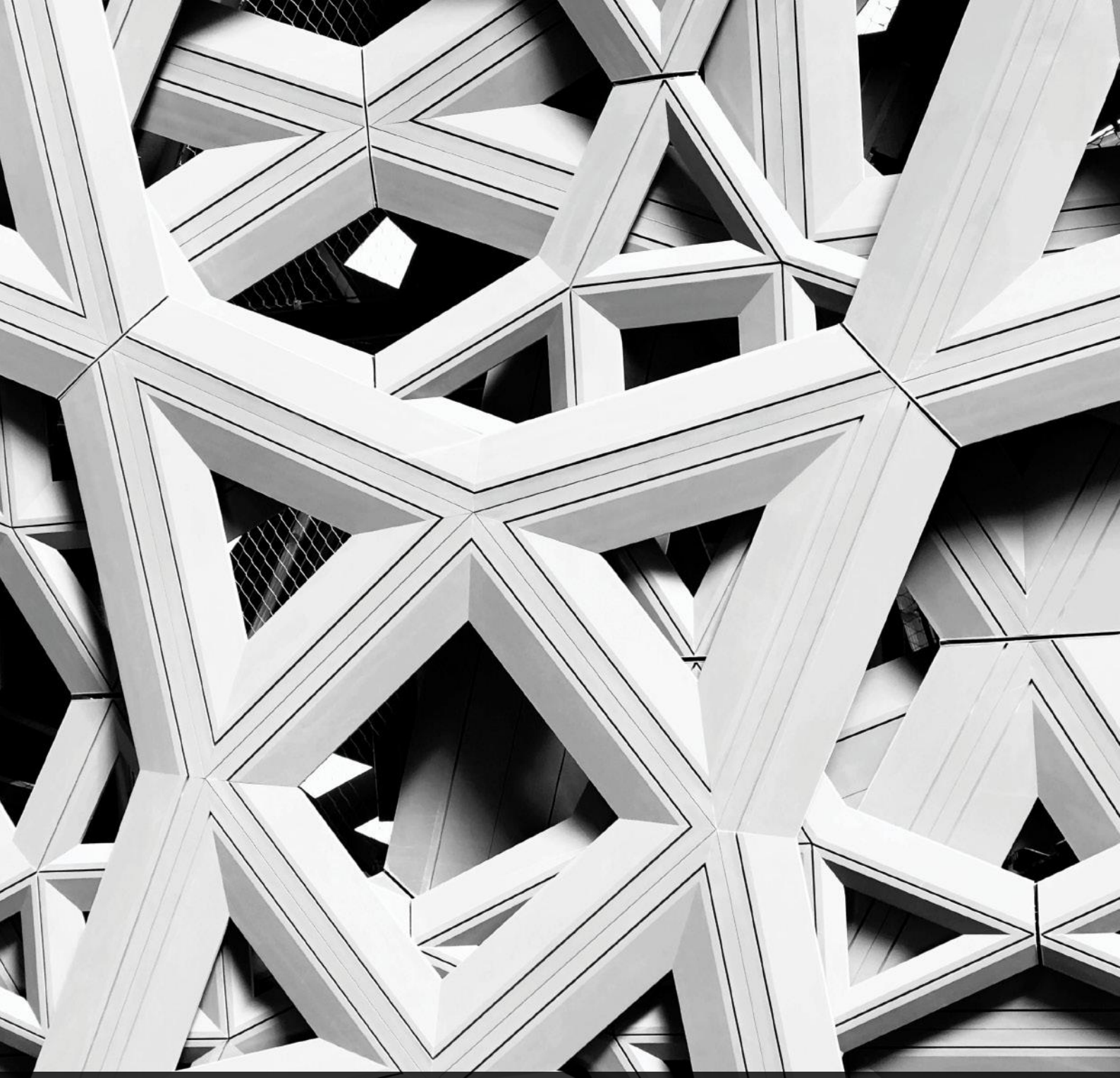


BCA Assessment Report

Warehouse 4 | Aspect Industrial Estate
788/882 Mamre Rd
Kemps Creek NSW 2178

Prepared for:
Mirvac

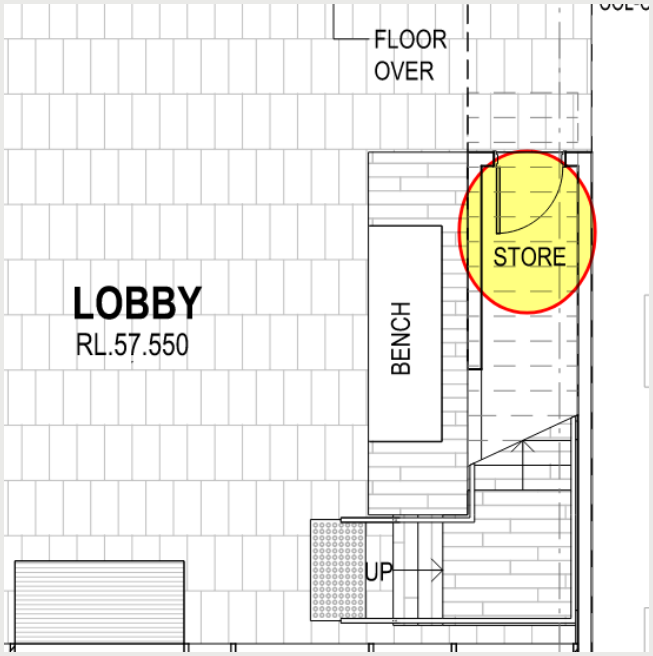
Revision 3
12 November 2025
Reference: 250410

bmplusg.com.au

Executive Summary

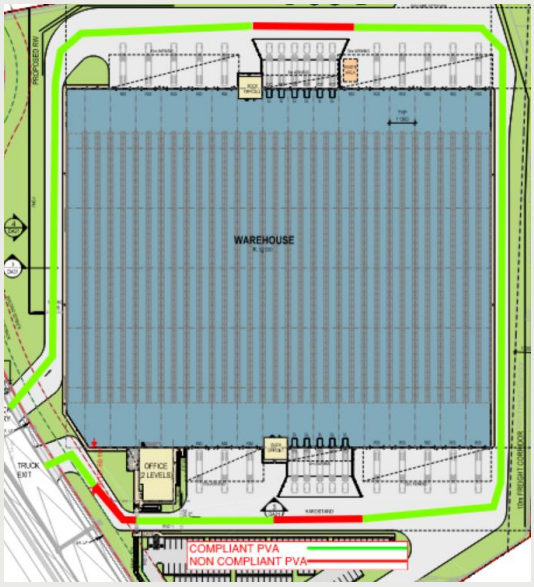
