency warning) is provided a hearing augmentation system is to be provided in the following locations: • an auditorium, conference room, meeting room or room for judicatory purposes, or • in a room in a class 9b building, or • ticket office, tellers booths, reception area or the like where the public screened from the service provider	NA
D 3.8	**Tactile indicators**:- TGSI required: • when "public" are approaching a stair (other than a fire isolated stair), escalator, travelator, and ramp (other than step ramp), • overhead obstructions less than 2m high • paths of travel meeting a vehicular way adjacent to the main entrance of the building – if there is no kerb or kerb ramp at that point. • TGSI required to comply with AS/NZS 1428.4.1-2009	**Refer to separate Access Consultant Report.** **Details required at Construction Certificate stage**
D3.9	**Wheelchair seating spaces in a Class 9b assembly buildings**:- Where fixed seating is provided in a Class 9b assembly building, wheelchair seating in accordance with AS1428.1-2009 must be provided with the number and grouping in accordance with Table D3.9.	NA
D3.10	**Swimming pools**: - Not less than 1 means of accessible water entry/exit in accordance with Spec D3.10 must be provided for each swimming pool required by Table D3.1.	NA
D3.11	**Ramps**: - An accessway must not have a series of ramps that 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.	NA
D3.12	**Glazing on an accessway**: - On an accessway where there is no chair rail, handrail or transom, all frameless or fully glazed doors, sidelights and any glazing capable of being mistaken for a doorway opening must be clearly marked in accordance with As1428.1-2009	**Refer to separate Access Consultant Report.** **Details required at Construction Certificate stage**

Section E	Services and Equipment	Comment
PART E1	**FIRE FIGHTING EQUIPMENT**	
E1.3	**Fire Hydrants**:- Hydrant system required to serve a building with a floor area >500m^2 and where the fire brigade is available to attend the fire. System must satisfy AS2419.1 – 2005.	**NA where total floor area of each building is less than 500m^2. Details to be confirmed with Construction Certificate documentation.**
E1.4	**Hose Reels**:- Fire hose reel system to be provided (in accordance with AS 2441 – 2005) to: • does not apply to Class 2, 3 building or Class 4 part of a building, • serve the whole building where internal fire hydrant have been installed; • serve any fire compartment >500m^2 (where internal hydrants are not installed); • Hose reels to be located: (a) Externally; or (b) Internally within 4m of an exit; or (c) Internally adjacent to a fire hydrant (other than one in fire isolated exit); or (d) Combination of the above • Achieve system coverage and (a) Need not be adjacent to every fire hydrant, (b) Need not be adjacent to every exit, (c) System coverage not achieved by (a) and (b), additional fire hose reels may be located in paths of travel to an exit. • Hose reels not to pass through fire or smoke doors	CR. Only required to carpark if floor area exceeds 500m^2 with details to be provided with Construction Certificate documentation. NA to Class 2 portion of building.
E1.5	**Sprinklers**:- Sprinkler system complying with AS 2118 to be provided in accordance with BCA Specification E1.5 to: • Buildings >25m effective height; • Carparks accommodating > 40 vehicles; • Class 6 buildings with large fire compartments; • Class 9c aged care buildings; • Some large isolated buildings; • Occupancies of excessive hazard	NA. However if proposed details to be provided with Construction Certificate documentation.
E1.6	**Portable Extinguishers**:- To be installed to AS2444 and in a Class 2 or 3 building must be: • An ABE type extinguishers minimum 2.5kg size. • Distributed out site a SOU to serve only the storey in which they are located and so that the travel distance of any SOU to the nearest PFE is not > 10.0m.	CR. Details to be provided with Construction Certificate documentation.
E1.7	Deliberately left blank	Noted
E1.8	**Fire Control Centres**:- Required in a building > 25m effective height or in a class 6, 7, 8 or 9 building that exceeds 18,000m^2 in floor area	NA

