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Regulatory Compliance Report

Liverpool Civil Plaza
52 Scott Street, Liverpool NSW 2170

Prepared for: **Built Development**
Date: **23 September 2020**
Revision: **C**

Table of Contents

Date	Rev No	Issue or Description of Amendment	Assessed By	Approved By
11.09.2020	A	Draft	Ahmad Sammani	Andrew Brohier
22.09.2020	B	Regulatory Compliance Report	Ahmad Sammani	Andrew Brohier
23.09.2020	C	Regulatory Compliance Report	Andrew Brohier	Andrew Brohier

1. Executive Summary

Development Overview

This Regulatory Compliance Report is submitted to Built Development Group and is an assessment of Development Application documentation for Phase A of the Liverpool Civic Place development located at 52 Scott Street, Liverpool.

It follows the approval of a Concept Proposal / Stage 1 DA (DA-585/2019) for the broader Liverpool Civic Place master plan that has determined land uses, building envelopes, public domain and a multi-level common basement across the site. The full Liverpool Civic Place site, subject to the Concept Proposal / Stage 1 DA approval is illustrated at **Figure 1**, however the scope of this Stage 2 DA is limited to Phase A, as illustrated at **Figure 2**.
Phase B and Phase C will be subject to future Stage 2 DA(s).

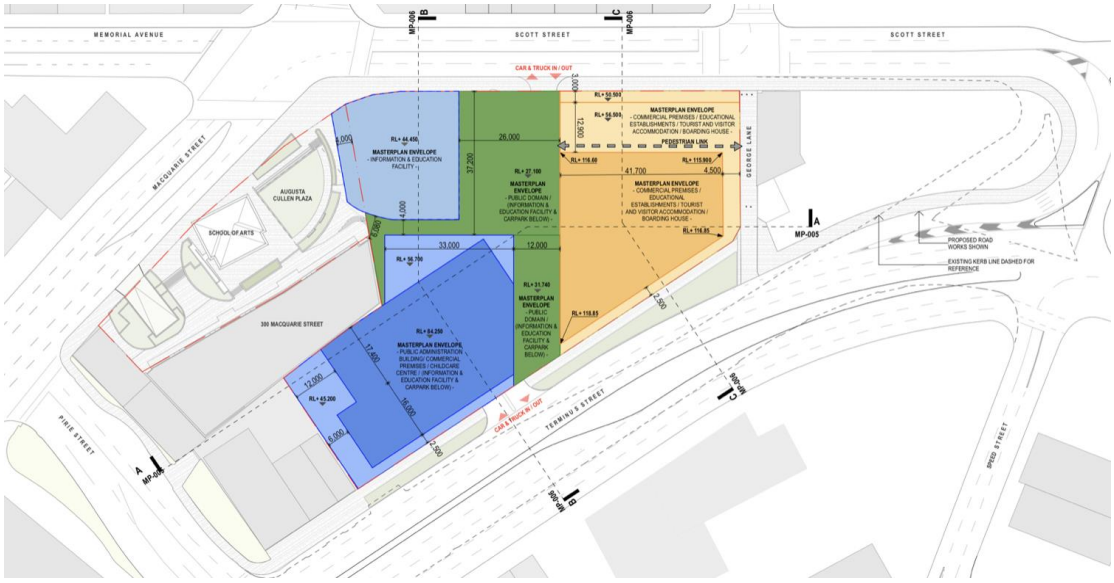

Figure 1 **Liverpool Civic Place Master Plan Site**

Source: FJMT

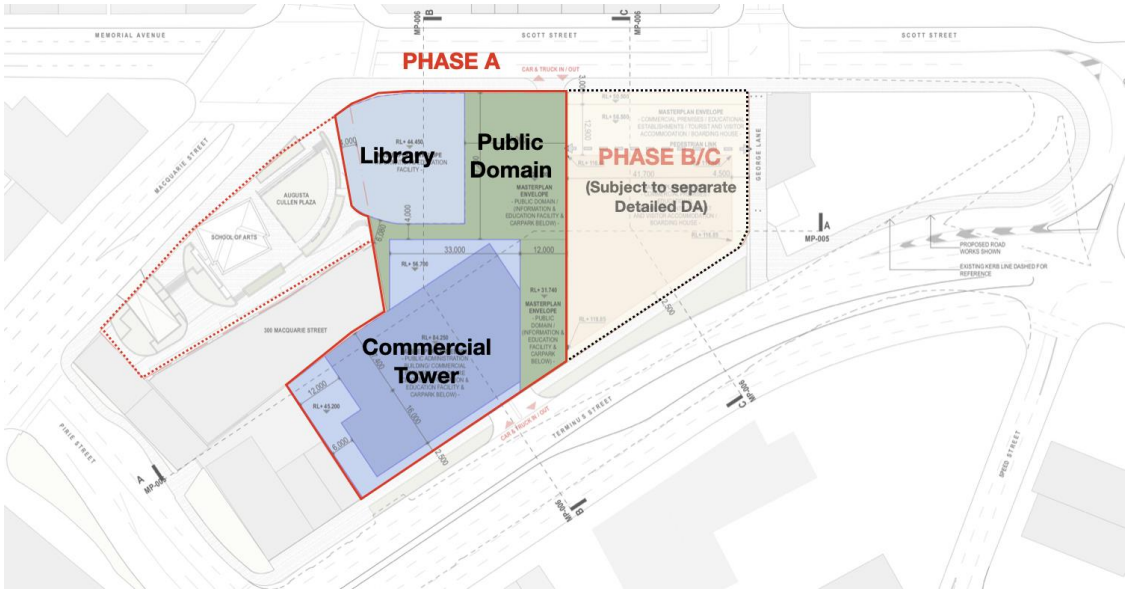

Figure 2 **Liverpool Civic Place Stage 1 site (subject site)**

Source: FJMT

This Stage 2 DA seeks approval for:

- Construction and use of a six (6) storey information and education facility (public library);
- Construction and use of a fourteen (14) storey mixed use building comprising:
  - Eight (8) storeys of public administration building floor space to be occupied by Liverpool City Council;
  - Four (4) storeys of commercial premises (office) floor space;
  - Childcare centre on Level 6; and
  - Single storey of rooftop plant.
- Partial construction and use of the overall site's common basement;
- Landscaping and public domain works including:
  - an internal shared road connecting to Scott Street with basement access;
  - a public plaza fronting Scott Street; and
  - an elevated pocket park fronting Terminus Street.
- Extension and augmentation of services and infrastructure as required.

This DA reflects the staged planning approval pathway for the Liverpool Civic Place redevelopment which has included two previously approved DAs, as outlined below:

Concept DA DA-585/2019:

The planning approval pathway for the Liverpool Civic Place development commenced in in 2019, with the submission of a Concept Proposal / Stage 1 DA for the Liverpool Civic Place master plan. On 31 August 2020, the Concept Proposal / Stage 1 DA (DA-585/2019) was approved by the Sydney Western City Planning Panel. The Concept Proposal / Stage 1 DA consent sets out the future development concept of the site, including the approved land uses, building envelopes, an expanse of public domain and a common basement. The Concept Proposal / Stage 1 DA did not approve any physical works.

Early Works DA DA-906/2019:

Development Application DA-906/2019 was approved by the Sydney Western City Planning Panel on 29 June 2020. The development consent relates to demolition of all structures, select tree removal and bulk earthworks including shoring through the use of piles.

Site Analysis

Site Location and Context

The site is located at 52 Scott Street, Liverpool within the Liverpool City Council Local Government Area (LGA) as illustrated at **Figure 1**. The site is located at the southern fringe of the Liverpool CBD. The site is approximately 300m south west of the Liverpool Railway Station and is also in the vicinity of a number of regionally significant land uses and features including Liverpool Hospital, Westfield Liverpool, Western Sydney University Liverpool Campus, the Georges River and Biggie Park public open space as illustrated at **Figure 1**.

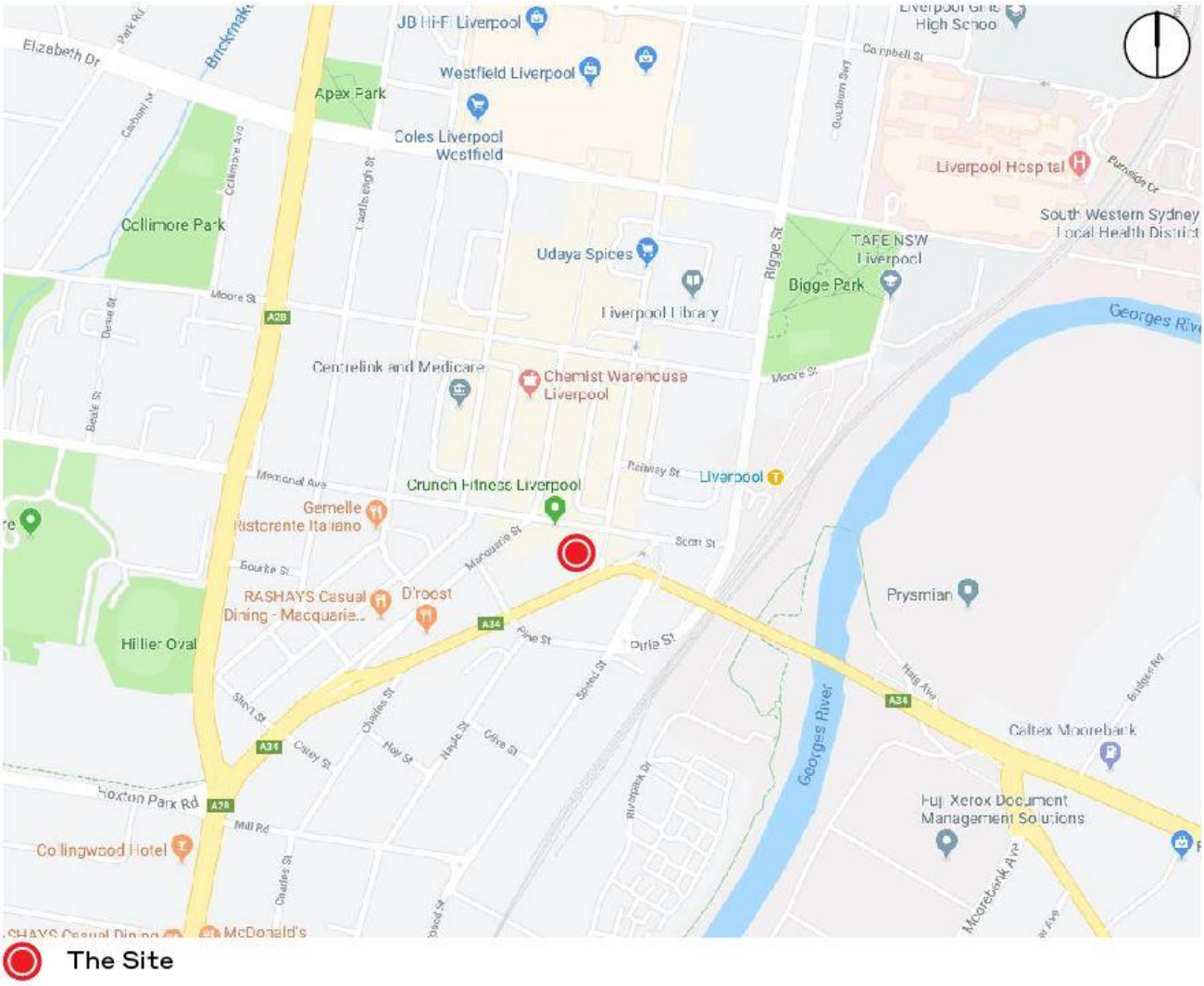

Figure 3 Site Location

Source: Google Maps & Ethos Urban

Compliance Summary

As Registered Certifiers we have reviewed the architectural design documents prepared by FJMT (refer appendix A) for compliance with the current building assessment provisions, i.e. the Building Code of Australia 2019 Amendment 1 (BCA).

