MBC GROUP

Building Code of Australia 2019 Amendment 1

BCA ASSESSMENT REPORT

BCA Report for proposed industrial buildings
Kemps Creek, Kemps Creek

Prepared for: Frasers Property Issue date: 15 Nov 2021

Contents

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Authorisation

Revision	Comment / Reason for Issue	Issue Date	Prepared by	Reviewed by
1	SSDA	15.11.2021		
			Julian Revell-Reade	Joel Lewis
				BPB #2335

Revision History

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1	SSDA	15.11.2021	Julian Revell-Reade

Commercial in Confidence

1 Executive Summary

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

1.1 Performance Solutions - Fire & Life Safety

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

DTS Clause	Description of Non-Compliance	Performance Requirement
C2.4	Requirements for open spaces and vehicular access Access for emergency vehicles is not provided to the following areas: Lot 1 ▪ Greater than 18m to South elevation Lot 2 ▪ Greater than 18m to all elevations Lot 3 ▪ Greater than 18m to the East & South elevations ▪ Not provided to the North & West elevation Lot 4 ▪ Greater than 18m to the North, East & South elevations Boom gates are located within the perimeter vehicle access. Should vehicular access not be provided in accordance with the deemed-to-satisfy provisions of the BCA, the vehicular access will be required to be addressed against the Performance Requirements of the BCA and in consultation with Fire and Rescue NSW.	CP9

D1.4 & D1.5	Extended Travel Distances The travel distance to and distance between exits have been assessed to exceed the deemed-to-satisfy provisions of the BCA in the following areas: Lot 2 ▪ 90m to an exit in lieu of 40m to the warehouse ▪ 160m between exits in lieu of 60m to the warehouse Lot 3 ▪ 50m to an exit in lieu of 40m to the warehouse ▪ 90m between exits in lieu of 60m to the warehouse Lot 4 ▪ 65m to an exit in lieu of 40m to the warehouse ▪ 135m between exits in lieu of 60m to the warehouse Should egress distances not be provided in accordance with the deemed-to-satisfy provisions of the BCA, the egress distances will be required to be addressed against the Performance Requirements of the BCA and in consultation with Fire and Rescue NSW.	DP4, EP2.2
E1.3 & AS2419.1-2005	Fire Hydrant Booster Should the fire hydrant booster assembly not be located within site of the main entry of each building, the hydrant booster location will be required to be addressed against the Performance Requirements of the BCA and in consultation with Fire and Rescue NSW	EP1.3
E1.3 & AS2419.1-2005	External Hydrant System Should hydrants be located under awnings to each building, the hydrant locations will be required to be addressed against the Performance Requirements of the BCA and in consultation with Fire and Rescue NSW.	EP1.3

E1.4 & AS2441-2005	Fire Hose Reels Should 50m fire hose reels be proposed to be utilised to the warehouse areas in lieu of 36m fire hose reels, the hose reels will be required to be addressed against the Performance Requirements of the BCA and in consultation with Fire and Rescue NSW.	EP1.1
E1.5 & AS2118.1-2017	Sprinkler Booster Location Should sprinkler booster and suction valves not be located at the main entry to the site and adjacent to the fire hydrant booster, the sprinkler booster and suction valve location will be required to be addressed against the Performance Requirements of the BCA and in consultation with Fire and Rescue NSW.	EP1.4
E2.2b	Smoke Hazard Management Should the smoke hazard management system not be provided to the buildings in accordance with the deemed-to-satisfy provisions of the BCA, it will be required to be addressed against the Performance Requirements of the BCA and in consultation with Fire and Rescue NSW.	EP2.2
E4.5 & AS2293.1-2005	Exit Signs Should illuminated exit signs be proposed to be mounted greater than 2.7m from the FFL, the signs will be required to be addressed against the Performance Requirements of the BCA and in consultation with Fire and Rescue NSW.	EP4.2

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

1.2 Performance Solutions - Accessibility

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

DTS Clause	Description of Non-Compliance	Performance Requirement
	Refer to report prepared by a suitably qualified access consultant	

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

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

Assessed by,

Julian Revell-Reade

2 Introduction

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

2.1 Purpose

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

2.2 Methodology

The methodology applied in undertaking this assessment has included: -

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

2.3 Limitations

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

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

This report does not include, or imply compliance with:

- the National Construction Code – Plumbing Code of Australia Volume 3
- the Disability Discrimination Act 1992 including the Disability ((Access to Premises – Buildings) Standards 2010 – unless specifically referred to)
- The deemed to satisfy provisions of Part D3 and F2.4 of BCA 2019 Amendment 1
- The deemed to satisfy provisions of Section J of BCA 2019 Amendment 1
- Demolition Standards not referred to by the BCA;
- Work Healthy and Safety Act 2011;
- An out of cycle change to the Building Code of Australia.

- Requirements of other Regulatory Authorities including, but not limited to, Telstra, Telecommunications Supply Authority, Water Supply Authority, Electricity Supply Authority, Work Cover, Roads and Maritime Services (RMS), Roads and Transport Authority, Local Council, ARTC, Department of Planning and the like; and
- Conditions of Development Consent issued by the Local Consent Authority.

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

2.4 Current Legislation

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

Applicable Building Code of Australia (BCA)

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

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

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

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

Legislative Provisions for the Upgrade of Existing Buildings

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

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

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

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

3 Development Description & Assessment Information

3.1 Proposed Development

The proposed development comprises of the construction of four warehouses, including ancillary offices to those warehouses.

3.2 Location and Description

The site is located at 657-769 Mamre Rd, Kemps Creek, 2178 NSW.