The following comprises a summary of the key compliance issues identified under the assessment in this report that will be required to be addressed prior to the Certification Applications for the project.

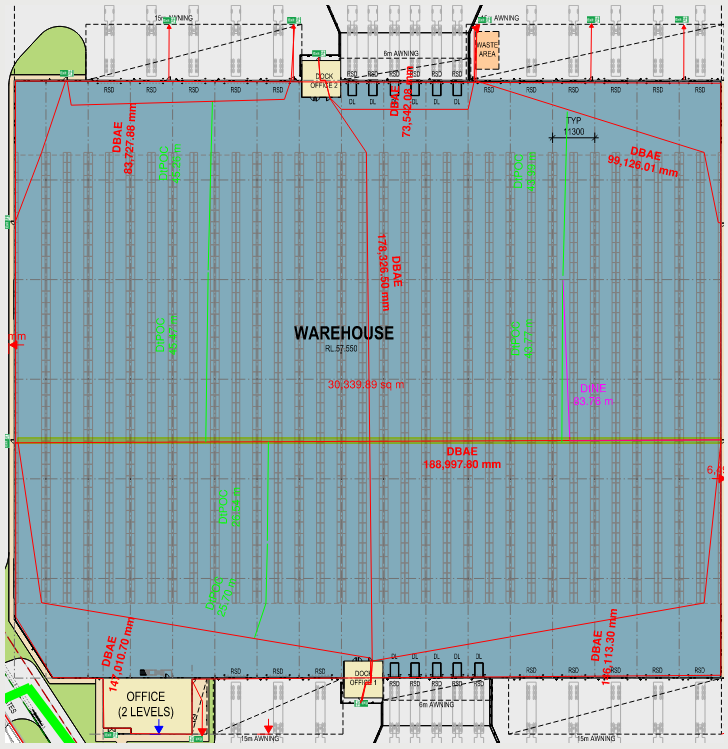
A. Matters requiring redesign or additional information at CC stage:

+ BCA (DtS) Clause		+ Description
1.	D2D18 & F4D4	**Number of Persons Accommodated:** Confirmation is to be provided by Mirvac detailing the intended population numbers for the development.
2.	D3D9	**Enclosure of Space under Stairs and Ramps:** The storeroom located beneath the internal office stair is to be enclosed within a fire-rated construction achieving a minimum Fire Resistance Level (FRL) of 60/60/60, and provided with a self-closing -/60/30 fire door. 
3.	E1D2	**Fire Hydrants:** Fire hydrant coverage plans are to be prepared and provided by the Hydraulic Consultant prior to the issue of the Construction Certificate, demonstrating compliance with AS 2419.1–2021. The fire hydrant coverage documentation is to incorporate the following details: - Fire hydrant booster location - Fire pump location - Fire hydrant locations - Hose layout plans demonstrating how coverage is achieved throughout the building

+ BCA (DtS) Clause		+ Description
4.	E1D3	**Fire Hose Reels:** Hose reel coverage plans are to be provided prior to the Construction Certificate stage. Any shortfalls in coverage beyond the DtS 36 m hose length and 4 m spray radius are to be assessed under a fire-engineered performance solution.
5.	NSW E1D4, E1D12 & E1D13	**Sprinklers:** The sprinkler system is required to be designed and installed in accordance with Specification 17. If an FM Global sprinkler system is proposed, this is to be clearly acknowledged and addressed within the Fire Engineering Report, including any associated departures from the BCA requirements. Note: The location of the sprinkler booster is likely to require a Performance Solution, as compliance with AS 2419.1–2021 for booster placement may not be achievable in its current proposed position.
6.	E1D17 & E2D21	**Provisions for Special Hazards:** Details of the proposed additional firefighting systems are required to address the additional hazard resulting from the proposed storage or use of the building.
7.	F5D2	**Height of Rooms and Other Spaces:** A physical barrier (handrail, Armco or similar) is to be provided under the internal stairs from level 1 office to warehouse where the clearance at the bottom of the stair is under 2.1m.

B. Matters requiring fire safety engineered performance solutions:

+ BCA (DtS) Clause		+ Description
1.	**C3D5**	**Requirements for Open Spaces and Vehicular Access:** There are areas where the furthest part of the PVA is more than 18m from the building: 
2.	**D2D5 / D2D6**	**Exit Travel Distances:** Exit travel distances to the point of choice are measured at 46 m and 84 m to the nearest exits and distances between alternative exits are measured at 189m. These distances exceed the prescriptive provisions and are therefore to be addressed under a fire-engineered performance solution.