This report has been prepared to assess the project against the Building Code of Australia to enable issuance of construction approvals. Further assessment of the design will be undertaken as the design develops to ensure compliance is achieved prior to approval being issued

Deviations from the Deemed-to-Satisfy Provisions

The assessment of the design documentation has revealed that the following areas deviate from the deemed-to-satisfy provisions of the BCA. These items are to be addressed to ensure compliance is achieved, either through design amendment to achieve compliance with the deemed-to-satisfy provisions, or through a performance solution demonstrating compliance with the Performance Requirements of the BCA:

No.	Description	DTS Clause	Performance Requirements
Fire Safety Items			
1	**Fire Resistance Levels** <u>Where the below elements are not addressed through the DTS provisions of the BCA they will form part of the fire engineering strategy for the building</u> ▪ The skylights on Lower Ground Floor and Level 07 are required to achieve an FRL of 120/120/120 ▪ The project team have advised that the FRL's associated with the Class 7b, Class 8, and Class 9b areas will be assessed on a performance basis.	C1.1 Spec. C1.1 C2.7 C2.8 C2.9	CP1 CP2
2	**Slab Edge Junction** ▪ Due to the facade details proposed, the fire wall and floor slabs do not extend to the construction edge of the building. As such, smoke separation is proposed in lieu of fire separation	Spec. C1.1 C2.2	CP1 CP2
3	**Spandrel Concession** ▪ Where the sprinkler system deviates from AS 2118.1-2017, spandrel protection will be required to be provided in accordance with the Deemed-to-Satisfy provisions of the BCA	C2.6	CP2
4	**Fire Separation** ▪ The basement firewalls will have vertical and horizonal elements which deviates from the requirements of C2.7 of the BCA.	C2.7 C2.8 C2.9	CP1 CP2
5	**Protection of Openings**	C3.2 C3.4	CP2

No.	Description	DTS Clause	Performance Requirements
	▪ Openings within 3m of the side and rear boundaries (not the road boundaries) are to be protected in accordance with C3		
6	**Exit travel distances & distance between alternative exits** ▪ Refer to section 8.4 of this report for details on the extended travel distance and distance between alternative exits	D1.4 D1.5	DP4 EP2.2
7	**Dimensions of exits and paths of travel to exits** ▪ Refer to section 8.5 of this report for details on the aggregate egress width shortfalls	D1.6 & *NSW Variation*	DP4, DP6, EP2.2
8	**Travel via fire-isolated exits** ▪ The upper ground scissors stairs discharge into a single passageway and therefore do not provide independent egress via their own passage. ▪ Discharge from the above noted passage passes the entrance to the Customer Service area and as such would require this opening to be protected in accordance with C3.4 of the BCA. ▪ More than 2 doors currently open into the stairs. ▪ The stair above gas meter room and the “smoke lobby” stairs discharge into a covered area which does not meet the criteria outlined in D1.7 of the BCA. ▪ The hydrant pump room located on Basement Level 02 and the Plant Room on Level 12 discharge directly into the fire stairs.	D1.7	DP4 DP5 EP2.2
9	**Ladder Access to Roof** ▪ The roof is over 200 m^2 and is proposed to be accessed via a ladder in lieu of stairs	D1.16	DP4 EP2.2
10	**Egress from early childhood centres** ▪ The childcare centre is proposed to be located on Level 06 and such will not have direct egress to a road or open space	D1.18	DP4 EP2.2
11	**Separation of rising and descending stair flights** ▪ Rising and descending stairs in the library are not separated in accordance with D2.4 and Spec C2.5	Spec. C2.5 D2.4	DP4, EP2.2
12	**Enclosure of space under stairs and ramps**	D2.8	DP5

No.	Description	DTS Clause	Performance Requirements
	▪ The space below the Basement 02 library fire isolated stairs has been proposed to be enclosed which deviates from the DTS provisions of D2.8(a) of the BCA.		
13	**Swinging Doors** ▪ The doorway from the building manager office on the lower ground level leading into the fire isolated passageway does not swing in the direction of egress	D2.20	DP4
14	**Fire hydrants** ▪ Vertical sections of the hydrant ring main will not be in their own fire isolated exit due to the nature of the scissor stairs ▪ The booster assembly will not be in sight of the main entrance as the building has multiple entrances. ▪ The landscaping appears to obstruct the handstand area on Terminus Street required for FRNSW vehicles. ▪ The egress doorway in the Library on the Lower GF obstructs the internal hydrant clearance	E1.3	EP1.3
15	**Sprinkler system** ▪ A combined Hydrant/Sprinkler system has been proposed which prescriptively nominates AS2118.1-1999 however, BCA 2019 Amdt1 requires sprinklers to be installed to the AS2118.1-2017 standard. This technical departure will be addressed on a performance basis	E1.5	EP1.4
16	**Fire control Room** ▪ As the building has multiple entrances the Fire Control Room will not be at the main entrance. ▪ The entrance to the Fire Control Room is via the driveway which has the potential to be blocked and the alternative path is not from a public place. ▪ There is also a change in level more than 300mm.	E1.8	EP1.6 EP2.2
17	**Atrium** ▪ The atrium in the library building is will be assessed on a Performance basis	G3.2 G3.3 G3.4 G3.8 Spec. G3.8	CP1 CP2 DP6 EP1.4 EP2.2 EP4.2
Miscellaneous Items			
18	**Weatherproofing of External Walls**	-	FP1.4

No.	Description	DTS Clause	Performance Requirements
	▪ As there are no deemed to satisfy provisions relating to the weatherproofing of external walls, a performance solution is to be provided by the façade engineer/registered architect demonstrating that the external walls comply with the requirements of Performance Requirement FP1.4.		

The feasibility and any additional requirements that will apply as a result of the performance solution will need to be confirmed by the professional preparing the performance solution. Any performance solution will need to be prepared by a suitably qualified/accredited professional.

Fire Safety Services

The following key fire safety services are required to meet the minimum DTS requirements.

1.	Sprinklers system throughout the building
2.	Fire hydrant system throughout the building
3.	Fire hose reels throughout the building (except to the Class 5 portions)
4.	Zone smoke control system throughout the building
5.	Fire precautions during construction
6.	Air-pressurization throughout the fire isolated stairs throughout the building
7.	Automatic smoke detection and alarm system throughout the building
8.	Automatic smoke exhaust throughout the library
9.	Sound System and Intercom System for Emergency Purposes
10.	Carpark ventilation systems must comply with Clause 5.5 of AS/NZS1668.1-2015 except that fans with metal blades suitable for operation at normal temperature may be used and the electrical power and control cabling need not be fire rated

Refer to part 7 of this report for further details regarding the required services.

The fire engineered solutions relating to EP1.3, EP1.4, EP2.2 will need to be approved after consultation with the NSW Fire Brigade as part of the Construction Certificate process.

2. Introduction

This Regulatory Compliance Report is submitted to Liverpool City Council (Council) on behalf of Built Development Group in support of a Stage 2 Development Application (DA) for Phase A of the Liverpool Civic Place development located at 52 Scott Street, Liverpool.

It follows the approval of a Concept Proposal / Stage 1 DA (DA-585/2019) for the broader Liverpool Civic Place master plan that has determined land uses, building envelopes, public domain and a multi-level common basement across the site. The full Liverpool Civic Place site, subject to the Concept Proposal / Stage 1 DA approval is illustrated at **Figure 1**, however the scope of this Stage 2 DA is limited to Phase A, as illustrated at **Figure 2**.
Phase B and Phase C will be subject to future Stage 2 DA(s).

Figure 2 Liverpool Civic Place Stage 1 site (subject site)

Source: FJMT

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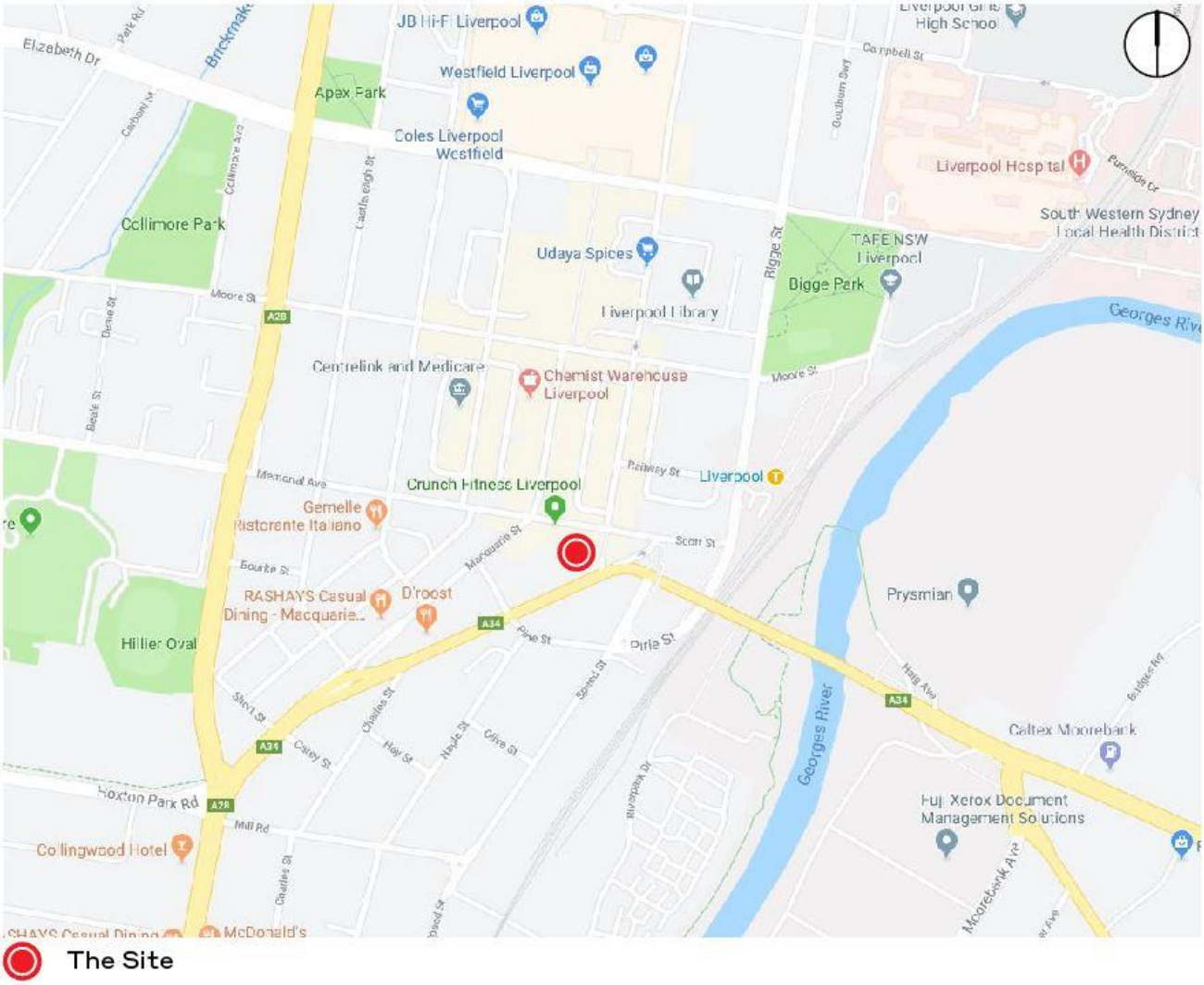


Figure 3 Site Location

Source: Google Maps & Ethos Urban

This report is based upon the review of the design documentation listed in Appendix A of this Report

The report has been prepared for regulatory compliance purposes and is intended as an overview of the relevant provisions of the Building Code of Australia for assistance only. Detailed drawings and associated review will still be required as the final design is developed.