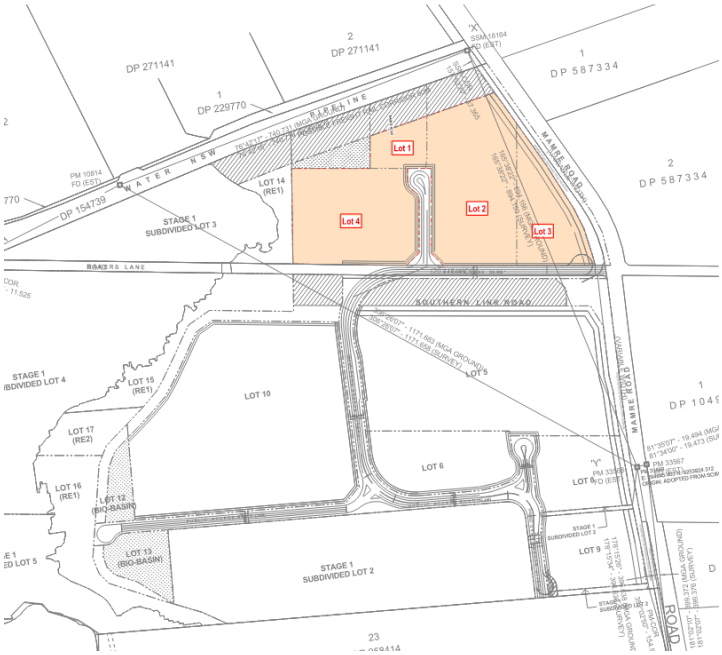

Figure 1 – 657-769 Mamre Road, Kemps Creek

3.3 BCA Classification (Clause A3.2)

The proposed development shall contain the following classifications: -

- Class 5: being an office building or part
- Class 7b: being a warehouse building or part

3.4 Rise in Storeys (Clause C1.2)

The proposed development has been assessed to have the following rise in stories:

- Lot 1 - *rise in storeys* of 1.
- Lot 2 - *rise in storeys* of 1.
- Lot 3 - *rise in storeys* of 1.
- Lot 4 - *rise in storeys* of 2.

3.5 Effective Height (Clause A1.1)

The proposed development has been assessed to have the following *effective height:*

- Lot 1 – *effective height* is not applicable
- Lot 2 - *effective height* is not applicable
- Lot 3 - *effective height* is not applicable
- Lot 4 - *effective height* of 4m, this is measured from ground floor RL38.60 to first floor RL42.60

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

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

It is noted that Lot 1 can be of Type B construction. The building has been assessed as Type C for the purposes of this report.

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

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

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

3.8 Building Data Summary

Part of Development	Use	Class	Floor Area (approx.) m^2	Population (using D1.13)
Lot 1				
Warehouse	Warehouse	7b	3,507	TBA
Office	Office	5	150	TBA
Lot 2				
Warehouse	Warehouse	7b	27,814	TBA
Office	Office	5	1,406	TBA

Lot 3				
Warehouse	Warehouse	7b	10,145	TBA
Office	Office	5	506	TBA
Lot 4				
Warehouse	Warehouse	7b	25,816	TBA
Office	Office	5	1,300	TBA

Notes:

- The Carpark areas have been considered ancillary to the use for the purposes of population numbers

Summary of Construction and Building				
	Lot 1	Lot 2	Lot 3	Lot 4
Use(s)	Warehouse / Office	Warehouse / Office	Warehouse / Office	Warehouse / Office
Classification(s)	5 & 7b	5 & 7b	5 & 7b	75 & 7b
Number of Storeys contained	1	1	1	2
Rise in Storeys	1	1	1	2
Type of Construction	C	C	C	C
Effective Height	<12m	<12m	<12m	<12m

4 Proposed Fire Safety Schedule

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

Fire Safety Schedule

Clause 168 of the Environmental Planning and Assessment Regulation 2000

Premises: TBA
Address: Lot 1-4, 657-769 Mamre Rd, Kemps Creek, 2178 NSW

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

SCHEDULE – Base Building BCA Year 2019-Amendment 1
Type of Construction = C
Effective height = <12m

	Measure	Status	Existing Performance Standard
1.	Automatic fire suppression system	N	BCA 2019 Amd. 1 Clause E1.5, Spec. E1.5, Spec E1.5a FPAA101D, FPAA101H AS 2118.1-2017, AS 2118.4-2012, AS 2118.6-2012 (Combined System)
2.	Emergency lighting	N	BCA 2019 Amd. 1 Clause E4.2, E4.3 E4.4, AS 2293.1-2018
3.	Exit and directional signage	N	BCA 2019 Amd. 1 Clause E4.5, NSW E4.6 & E4.8, Spec E4.8 AS 2293.1-2018
4.	Fire alarm monitoring system	N	BCA 2019 Amd. 1 Spec E2.2a Clause 8, AS 1670.3-2018

	Measure	Status	Existing Performance Standard
5.	Fire hose reel systems	N	BCA 2019 Amd. 1 Clause E1.4, AS 2441-2005
6.	Fire hydrant systems	N	BCA 2019 Amd. 1 Clause E1.3, AS 2419.1-2005, AS 2118.6-2012 (Combined System)
7.	Mechanical air handling systems		BCA 2019 Amd. 1 Clause C2.3, E2.2, Spec. E1.8, Spec E2.2a, Spec G3.8, AS/NZS 1668.1-2015, AS 1668.2-2012
8.	Occupant warning system	N	BCA 2019 Amd. 1 Clause E2.2, Spec. E2.2a Clause 7, AS 1670.1-2018
9.	Path of travel for stairways, passageway and ramps	N	Clauses 183-186 of the Environmental Planning and Assessment Regulation 2000
10.	Perimeter vehicle access for emergency vehicles	N	BCA 2019 Amd. 1 Clause C2.4
11.	Portable fire extinguishers	N	BCA 2019 Amd. 1 Clause E1.6, AS 2444-2001
12.	Performance Solution Report XXXXX, prepared by XXXX dated XXXX	N	

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

5 BCA Assessment – Clause by Clause

BCA Clause	Compliance Provisions	Status	Assessment commentary
Part B - Structural			
B1 – Structural Provisions			
B1.0	Deemed-to-Satisfy Provisions	Compliance Readily Achievable	Part B1 is applicable
B1.1	Resistance to Action	Compliance Readily Achievable	The resistance of a building or structure shall be greater than the most critical action effect determined by B1.2 of the BCA, AS/NZS 1170.0-2002 and B1.4 of the BCA.
B1.2	Determination of individual Actions	Compliance Readily Achievable	The structural design of the building is required to be determined in accordance with the varying “actions” considerations contained within this clause (i.e. permanent actions, imposed actions, wind / snow / earthquake actions).