Section E	Services and Equipment	Comment
E1.9	**Fire precautions during construction**:- • Fire extinguisher at each exit (temporary) form each storey; • Booster connections, hydrants and FHR to be operational when building >12m effective height	CR. Details to be provided with Construction Certificate documentation.
E1.10	**Provision for special hazards**	NA
PART E2	**SMOKE HAZARD MANAGEMENT**	
E2.1	**Application of Part**:- DTS provisions to not apply to open deck carparks, and the smoke and heat vent provisions do not apply to storerooms and the like of less than $30m^2$	Noted
E2.2	**General requirements for smoke hazard management** (including Tables E2.2a & E2.2b). Class 2 or 3 building must be provided with an automatic smoke detection and alarm system complying with Specification E2.2a.	CR. Details to be provided with Construction Certificate documentation.
E2.3	**Provision for special hazard**:- Additional measures to be provided due to the special characteristics, function; use; type of materials stored; or special mix of classifications within a building	NA
PART E3	**LIFT INSTALLATIONS**	
E3.1	Repealed	Noted
E3.2	**Stretcher facility in lifts are required in**:- • Buildings with an effective height > 12m; • In at least one "emergency lift" One lift is required to provide a clear space of not less than 600mm wide x 2m long x 1400mm high above the lift car floor level	NA.
E3.3	**Warning against use of lifts in fire**:- Signs to be provided at each lift landing located near every call button complying with figure E3.3	CR. Details to be provided with Construction Certificate documentation.
E3.4	**Emergency lifts**:- Required in some class 9a buildings and also buildings with effective height >25m	NA
E3.5	**Landings**:- Access and egress to and from liftwell landings must comply with BCA Part D	CR. Details to be provided with Construction Certificate documentation.
E3.6	**Facilities for people with disabilities**:- Passenger lifts to comply with the relevant Australian Standard listed in Table E3.6a and have accessible features as listed in Table E3.6b, and must not rely on constant pressure for its operation if the lift car is fully enclosed.	**Refer to separate Access Consultant Report.** **Details required at Construction Certificate stage**
E3.7	**Fire Service Controls**:- Passenger lift cars serving any storey above an effective height of 12m, must be provided with fire service control switch in accordance with E3.9 and lift car fire service drive control switch in accordance with E3.10.	NA.

Section E	Services and Equipment	Comment
E3.8	**Aged Care Buildings**:- Where residents are on levels which do not have access to the road or open space the building must have either: • Stretcher facility lift; or • Ramp complying with AS 1428.1	NA
E3.9	**Fire Service Recall Operation Switch** Where required, switch. Labelling, key and operation procedures for a fire service recall control switch are to be provided.	NA.
E3.10	**Lift Car Fire Service Drive Control Switch** Where required switch initiation, labelling and operation for the fire service drive control switch is to be provided.	NA.
PART E4	**EMERGENCY LIGHTING, EXIT SIGNS AND WARNING SYSTEMS**	
E4.1	Repealed	Noted
E4.2	**Emergency Lighting**:- Required (in accordance with AS 2293.1) in: • Every fire isolated exit; • every storey >300m^2 in area • path of travel to an exit and in any room with floor area > 100m^2 that does not open to a corridor/space with emergency lighting and any room having a floor area in excess of 300m^2; • any room with floor area >300m^2; • any room or space to which there is public access in every storey in a Class 6 or 9b building if that storey has a floor area >300m^2, or any point more than 20m from a doorway leading directly to stairway of open space; • every non-fire isolated stairway	CR subject to Electrical Services (ie emergency lighting required to common corridors and internal stairs) drawings, specification and certification of the works being in accordance with AS2293.1-2005. Details to be provided with Construction Certificate documentation.
E4.3	**Measurement of distances**:- Using the shortest path of travel.	Noted
E4.4	**Design and operation of emergency lighting**:- To comply with AS 2293.1	CR. Details of emergency lighting in accordance with AS2293.1-2005 to be provided with Construction Certificate documentation.
E4.5	**Exit signs**:- Clearly visible to persons approaching an exit, above doors: • to enclosed or external stairs, passageways and ramps • to external access balcony, • from an enclosed stair, passageway or ramp at the level of discharge to the road; • acting as horizontal exits; • serving as or forming part of a required exit in a storey with emergency lighting.	CR. Details in accordance with AS2293.1-2005 to be provided with Construction Certificate documentation.
E4.6	**Direction signs**:- Where an exit is not apparent exit signs with directional arrows are required	CR. Details to be provided with Construction Certificate documentation.