The applicable legislation governing the design of buildings is the Environmental Planning and Assessment Act 1979. This Act requires that all new building works must be designed to comply with the BCA.

The version of the BCA applicable to the development, is version that in place at the time of the application to the Registered Certifier for the Construction Certificate. For the purposes of this Report, BCA 2019 Amendment 1 has been utilised as the version of the BCA applicable at the time of preparation this Report.

3. Compliance with the Building Code of Australia

The Building Code of Australia is a performance-based document, whereby compliance is achieved by complying with the Governing Requirements and the Performance Requirements.

Performance Requirements are satisfied by one of the following:

1) A Performance Solution
2) A Deemed-to-Satisfy Solution
3) A combination of (1) and (2)

4. Documentation of Performance Solutions (Taking Effect on 1 July 2021)

A Performance Solution must demonstrate compliance with all relevant Performance Requirements, or the solution must be at least equivalent to the Deemed-to-Satisfy provisions. Compliance with the Performance Requirements is to be demonstrated through one or a combination of the following:

a) Evidence of suitability in accordance with Part A5 of the BCA that shows the use of a material, product, plumbing and drainage product, form of construction or design meets the relevant Performance Requirements.
b) A Verification Method including the following:
    i. The Verification Methods provided in the NCC.
    ii. Other Verification Methods, accepted by the appropriate authority that show compliance with the relevant Performance Requirements
c) Expert Judgement
d) Comparison with the Deemed-to-Satisfy Provisions

Where a Performance Solution is proposed as the method to achieve compliance, the following steps must be undertaken:

a) Prepare a performance-based design brief in consultation with relevant stakeholders
b) Carry out analysis, using one or more of the assessment methods nominated above, as proposed by the performance-based design brief.
c) Evaluate results from (b) against the acceptance criteria in the performance-based design brief
d) Prepare a final report that includes:
    i. All Performance Requirements and/or Deemed-to-Satisfy Provisions identified as applicable
    ii. Identification of all assessment methods used
    iii. Details of required steps above
    iv. Confirmation that the Performance Requirement has been met; and
    v. Details of conditions or limitations, if an exist, regarding the Performance Solution.

5. Preliminaries

5.1. Building Assessment Data

Summary of Construction Determination:

Part of Project	Council Building	Library	United Building (Library + council)
Classification	5, 7a, 7b*, 8*, 9b	7a, 9b	5, 7a, 7b*, 8*, 9b
Number of Storeys	18	9	18
Rise In Storeys	13	5	13
Type of Construction	A	A	A
Effective Height (m)	48.2 m		

Note:

1. *The effective height of the project includes all stories included in the rise in stories of the project and has been determined based on RL70.500 – RL22.300*
2. *The Council Building and the Library are connected via the basement below and as such have been assessed as a number building in accordance with A7 of the BCA,*
3. *Where the total storage on a level exceeds 10% the floor area it is classified as 7b,*
4. *Where the sprinkler concession noted E1.5 of the BCA is proposed to be utilised in the substation the area is to be considered class 8*

Summary of the floor areas and relevant populations where applicable: -

Part of Project	BCA Classification	Approx. Floor Area (m^2)	Approximate Volume (m^3)	Assumed Population
Basement 05	7a	3,431 m^2	TBA	96
Basement 04	7a	3,491 m^2	TBA	130
Basement 03	7a	3,491 m^2	TBA	124
Basement 02	7a, 7b*, 9b	4,488 m^2	TBA	Car Park: 29 Library: 525
Basement 01	7a, 9b	1,744 m^2 558 m^2	TBA	Car Park: 30 Library: 135
Lower GF	5, 7a 9b	2,568 m^2 499 m^2	TBA	Council Office: 21 Car Park: 9 Library: 87
Upper GF	5, 7a 8* 9b	1,741 m^2 587 m^2	TBA	Council Office: 13 Car Park: 23 Substation: 1 Library: 126
Level 01	5 9b	2,082 m^2 584 m^2	TBA	Council Office: 108 Council Chambers: 300 Library: 140
Level 02	5 9b	1,441 m^2 584 m^2	TBA	Council Office: 122 Library: 123
Level 03	5	2,006 m^2	TBA	174
Level 04	5	2,006 m^2	TBA	140
Level 05	5	1,667 m^2	TBA	140

Part of Project	BCA Classification	Approx. Floor Area (m^2)	Approximate Volume (m^3)	Assumed Population
Level 06	9b	1,696 m^2	TBA	90 Children 21 Staff
Level 07	5	1,641 m^2	TBA	104
Level 08	5	1,667 m^2	TBA	104
Level 09	5	1,421 m^2	TBA	115
Level 10	5	1,421 m^2	TBA	115
Level 11	5	1,421 m^2	TBA	115
Level 12 Plant	5	1,421 m^2	TBA	42
Total		43,656 m^2		3,302 persons

Notes:

1. *The above populations have been based on Liverpool Civil Plaza Population Schedule dated 12 September 2020*

Occupiable Outdoor Areas

BCA 2019 introduced specific provisions regarding occupiable outdoor areas. These provisions outline requirements with regards to fire ratings, egress provisions and coverage from essential services and are contained in this report.

An occupiable outdoor area is defined in the BCA as follows:

'a space on a roof, balcony or similar part of a building:

a) That is open to the sky; and
b) To which access is provided, other than access only for maintenance; and
c) That is not open space or directly connected with open space'

6. Structure

6.1. Structural Provisions (BCA B1):

New structural works are to comply with the applicable requirements of BCA Part B1, including AS/NZS 1170.0-2002, AS/NZS 1170-1-2002, AS/NZS 1170.2-2011 and AS 1170.4-2007.

Depending on the importance level of the building as determined by AS/NZS 1170.0-2002, the non structural elements of the building, including partitions (and non-structural fire walls), ceilings, services and racking/shelving may be required to comply with the seismic restraint requirements of AS 1170.4-2007. Where this is required, certification will be required confirming that the design of the seismic restraints comply with AS 1170.4-2002. This may be provided by a specialist seismic consultant or by the architect and services design engineers.

It is noted that BCA 2019 introduced a new Verification Method, BV2, which is a pathway available to verify compliance with BCA Performance Requirement BP1.1(a)(iii).

Glazing is to comply with AS1288-2006, and AS2047-2014.

Prior to the issue of the Construction Certificate structural certification is required to be provided by a Professional Engineer registered on the National Engineering Register.

7. Fire Protection

7.1. Fire Compartmentation (BCA C1.1)

The BCA stipulates three levels of fire resistant construction, which is based upon the rise in storeys and classification of the building. Each of these types of construction has maximum floor area and volume limitations as per BCA Table C2.2.

Based upon the rise in storeys and use of the building, it is required to be constructed in accordance with the requirements of Type A Construction, in accordance with Table 3 & 3.9 of Specification C1.1 of the Building Code of Australia 2019 Amendment 1.

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

Classification		Type of Construction
		A
5, 9b building	max floor area—	8 000 m^2
	max volume—	48 000 m^3
7b, 8 building	max floor area—	5 000 m^2
	max volume—	30 000 m^3

The building should be constructed generally in accordance with the relevant provisions of Specification C1.1 of the BCA applicable to Type A Construction, please refer to Appendix C which outlines the required fire rating to be achieved by the development. These fire ratings are summarised below: -

Building Element	Type	Class 5, 7a, 9b	Class 7b, 8
External Walls (3 m or more from a Fire Source Feature)	Loading	120/60/30	240/190/90
	Non-Loadbearing	-/-/-	-/-/-

Building Element	Type	Class 5, 7a, 9b	Class 7b, 8
External Columns	Loading	120/-/-	240/-/-
	Non-Loadbearing	-/-/-	-/-/-
Fire Walls	Loading	120/120/120	240/240/240
	Non-Loadbearing	-/120/120	-/240/240
Fire Stair / Shaft Walls	Loading	120/120/120	240/120/120
	Non-Loadbearing	-/120/120	-/120/120
Service Shaft Walls	Loading	120/90/90	240/120/120
	Non-Loadbearing	-/90/90	-/120/120
Floors	Loading	120/120/120	240/240/240
Walls, Beams, Columns Supporting Floors	Loading	120/-/-	240/-/-
	Non-Loadbearing	-/-/-	-/-/-
Walls, Beams, Columns Supporting Roof	Loading	120/-/-	240/-/-
	Non-Loadbearing	-/-/-	-/-/-
Roof	Loading	120/60/30	240/90/60

Where the below elements are not addressed through the DTS provisions of the BCA they will form part of the fire engineering strategy for the building

- Due to the facade details proposed, the fire wall and floor slabs do not extend to the construction edge of the building. As such, smoke separation is proposed in lieu of fire separation
- The basement firewalls will have vertical and horizonal elements which deviates from the requirements of C2.7 of the BCA

7.2. Fire Resistance (BCA C1.1)

The building should be constructed generally in accordance with the relevant provisions of Specification C1.1 of the BCA applicable to Type A Construction, please refer to Appendix C which outlines the required fire rating to be achieved by the development.

Please note that with regards to fire separation, the provisions and required FRL's that apply to the building also apply to an occupiable outdoor space associated with the building.

Where the below elements are not addressed through the DTS provisions of the BCA they will form part of the fire engineering strategy for the building

- The skylights on Lower Ground Floor and Level 07 are required to achieve an FRL of 120/120/120
- The project team have advised that the FRL's associated with the Class 7b, Class 8, and Class 9b areas will be assessed on a performance basis.

7.3. Atrium Provisions (BCA G3)

Part G3 of the BCA contains additional fire and smoke management provisions for buildings containing atriums, but only applies where the atrium connects –

i. More than 2 storeys, or
ii. More than 3 storeys if each storey is protected with a sprinkler system and one of those storeys connected is situated at a level which has direct egress to a road or open space

The BCA deemed to satisfy provisions for atriums are outlined below:

Dimensions of Atrium Well

The atrium well must have a width throughout that is able to contain a cylinder having a horizontal diameter of not less than 6m.