BCA Clause	Compliance Provisions	Status	Assessment commentary
B1.4	Determination of Structural resistance of materials and form of construction	Compliance Readily Achievable	The structural resistance of materials and forms of construction shall be determined in accordance with the following: (i) Masonry - AS3700-2018 (ii) Concrete construction - AS3600-2018 (iii) Footings and slabs – AS2870-2011 (iv) Steel construction - AS4100-1998 or AS/NZS 4600-2005 (v) Termite Risk Management - AS3660.1-2014 (vi) Piling - AS2159-2009 (vii) Glazed assemblies - AS2047-2014-amendments 1 & 2 (external), and/or AS1288-2006 (internal)
B1.5	Structural software	Compliance Readily Achievable	Structural software not permitted as buildings size exceeds limits permitted
B1.6	Construction of buildings in flood hazard areas	Compliance Readily Achievable	Not within a flood zone
Specifications			
Part C – Fire Resistance			
C1 - Fire Resistance			
C1.1	Type of Construction Required	Noted	Type C for all Warehouses

BCA Clause	Compliance Provisions	Status	Assessment commentary
			It is noted that warehouse 1 may be of type B construction, it has been considered type C for the purposes of this report.
C1.2	Calculation of Rise in storeys	Compliance Readily Achievable	▪ Lot 1 - rise in storeys of 1. ▪ Lot 2 - rise in storeys of 1. ▪ Lot 3 - rise in storeys of 1. ▪ Lot 4 - rise in storeys of 2.
C1.3	Buildings of Multiple classification	Noted	Both Class 5 and Class 7b have the same FRL of 90/90/90, therefore multiple classifications isn't an issue.
C1.8	Lightweight Construction	Further Details Required	Any light weight construction must comply to Specification C1.8 provisions within the BCA. Please provide details to confirm compliance to this clause.
C1.10 & *NSW Variation*	Fire Hazard Properties	Compliance Readily Achievable	All floor, wall and ceiling lining materials shall comply with C1.10 and Specification C1.10. Design Compliance Statement to be provided by relevant architect prior to issue of CC.
C1.11	Performance of external walls in fire	Compliance Readily Achievable	Only applicable to buildings with a rise in storeys of not more than 2. Thus, tilt up and precast concrete can be used.
C2 - Compartmentation and Separation			
C2.1	Application of Part	Noted	This part is applicable

BCA Clause	Compliance Provisions	Status	Assessment commentary
C2.2	General Floor area and volume limitations	Noted	Buildings exceed the maximum fire compartment size. It is noted that Lot 1 may be considered Type B construction, for the purposes of the report the building has been assessed as Type C construction.
C2.3	Large isolated buildings	Compliance Readily Achievable	All Warehouses are considered as Large Isolated Buildings.
C2.4	Requirements for open spaces and vehicular access	Does Not Comply	b) i) Must provide continuous access for emergency vehicles to enable travel in a forward direction from a public road around the entire building. ii) must have a minimum obstructed width of 6m with no part of its furthest boundary is more than 18m. **The following areas exceed the maximum allowable travel distance:** Lot 1 ▪ Greater than 18m to South elevation Lot 2 ▪ Greater than 18m to all elevations Lot 3 ▪ Greater than 18m to the East & South elevations ▪ Not provided to the North & West elevation Lot 4 ▪ Greater than 18m to the North, East & South elevations Boom gates are located within the perimeter vehicle access.

BCA Clause	Compliance Provisions	Status	Assessment commentary
			Should vehicular access not be provided in accordance with the deemed-to-satisfy provisions of the BCA, the vehicular access will be required to be addressed against the Performance Requirements of the BCA and in consultation with Fire and Rescue NSW.
C2.8	Separation of classifications in the same storey	Compliance Readily Achievable	In the Class 7b Warehouses there are Class 5 Offices, however they both require the same FRL of 90/90/90 as per Table 5.
C2.12	Separation of equipment	Compliance Readily Achievable	The Battery System in Warehouse (25000 SQM) and Warehouse (27335 SQM) may be required to be protected with FRL of 120/120/120.
C2.13	Electricity supply system	Compliance Readily Achievable	Electrical substations, main switchboards etc., must be separated from the remainder of the building by construction achieving and FRL of 120/120/120.
C3 – Protection of Openings			
C3.1	Application of Part	Noted	This part is applicable
C3.2	Protection of openings in external walls	Noted	Openings are not exposed to fire source features by less than the dimensions prescribed in BCA.
C3.3	Separation of openings in external walls and associated openings in different fire compartments	Compliance Readily Achievable	External walls to all warehouses are located greater than 6m from each other.

BCA Clause	Compliance Provisions	Status	Assessment commentary
C3.15	Openings for service installations	Compliance Readily Achievable	Any new proposed penetrations must comply with provisions of C3.15 and Spec. C3.15. At OC stage a detailed schedule of every penetration is required to be produced. Advise engaging specialist fire stopping company.
C3.16	Construction joints	Compliance Readily Achievable	Any proposed joint construction is to comply with the provisions of C3.16 and in accordance to AS 1530.4
Specifications			
Spec C1.1	Fire-Resisting Construction	Compliance Readily Achievable	Refer to Table 5 of the specification
Spec C1.8	Structural Tests for Lightweight Construction	Compliance Readily Achievable	Refer to specification
Spec C1.10 & *NSW Variation*	Fire Hazard Properties	Compliance Readily Achievable	Refer to specification
Spec C1.11	Performance of External Walls in Fire	Compliance Readily Achievable	Refer to specification
Spec C3.4	Fire Doors, Smoke Doors, Fire Windows and Shutters	Compliance Readily Achievable	Refer to specification
Spec C3.15	Penetration of Walls, Floors and Ceilings by Services	Compliance Readily Achievable	Refer to specification
Part D - Access and Egress			
D1 - Provision for Escape			
D1.0	Deemed-to-Satisfy Provisions	Noted	Noted