+ BCA (DtS) Clause		+ Description
		BM+G has allowed for an undercroft racking aisle between the vertical racks, which is to be reflected on the Construction Certificate architectural plans. 
3.	D2D14	**Travel Via Non Fire Isolated Required Stairways:** The distance from the office stair is approximately 75 m, exceeding the Deemed-to-Satisfy (DtS) limit of 40 m to the exit door leading to open space. The maximum travel distance from any point on the first floor is approximately 103 m, which exceeds the DtS limit of 80 m. Confirmation is to be obtained from the Fire Engineer as to whether a performance solution can be prepared to address this non-compliance.
4.	E1D2	**Fire Hydrants:** It is noted that the proposed fire sprinkler booster assembly does not comply with AS 2419.1–2021 and will require a Performance Solution, as it is not located within sight of the principal pedestrian entrance. Confirmation of the final location of the sprinkler and hydrant booster is to be provided. ***Note:*** *Where a Large Isolated Building (LIB) exceeds 108,000 m³, or incorporates an automated racking system, a Performance Solution is required for the design of the hydrant system in accordance with Appendix E of AS 2419.1–2021.*
5.	E2D10 & Spec 21.	**Smoke Hazard Management:** If detection is proposed to be omitted from the facility, a fire engineered performance solution must be submitted before the construction certificate is issued.

C. Other matters requiring performance solutions:

+ BCA (DtS) Clause		+ Description
1.	F3P1 & F3D5	**Performance Requirement F3P1:** A Performance Solution Report will be required to address the above, noting that the proposed design does not comprise of wholly DtS materials.

+ Contents

Report Status

Date	12.11.2025
Revision	3
Status	Design Development
Author	JM
Reviewed	DG

Prepared by:

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Reviewed by:

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Revision History

Revision	0	**Date**	25.08.2022
Status	Draft		

Revision	1	**Date**	08.09.2022
Status	Preliminary Assessment		

Revision	2	**Date**	30.09.2022
Status	SSD Submission		

Revision	3	**Date**	12.11.2025
Status	SSD-98407710 – Submission		

1.0 Description of Project

1.1 Proposal

BM+G Pty Ltd have been commissioned by Mirvac to undertake an assessment of the Detailed Design of the proposed WH4 at 788/882 Mamre Rd, Kemps Creek NSW 2178 against the relevant provisions of the Building Code of Australia 2022 (BCA) Amendment 2.

An assessment of BCA compliance with respect to the new works is included within Section 3.0.

1.2 Objectives

The objectives of this statement are to:

- Confirm that the SSD-98407710 architectural documentation has been reviewed by an appropriately qualified Building Surveyor and Registered Certifier.
- Confirm that the proposed new building works can readily achieve compliance with the BCA pursuant to Section 19 of the Environmental Planning & Assessment (Development Certification & Fire Safety) Regulation 2021.
- Accompany the Development Application submission to enable the Consent Authority to be satisfied that subsequent compliance with the fire & life safety and health & amenity requirements of the BCA, will not necessarily give rise to design changes to the building which may necessitate the submission of an application under Section 4.55 of the Environmental Planning and Assessment Act 1979.
- It should be noted that it is not the intent of this statement to identify all BCA provisions that apply to the subject development. The development will be subject further assessment following receipt of more detailed documentation at Construction Certificate stage.

The assessment has been undertaken in accordance with Clause 24 and 25 of the Building and Development Certifiers Regulation 2020. BM+G are the proposed Registered Certifier and the advice provided in this Report is limited to whether submitted documentation complies with the Building Code of Australia or a legislative requirement.

1.3 Project Team

The following bm+g team members have contributed to this Report:

- **James McNeill** – Report Preparation (Building Surveyor) | Building Surveyor-Unrestricted
- **Dean Goldsmith** – Project PCA/Peer Review (Director) | Building Surveyor-Unrestricted

1.4 Referenced Documentation

The following documentation has been reviewed, referenced and/or relied upon in the preparation of this report:

- Building Code of Australia 2022 (BCA) Amendment 2
- The Guide to the Building Code of Australia 2022 Amendment 2
- Architectural Plans prepared by SBA numbered:

+ Drawing No.	+ Rev	+ Date
DA02	J	31/10/2025
DA11	B	21/10/2025
DA21	B	21/10/2025
DA31	BcHEE	21/10/2025

+ Drawing No.	+ Rev	+ Date
DA10	C	23/10/2025
DA12	D	06/11/2025
DA22	A	21/10/2025

1.5 Regulatory Framework

- Pursuant to Section 19(1) of the Environmental Planning and Assessment (Development Certification and Fire Safety) Regulation 2021 all new building work must comply with the current BCA however the existing features of an existing building need not comply with the BCA unless upgrade is required by other clauses of the legislation.