Separation of Atrium by Bounding Construction

The atrium must be separated from the remainder of the building at each storey by bounding walls set back not more than 3.5m from the perimeter of the atrium void.

The boundary walls must be constructed to achieve a 60/60/60 FRL and have any door openings protected with self-closing -/60/30 fire doors; or

Be constructed of fixed toughened safety or wired glass in non-combustible frames with wall wetting sprinklers.

If a bounding wall separating the atrium is set back from the perimeter of the atrium wall, the balustrade around the atrium wall should be constructed of non-combustible material and be imperforate.

Separation at Roof

The roof of the atrium will require either a FRL as prescribed in Table 3 of Specification C1.1, or the roof structure and membrane must be protected by a sprinkler system.

The following fire services must be provided to the entire building in accordance with BCA Specification G3.8:

- Sprinkler system complying with AS2118.1-2017 and BCA Specification G3.8 Part 2;

- Specific smoke control requirements to any mechanical air handling systems serving the atrium, and dedicated smoke exhaust to the atrium itself complying with AS1668.1-2015 and BCA Specification G3.8 Part 3;
- Fire detection and alarm system complying with AS1670.1-2018 and BCA Specification G3.8 Part 4;
- Emergency Warning and Intercom system for emergency purposes complying with AS1670.4-2018 and BCA Specification G3.8 Part 5;
- Where a required path of travel to an exit is within an atrium, a standby power supply system must be provided to operate required fire safety systems in the building (including sprinkler and hydrant pumps, air handling systems, alarms occupant warning and communication systems, etc). The standby power system must comply with BCA Specification G3.8 Part 6;

7.4. Fire Hazard Properties (BCA C1.10 and BCA C1.9)

The fire hazard properties of fixed surface linings and mechanical ductwork will also need to be addressed within the detailed documentation phase pursuant to Specification C1.10 of the Building Code of Australia. The following requirements apply:

Sprinkler Protected Areas

a) Floor Coverings – Critical radiant Flux not less than 1.2 kW/m2
b) Wall and Ceiling Linings – Material Group No. 1, 2, or 3
c) Other Materials – Spread of Flame Index not exceeding 9 and Smoke Developed Index not exceeding 8;
d) Rigid and flexible air handling ductwork must comply with AS4254 parts 1 & 2 2012

Rigid and flexible air handling ductwork must comply with AS4254 Parts 1 & 2 2012.

Floor linings and floor coverings used in lift cars must have a critical radiant flux not less than 2.2, and wall and ceiling linings must be a Material Group No. 1 or 2.

External Wall Cladding

Since the building is of Type A construction, the following components are required to be completely non-combustible:

- External walls, including façade coverings, framing, insulation;
- Flooring and framing of lift pits;
- Non-loadbearing internal walls required to have an FRL;
- All non-loadbearing shafts;
- All loadbearing internal walls and loadbearing fire walls, including those that are part of loadbearing shafts.

Please provide product specifications and test reports to AS 1530.1-1994 for all materials to demonstrate compliance For materials and assemblies that are required to be non-combustible, the material or system must be not deemed combustible when tested in accordance with AS 1530.1-1994.

Combustible Materials

The following materials, though combustible or containing combustible fibres, may be used wherever a non-combustible material is required:

a) Plasterboard.
b) Perforated gypsum lath with a normal paper finish.
c) Fibrous-plaster sheet.

d) Fibre-reinforced cement sheeting.
e) Pre-finished metal sheeting having a combustible surface finish not exceeding 1 mm thickness and where the Spread-of-Flame Index of the product is not greater than 0.
f) Sarking type materials that do not exceed 1mm in thickness and have a Flammability Index not greater than 5.
g) Bonded laminated materials where -
   (i) each laminate is non-combustible; and
   (ii) each adhesive layer does not exceed 1 mm in thickness; and
   (iii) the total thickness of the adhesive layers does not exceed 2 mm; and
   (iv) the Spread-of-Flame Index and the Smoke-Developed Index of the bonded laminated material as a whole does not exceed 0 and 3 respectively.

It is recommended that once material selections are made, copies of the fire test certificates/reports be provided for review and approval.

Any Aluminium Composite Panels must be labelled in accordance with SA TS 5344.
The BCA does nominate that ancillary elements may not be fixed to an external wall that is required to be non-combustible unless they comprise of the following:

a) An ancillary element that is non-combustible.
b) A gutter, downpipe or other plumbing fixture or fitting.
c) A flashing.
d) A grate or grille not more than 2 m² in area associated with a building service.
e) An electrical switch, socket-outlet, cover plate or the like.
f) A light fitting.
g) A required sign.
h) A sign other than one provided under (a) or (g) that—
   i) achieves a group number of 1 or 2; and
   ii) does not extend beyond one storey; and
   iii) does not extend beyond one fire compartment; and
   iv) is separated vertically from other signs permitted under (h) by at least 2 storeys.

7.5. Separation of equipment (C2.12)

Equipment listed below must be separated from the remainder of the building providing a FRL as required by Spec C1.1 but not less than 120/120/120 with a self-closing fire door with an FRL or not less than -/120/30.

a) Lift motors and lift control panels; or
b) Emergency generators used to sustain emergency equipment operating in the emergency mode; or
c) Central smoke control plant; or
d) Boilers; or
e) A battery system installed in that building that has total voltage of 12 volts or more and a storage capacity of 200kWh or more.

7.6. Vertical Separation of openings in external walls (BCA C2.6)

A building of Type A construction must be provided with spandrel separation between openings on different storeys unless the building is protected with a sprinkler system throughout in accordance with Specification E1.5.

For the purposes of C2.6, window or other opening means that part of the external wall of a building that does not have an FRL of 60/60/60 or greater.

Spandrels are required in accordance with BCA Clause C2.6, which stipulates a 900mm high spandrel; with 600mm of this spandrel being above the finished floor level. Alternatively, an 1100mm horizontal slab may be utilized. The spandrel material is required to be non-combustible and to achieve an FRL of 60/60/60.

It is noted that any penetrations in the spandrel construction e.g. for drainage, overflow etc. are to be protected.

Where the sprinkler system deviates from AS 2118.1-2017, spandrel protection will be required to be provided in accordance with the Deemed-to-Satisfy provisions of the BCA. Alternatively, the feasibility and any additional requirements that will apply as a result of the performance solution will need to be confirmed by the professional preparing the performance solution. Any performance solution will need to be prepared by a suitably qualified/accredited professional.

7.7. Protection of Openings in External Walls (BCA C3.2 / C3.4)

The prescriptive provisions of the BCA stipulate that any external opening within 3m of the boundary, within 6m of the far boundary of a road, river, lake or the like that adjoins the allotment, or within 6m of another building on the allotment requires protection by -/60/- fire rated construction, or externally located wall wetting sprinklers.

Fire source feature is defined as;

a) The far boundary of a road, river, lake or the like adjoining an allotment,
b) The side or rear boundary of the allotment,
c) The external wall of another building on the allotment which is not a class 10 building.

Openings within 3m of the side and rear boundaries (not the road boundaries) are to be protected in accordance with C3.4 of the BCA or form part of the fire engineering strategy for the project.

7.8. Protection of Openings fire rated building elements (BCA C3.5 and BCA C3.10)

The prescriptive provisions of the BCA stipulate that openings within building elements required to have an FRL shall be protected as follows:

a) Penetrations through fire rated floors to be protected either by a tested prototype (e.g. fire collar, fire damper, etc) or be installed within a fire rated shaft achieving an FRL the same as the FRL of the floor it is passing through;
b) Any penetration through a wall or room required to have an FRL (e.g. substation, boiler room, apartment separating wall etc) is to be protected either by a tested prototype (e.g. fire collar, fire damper, etc) or be installed within a shaft achieving an FRL the same as the FRL of the floor it is passing through; (or 120/120/120 where it is a room such as a substation);
c) Self-closing -/60/30 fire doors to the doors opening to the fire isolated stairs (note that this also includes the access doors to the condenser units on the plant platforms).

Note that where fire dampers, fire collars, etc are utilised, allowance needs to be made for access hatches to be provided within the walls / ceilings to ensure that maintenance access is provided.

As the design develops, details will need to be included in relation to sealing of penetrations / construction of fire rated shafts.

8. Access and Egress

8.1. Provision for Escape (BCA D1)

The egress provisions for the proposed building are provided by the following:

- External perimeter doorways

- External Doors
- Fire Isolated Stairs

The egress provisions that apply to the building also apply to any occupiable outdoor areas.

Detailing issues that will need to be addressed as the design develops include:

- Door Hardware
- Exit Door Operation
- Stair Construction
- Handrail and Balustrade construction
- Details of Separation of Rising and Descending Stairs
- Discharge from Fire Isolated Exits
- Details of the egress provisions to the Road.
- Door swings

It is noted that the current design indicates the following deviations from the Deemed-to-Satisfy provisions of the BCA:

- The roof is over 200 m^2 and is proposed to be accessed via a ladder in lieu of stairs
- The childcare centre is proposed to be located on Level 06 and such will not have direct egress to a road or open space
- Rising and descending stairs in the library are not separated in accordance with D2.4 and Spec C2.5
- The space below the Basement 02 library fire isolated stairs has been proposed to be enclosed which deviates from the DTS provisions of D2.8(a) of the BCA
- The doorway from the building manager office on the lower ground level leading into the fire isolated passageway does not swing in the direction of egress

In the event that the above departures will be addressed through a performance solution, the feasibility and any additional requirements that will apply as a result of the performance solution will need to be confirmed by the professional preparing the performance solution. Any performance solution will need to be prepared by a suitably qualified/accredited professional.

8.2. Travel via Fire Isolated Exits (BCA D1.7)

The proposed exits are required to be fire isolated.

The BCA requires each fire isolated stairway to provide independent egress from each storey served and discharge directly, or by way of its own fire isolated passageway to:

- A road or open space; or

- To a point in a storey 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 an unimpeded path of travel not more than 20m to a road or open space; or
- A covered area that adjoins a road or open space, is open for at least 1/3 of its perimeter, has an unobstructed clear height throughout of not less than 3m, and provides an unimpeded path of travel to a road or open space of not less than 6m.

Additionally, where the path of travel from the point of discharge requires occupants to pass within 6m of any part of the external wall of the same building (measured horizontally), that external wall must have a 60/60/60 FRL and have any openings protected internally for a distance of 3m above or below the path of travel.

Where the below elements are not addressed through the DTS provisions of the BCA they will form part of the fire engineering strategy for the building

- The upper ground scissors stairs discharge into a single passageway and therefore do not provide independent egress via their own passage.
- Discharge from the above noted passage passes the entrance to the Customer Service area and as such would require this opening to be protected in accordance with C3.4 of the BCA.
- More than 2 doors currently open into the stairs.
- The stair above gas meter room and the “smoke lobby” stairs discharge into a covered area which does not meet the criteria outlined in D1.7 of the BCA.
- The hydrant pump room located on Basement Level 02 and the Plant Room on Level 12 discharge directly into the fire stairs.