Section E	Services and Equipment	Comment
E4.7	**Class 2 and 3 Buildings and Class 4 parts exemptions:-** Illuminated exit signs not applicable to: • doors of SOUs of Class 2, 3 or 4; • class 2 building where "EXIT" is clearly labelled on the side remote from the exit/balcony	Noted
E4.8	**Design and operation of exit signs**:- To comply with AS 2293.1 or photoluminescent exit sign in accordance with BCA Specification E4.8.	CR. Details of exit signs in accordance with AS2293.1-2005 to be provided with Construction Certificate documentation.
E4.9	**Sound systems and intercom systems for emergency purposes**:- To be installed to comply with AS 1670.4 in: • buildings with effective height >25m; • class 3 residential part of a school or aged/ disabled children accommodation with RIS > 2; • class 3 residential aged care; • class 9a with floor area > 1000m2 or RIS >2; • class 9b school with RIS 3 • class 9b theatre, public hall, etc with floor area >1000m2 or RIS >2	NA, subject to confirmation of use.

Section F	Health and Amenity	Comment
PART F1	**DAMP & WEATHER PROOFING**	
F1.1	**Stormwater drainage**:- Collection of stormwater drainage is to comply with the consent authority's requirements and also AS/NZS3500.3-2015	CR. Details to be provided with Construction Certificate documentation.
F1.4	**External above Ground Membranes**:- Waterproofing membranes for external above ground use must comply with AS4654.1 & 2 – 2012	CR. Details to be provided with Construction Certificate documentation.
F1.5	**Roof coverings**:- Plastic sheeting: AS/NZS1562.3-1996, AS/NZS4256 Parts 1, 2, 3-1994 & 5-1996; Roofing tiles AS2049-2002, AS2050-2002; Cellulose cement corrugated sheets: AS/NZS 2908.1-2000 with safety mesh to AS/NZS1562.3-1996; Metal Roofing: AS1562.1-1992 and Asphalt shingles: ASTM D3018-90, Class A	CR. Details to be provided with Construction Certificate documentation.
F1.6	**Sarking**:- Where used for weatherproofing for roofs and walls must comply with AS/NZS 4200 parts 1 & 2 - 1994	NA
F1.7	**Waterproofing of wet areas in buildings**:- The floor surface or substrate to proposed bathrooms, shower areas and toilets must be provided with a waterproofing membrane in accordance with Table F1.7 and AS 3740-2010. In addition the junction between the floor surface and the walls are required to be impervious to water.	CR. Details to be provided with Construction Certificate documentation.
F1.8	Deliberately left blank	

<table>
<tr><th>Section F</th><th>Health and Amenity</th><th>Comment</th></tr>
<tr><td>F1.9</td><td>Damp-proofing:-

The building must be provided with a damp proof course that prevents moisture from the ground from reaching the internal elements of the building and walls above the damp-proof course.

To be installed in accordance with AS/NZS 2904-1995 or AS3660.1-2014. Some concessions apply to class 7 and 8 and 10 buildings.</td><td>CR. Details to be provided with Construction Certificate documentation.</td></tr>
<tr><td>F1.10</td><td>Damp-proofing of floors on the ground:-

Vapour barrier to be in accordance with AS 2870-2011.</td><td>CR. Details to be provided with Construction Certificate documentation.</td></tr>
<tr><td>F1.11</td><td>Provision of floor wastes:-

Class 2, 3 or 4 part to have floor wastes in bathrooms, laundries located at any level above an SOU / public space.</td><td>CR. Details to be provided with Construction Certificate documentation.</td></tr>
<tr><td>F1.12</td><td>Sub-floor ventilation:-