BCA Clause	Compliance Provisions	Status	Assessment commentary
D1.1	Application of Part	Noted	This part is applicable
D1.2 & *NSW Variation*	Number of exits required	Compliance Readily Achievable	Each building shall have at least one exit from each storey. Not less than 2 exits shall be provided from each storey if the building has an affective height of more than 25m. Basements that have a vertical rise of more than 1.5m shall be provided with 2 exits unless; (i) the floor area of the storey is not more than 50 m2; and (ii) the distance of travel from any point on the floor to a single exit is not more than 20 m Class 9 buildings with a RIS of more than 6 shall also be provided with not less than 2 exits, Where the class 9 building is a childcare 2 exits must be provided fr4om each storey (regardless of its RIS) and where the class 9b is a primary or secondary school with a RIS of more than two, 2 exits are also required. The proposed buildings are provide with permitter exits around the building.
D1.4	Exit travel distances	Does Not Comply	Travel distance shall be as follows:

BCA Clause	Compliance Provisions	Status	Assessment commentary
			Class 5, 6, 7, 8 or 9 portions: - 20m to a point of choice - 40m total distance to an exit -30m to a single exit serving a storey at the level of egress to the road or open space for class 5 and 6 portions **Class 2 or 3 portions:** The doorway of an SOU (including class 4) must be 6m from a point of choice of 2 available exits. For Class 2 or 3 potions 20m a single exit serving the level of egress to a road or open space. No point on the floor of a room not within an SOU must be more than 20m from an exit or a point in which two exits are available in different directions. **The following areas exceed the maximum allowable travel distance:** Lot 2 – ▪ 90 m to an exit in lieu of 40m Lot 3 – ▪ 50m to an exit in lieu of 40m Lot 4 – ▪ 65m to an exit in lieu of 40m

BCA Clause	Compliance Provisions	Status	Assessment commentary
D1.5	Distance between alternative exits	Does Not Comply	Exits must not be less than 9m apart; and note more than: Class 2 or 3 - 45m apart Class 5, 6, 7, 8 or 9 - 60m apart; and Located so that alternative paths of travel do not converge such that they become less than 6 m apart. **The following areas exceed the maximum allowable travel distance:** Lot 2 – ▪ 160m between alternative exits in lieu of 60m Lot 3 – ▪ 90m between alternative exits in lieu of 60m Lot 4 – ▪ 135m between alternative exits in lieu of 60m

BCA Clause	Compliance Provisions	Status	Assessment commentary
D1.6 & *NSW Variation*	Dimensions of exits and paths of travel to exits	Compliance Readily Achievable	Dimensions of exits and paths of travel appear compliant with provisions in D1.6 of the BCA. 1m in width of an exit or path of travel to an exit is required. The unobstructed height of throughout must also not be less than 2m (1980mm at doorways). Aggregate exit width caters for the proposed number of occupants on each level as determined by D1.13 of the BCA.
D1.9	Travel by non-fire-isolated stairways or ramps	Compliance Readily Achievable	Non-fire isolated stairway relied upon
D1.10 & *NSW Variation*	Discharge from exits	Compliance Readily Achievable	Exits must not obstructed by potential vehicle blockage by placement of bollards.
D1.13 & *NSW Variation*	Number of persons accommodated	Further Details Required	Population numbers to be provided for assessment
D1.14	Measurement of distances	Noted	Noted

BCA Clause	Compliance Provisions	Status	Assessment commentary
D1.15	Method of measurement	Noted	Noted
D1.16	Plant rooms, lift machine rooms and electricity network substations: Concession	Compliance Readily Achievable	Ladders may be provided to plants rooms and the like if not more than 100m2. Plant room stairways to achieve compliance with AS 1657.
D2 – Construction of Exits			
D2.0	Deemed-to-Satisfy Provisions	Noted	Noted
D2.1 & NSW Variation	Application of Part	Noted	This part is applicable
D2.3	Non-fire-isolated stairways and ramps	Compliance Readily Achievable	Non-fire isolated stairways in a building having a rise in storeys of more than 2 must be constructed of: Reinforced concrete; or Steel in no part less than 6mm; or timber that— (i) has a finished thickness of not less than 44 mm; and (ii) has an average density of not less than 800 kg/m3 at a moisture content of 12%; and (iii) has not been joined by means of glue unless it has been laminated and glued with resorcinol formaldehyde or resorcinol phenol formaldehyde glue.

BCA Clause	Compliance Provisions	Status	Assessment commentary
D2.9	Width of required stairways and ramps	Noted	A required stairway or ramp that exceeds 2 m in width is counted as having a width of only 2 m unless it is divided by a handrail or barrier continuous between landings and each division has a width of not more than 2 m.
D2.10	Pedestrian ramps	Compliance Readily Achievable	A ramp serving as a required exit must— i) where the ramp is also serving as an accessible ramp under Part D3, be in accordance with AS 1428.1; or ii) in any other case, have a gradient not steeper than 1:8.
D2.13 & NSW Variation	Goings and risers	Compliance Readily Achievable	Risers and goings must comply with D2.13 and have slip resistance as per table D2.14. Architect to cover in Design Compliance Statement.
D2.14	Landings	Compliance Readily Achievable	750mm landings to be provided at bottom and top of stairs as per D2.14 and landings and stairs nosings throughout to have a slip resistance as per table D2.14. Architect to cover in Design Compliance Statement.
D2.15 & *NSW Variation*	Thresholds	Compliance Readily Achievable	No steps are to be located closer to the doors threshold then the width of the door unless to the door leads to open space; a step ramp compliant with AS1428.1-2009 can be incorporated.