8.3. Fire Stair Re-Entry (BCA D2.22)

The doors of a fire isolated exit must not be locked from the inside so as to allow provision for fire stair re-entry within fire isolated exits serving any storey above any effective height of 25m.

The requirement for doors to remain unlocked do not apply to a door fitted with a fail-safe device that automatically unlocks the door upon activation of a fire alarm and –

a) On at least every fourth storey the doors are not able to be locked and a sign is fixed on such doors stating that re-entry is available; or
b) An intercommunication system, or an audible or visual alarm system operated from within the enclosure is provided, and a sign is fixed adjacent to such doors explaining its purpose and method of operation.

8.4. Exit Travel Distances (BCA D1.4)

The travel distances to exits should not exceed:

Class 5 to 9

- no point on the floor must be more than 20m to a single exit or point of choice and where two exits are provided, a maximum of 40m to one of those exits; and
- exits shall be located to not be more than 60m apart and not closer than 9m

Travel distance and distance between alternative exits exceeds the criteria noted above in the below areas

- Basement 05
  - Distance to a point of choice is up to 38m in lieu of 20m
  - Total distance where 2 exits are available is up to 50m in lieu of 40m

- Basement 04
  - Distance to a point of choice is up to 54m in lieu of 20m
  - Total distance where 2 exits are available is up to 69m in lieu of 40m

- Basement 03
  - Distance to a point of choice is up to 54m in lieu of 20m
  - Total distance where 2 exits are available is up to 64m in lieu of 40m

- Basement 02
  - Distance to a point of choice is up to 30m in lieu of 20m
  - Total distance where 2 exits are available is up to 60m in lieu of 40m
  - Distance between alternative exits is up to 101m in lieu of 60m

- Basement 01
  - Distance to a point of choice is up to 30m in lieu of 20m

- Lower Ground Floor
  - Distance between alternative exits is up to 66m in lieu of 60m

- Upper Ground Floor
  - Distance between alternative exits is up to 72m in lieu of 60m

- Level 01
  - Distance to a point of choice is up to 27m in lieu of 20m

- Level 02
  - Distance to a point of choice is up to 27m in lieu of 20m

- Level 07
  - Distance to a point of choice is up to 27m in lieu of 20m
  - Total distance where 2 exits are available is up to 43m in lieu of 40m

- Level 04
  - Distance to a point of choice is up to 36m in lieu of 20m
  - Total distance where 2 exits are available is up to 42m in lieu of 40m

The extended travel distances and distance between the exit stairs will need to be addressed to comply with the requirements of the deemed to satisfy provisions noted above or be assessed as performance solutions by the Fire Safety Engineer using BCA Performance Requirements DP4 & EP2.2

8.5. Dimensions of Exits (BCA D1.6)

Minimum dimensions of 1000mm and 2000mm height to be provided within exits, with the paths of travel should provide a minimum width of 1000mm (note that all maintenance access, cat walks, etc may comply with AS1657-2018 in which case a 600mm clear width is required).

The following table summarises the exit widths required by BCA Clause D1.6:

Storey	Number of people	Exit Width Required	Exit Width Provided
Basement 05	96	2 m	2 m

Storey	Number of people	Exit Width Required	Exit Width Provided
Basement 04	130	2 m	2 m
Basement 03	124	2 m	2 m
Basement 02*	Car Park: 29 Library: 525	Car Park: 2 m Library: 5 m	2 m **3 m**
Basement 01	Car Park: 30 Library: 135	2 m 2 m	2 m 2 m
Lower GF	Council Office: 21 Car Park: 9 Library: 87	2 m 2 m 2 m	3 m 2 m 4 m
Upper GF	Council Office: 13 Car Park+Substation: 24 Library: 126	2 m 2 m 2 m	4 m 4 m 2 m
Level 01	Council Office + Council Chambers: 408 Library: 140	4 m 2 m	**2 m** 2 m
Level 02	Council Office: 122 Library: 123	2 m 2 m	2 m 2 m
Level 03	174	2 m	2 m
Level 04	140	2 m	2 m
Level 05	140	2 m	2 m
Level 06	90 Children 21 Staff	2 m	2 m
Level 07	104	2 m	2 m
Level 08	104	2 m	2 m
Level 09	115	2 m	2 m
Level 10	115	2 m	2 m
Level 11	115	2 m	2 m
Level 12 Plant	42	2 m	2 m

Doorways are permitted to contain a clear opening width of the required width of the exit minus 250mm, with a height of 1980mm as part of egress requirements. Access for persons with disabilities however requires a clear doorway opening width of 850mm (i.e. minimum 920 mm doors).

8.6. Balustrades and Handrails (BCA D2.16 / BCA D2.17 / D2.24)

Generally

Balustrading to a minimum height of 1000mm with a maximum opening of 124mm in any direction should be provided adjacent to balconies, landings, corridors etc where located adjacent to a change in level exceeding 1000mm, or where it is possible to fall through an openable window located more than 4m above the surface beneath.

Where it is possible to fall more than 4m to the surface below, the balustrade shall not contain any horizontal or near horizontal members that facilitate climbing between 150 – 760mm above the floor.

Handrails should generally be provided at a minimum height of 865mm alongside of all ramps and stairs.

The public stairs and ramps located along an accessible path of travel should be designed in accordance with the requirements of AS1428.1 for persons with disabilities. This requires a handrail on each side of the stair and ramp and for the handrail to extend approximately 550mm – 600mm past the last tread / end of ramp.

In addition to the above, handrails are required to both sides of all stairs with a width of 2m or more.

Fire Isolated Stairways

Balustrades in the fire isolated stairways are permitted to contain a 3 rail system, with a bottom rail situated at not more than 150mm above the nosings. The distance between the rails shall not exceed 460mm.

Handrails are required on both sides of all stairways except for fire isolated stairways used only for emergency egress purposes.

Note: in a required exit serving an area required to be accessible, handrails must be designed and constructed to comply with Clause 12 of AS1428.1-2009

Openable Windows in Early Childhood Centres

In Class 9b early childhood centres, where the distance from the floor level to the level below exceeds 2m, window openings shall be provided with protection in accordance with BCA Clause D2.24.

Where the lowest part of the window opening is less than 1.7m above a floor, the window opening must be:

a) Fitted with a device to restrict the opening; or
b) Fitted with a screen with secure fittings

The device or screen required must –

a) Not permit a 125mm sphere to pass through it; and
b) Resist an outward horizontal action of 250N; and
c) Have a child resistant release mechanism if the screen or device is able to be removed, unlocked or overridden

Further review will be undertaken to ensure compliance as the design develops.

8.7. Slip Resistance

The adoption of BCA 2014 introduced a requirement for slip resistance of stairway treads and ramp surfaces. The requirements are as follows:

Table D2.14 SLIP-RESISTANCE CLASSIFICATION

Application	Surface conditions

	Dry	Wet
Ramp steeper than 1:14	P4 or R11	P5 or R12
Ramp steeper than 1:20 but not steeper than 1:14	P3 or R10	P4 or R11
Tread or landing surface	P3 or R10	P4 or R11
Nosing or landing edge strip	P3	P4

9. Services and Equipment

The following section of this report describes the essential fire safety measures and the minimum performance requirements of those measures. A draft essential fire safety schedule can be found in Appendix B.

It is noted that the provisions below also apply to occupiable outdoor areas.

9.1. Fire Hydrants (BCA E1.3)

A system of Fire Hydrants is required to be provided in accordance with BCA Clause E1.3 and AS2419.1-2005.

The building is required to be provided with a booster assembly as part of the fire hydrant requirements. The booster is required to be located attached to the building at the main entry. If remote from the building, the booster is to be located at the main vehicle entry or with sight of the main entry of the building within 20m of a hardstand area.

A fire ring main is required.

The booster has been proposed to be located facing Terminus Street and the pump combined hydrant/sprinkler pump room has been proposed to be located on basement level 2. These locations have revealed the below DTS departures:

- Vertical sections of the hydrant ring main will not be in their own fire isolated exit due to the nature of the scissor stairs
- The booster assembly will not be in sight of the main entrance as the building has multiple entrances.
- The landscaping appears to obstruct the handstand area on Terminus Street required for FRNSW vehicles.
- The egress doorway in the Library on the Lower GF obstructs the internal hydrant clearance

In the event that the above items are not addressed through design this will need to be addressed on a performance basis by the project fire engineering in consultation with FRNSW

9.2. Fire Hose Reels

A Fire Hose Reel System is required to BCA Clause E1.4 and AS2441-2005.

The system is not required to provide coverage to the Class 5 portions of the development.

Fire hose reels are to be located within 4m of exits and provide coverage within the building based on a 36m hose length and 4m of water spray. Where required, additional fire hose reels shall be located internally as required to provide coverage. These hose reels are to be located adjacent to internal hydrants.

Fire hose reel cupboards must not contain any other services such as water meters, etc., and doors to fire hose reel cupboards are not to impede the path of egress unless a performance solution is developed under BCA Performance Requirement EP1.1

Fire Hose reel are not to extend through Fire and Smoke Walls.

9.3. Fire Extinguishers (BCA E1.6)

The provision of portable fire extinguishers is required to BCA Clause E1.6 and AS2444 - 2001.

Table E.6 details when portable fire extinguishers are required:

Occupancy Class	Risk Class (as defined in AS 2444)
General provisions – Class 2 to 9 buildings (except within sole-occupancy units of a Class 9c building)	a) To cover Class AE or E fire risks associated with emergency services switchboards. (Note 1) b) To cover Class F fire risks involving cooking oils and fats in kitchens. c) To cover Class B fire risks in locations where flammable liquids in excess of 50 litres are stored or used (not excluding that held in fuel tanks of vehicles). d) To cover Class A fire risks in normally occupied fire compartments less than 500m^2 not provided with fire hose reels (excluding open deck carparks). e) To cover Class A fire risks in classrooms and associated schools not provided with fire hose reels.

Fire extinguishers are to be located in accordance with AS 2444 - 2001, often collocated with fire hydrants and/or fire hose reels.

9.4. Automatic Sprinkler Protection (BCA E1.5)

Automatic sprinkler protection is required to Specification E1.5 and AS2118.1-2017 to the following areas:

- Throughout the entire building where the effective height exceeds 25m;

The sprinkler system shall be connected to and activate an occupant warning system complying with BCA Specification E2.2a.