SUB-FLOOR VENTILATION AND CLEARANCE
<table>
<tr><th rowspan="2">Climate zone (see Figure F1.12)</th><th colspan="2">Minimum sub-floor ventilation (mm²/m of wall)</th><th colspan="2">Minimum height from ground surface (mm)</th></tr>
<tr><th>No membrane</th><th>Ground sealed with impervious membrane</th><th>Termite inspection not required</th><th>Termite inspection required (see note)</th></tr>
<tr><td>3</td><td>6000</td><td>3000</td><td>150</td><td>400</td></tr>
</table></td><td>NA. Slab on ground.</td></tr>
<tr><td>F1.13</td><td>Glazed Assemblies:-

Windows, sliding doors, adjustable louvres, shopfronts; window walls must comply with AS2047 -2014 if located in an external wall for resistance to water penetration.

Some concessions apply to class 7 & 8.</td><td>CR. Details to be provided with Construction Certificate documentation.</td></tr>
<tr><td>PART F2</td><td colspan="2">SANITARY & OTHER FACILITIES</td></tr>
<tr><td>F2.1</td><td>Facilities in residential buildings:-

Minimum facilities for class 2, 3 and 9c and class 4 parts must be provided in accordance with Table F2.1</td><td>CR. Details to be provided with Construction Certificate documentation.</td></tr>
<tr><td>F2.2</td><td>Calculation of number of occupants and fixtures:-

Sanitary facilities to be determined by Clause D1.13 of the BCA unless the building owner can provide explicit occupant numbers.</td><td>Noted</td></tr>
<tr><td>F2.3</td><td>Facilities in Class 3 to 9 Buildings, Table F2.3:-</td><td>NA</td></tr>
</table>

Section F	Health and Amenity	Comment
F2.4	**Facilities for people with disabilities**:- Accessible sanitary facilities to be provided in accessible parts of the building as indicated in table F2.4 (a) in accordance with AS1428.1 – 2009, and: -. Accessible showers in accordance with table F2.4 (b), At each bank of toilets where there is 1 or more toilets in addition to an accessible unisex sanitary compartment at that bank, an ambulant facility suitable for males and females. Accessible unisex sanitary facility must contain a closet pan, washbasin, shelf or bench top and means of disposing sanitary towels. Accessible unisex sanitary facility must be entered without crossing an area reserved for one sex only. If 2 or more accessible unisex sanitary facilities provided, the number of left and right hand mirror image facilities must be as even as possible. If male and female toilets are at different locations, accessible unisex sanitary facilities are required at one of those locations only. Accessible unisex sanitary compartment or shower need not be provided on a storey not required to have a lift or ramp in accordance with BCA Cl D3.3 (small floor area)	**Refer to separate Access Consultant Report.** **Details required at Construction Certificate stage**
F2.5	**Construction of sanitary compartments**:- Doors to fully enclosed sanitary compartments must be constructed at least 1.2m from the pan, or be outward opening, or removal from the outside.	CR. Details to be provided with Construction Certificate documentation.
F2.6	**Interpretation** : urinals and wash basins:	Noted
F2.7	deleted	NA.
F2.8	**Waste Management**:- Slop-hoppers to be provided in class 9a and class 9c buildings	NA
PART F3	**ROOM SIZES**	
F3.1	**Height of rooms**:- • 2.4m high generally for habitable rooms and 2.1m high for non-habitable rooms, corridors, kitchen. Note: In rooms with a sloping ceiling, reduced heights apply. • Class 9b Classrooms or other parts that accommodate not more than 100 persons – 2.4m and parts that accommodate more than 100 persons – 2.7m. • Commercial kitchens minimum 2.4m high.	CR. Details to be provided with Construction Certificate documentation.
PART F4	**LIGHT AND VENTILATION**	
F4.1	**Provision of Natural light**:- • Class 2 and 4 – all habitable rooms; • Class 3 – all bedrooms and dormitories; • Class 9a/9c – all rooms used for sleeping; • Class 9b – classrooms for schools; playrooms for childhood centres	CR. Details to be provided with Construction Certificate documentation.