BCA Clause	Compliance Provisions	Status	Assessment commentary
D2.16 & *NSW Variation*	Barriers to prevent falls	Compliance Readily Achievable	Compliant balustrades not less than 1m high with no climbable features between 150mm and 760mm are to be provided wherever it is possible to fall 1m or more. Architect to cover in Design Compliance Statement.
D2.17	Handrails	Compliance Readily Achievable	Handrails are to be provided to either side of stairs (one side in fire isolated stairs) in accordance with AS1428.1-2009. Handrail extensions to be provided. Architect to cover in Design Compliance Statement.
D2.18	Fixed platforms, walkways, stairways and ladders	Compliance Readily Achievable	A fixed platform, walkway, stairway, ladder and any going and riser, landing, handrail or barrier attached thereto may comply with AS 1657 in lieu of D2.13, D2.14, D2.16 and D2.17 if it only serves: (a) machinery rooms, boiler houses, lift-machine rooms, plant-rooms, attics and the like

BCA Clause	Compliance Provisions	Status	Assessment commentary
D2.19 & *NSW Variation*	Doorways and doors	Compliance Readily Achievable	Doors serving as required exits or forming part of required exits must be swinging or power operated. If fitted with a door which is power-operated— (A) it must be able to be opened manually under a force of not more than 110 N if there is a malfunction or failure of the power source; and (B) if it leads directly to a road or open space it must open automatically if there is a power failure to the door or on the activation of a fire or smoke alarm anywhere in the fire compartment served by the door.
D2.20.	Swinging doors	Compliance Readily Achievable	Doors forming part of a required exit must not encroach at any part of its swing more than 500mm on the required width of the exit, i.e. F.I.S landings. Doors must swing in the direction of egress unless serving a ground floor tenancy that is less than 200m2 and incorporates a hold-open device.
D2.21 & *NSW Variation*	Operation of latch	Compliance Readily Achievable	Doors shall be readily openable without a key from the side that a person may seek egress by a single handed downward action on a single device located between 900mm and 1100mm. Alternatively door must be readily openable on activation of a fail-safe device.

BCA Clause	Compliance Provisions	Status	Assessment commentary
D2.23	Signs on doors	Compliance Readily Achievable	Signage to be provided on exit and fire door; for a self-closing door— “FIRE SAFETY DOOR DO NOT OBSTRUCT DO NOT KEEP OPEN”; or for a door discharging from F.I.S "FIRE SAFETY DOOR—DO NOT OBSTRUCT"
D3 – Access for People with a Disability			
D3.0	Deemed-to-Satisfy Provisions	Noted	Noted
D3.1	General building access requirements	Noted	Access is required to all areas of the class 5, 7b portions of the building. Access consultant shall provide a design compliance statement prior to the issuance of a CC..

BCA Clause	Compliance Provisions	Status	Assessment commentary
D3.2	Access to buildings	Compliance Readily Achievable	(a) An accessway must be provided to a building required to be accessible— (i) from the main points of a pedestrian entry at the allotment boundary & (ii) from another accessible building connected by a pedestrian link; and (iii) from any required accessible carparking space on the allotment. Access consultant to update report based upon detailed review of CC plans.
D3.3	Parts of buildings to be accessible	Compliance Readily Achievable	Access is to be provided to and within all areas normally used by occupants in accordance with AS 1428.1-2009. Access consultant to update report based upon detailed review of CC plans.
D3.4	Exemptions	Further Details Required	The following areas are not required to be accessible: (a) An area where access would be inappropriate because of the particular purpose for which the area is used. (b) An area that would pose a health or safety risk for people with a disability. (c) Any path of travel providing access only to an area exempted by (a) or (b).

BCA Clause	Compliance Provisions	Status	Assessment commentary
D3.5	Accessible carparking	Compliance Readily Achievable	Accessible carparking is to be provided for class 5 & 7b buildings. This requires: 1 space for every 100 carparking spaces or part thereof or as stipulated by development consent (DA).
D3.6	Signage	Compliance Readily Achievable	To be provided throughout in accordance with details in D3.6. i.e. tactile and braille indicating levels, sanitary facilities etc.
D3.8	Tactile indicators	Compliance Appears Achieved	To be provided in accordance with AS 1428 throughout: (i) a stairway, other than a fire-isolated stairway (iv) a ramps, step ramp, kerb ramp TGSI are also required in the absence of suitable barrier to protect from over head obstructions or an accessway meeting a vehicular way adjacent to an pedestrian entrance to a building.

BCA Clause	Compliance Provisions	Status	Assessment commentary
D3.11	Ramps	Compliance Readily Achievable	On an accessway— (a) a series of connected ramps must not have a combined vertical rise of more than 3.6 m; and (b) a landing for a step ramp must not overlap a landing for another step ramp or ramp.
D3.12	Glazing on an access way	Further Details Required	Glazing to be provided visual indicators in accordance with AS1428.1-2009 when able to be confused for a doorway
Specifications			
Spec D1.12	Non-Required Stairways, Ramps and Escalators	Compliance Readily Achievable	This Specification contains the requirements to allow non-required stairways, ramps or escalators to connect any number of storeys in a Class 5 or 6 building. This specification shall be understood in detail should it be utilised in the design of a non-required stairway, ramp or escalator. A compliance statement shall be provided by the architect prior to the issuance of the CC.
Spec D3.6	Braille and Tactile Signs	Compliance Readily Achievable	This Specification sets out the requirements for the design and installation of braille and tactile signage as required by D2.21, D3.6 and Specification F2.9. A compliance statement shall be provided by the architect prior to the issuance of the CC.

BCA Clause	Compliance Provisions	Status	Assessment commentary
Part E – Services and Equipment			
E1 – Fire Fighting Equipment			
E1.0	Deemed-to-Satisfy Provisions	Noted	Noted
E1.3	Fire hydrants	Compliance Readily Achievable	Fire Hydrants are required to service Warehouses in accordance with Clause E1.3, and AS2419.1-2005. Fire Hydrant Booster Assembly is also to be required to be provided in accordance with AS2419.1-2005. Engineering Details of the proposed fire hydrant system shall be provided. This detail shall be certified by a suitably qualified Accredited Practitioner - Fire Safety Should hydrant booster assembly or be located within site of the main entry of the building, the hydrant booster will be required to be addressed. against the Performance Requirements of the BCA and in consultation with Fire and Rescue NSW Should hydrants be located under awnings, the hydrant locations will be required to be addressed against the Performance Requirements of the BCA and in consultation with Fire and Rescue NSW.
E1.4	Fire hose reels	Compliance Readily Achievable	A fire hose reel (FHR) system shall be provided in accordance with Clause E1.4, and AS2441-2005.