A combined Hydrant/Sprinkler system has been proposed which prescriptively nominates AS2118.1-1999 however, BCA 2019 Amdt1 requires sprinklers to be installed to the AS2118.1-2017 standard. This technical departure will be addressed on a performance basis

9.5. Smoke Hazard Management (BCA E2.2)

Smoke hazard management shall be provided throughout the building by means of the following systems:

- Zone Smoke Control in accordance with the requirements of AS/NZS 1668.1-2015 Amendment 1 ;
- Automatic Shutdown of Mechanical Systems in accordance with the requirements of AS/NZS 1668.1-2015 Amendment 1;
- Automatic Smoke Exhaust System to the Library activated by Automatic Smoke Detection & Alarm System in accordance with the requirements of BCA Spec E2.2a and AS1670.1-2018

- Automatic Smoke Detection and Alarm System in accordance with the requirements of BCA Spec E2.2a and AS 1670.1-2018;
- Automatic Pressurisation to Fire Isolated Exits in accordance with the requirements of AS/NZS 1668.1-2015 Amendment 1
- Carpark ventilation systems must comply with Clause 5.5 of AS/NZS1668.1-2015 Amendment 1 except that fans with metal blades suitable for operation at normal temperature may be used and the electrical power and control cabling need not be fire rated

A fire indicator panel is required as part of the detection system. This panel is to be located within 4m of the main entry and should be incorporated within the fire control room. Any variation to the prescriptive provisions will require the consent of the fire brigade and should form part of the fire safety engineering report to verify the performance requirements of the BCA.

In addition to the above, the following additional smoke hazard management provisions are required due to the atrium in the building:

- The operation of mechanical air handling systems serving the atrium must be deigned to operate in accordance with BCA Specification G3.8, Section 3
- The atrium must be provided with a smoke exhaust system in accordance with BCA Specification G3.8, Section 3.4
- A smoke detection system complying with AS1670.1-2018 and BCA Specification G3.8; Section 4 is to be installed throughout the building
- A break glass fire alarm system must be provided at each door to a fire isolated stairways

9.6. Lift Services (BCA E3.4 and BCA E3.6)

The passenger lifts to be installed are to be:-

- Fitted with warning signs, fire service controls in accordance with Clauses E3.3, Figure E3.3, E3.7, E3.9 and E3.10 of the BCA.
- Stretcher facilities are to be provided within the lifts with minimum dimensions of 600m wide, 2000mm long and 1400mm high;
- At least two emergency lifts with stretcher facilities in accordance with Part E3.4 of the BCA. The two emergency lifts shall be located in separate shafts. These lifts are to serve all storeys that are served by passenger lifts.
- Be provided with the following in order to satisfy accessibility requirements:
  - A handrail in accordance with AS1735.12-1999,
  - Minimum internal floor dimensions of 1400 x 1600mm for lifts which travel more than 12m, or 1100 x 1400mm for lifts which travel not more than 12m,
  - Fitted with a series of door opening sensory devices which will detect a 75mm diameter or across the door opening between 50mm and 1550mm above floor level,
  - Have a set of buttons for operating the lift located at heights above level complying with AS1735.12 - 1999
  - For lifts serving more than 2 levels, automatic audible information within the lift car identifying the level each time the car stops, and audible and visual indication at each lift landing to indicate the arrival of a car
- Emergency hands free communication, including a button that alerts a call centre of a problem and a light to signal that the call has been received

9.7. Exit Signs and Emergency Lighting (BCA E4.2 and BCA E4.5)

Emergency Lighting and Exit Signs indicating exit location paths of travel to exits to be provided in accordance with BCA Part E4 and AS/NZS 2293.1-2018, including the potential use of photo luminescent exit signs.

Where exit signs are proposed to be above 2.7m to avoid potential damage by forklifts in the warehousing areas, this will need to be documented as a performance solution by an accredited fire safety engineer. This would need to be assessed to BCA Performance Requirement EP4.2.

9.8. Sound Systems and Intercom Systems for Emergency Purposes (BCA E4.9)

A Sound System and Intercom System is required in accordance with AS1670.4-2018 and BCA Clause E4.9

9.9. Fire Control Centre (BCA E1.8)

As the building has an effective height of greater than 25m, a fire control centre is required. Where the effective height of the building exceeds 50m, the fire control centre must be located within a dedicated room in accordance with the requirements of BCA Specification E1.8

The proposed Fire Control Room currently includes the below DTS departures:

- As the building has multiple entrances the Fire Control Room will not be at the main entrance.
- The entrance to the Fire Control Room is via the driveway which has the potential to be blocked
- The alternative path from the Fire Control Room is not from a public place.
- There is also a change in level more than 300mm

In the event that the above departures will be addressed through a performance solution, the feasibility and any additional requirements that will apply as a result of the performance solution will need to be confirmed by the professional preparing the performance solution. Any performance solution will need to be prepared by a suitably qualified/accredited professional.

9.10. Fire Precautions During Construction (BCA E1.9)

After the building has reached an effective height of 12m, the following fire services are required to be operational:

- Required fire hydrants and fire hose reels on every storey covered by the roof/floor structure (except the 2 uppermost storeys); and
- Booster connections installed.

Due to the height of the building this will need to be considered and implemented during construction.

10. Health and Amenity

10.1. Sanitary Facilities (BCA BCA F2.3)

Separate sanitary facilities are required to be provided for male & female employees at a rate at the following.

The following table summarises the sanitary facilities:

Library (population 1136)

Male	Required	Provided	Female	Required	Provided

Closet Pans	4	10	Closet Pans	10	16
Washbasins	4	9	Washbasins	5	10
Urinals	9	10			

Levels Lower GF, Upper Ground Floor, Level 01 (Council Office), Level 02, Level 03, Level 04, Level 05, & Level 7 (population 855)

Male	Required	Provided	Female	Required	Provided
Closet Pans	22	25	Closet Pans	29	32
Washbasins	15	20	Washbasins	15	20
Urinals	10	12			

Levels 01 – Council Chambers (population 334)*

Male	Required	Provided	Female	Required	Provided
Closet Pans	2	7	Closet Pans	5	10
Washbasins	2	6	Washbasins	3	6
Urinals	4	5			

**Note: the population includes the UG customer service, LG customer service, & council chambers numbers. This is based on the advice that the general public will utilise Level 01's facilities.*

Level 6 – Childcare (population 21 staff)

Male Staff	Required	Provided	Female Staff	Required	Provided
Closet Pans	1	2	Closet Pans	1	3
Washbasins	1	2	Washbasins	1	2
Urinals	1	2			

A Class 9b early childhood centre must be provided with:

1. a kitchen or food preparation area with a kitchen sink, separate hand washing facilities, space for a refrigerator and space for cooking facilities, with:
   a. the facilities protected by a door or gate with child proof latches to prevent unsupervised access to the facilities by children younger than 5 years old; and
   b. the ability to facilitate supervision of children from the facilities if the early childhood centre accommodates children younger than 2 years old; and

2. one bath, shower or shower-bath; and

3. if the centre accommodates children younger than 3 years old
   a. a laundry facility comprising a washtub and space in the same room for a washing machine; and

b. a bench type baby bath, which is within 1 m of the nappy change bench; and
c. a nappy changing bench which:
   i. is within 1 m of separate adult hand washing facilities and bench type baby bath; and
   ii. must be not less than 0.9 m2 in area and at a height of not less than 850 mm, but not more than 900mm above the finished floor level; and
   iii. must have a space not less than 800 mm high, 500 mm wide and 800 mm deep for the storage of steps; and
   iv. is positioned to permit a staff member changing a nappy to have visibility of the play area at all times.

4. Not less than one washbasin must be provided where closet pans or urinals are provided.

Level 08 (Population 104)

Male	Required	Provided	Female	Required	Provided
Closet Pans	3	3	Closet Pans	4	4
Washbasins	2	3	Washbasins	2	3
Urinals	3	**2**			

Level 09, Level 10, Level 11 (Population 115 on each level)

Male	Required	Provided	Female	Required	Provided
Closet Pans	3	3	Closet Pans	4	4
Washbasins	2	3	Washbasins	2	3
Urinals	3	**2**			

Detailed designs will need to be developed as to the layout, dimensions, etc of the sanitary facilities.

Note:
- The Unisex facilities provided for people with disabilities may be counted once for each sex. These facilities are to be provided in accordance with AS1428.1-2009.
- The sanitary facilities are calculated based on the population determined under D1.13 of the BCA

Bathroom Construction

Where bathrooms or rooms containing water closets have the WC within 1200mm of the doorway, the door shall be either sliding, open outwards, or be provided with removable hinges.

10.2. Light and Ventilation (BCA Part F4)

Class 5, 7 & 9

Natural Ventilation is required to be provided to rooms at a rate of 5% of the floor area in openings. Alternatively, mechanical ventilation is required in accordance with AS1668.2-2012

Artificial lighting complying with AS/NZS1680.0-2009 is to be incorporated with the final detailed design to be developed to confirm this.

These provisions also apply to areas considered as occupiable outdoor areas.

10.3. Waterproofing (BCA FP1.4)

Performance Requirement FP1.4 which relates to the prevention of the penetration of water through external walls, must be complied with. It is noted that there are no Deemed-to-Satisfy Provisions for this Performance Requirement in respect of external walls.

As such, a performance solution is to be prepared by a suitably qualified professional that demonstrates that the external walls of the proposed building complies with Performance Requirement FP1.4 which reads as follows:

A roof and external wall (including openings around windows and doors) must prevent the penetration of water that could cause—

a) unhealthy or dangerous conditions, or loss of amenity for occupants; and
b) undue dampness or deterioration of building elements.

External above Ground Membranes

All external above ground areas (roof slabs, balconies etc.) shall be protected by a waterproofing system in accordance with AS4654 Parts 1 and 2 – 2012.

For external balconies the waterproofing membrane must have a vertical upward termination height in accordance with the table below dependant on the wind class of the site. The wind class is determined by the structural engineer.

Wind Class Regions A & B	Wind Class Regions C & D	Ultimate Limit State Wind Speed	Termination Height (mm)
N1	-	34	40
N2	-	40	50
N3	C1	50	70
N4	C2	61	100
N5	C3	74	150
N6	C4	86	180

Wet Areas

Internal wet areas throughout the development (e.g. bathrooms, laundries) shall be waterproofed in accordance with AS3740 - 2010 requirements.

Further review will be undertaken as the design develops with respect to the specification of waterproofing membrane, provision of water-stops at doorways etc.

10.4. Stormwater Drainage

Stormwater drainage systems serving the building are to comply with AS3500.3 - 2018.

The use of a syphonic stormwater drainage system is not covered by Australian Standards and any design incorporating one would need an appropriate performance solution will need to be documented by the hydraulic consultant addressing the system compliance against BCA Performance Requirements FP1.2 & FP1.3.

11. Energy Efficiency

The proposed development shall comply with Part J of the BCA. To achieve compliance, there are two options available:

1. The building can comply with the deemed-to-satisfy provisions of the BCA, relating to the following areas:

- Building Fabric
- Glazing
- Building Sealing
- Air Conditioning & Ventilation Systems
- Artificial Lighting & Power
- Hot Water Supply

2. The building can be verified against a reference building as per Verification Method JV3. This requires that the proposed building and its services be shown to have an annual energy consumption of equal or less than the reference building which has been modelled as per the requirements of Part J of the BCA.

Certification from an appropriately qualified engineer should be provided for either option with a report / computation outlining how compliance is achieved.

Facilities for Energy Monitoring is to be provided to the building in accordance with the requirements of BCA Part J8.