The assessment has been undertaken in accordance with Clause 24 and 25 of the Building and Development Certifiers Regulation 2020. bm+g are the proposed Registered Certifier and the advice provided in this Report is limited to whether submitted documentation complies with the Building Code of Australia or a legislative requirement.

1.6 Relevant Version of the NCC Building Code of Australia

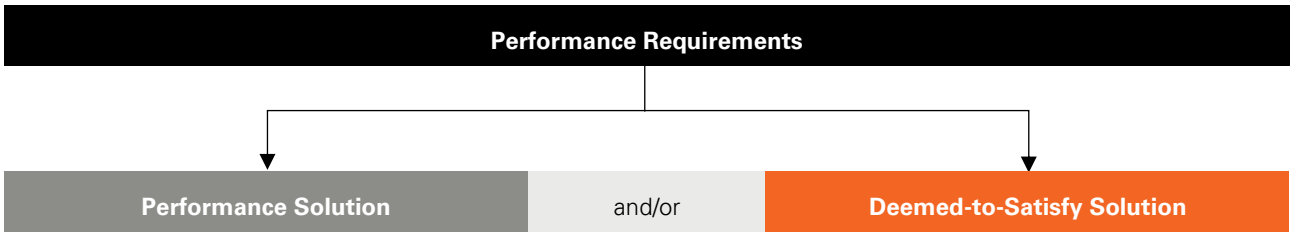
Pursuant to Section 19 of the Environmental Planning and Assessment (Development Certification and Fire Safety) Regulation 2021 the proposed development is subject to compliance with the relevant requirements of the BCA as in force at the day on which the application for the Construction Certificate is made. The current version of the BCA is BCA 2022 (Amendment 2) which is in force as of 29 July 2025, with BCA 2025 *potentially coming in to force from 1 May 2025

Where the building is a multi-storey building and multiple Construction Certificates will be issued under the same development consent, the relevant version of the BCA may be 'locked in' based on the day in which the application is made for the Construction Certificate which involves the ***entrance floor***.

**Note: The Building Ministers Forum has announced that BCA 2025 will be released as a final document on 1 February 2025, with adoption by the States and Territories being available from 1 May 2025. That is, 1 May 2025 is the earliest that BCA 2025 may be adopted.*

The date in which BCA 2025 will be adopted is a matter for the States and Territories to decide, with the NSW Government yet to announce when this will occur. As such, 1 May 2025 should be treated as the target for project adoption of BCA 2025 until advised otherwise by the NSW Government.

1.7 Compliance with the National Construction Code



Compliance with the NCC is achieved by complying with:

+ the Governing Requirements of the NCC; and
+ the Performance Requirements.

Performance Requirements are satisfied by one of the following, as shown in the Figure below:

+ A Performance Solution.
+ A Deemed-to-Satisfy Solution.
+ A combination of the above two options.

1.8 Limitations and Exclusions

The limitations and exclusions of this report are as follows:

+ This report is prepared in accordance with the Conflicts of Interest provisions of Part 4 of the Building and Development Certifiers Regulation 2020. bm+g confirm that this report is prepared specifically to address the requirements of Clause 25(5) and (9) of the Regulation with

respect to the role of the Registered Certifier. This assessment report is not to be construed as extending any further into providing design advice, which would be contrary to the aims of this legislation.