BCA Clause	Compliance Provisions	Status	Assessment commentary
			Engineering Details of the proposed FHR system shall be provided. This detail shall be certified by a suitably qualified Accredited Practitioner - Fire Safety Should 50m fire hose reels be proposed to be utilised to the warehouse areas in lieu of 36m fire hose reels, the hose reels will be required to be addressed against the Performance Requirements of the BCA and in consultation with Fire and Rescue NSW.
E1.5 & *NSW Variation*	Sprinklers	Compliance Readily Achievable	A sprinkler system shall be provided, as it is a Large Isolated Buildings, in accordance with Clause E1.5, Spec E1.5, and AS 2118.1-2017. Engineering Details of the proposed sprinkler system shall be provided. This detail shall be certified by a suitably qualified Accredited Practitioner - Fire Safety Should the sprinkler booster and suction valve not be located at the main entry to the site and adjacent to the fire hydrant booster, the sprinkler booster and suction valve location will be required to be addressed against the Performance Requirements of the BCA and in consultation with Fire and Rescue NSW
E1.6	Portable fire extinguishers	Compliance Readily Achievable	Portable fire extinguishers shall be provided in accordance with Clause E1.6, and AS 2444-2001. Details of the type of portable fire extinguishers proposed and their location shall be provided. This detail shall be certified by a suitably qualified person

BCA Clause	Compliance Provisions	Status	Assessment commentary
E1.8	Fire control centres	Compliance Readily Achievable	A Fire Control Centre (FCC) shall be provided to Lot2 & Lot 4 in accordance with Spec E1.8 of the BCA. Architectural details showing compliance with Clauses 2 to 5 or 2 to 12 as applicable shall be provided. This detail shall be certified by a suitably qualified person
E1.10	Provision for special hazards	Further Details Required	Further information to be provide for the use of the buildings. A registered Certifier - Fire Safety shall provide a report outlining the measures proposed to mitigate the special hazard and satisfy the requirements of Clause E1.10 of the BCA
Specifications			
E1.5	Fire Sprinkler Systems	Compliance Readily Achievable	Refer to Specification
E1.8	Fire Control Centres	Compliance Readily Achievable	Refer to Specification
E2 – Smoke Hazard Management			
E2.0	Deemed-to-Satisfy Provisions	Noted	Noted

BCA Clause	Compliance Provisions	Status	Assessment commentary
E2.1	Application of Part	Noted	This part is not applicable to open-deck carparks, open spectator stands & Class 8 electricity network substations. Smoke exhaust and smoke & heat vents are not applicable to storerooms (Less than 30sqm) sanitary compartments, plantrooms or the like
E2.2 & *NSW Variation*	General requirements	Noted	Lot 2 & 4 A smoke hazard management system compliant with the requirements of Table E2.2a and / or Table E2.2b shall be provided in accordance with Clause E2.2, AS1668.1-2015 and AS1670.1-2018 as applicable. Engineering Details of the proposed smoke hazard management system shall be provided. This detail shall be certified by a suitably qualified and Chartered Mechanical Engineer Should the smoke hazard management system not be provided to the buildings in accordance with the deemed-to-satisfy provisions of the BCA, it will be required to be addressed against the Performance Requirements of the BCA and in consultation with Fire and Rescue NSW.
E2.3	Provision for special hazards	Further Details Required	Further information to be provide for the use of the buildings. A registered Certifier - Fire Safety shall provide a report outlining the measures proposed to mitigate the special hazard and satisfy the requirements of Clause E1.10 of the BCA

BCA Clause	Compliance Provisions	Status	Assessment commentary
Specifications			
Spec E2.2b	Smoke Exhaust Systems	Compliance Readily Achievable	Refer to Specification
Spec E2.2c	Smoke-and-Heat Vents	Compliance Readily Achievable	Refer to Specification
E3 – Lift Installations			
E3.0	Deemed-to-Satisfy Provisions	Noted	Noted
E3.1	Lift installations	Compliance Readily Achievable	An electric passenger lift installation and an electrohydraulic passenger lift installation must comply with Specification E3.1. Please provide details of the lifts proposed to be installed including design certification from a suitably qualified engineer.
E3.3	Warning against use of lifts in fire	Compliance Readily Achievable	Warning signs must be displayed; “DO NOT USE LIFTS IF THERE IS A FIRE”. No less than 10mm high that are incised, inlaid or embossed on a metal, wood, plastic or similar plate securely & permanently attached to the wall or provided directly into the surface material of the wall. These shall be near every call button for a passenger lift or group throughout the building. Details demonstrating compliance shall be provided
E3.5	Landings	Compliance Readily Achievable	Access and egress to and from lift landings shall comply with Section D of the BCA. Details demonstrating compliance shall be provided

BCA Clause	Compliance Provisions	Status	Assessment commentary
E3.6	Passenger lifts	Compliance Readily Achievable	In an accessible building, every passenger lift shall comply with the limitations of Table E3.6a of the BCA, be provided accessible features as required by Table E3.6b of the BCA and not rely upon a constant pressure device for its operation if the lift car is fully enclosed. Details demonstrating compliance shall be provided
Specifications			
Spec E3.1	Lift Installations	Compliance Readily Achievable	Not a requirement
E4 – Emergency Lighting, Exit Signs and Warning Systems			
E4.0	Deemed-to-Satisfy Provisions	Choose an item.	Noted
E4.2	Emergency lighting requirements	Compliance Readily Achievable	All Warehouses and Office apart from Office (150sqm) require Emergency Lighting. Emergency Lighting & Exit Signage to be provided to the building in accordance with E4 and AS 2293.1-2005.
E4.3	Measurement of distance	Compliance Readily Achievable	Emergency Lighting & Exit Signage to be provided to the building in accordance with E4 and AS 2293.1-2005.
E4.4	Design and operation of emergency lighting	Compliance Readily Achievable	Emergency Lighting & Exit Signage to be provided to the building in accordance with E4 and AS 2293.1-2005.