Due to special nature of the building some energy provisions may not be appropriate

12. Access for People with Disabilities

The development is required to comply with the accessibility provisions contained within:

- The Building Code of Australia 2019 Amendment 1;
- Disability (Access to Premises – Buildings) Standards 2010;
- AS1428.1-2009 General Requirements for Access – New Building Work;
- AS1428.4.1 -2009 Tactile Ground Surface Indicators
- AS2890.6-2009 Car Parking for People with Disabilities

Note: With the introduction of the Commonwealth *Disability Discrimination Act (DDA)* in 1992 (enacted in 1993), all organisations have a responsibility to provide equitable and dignified access to goods, services and premises used by occupants. Organisations and individuals since its introduction, are required to work to the objects of the Act which are to eliminate, as far as possible, discrimination against persons on the ground of disability in the **areas of work, accommodation, education, access to premises, clubs and sports, and the provision of goods, facilities, services and land, existing laws and the administration of Commonwealth laws and programs.**

This report assesses against the requirements contained with the Building Code of Australia (and documents referred to therein) and is not considered to be a full assessment against the Disability Discrimination Act.

12.1. General Building Access Requirements (BCA D3.1)

Access for people with disabilities shall be provided to and within the building in accordance with the requirements of Clause D3.2, D3.3 and D3.4 of the BCA 2019 Amdt 1 and AS 1428.1. Parts of the building required to be accessible shall comply with the requirements of:-

- AS1428.1-2009 General Requirements for Access – New Building Work;
- AS1428.4.1 -2009 Tactile Ground Surface Indicators
- AS2890.6-2009 Car Parking for People with Disabilities

Access for persons with a disability is to be provided as follows:

<u>Office/shops (Class 5/Class 6 buildings)</u>

To and within all areas normally used by the occupants

Car parks (Class 7a buildings)

To and within any level containing accessible car parking spaces.

Schools and early childhood centres

To and within all areas normally used by the occupants.

Assembly Buildings

To all required wheelchair seating spaces and to all areas normally used by occupants

12.2. Provision for Access to Buildings

The BCA prescribes access to be provided to and within the building as follows:

- Via the principle pedestrian entry and at least 50% of all other entrances from the allotment boundary
- From designated car parking spaces for the use of occupants with a disability.
- From another accessible building connected by a pedestrian link.
- All areas used by the occupants.

In buildings over 500m^2 in floor area, a non-accessible entrance must not be located more than 50m from an accessible entrance.

Where a pedestrian entry contains multiple doors, the following is required;

- Entrance containing not more than 3 doors, at least one of the doorways must be accessible.
- Where an entrance contains more than 3 doors, not less than 50% of the doorways must be accessible.

A door is considered to be accessible if it is automatic (open and closing) or is more than 850mm in clear opening width and contains the required door circulation space.

12.3. Accessibility within Building (BCA D3.3)

A building required to be accessible is required to be equipped with either a AS 1428.1 compliant lift or AS 1428.1 compliant ramp, (but the maximum vertical rise of a ramp must not exceed 3.6m).

Within the building the following are required;

- Door circulation space as per AS1428.1 Clause 13.3;
- Doorways must have a clear opening of 850mm;
- Passing spaces (1.8m wide passages) must be provided at maximum of 20m intervals
- Within 2.0m of end access ways/corridors, turning areas spaces are required to be provided.
- Carpet pile height of not more than 11mm to an adjacent surface and backing <4mm
- Any glazing capable of being mistaken for a doorway or opening must be clearly marked (or contain chair rail, hand rail or transom as per AS 1288 requirements)

The design would generally comply with the prescriptive provisions of the BCA with additional ongoing review being undertaken as to door widths, circulation, etc. Further details are to be provided or access to these areas is to be assessed by an access consultant.

12.4. Car Parking (BCA D3.5)

Accessible car parking spaces are required to comply with AS 2890.6-2009 at the rate of 1:100

A 'shared zone' of minimum 5400mm x 2400mm is required adjacent to accessible car parking spaces, protected with a bollard.

12.5. Tactile Indicators (BCA D3.8)

Tactile indicators are required to be provided to warn occupants of all stairs (except Fire Isolated stairs) and ramps regardless of public nature or private environment and where an overhead obstruction occurs less than 2.0m above the finished floor level.

12.6. Stairs (BCA D3.3 inter Alia AS1428.1)

Stairs shall be constructed as follows:

a) Where the intersection is at the property boundary, the stair shall be set back by a minimum of 900mm so that the handrail and TGSIs do not protrude into the transverse path of travel.
b) Where the intersection is at an internal corridor, the stair shall be set back one tread width plus 300mm (nominally 700mm as per AS 1428.1-2009 Fig 26(b)), so the handrails do not protrude into transverse path of travel.
c) Stairs shall have opaque risers.
d) Stair nosing shall not project beyond the face of the riser and the riser may be vertical or have a splay backwards up to a maximum 25mm.
e) Stair nosing profiles shall;
   - Have a sharp intersection;
   - Be rounded up to 5mm radius; or
   - Be chamfered up to 5mm x 5mm
f) All stairs, including fire isolated stairs shall, at the nosing of each tread have a strip not less than 50mm and not more than 75mm deep across the full width of the path of travel. The strip may be set back a maximum of 15mm from the front of the nosing. The strip shall have a minimum luminance contrast of 30% to the background. Where the luminous contrasting strip is affixed to the surface of the tread, any change in level shall not exceed a difference of 5mm.

12.7. Accessible Sanitary Facilities (BCA F2.4)

Unisex Accessible Sanitary Facilities

An accessible unisex sanitary facility must be located so that it can be entered without crossing an area reserved for one sex only and provided in accordance with AS 1428.1-2009 and must contain a closet pan, washbasin, shelf or bench top and adequate means of disposal of sanitary products and as per following.

Building Type	Minimum accessible unisex sanitary compartments to be provided
Office, assembly building	a) 1 on every storey containing sanitary compartments; and b) Where a storey has more than 1 bank of sanitary compartments containing male and female sanitary compartments, at not less than 50% of those banks.

Ambulant Facilities

At each bank of toilets where there is one or more toilets in addition to an accessible unisex sanitary compartment, a sanitary compartment suitable for a person with an ambulant disability in accordance with AS 1428.1-2009 must be provided for use by males and females.

Where male sanitary facilities are provided at a separate location to female sanitary facilities, accessible unisex sanitary facilities are only required at one of those locations.

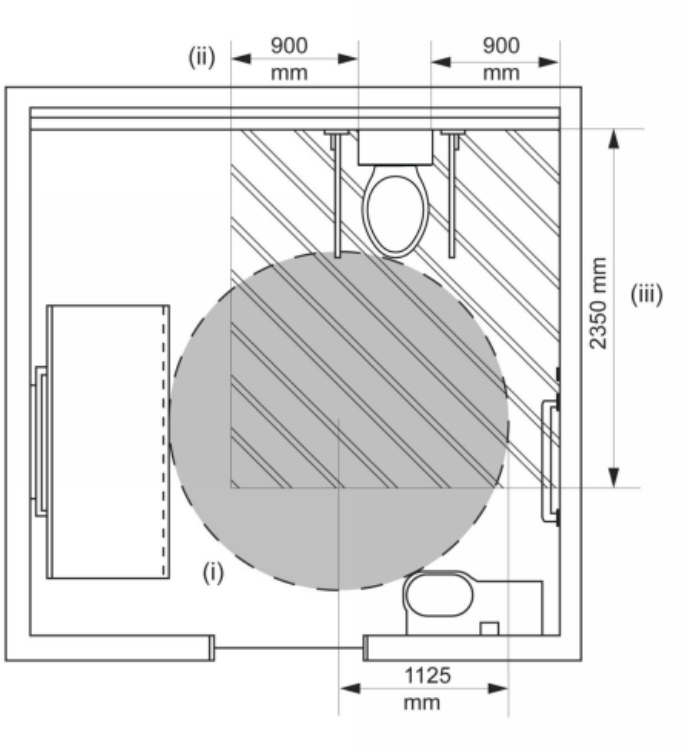
An accessible unisex sanitary compartment or an accessible unisex shower need not be provided on a storey or level that is not provided with a passenger lift or ramp complying with AS 1428.1-2009

12.8. Accessible adult change facility (F2.9)

It is noted that an accessible adult change facility is not required for this building classifications. However, the design documentation indicates that an adult change facility is proposed to be provided Basement Level 02

General requirements for the accessible adult change facility include:

a) All required equipment and fixtures to be contained within the same room
b) If it is to be a unisex facility, it must be located so that it can be entered without crossing an area reserved for one sex only.
c) Room height of 2.4m minimum
d) A hoist
e) Toilet pan, seat, backrest, grab rails
f) Washbasins and tap
g) Fixture and fittings
h) Change table
i) Changing rails
j) Automated entrance door
k) Signage
l) Operating instructions for hoist and change table
m) Circulation spaces



12.9. Signage (BCA D3.6)

As part of the detailed design package, specifications will need to be developed indicating:

- Sanitary Facility Identification Signs (note that they are to comply with BCA Specification D3.6 and include the use of Braille, Tactile, etc and be placed on the wall on the latch side of the facility);
- Directional / Way Finding signs to the Lifts, Sanitary Facilities, etc;
- Hearing Augmentation System;
- Identify each door required by BCA Clause E4.5 to be provided with an exit sign, stating ‘EXIT’ and ‘Level” number
- Braille and tactile signs must be illuminated to ensure *luminance contrast* requirements are met at all times during which the sign is required to be read.

12.10. Lifts (BCA E3.6)

Lifts compliant to BCA E3.6 and BCA E3.7 must be provided, where required to be provided, with a minimum size of 1400 x 1600mm or 1100mm x 1400mm (whichever is appropriate) in size – with appropriate handrails and auditory commands.