Section F	Health and Amenity	Comment
F4.2	**Methods and extent of natural lighting**:- • Provided by windows with light transmission and are open to sky or face a courtyard; • Setbacks to obstructions/boundary generally 1m – exceptions apply to class 2, 3, 4, 9a and 9c	CR. Details to be provided with Construction Certificate documentation.
F4.3	**Natural light borrowed from adjoining room**:- Applies in some instances in class 2, 3 and class 4 parts	Noted
F4.4	**Artificial lighting**:- Artificial lighting must be provided to the building to all rooms that are frequently occupied and all corridors, lobbies, internal stairways and circulation spaces and paths of egress. The lighting system must comply with AS/NZS 1680.0 – 2009.	CR. Artificial lighting required for fully enclosed rooms with no external windows. Details to be provided with Construction Certificate documentation.
F4.5	**Ventilation of rooms**:- A habitable room, office, shop, factory, workroom, sanitary compartment, bathroom, shower room, laundry and any other room occupies by a person for any purpose must have either natural or mechanical ventilation. Mechanical Ventilation for occupants of the building is required to comply with AS 1668.2 – 2012 and AS/NZS 3666.1 – 2011	CR. Mechanical ventilation required for fully enclosed rooms with no external windows. Details to be provided with Construction Certificate documentation.
F4.6	**Natural ventilation**:- Relates to methods of providing natural ventilation through openings in the building, ie openings 5% of floor area of room.	CR. Details to be provided with Construction Certificate documentation.
F4.7	**Ventilation borrowed from adjoining rooms**:- Ventilation can be borrowed if both rooms are within the same SOU or an enclosed veranda is common property	Noted
F4.8	**Restriction on position of water closets and urinals**:- A room containing a closet pan/urinal must not open directly into a kitchen; pantry; restaurant; public dining room; dormitory in a class 3; public assembly room; workplace used by more than 1 person	CR. Details to be provided with Construction Certificate documentation.
F4.9	**Airlocks**: Airlocks, mechanical ventilation and screens can be utilised where WCs open into rooms as indicated in clause F4.8.	Noted.
F4.10	Repealed	
F4.11	**Carparks**:- Every storey of a carpark, except an open deck carpark, must be provided with either mechanical ventilation complying with AS1668.2 of permanent natural ventilation.	CR. Details to be provided with Construction Certificate documentation.

Section F	Health and Amenity	Comment
F4.12	**Kitchen local exhaust ventilation**:- Commercial kitchen to be provided with kitchen exhaust hood complying with AS/NZS1668.1 and AS1668.2 where:- • Any cooking apparatus has a total max. electrical power input > 8kW or a total gas power input exceeding 29MJ/h; or • The total max. power input to >1 apparatus exceeds 0.5kW electrical power or 1.8MJ gas per m^2 of floor area of the room or enclosure.	NA
PART F5	**SOUND TRANSMISSION AND INSULATION**	
F5.1	**Application of Part**: The DTS provisions of this part apply to class 2, 3 and 9c buildings	Noted
F5.2	**Determination of airborne sound insulation ratings**:- Relates to form of construction required to have airborne sound insulating rating	Noted
F5.3	**Determination of impact sound insulation ratings**:- This clause intends to clarify the means of determining the impact sound insulation ratings, ie Floor required to have impact sound insulation pressure level with spectrum term (Ln,w) to be in accordance with AS/ISO 717.2-2004 or Specification F5.2. Wall required to have impact sound insulation in a Class 2 or 3 building must be discontinuous construction. Discontinuous construction means a wall having a minimum 20mm cavity between 2 separate leaves and for masonry (resilient ties if required) and other than masonry have no mechanical linkage between leaves except at the periphery.	CR. Details to be provided with Construction Certificate documentation.
F5.4	**Sound Insulation of floors**:- A floor in a Class 2 or 3 building must have an Rw + Ctr (airborne) not less than 50 and an Ln,w (impact) not more than 62 if it separates— • SOU's; or • a SOU from a plant room, lift shaft, stairway, public corridor, public lobby or the like, or parts of a different classification. A floor in a Class 9c aged care building separating SOUs must have an Rw not less than 45.	CR. Details to be provided with Construction Certificate documentation.