BCA Clause	Compliance Provisions	Status	Assessment commentary
E4.5	Exit signs	Compliance Readily Achievable	Emergency Lighting & Exit Signage to be provided to the building in accordance with E4 and AS 2293.1-2005. Should illuminated exit signs be proposed to be mounted greater than 2.7m from the FFL, the signs will be required to be addressed against the Performance Requirements of the BCA and in consultation with Fire and Rescue NSW.
E4.6 & *NSW Variation*	Direction signs	Compliance Readily Achievable	Emergency Lighting & Exit Signage to be provided to the building in accordance with E4 and AS 2293.1-2005.
E4.8	Design and operation of exit signs	Compliance Readily Achievable	Emergency Lighting & Exit Signage to be provided to the building in accordance with E4 and AS 2293.1-2005.
Part F – Health and Safety			
F1 – Damp and Weatherproofing			
F1.0	Deemed-to-Satisfy Provisions	Noted	Noted
F1.1	Stormwater drainage	Compliance Readily Achievable	Stormwater drainage shall comply with AS 3500.3-2018. Details of the proposed Stormwater Management System shall be provided. This detail shall be certified by a suitably qualified and Chartered Engineer
F1.4	External above ground membranes	Compliance Readily Achievable	Waterproofing membranes for external above ground use must comply with AS 4654.1-2012 and AS 4654.2-2012. Details demonstrating compliance shall be provided

BCA Clause	Compliance Provisions	Status	Assessment commentary
F1.5	Roof coverings	Compliance Readily Achievable	The roof must be covered with one of the following materials, concrete roof tiles, terracotta roof tiles, cellulose cement corrugated sheeting, metal sheet roofing, plastic sheet roofing or shingles made of terracotta, fibre cement, timber or slate. Compliance with fire resisting construction and non-combustible construction of Part C must also be achieved as applicable. Where none of the above materials is proposed, a Performance Solution addressing Performance Requirements FP1.4 will be required
F1.6	Sarking	Compliance Readily Achievable	Sarking-type material used for weatherproofing of rood and walls must comply with AS 4200.1- 2017 and AS 4200.2-2017. Compliance with fire resisting construction and non-combustible construction of Part C must also be achieved as applicable
F1.7	Waterproofing of wet areas in buildings	Compliance Readily Achievable	Waterproofing of wet areas shall comply with the requirements of Table F1.7 and AS 3740-2010. Details demonstrating compliance shall be provided
F1.9	Damp-proofing	Compliance Readily Achievable	Moisture from the ground must be prevented from reaching the structure of the building. Where a damp-proof course is provided it must comply with AS 2904-1995 or impervious sheet material in accordance with AS3660.1-2014. Details demonstrating compliance shall be provided

BCA Clause	Compliance Provisions	Status	Assessment commentary
F1.10	Damp-proofing of floors on the ground	Compliance Readily Achievable	Floors laid on ground shall be provided a vapour barrier in accordance with AS 2870-2011. Details demonstrating compliance shall be provided
F1.13	Glazed assemblies	Compliance Readily Achievable	Glazed assemblies in an external wall shall comply with AS 2047-2014. The following glazed assemblies need not comply revolving doors, fixed louvres, skylights / roof lights, sliding and swinging doors without a frame, heritage windows or second hand windows, windows constructed onsite which are not design tested. Details demonstrating compliance shall be provided
F2 – Sanitary and Other Facilities			
F2.0	Deemed-to-Satisfy Provisions	Noted	Noted
F2.2	Calculation of number of occupants and facilities	Compliance Readily Achievable	Population numbers to be provide for assessment
F2.3	Facilities in Class 3 to 9 buildings	Compliance Readily Achievable	Please provide details of Sanitary Facilities Required.

BCA Clause	Compliance Provisions	Status	Assessment commentary
F2.4	Accessible sanitary facilities	Does not comply	Accessible sanitary facilities compliant with AS 1428.1-2009 shall be provided in accordance with Clause F2.4 and Table F2.4 for the classification and use concerned. Accessible facility not provided to Lot 1 office
F2.5	Construction of sanitary compartments	Compliance Readily Achievable	Sanitary compartments other than in early childhood centres shall have doors and partitions that separate adjacent compartments and extend from the floor level to the ceiling in the case of unisex facilities, to a height of not less than 1.5m above the floor if primary school children are the principal user, 1.8m above the floor in all other cases. The door to a fully enclosed sanitary compartment that does not have 1.2m clear space from pan to door swing shall open outwards or slide or be readily removable from the outside.
F2.6	Interpretation: Urinals and washbasins	Compliance Readily Achievable	A closet pan may be used in lieu of a urinal. A urinal is any of the following, individual stall, wall hung unit, 600mm length of a continuous trough A washbasin may be an individual basin or part of a hand washing trough served by a single water tap
Specifications			
F3 – Room Heights			

BCA Clause	Compliance Provisions	Status	Assessment commentary
F3.0	Deemed-to-Satisfy Provisions	Noted	Noted
F3.1	Height of rooms and other spaces	Compliance Readily Achievable	Floor to ceiling heights compliant with Clause F3.1 of the BCA shall be achieved throughout the development. Details demonstrating compliance shall be provided In Class 7 - 2.4m and in corridors, passageway or the like - 2.1m
F4 – Light and Ventilation			
F4.0	Deemed-to-Satisfy Provisions	Noted	Noted
F4.4	Artificial lighting	Compliance Readily Achievable	Artificial lighting shall be provided to required stairways, passageways and ramps. Artificial lighting shall comply with AS/NZS 1680.0 and must be provided to all rooms that are frequently occupied
F4.5 & *NSW Variation*	Ventilation of rooms	Compliance Readily Achievable	Natural ventilation or mechanical ventilation to be provided. Mechanical Engineer to confirm compliance with F4.5 and AS 3666.1. If compliance with DtS not achievable a Performance Solution demonstrating compliance with FP4.3 and FP4.4 may be more appropriate.