13. Appendix A - Reference Documentation

The following documentation was used in the assessment and preparation of this report:

Drawing No.	Title	Issue	Date	Revision
SD-AR-20B5	GA FLOOR PLANS Basement 05	Issued for consultants reports	28/08/2020	E
SD-AR-20B4	GA FLOOR PLANS Basement 04	Issued for consultants reports	28/08/2020	E
SD-AR-20B3	GA FLOOR PLANS Basement 03	Issued for consultants reports	28/08/2020	E
SD-AR-20B2	GA FLOOR PLANS Basement 02	Issued for consultants reports	28/08/2020	E
SD-AR-20B1	GA FLOOR PLANS Basement 01	Issued for consultants reports	28/08/2020	E
SD-AR-20LG	GA FLOOR PLANS Lower Ground Floor Plan	Issued for consultants reports	28/08/2020	E
SD-AR-20UG	GA FLOOR PLANS Upper Ground Floor Plan	Issued for consultants reports	28/08/2020	E
SD-AR-2001	GA FLOOR PLANS Level 01 Plan	Issued for consultants reports	28/08/2020	E
SD-AR-2002	GA FLOOR PLANS Level 02 Plan	Issued for consultants reports	28/08/2020	E
SD-AR-2003	GA FLOOR PLANS Level 03 Plan	Issued for consultants reports	28/08/2020	E
SD-AR-2004	GA FLOOR PLANS Level 04 Plan Terrace	Issued for consultants reports	28/08/2020	E
SD-AR-2005	GA FLOOR PLANS Level 05 Plan	Issued for consultants reports	28/08/2020	E
SD-AR-2006	GA FLOOR PLANS Level 06 Plan Childcare	Issued for consultants reports	28/08/2020	E
SD-AR-2007	GA FLOOR PLANS Level 07 Plan Executive Floor Level 08 Plan (without terrace)	Issued for consultants reports	28/08/2020	E

Drawing No.	Title	Issue	Date	Revision
SD-AR-2008	GA FLOOR PLANS Level 09-11 Typical Tower	Issued for consultants reports	28/08/2020	E
SD-AR-2012	GA FLOOR PLANS Level 12 Plan Roof Plant	Issued for consultants reports	28/08/2020	E
SD-AR-2014	GA FLOOR PLANS Roof Plan	Issued for consultants reports	28/08/2020	E
SD-AR-3000	GA ELEVATIONS North Elevation	Issued for consultants reports	28/08/2020	E
SD-AR-3001	GA ELEVATIONS North Elevation (without Library)	Issued for consultants reports	28/08/2020	E
SD-AR-3002	GA ELEVATIONS East Elevation	Issued for consultants reports	28/08/2020	E
SD-AR-3003	GA ELEVATIONS West Elevation	Issued for consultants reports	28/08/2020	E
SD-AR-3004	GA ELEVATIONS South Elevation (Terminus Street)	Issued for consultants reports	28/08/2020	E
SD-AR-4001	GA SECTIONS Section 1 - Library and Civic Plaza	Issued for consultants reports	28/08/2020	E
SD-AR-4002	GA SECTIONS Section 2 – Tower and Pocket Park	Issued for consultants reports	28/08/2020	E
SD-AR-4003	GA SECTIONS Section 3 – Tower and Library	Issued for consultants reports	28/08/2020	E

14. Appendix B - Draft Fire Safety Schedule

	Essential Fire Safety Measures	Standard of Performance
1.	Access Panels, Doors and Hoppers	▪ BCA 2019 Amendment 1 Clause C3.13
2.	Automatic Fail Safe Devices	▪ BCA 2019 Amendment 1 Clause D2.19 & D2.21
3.	Automatic Smoke Detection and Alarm System	▪ Clause 3 or 4 or 5 BCA 2019 Amendment 1 Spec. E2.2a ▪ AS 1670.1 – 2018 ▪ AS/NZS 1668.1 – 2015
4.	Automatic Fire Suppression System	▪ BCA 2019 Amendment 1 Spec. E1.5 ▪ AS 2118.1 – 2017 Amdt 1 ▪ AS 2118.6 – 2012 (Combined sprinkler & hydrant) ▪ Fire Engineered Performance Solution
5.	Building Occupant Warning System activated by the Sprinkler System	▪ BCA 2019 Amendment 1 Spec. E1.5 & Specification E2.2a Clause 7
6.	Emergency Lifts	▪ BCA 2019 Amendment 1 Clause E3.4
7.	Emergency Lighting	▪ BCA 2019 Amendment 1 Clause E4.2, E4.4 ▪ AS/NZS 2293.1 – 2018
8.	EWIS	▪ BCA 2019 Amendment 1 Clause E4.9 ▪ AS 1670.4 – 2018
9.	Emergency Evacuation Plan	▪ AS 3745 – 2002
10.	Exit Signs	▪ BCA 2019 Amendment 1 Clauses E4.5, E4.6 & E4.8 ▪ AS/NZS 2293.1 – 2018
11.	Fire Control Rooms	▪ BCA 2019 Amendment 1 Spec. E1.8 ▪ Fire Engineered Performance Solution
12.	Fire Blankets	▪ BCA 2019 Amendment 1 Clause E1.6 ▪ AS 2444 – 2001
13.	Fire Dampers	▪ BCA 2019 Amendment 1 Clause C2.12, C3.15, Spec C2.5, D1.7, E2.2, E2.3, F4.12, Spec E2.2, E2.3, Spec E2.2b, Spec G3.8 ▪ AS 1668.1 – 2015
14.	Fire Doors	▪ BCA 2019 Amendment 1 Clause C3.2, C3.4, & C3.8 ▪ AS 1905.1 – 2015
15.	Fire Hose Reels	▪ BCA 2019 Amendment 1 Clause E1.4 ▪ AS 2441 – 2005 Amdt 1
16.	Fire Hydrant System	▪ BCA 2019 Amendment 1 Clause C2.12, E1.3 ▪ AS 2419.1 – 2005 Amdt 1 ▪ Fire Engineered Performance Solution
17.	Fire Seals	▪ BCA 2019 Amendment 1 Clause C3.15, C3.16, Spec C3.15, Spec D1.12 ▪ AS 1530.4 –2014
18.	Fire Shutters	▪ BCA 2019 Amendment 1 Spec. C3.4 ▪ AS 1905.2 – 2005
19.	Fire Windows	▪ BCA 2019 Amendment 1 Spec. C3.4
20.	Lightweight Construction	▪ BCA 2019 Amendment 1 Clause C1.8, Spec C1.8
21.	Mechanical Air Handling System	▪ BCA 2019 Amendment 1 Clause E2.2

	Essential Fire Safety Measures	Standard of Performance
		▪ AS/NZS 1668.1 – 2015 & AS 1668.2 – 2012
22.	Paths of Travel	▪ EP&A Reg 2000 Clause 186 ▪ Fire Engineered Performance Solution
23.	Portable Fire Extinguishers	▪ BCA 2019 Amendment 1 Clause E1.6 ▪ AS 2444 – 2001
24.	Pressurising Systems	▪ BCA 2019 Amendment 1 Clause E2.2 ▪ AS/NZS 1668.1 – 2015
25.	Required Exit Doors (power operated)	▪ BCA 2019 Amendment 1 Clause D2.19 (b)(iv)
26.	Smoke Hazard Management System	▪ BCA 2019 Amendment 1 Part E2 ▪ AS/NZS 1668.1 – 2015
27.	Smoke Dampers	▪ BCA 2019 Amendment 1 Clause Spec E2.2, E2.3, Spec E2.2b, Spec G3.8 ▪ AS/NZS 1668.1 – 2015
28.	Smoke Doors	▪ BCA 2019 Amendment 1 Spec. C3.4
29.	Stand-by Power System	▪ BCA 2019 Amendment 1 Clause G3.8
30.	Wall-Wetting Sprinklers	▪ BCA 2019 Amendment 1 Clause C3.4
31.	Warning and Operational Signs	▪ AS 1905.1 –2015, BCA Clause D2.23, E3.3

15. Appendix C - Fire Resistance Levels

The table below represents the Fire resistance levels required in accordance with BCA 2019 Amendment 1:

Table 3 TYPE A CONSTRUCTION: FRL OF BUILDING ELEMENTS	**Class of building — FRL: (in minutes)** *Structural adequacy/Integrity/Insulation*			
	2, 3 or 4 part	**5, 7a or 9**	**6**	**7b or 8**
EXTERNAL WALL (including any column and other building element incorporated within it) or other external building element, where the distance from any fire-source feature to which it is exposed is -				
For *loadbearing* parts-				
less than 1.5 m	90/ 90/ 90	120/120/120	180/180/180	240/240/240
1.5 to less than 3 m	90/ 60/ 60	120/ 90/ 90	180/180/120	240/240/180
3 m or more	90/ 60/ 30	120/ 60/ 30	180/120/ 90	240/180/ 90
For non-*loadbearing* parts -				
less than 1.5 m	–/ 90/ 90	–/120/120	–/180/180	–/240/240
1.5 to less than 3 m	–/ 60/ 60	–/ 90/ 90	–/180/120	–/240/180
3 m or more	–/–/–	–/–/–	–/–/–	–/–/–
EXTERNAL COLUMN not incorporated in an *external wall*, where the distance from any *fire-source feature* to which it is exposed is -				
less than 3 m	90/–/–	120/–/–	180/–/–	240/–/–
3 m or more	–/–/–	–/–/–	–/–/–	–/–/–
COMMON WALLS and FIRE WALLS	90/ 90/ 90	120/120/120	180/180/180	240/240/240
INTERNAL WALLS				
Fire-resisting lift and stair *shafts*				
Loadbearing	90/ 90/ 90	120/120/120	180/120/120	240/120/120
Non-*loadbearing*	–/ 90/ 90	–/120/120	–/120/120	–/120/120
Bounding *public corridors*, public lobbies and the like				
Loadbearing	90/ 90/ 90	120/–/–	180/–/–	240/–/–
Non-*loadbearing*	–/ 60/ 60	–/–/–	–/–/–	–/–/–
Between or bounding *sole-occupancy units*				
Loadbearing	90/ 90/ 90	120/–/–	180/–/–	240/–/–
Non-*loadbearing*	–/ 60/ 60	–/–/–	–/–/–	–/–/–
Ventilating, pipe, garbage, and like *shafts* not used for the discharge of hot products of combustion				
Loadbearing	90/ 90/ 90	120/ 90/ 90	180/120/120	240/120/120
Non-*loadbearing*	–/ 90/ 90	–/ 90/ 90	–/120/120	–/120/120
OTHER LOADBEARING INTERNAL WALLS, INTERNAL BEAMS, TRUSSES and COLUMNS	90/–/–	120/–/–	180/–/–	240/–/–
FLOORS	90/ 90/ 90	120/120/120	180/180/180	240/240/240
ROOFS	90/ 60/ 30	120/ 60/ 30	180/ 60/ 30	240/ 90/ 60

Table 3.9 REQUIREMENTS FOR CARPARKS			FRL (not less than) Structural adequacy/Integrity/Insulation ESA/M (not greater than)
Wall			
(a)	*external wall*		
	(i)	less than 3 m from a *fire-source feature* to which it is exposed:	
		Loadbearing	60/60/60
		Non-*loadbearing*	–/60/60
	(ii)	3 m or more from a *fire-source feature* to which it is exposed	–/–/–
(b)	*internal wall*		
	(i)	*loadbearing*, other than one supporting only the roof (not used for carparking)	60/–/–
	(ii)	supporting only the roof (not used for carparking)	–/–/–
	(iii)	non-*loadbearing*	–/–/–
(c)	*fire wall*		
	(i)	from the direction used as a *carpark*	60/60/60
	(ii)	from the direction not used as a *carpark*	as *required* by Table 3
Column			
(a)	supporting only the roof (not used for carparking) and 3 m or more from a *fire-source feature* to which it is exposed		–/–/–
(b)	steel column, other than one covered by (a) and one that does not support a part of a building that is not used as a *carpark*		60/–/– or 26 m^2/tonne
(c)	any other column not covered by (a) or (b)		60/–/–
Beam			
(a)	steel floor beam in continuous contact with a concrete floor slab		60/–/– or 30 m^2/tonne
(b)	any other beam		60/–/–
Fire-resisting lift and stair shaft (within the *carpark* only)			60/60/60
Floor slab and vehicle ramp			60/60/60
Roof (not used for carparking)			–/–/–
Notes:	1.	ESA/M means the ratio of exposed surface area to mass per unit length.	
	2.	Refer to Specification E1.5 for special requirements for a sprinkler system in a *carpark* complying with Table 3.9 and located within a multi-classified building.	