+ Please note that whilst the BCA specifies a minimum standard of compliance with AS1428 and Part D4 of the BCA for access and facilities for people with disabilities, compliance with such requirements may not necessarily preclude the possibility of a future complaint made under the DDA 1992. The DDA is a complaint based legislation and is presently not identified by the State Building Codes and Regulations. In this regard the building owner should be satisfied that their obligations under the DDA have been addressed.

+ No assessment has been undertaken with respect to SEPP (Housing) 2021. It is understood that suitably qualified consultants will be engaged to determine the relevance of any Council planning requirements or SEPP requirements and provided detailed assessment reports where applicable.

  Where relevant to this development, it is assumed that these assessments will be undertaken by others.

+ This report does not consider BCA Part G5 (Volume 1) which makes provision for construction of buildings in bushfire-prone areas, therefore no assessment has been undertaken in consideration of RFS, Planning for Bushfire Protection and AS 3959. Where Part G is applicable to the site, then it is required that assessment / due diligence is undertaken by a specialist consultant to verify compliance.

+ This report does not constitute a detailed assessment of the architectural documentation against the requirements of Section J. It is understood that a suitably qualified consultant will be engaged to determine compliance in this regard.

+ bm+g has not undertaken an assessment of any Performance Solution Reports at the time of the preparation of this report.

+ The Report does not address matters in relation to the following Local Government Act and Regulations:

  - Work Health and Safety Act and Regulations.
  - Work Cover Authority requirements.
  - Water, drainage, gas, telecommunications and electricity supply authority requirements.
  - Disability Discrimination Act 1992.

+ bm+g cannot guarantee acceptance of this report by Local Council, Fire & Rescue NSW or other approval authorities.

+

1.9 Report Terminology

Air-Conditioning – For the purposes of Section J of Volume One, a service that actively cools or heats the air within a space, but does not include a service that directly—

- cools or heats cold or hot rooms; or
- maintains specialised conditions for equipment or processes, where this is the main purpose of the service.

Building Code of Australia – Document published on behalf of the Australian Building Codes Board. The BCA is a uniform set of technical provisions for the design and construction of buildings and other structures throughout Australia and is adopted in NSW under the provisions of the Environmental Planning & Assessment Act & Regulation.

Climatic Zone – An area defined in Figure 2 and in Table 2 (of BCA Schedule 3) for specific locations, having energy efficiency provisions based on a range of similar climatic characteristics.

Conditioned Space – A space within a building, including a ceiling or under-floor supply air plenum or return air plenum, where the environment is likely, by the intended use of the space, to have its temperature controlled by *air-conditioning*.

Construction Certificate – Building Approval issued by the Certifying Authority pursuant to Part 6 of the EP&A Act 1979.

Construction Type – The construction type is a measure of a buildings ability to resist a fire. The minimum type of fire-resisting construction of a building must be that specified in Table C2D2 and Specification 5, except as allowed for:

- certain Class 2, 3 or 9c buildings in C2D6; and
- a Class 4 part of a building located on the top storey in C2D4(2); and
- open spectator stands and indoor sports stadiums in C2D8.

Note: *Type A construction is the most fire-resistant and Type C the least fire-resistant of the types of construction.*

Deemed-to-Satisfy (DtS) Provisions of the BCA – Means the prescriptive provisions of the BCA which are deemed to satisfy the performance requirements.

Effective Height – The vertical distance between the floor of the lowest storey included in the calculation of rise in storeys and the floor of the topmost storey (excluding the topmost storey if it contains only heating, ventilating, lift, or other equipment, water tanks or similar service units).

Exit – Any, or any combination of the following if they provide egress to a road or open space:

- An internal or external stairway.
- A ramp.
- A fire-isolated passageway.
- A doorway opening to a road or open space.

Fire Compartment – The total space of the building; or when referred to in:

- The Performance Requirements – any part of a building separated from the remainder by barriers to fire such as walls and/or floors having an appropriate resistance to the spread of fire with any openings adequately protected; or
- The Deemed-to-Satisfy Provisions – any part of a building separated from the remainder by walls and/or floors each having an FRL not less than that required for a fire wall for that type of construction and where all openings in the separating construction are protected in accordance with the Deemed-to-Satisfy Provisions of the relevant part.