Section F	Health and Amenity	Comment
F5.5	**Sound insulation rating of walls**:- a) A wall in a Class 2 or 3 building must — i. have an $R_w + C_{tr}$ (airborne) not less than 50, if it separates SOU's; and ii. have an R_w (airborne) not less than 50, if it separates a SOU from a plant room, lift shaft, stairway, public corridor, public lobby or the like, or parts of a different classification; and iii. comply with F5.3(b) if it separates: A. a bathroom, sanitary compartment, laundry or kitchen in one SOU from a habitable room (other than a kitchen) in an adjoining unit; or B. a SOU from a plant room or lift shaft. b) A door may be incorporated in a wall in a Class 2 or 3 building that separates a SOU from a stairway, public corridor, public lobby or the like, provided the door assembly has an Rw not less than 30. c) A wall in a Class 9c aged care building must have an R_w not less than 45 if it separates— i. SOUs; or ii. a SOU from a kitchen, bathroom, sanitary compartment (not being an associated ensuite), laundry, plant room or utilities room. d) In addition to c), a wall separating a SOU in a Class 9c aged care building from a kitchen or laundry must comply with F5.3(b). e) Where a wall required to have sound insulation has a floor above, the wall must continue to— i. the underside of the floor above; or ii. a ceiling that provides the sound insulation required for the wall. f) Where a wall required to have sound insulation has a roof above, the wall must continue to— i. the underside of the roof above; or ii. a ceiling that provides the sound insulation required for the wall.	CR. Details to be provided with Construction Certificate documentation.
F5.6	**Sound insulating rating of services**:- 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 SOU, the duct or pipe must be separated from the rooms of any SOU by construction with an $R_w + C_{tr}$ (airborne) not less than— • 40 if the adjacent room is a habitable room (other than a kitchen); or • 25 if the adjacent room is a kitchen or non- habitable room. If a storm water pipe passes through a SOU it must be separated in accordance with (a)(i) and (ii).	CR. Details to be provided with Construction Certificate documentation.
F5.7	**Sound isolation of Pumps**:- Flexible coupling must be used at the point of connection between service pipes in a building and any pump.	NA

Section G	Ancillary Provisions	Comment

Section G	Ancillary Provisions	Comment
G1.2	**Refrigerated chambers, strongrooms or vaults**:- Provides min. safety provisions for refrigerated chambers, etc of sufficient size for a person to enter, must have- • Door capable of being opened from inside without key, • Lighting controlled by a switch located adjacent to the entrance door inside the room, • Indicator lamp outside the room which is illuminated when the interior lights are switched on, • An alarm located outside but controlled from inside that achieves a sound pressure level of 90dB(A) when measured 3m from the sounding device. • Door with clear width of 600mm and height of 1.5m.	NA
G2	**Heating Appliances** Provides minimum installation requirements for heating appliances (eg stove, heater or similar)	NA
G3	**Atrium Construction**	
G3.1	**Application of part** Applies to buildings with atrium connecting 3 or more storeys	NA
G4	**Alpine Areas**	NA
G5	**Construction in Bushfire Zones**	NA, unless required by DA.

Section H	Theatres, Stages and Public Halls	Comment
H1.1	**Application of part** H1.4 and H1.7 applies to every enclosed Class 9b building (ie school assembly building, church or community hall and the like).	NA

Section J	Energy Efficiency	Comment
PART J1	**BUILDING FABRIC**	
J1.1	**Application of part** Applies to Conditioned Space areas including Class 3 other than Residential Class 2 & 4 SOU's, due to the NSW Variations only the following applies to these Residential areas; • J1.2 – Thermal Construction. • J1.3 (d) & J1.5 (c) – Thermal Breaks. • J1.3 (c) – Compensation for loss of ceiling insulation. • J1.6 (c) & J1.6 (d) – Floor edge insulation	CR. Details co-ordinated with BASIX requirements to be provided with Construction Certificate documentation.