BCA Clause	Compliance Provisions	Status	Assessment commentary
F4.8	Restriction on location of sanitary compartments	Compliance Readily Achievable	Sanitary compartments must not open directly into— (a) a kitchen or pantry; or (b) a public dining room or restaurant; or (c) a dormitory in a Class 3 building; or (d) a room used for public assembly (which is not an early childhood centre, primary school or open spectator stand); or (e) a workplace normally occupied by more than one person.
F6 - Condensation Management			
F6.0	Deemed-to-Satisfy Provisions	Noted	(a) Compliance with Performance Requirement FP6.1 is satisfied by complying with Deemed-to-Satisfy Provisions F6.1 to F6.4 (b) Where a Performance Solution is proposed, the relevant Performance Requirements must be determined in accordance with A2.2(3) and A2.24(3) as applicable
F6.1	Application of Part	Noted	The Deemed-to-Satisfy Provisions of this Part only apply to a sole-occupancy unit of a Class 2 building and a class 4 part of a building.
Part J – Energy Efficiency			
J0.0	Deemed-to-Satisfy Provisions	Noted	Part J Report to be provided by Architect or ESD Consultant. ESD Consultant or Architect to certify CC Plans achieve compliance with Part J.

6 Appendix A – Architectural Plans Reviewed

The following documentation, prepared by HL Architects Pty Ltd was used in the assessment and preparation of this report: -

Drawing No.	Title	Date	Drawn By	Revision
SP-KC1-DA-003	Site Plan (Warehouse 1, 2, 3 & 4)	08/11/21	HLA Architects Pty Ltd	P3
SP-KC1-DA-101	Warehouse 1 & Office 1 Floor Plan	08/11/21	HLA Architects Pty Ltd	P3
SP-KC1-DA-102	Warehouse 2 Floor Plan	08/11/21	HLA Architects Pty Ltd	P3
SP-KC1-DA-103	Warehouse 3 Floor Plan	08/11/21	HLA Architects Pty Ltd	P4
SP-KC1-DA-104	Warehouse 4 Floor Plan	08/11/21	HLA Architects Pty Ltd	P4
SP-KC1-DA-114	Office 2 Floor Plan	08/11/21	HLA Architects Pty Ltd	P2
SP-KC1-DA-115	Office 3 Floor Plan	08/11/21	HLA Architects Pty Ltd	P2
SP-KC1-DA-116	Office 4 Floor Plan	08/11/21	HLA Architects Pty Ltd	P2
SP-KC1-DA-200	Warehouse 1 Elevations	08/11/21	HLA Architects Pty Ltd	P3
SP-KC1-DA-201	Warehouse 2 Elevations	08/11/21	HLA Architects Pty Ltd	P2
SP-KC1-DA-202	Warehouse 3 Elevations	08/11/21	HLA Architects Pty Ltd	P2
SP-KC1-DA-203	Warehouse 4 Elevations	08/11/21	HLA Architects Pty Ltd	P2
SP-KC1-DA-210	Office 1 Elevations	08/11/21	HLA Architects Pty Ltd	P2
SP-KC1-DA-214	Office 2 Elevations	08/11/21	HLA Architects Pty Ltd	P2
SP-KC1-DA-215	Office 3 Elevations	08/11/21	HLA Architects Pty Ltd	P2
SP-KC1-DA-216	Office 4 Elevations	08/11/21	HLA Architects Pty Ltd	P2
SP-KC1-DA-300	Sections (Warehouse 1, 2, 3 & 4)	08/11/21	HLA Architects Pty Ltd	P2
SP-KC1-DA-301	Sections (Warehouse 4 Awning)	08/11/21	HLA Architects Pty Ltd	P2

7 Appendix B – Table 3 of Specification C1.1

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

7.1 Table 5 Type C construction; FRL of building elements

Building element	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—				
less than 1.5 m	90/ 90/ 90	90/ 90/ 90	90/ 90/ 90	90/ 90/ 90
1.5 to less than 3 m	–/–/–	60/ 60/ 60	60/ 60/ 60	60/ 60/ 60
3 m or more	–/–/–	–/–/–	–/–/–	–/–/–
EXTERNAL COLUMN				
Less than 1.5 m	90/–/–	90/–/–	90/–/–	90/–/–
1.5 to less than 3 m	–/–/–	60/–/–	60/–/–	60/–/–
3 m or more	–/–/–	–/–/–	–/–/–	–/–/–
COMMON WALLS and FIRE WALLS—				
All	90/ 90/ 90	90/ 90/ 90	90/ 90/ 90	90/ 90/ 90
INTERNAL WALLS—				
Bounding public corridors, public lobbies and the like—				
All	60/ 60/ 60	–/–/–	–/–/–	–/–/–
Between or bounding sole-occupancy units—				
All	60/ 60/ 60	–/–/–	–/–/–	–/–/–
Bounding a stair if required to be rated—				
All	60/ 60/ 60	60/ 60/ 60	60/ 60/ 60	60/ 60/ 60
OTHER LOADBEARING INTERNAL WALLS and COLUMNS—				
ROOFS				
Any	–/–/–	–/–/–	–/–/–	–/–/–

8 Appendix C – Occupancy Calculations

The floor area estimations have been provided, including the excluded circulation spaces.

Lot ?		
Subject Area	Occupancy Use	Population Provided
Warehouse	Warehouse	TBA
Office	Office	TBA

9 Appendix D – Aggregate Egress Width Calculations

The following has been determined from the submitted details from hla architects.

Aggregate Egress Widths					
Part of Development	Population	Egress Width Required	Means of Egress	Egress Width Provided	Status
Lot 1	TBA				
Lot 2	TBA				
Lot 3	TBA				
Lot 4	TBA				

10 Appendix E – Sanitary Facilities Calculations

The following has been determined from the submitted details from hla architects.

Key - * signifies a unisex accessible sanitary facility was added to this facility
` signifies a pan was counted as a urinal or vice versa
Red numbers signify a deficiency in facilities

F2.4 - Sanitary Facility Calculations – Lot ?																	
Description of building or part	Occupant Number	Population No.		Required			Provided			Unisex Accessible added to (if applicable)			Difference		
				WC	Urinals	Basins	WC	Urinals	Basins	WC	Urinals	Basins	WC	Urinals	Basins
Warehouse	TBA	Male													
		Female						NA							
Office	TBA	Male													
		Female						NA							

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