Fire Resistance Level (FRL) – The grading periods in minutes for the following criteria:

- structural adequacy; and
- integrity; and
- insulation.

and expressed in that order.

Fire Source Feature (FSF) – The far boundary of a road adjoining the allotment; or a side or rear boundary of the allotment; or an external wall of another building on the allotment which is not a Class 10 building.

National Construction Code Series (NCC) – The NCC was introduced 1 May 2011 by the Council of Australian Governments (COAG). The BCA Volume One (Class 2 to 9 Buildings) is now referenced as the National Construction Code Series Volume One — BCA.

Occupiable Outdoor Area – A space on a roof, balcony or similar part of a building:

+ that is open to the sky; and
+ to which access is provided, other than access only for maintenance; and
+ that is not open space or directly connected with open space.

Occupation Certificate (OC) – Building Occupation Approval issued by the Principal Certifying Authority pursuant to Part 6 of the EPA Act 1979.

Open Space – A space on the allotment, or a roof or other part of the building suitably protected from fire, open to the sky and connected directly with a public road.

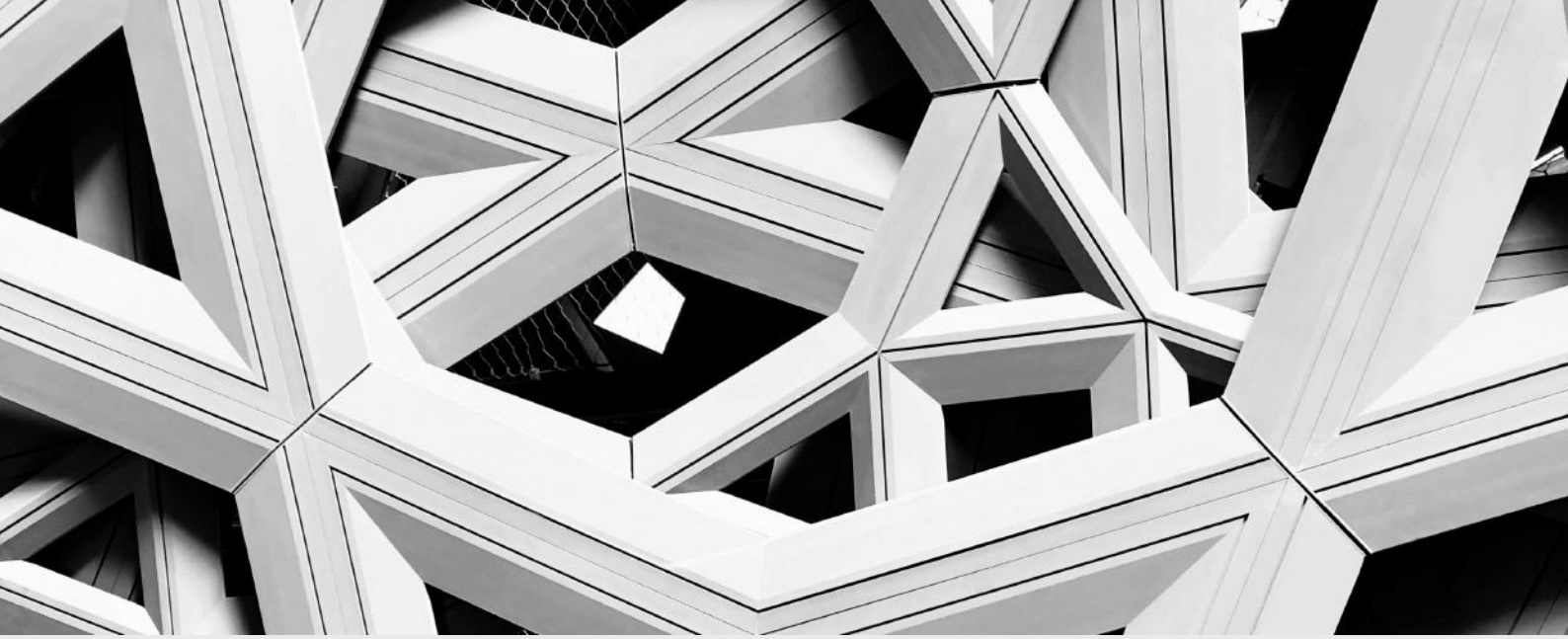
Performance-Based Design Brief – The process and the associated report that defines the scope of work for the performance-based analysis, the technical basis for analysis, and the criteria for acceptance of any relevant Performance Solution as agreed by stakeholders.