Section J	Energy Efficiency	Comment
J1.2	**Thermal Construction – General** (a) Insulation where specified is to comply with AS/NZS – 4859.1-2002, be installed in accordance with the Manufacturers Specification and so that it— (i) abuts or overlaps adjoining insulation; and (ii) forms a continuous barrier with ceilings, walls, bulkheads, or the like that inherently contribute to the thermal barrier; and (iii) does not affect the safe or effective operation of a service or fitting. (b) Reflective insulation where specified is to be installed with— (i) the necessary airspace to achieve the required R-Value between a reflective side of the reflective insulation and a building lining or cladding; and (ii) the reflective insulation closely fitted against any penetration, door or window opening; and (iii) the reflective insulation adequately supported by framing members; and (iv) each adjoining sheet of roll membrane being overlapped not less than 50 mm; or taped together. (c) Bulk insulation where specified is be installed so that— (i) it maintains its position and thickness, other than where it crosses roof battens, water pipes, electrical cabling or the like; and (ii) in a ceiling, where there is no bulk insulation or reflective insulation in the wall beneath, it overlaps the wall by not less than 50 mm.	CR. Details to be provided with Construction Certificate documentation.
J1.3	**Roof and Ceiling Construction** Roof and Ceiling insulation must achieve levels as detailed for conditioned space and refer to BASIX for residential areas.	CR. Details to be provided with Construction Certificate documentation.
J1.4	**Roof Lights** Applies to Conditioned Space areas including Class 3 other than Residential Class 2 & 4 SOU's, due to the NSW Variations only the BASIX Provisions applies to these Residential SOU's.	NA
J1.5	**Walls** Applies to Conditioned Space areas other than Residential. Class 2 & 4, due to the NSW Variations only the BASIX Provisions applies to these Residential areas.	CR. Details to be provided with Construction Certificate documentation.
J1.6	**Floors** Applies to Conditioned Space areas other than Residential. Class 2 & 4, due to the NSW Variations only the BASIX Provisions applies to these Residential areas.	CR. Details to be provided with Construction Certificate documentation.
Part J2	**External Glazing – Fabric –** Applies to Conditioned Space areas including Class 3 other than Residential Class 2 & 4 SOU's, due to the NSW Variations only the BASIX Provisions applies to these Residential SOU's.	CR. Details to be provided with Construction Certificate documentation.
PART J3	**BUILDING SEALING**	

Section J	Energy Efficiency	Comment
J3.1	**Application of part** Applies to Commercial areas including Class 3 and due to NSW Variations Clauses J3.2 to J3.7 applies to Residential areas also.	Noted
J3.2	**Chimneys and Flues**	NA
J3.3	**Roof Lights** Skylight must have a Total System SHGC Value and a Total System U-Value of not more than that specified in a BASIX (if applicable), and skylights must be sealed with an imperforate ceiling diffuser or the like installed at the ceiling or internal lining level, or a weather proof seal is provided.	CR. Details to be provided with Construction Certificate documentation.
J3.4	**Windows and Doors** A seal to restrict air infiltration is to be fitted to each edge of the proposed external doors, openable external windows or the like that form part of the envelope of the *'conditioned space'* of the building, ie: • These requirements do not apply to a window complying with AS 2047-1999, and • For an external swing door, the bottom edge seal must be a draft protection device, and • For other edges of an external door or the edges of an openable window or other such opening, may be a foam or rubber compressible strip, fibrous sea, etc, and • The external entrance doors must be provided with a self-closing device.	CR. Details to be provided with Construction Certificate documentation.
J3.5	**Exhaust Fans** Miscellaneous exhaust fans where proposed are to be fitted with a sealing device such as self-closing damper or the like when serving the envelope of the *'conditioned space'* of the building.	CR. Details to be provided with Construction Certificate documentation.
J3.6	**Construction of Roofs, Walls and Floors** Roofs, external walls, external floors and any opening such as a window, door or the like to the building must be constructed to minimize air leakage when forming part of the envelope of the *'conditioned space'* of the. This necessitates construction around openings are to be: • enclosed by internal lining systems that are close fitting at ceiling, wall and floor junctions; or • sealed by caulking, skirting, architraves, cornices or the like.	CR. Details to be provided with Construction Certificate documentation.
J3.7	**Evaporative Coolers** Any evaporative cooler installed to serve the building must be fitted with a self-closing damper or the like.	CR. Details to be provided with Construction Certificate documentation.
J4	**Air Movement**	NA
J5	**Air-conditioning and Ventilation Systems** Due to the NSW Variations Clauses J5.2 (a to (d) and (f) to (g), J5.3 and J5.4 applies to Class 2 & 4 parts. Part J5 Provisions applies to Class 3 and 5 to 9 parts.	CR. Details to be provided with Construction Certificate documentation.

Section J	Energy Efficiency	Comment
J6	**Artificial Lighting and Power** Due to the NSW Variations only the BASIX Provisions applies to Class 2 & 4 parts Part J6 Provisions applies to Class 3 and 5 to 9 parts.	CR. Details to be provided with Construction Certificate documentation.
J7	**Hot Water Supply** Due to the NSW Variations only the BASIX Provisions applies to Class 2 & 4 parts. Clause 7.2 applies to Class 3 and 5 to 9 parts, e.g Hot water system (if proposed to be replaced), any new supply piping and provision of a heat trap is to be designed and installed in accordance with Section 8 of AS/NZS 3500.4 – 2003 for the Climate Zone from this Standard	CR. Details to be provided with Construction Certificate documentation.
J8	**Facilities for Energy Monitoring** (a) A building or SOU with a floor area > 500m^2 must have the facility to record the consumption of gas or electricity. (b) A building with a floor area > 2,500m^2 must have the facility to record individual energy consumption of; • air-conditioning plant including, where appropriate, heating plant, cooling plant and air handling fans, • artificial lighting, and • appliance power, and • central hot water supply, and • Internal transport devices including lifts, escalators and travelators where there is > 1 serving the building, and • Other ancillary plant. (c) The provisions of (b) do not apply to a Class 2 building with a floor area > 2,500m^2 where the total area of the common areas is < 500m^2.	CR. Details to be provided with Construction Certificate documentation.

ANNEXURE B

Schedule of Essential Fire Safety Measures (Proposed)

The building is recommended that the building be provided with the following proposed essential fire safety measures, capable of performing and being maintained to the standard listed in the Schedule below. For the purposes of Clause 168 of the Environmental Planning and Assessment Regulation 2000, these standards will be considered to be the current fire safety schedule for the building.

DRAFT SCHEDULE

Measure	Design/ Installation Standard	Proposed Installation
Automatic Fire Detection and Alarm System	BCA Specification E2.2a Clause 3 or 4 and AS3786-2014 or AS1670.1 – 2015	✓
Building Occupant Warning System	BCA Specification E2.2a Clause 6 and AS3786-2014 or AS1670.1 – 2015	✓
Emergency Lighting	BCA Clause E4.2, E4.4 & AS2293.1 – 2005	✓
Exit Signs	BCA Clauses E4.5, E4.6, E4.7 & E4.8 and AS2293.1 – 2005	✓
Fire Doors	BCA Clause C3.2, C3.4, C3.11and AS1905.1 – 2015	✓
Fire Hydrant System	BCA Clause E1.3 and AS2419.1 - 2005	**tbc**
Fire Seals	BCA Clause C3.12, C3.15 and AS1530.4 – 2014 & AS4072.1-2014	✓
Paths of Travel	EP&A Reg 2000 Clause 186	✓
Portable Fire Extinguishers	BCA Clause E1.6 & AS2444 – 2001	✓
Protection of Openings in External Walls (i.e. Windows West Elevation of Front Building)	BCA Clause C3.2, C3.4 and AS2118.2 – 2010 Method of Protection to be Confirmed	✓
Smoke Alarms within SOU's	BCA Specification E2.2a and AS3786-2014	✓

The above list may be subject to variation with any Alternative Fire Engineered Solution Report.