Performance Requirements of the BCA – A Building Solution will comply with the BCA if it satisfies the Performance Requirements. A Performance Requirement states the level of performance that a Building Solution must meet.

Compliance with the Performance Requirements can only be achieved by-

+ complying with the Deemed-to-Satisfy Provisions; or
+ formulating a Performance Solution which-
  - complies with the Performance Requirements; or
  - is shown to be at least equivalent to the Deemed-to-Satisfy provisions; or
+ a combination of (a) and (b).

Performance Solution – A method of complying with the performance requirements other than by a Deemed-to-Satisfy Solution.



2.0 Building Characteristics

2.1 Building Classification

The building has been classified as follows:

BCA Classification(s)	Class 5 and 7b
Rise in Storeys	2
Storeys Contained	2
Type of Construction	Type C Construction
Importance Level (Structural)	2 – *To be confirmed by structural engineer*
Sprinkler Protected Throughout	Yes
Effective Height	3.6m (RL61.15 – RL57.55)
Floor Area	Circa 30,000 m^2
Max. Fire Compartment Size	TBC
Climate Zone	Zone 6

2.2 Fire Compartment Floor Area Limitations

Maximum size of fire compartment/atria is:

Classification		Type A	Type B	Type C
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

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

2.3 Distance to Fire Source Features

Based upon a review of the plans, it is noted that each elevation of the building is located within the following distances from fire source features on the site.

+ Elevation	+ Fire Source Feature	+ Distance
North	**Side or rear boundary**	>6m
East	**Side or rear boundary**	>6m
South	**Side or rear boundary**	>6m
West	**Far side of Road**	>6m

***Note:** Fire Source Feature (FSF) – The far boundary of a road adjoining the allotment; or a side or rear boundary of the allotment; or an external wall of another building on the allotment which is not a Class 10 building.*

3.0 BCA Assessment

We note the following BCA compliance matters with relation to proposed building works are capable of complying with the BCA. Please note that this is not a full list of BCA clauses, they are the key requirements that relate to the proposed work and the below should be read in conjunction with the BCA.

3.1 Section B – Structure

Part B1

+ New building works are to comply with the structural provisions of the BCA 2022 Amendment 2 and the following referenced standards including:
  - AS 1170.0 – 2002 General Principles
  - AS 1170.1 – 2002, including certification for balustrades (dead and live loads)
  - AS 1170.2 – 2021, Wind loads
  - AS 1170.4 – 2007, Earthquake loads
  - AS 3700 – 2018, Masonry Structures
  - AS 3600 – 2018, Concrete Structures
  - AS 4100 – 1998, Steel Structures and/or
  - AS 4600 – 2018, Cold formed steel Structures
  - AS 2159 – 2009, Piling Design &Installation
  - AS 1720 – 2010, Design of Timber Structure
  - AS/NZS 1664.1 & 2 – 1997, Aluminium Structures

- AS 2047 – 2014, Windows and External Glazed Doors in buildings
- AS 1288 – 2006, Glass in buildings
- AS 3660.1 – 2014, Termite control (or confirmation no primary building elements are timber).

+ Design certification will also be required from the Architect and Services Consultants to confirm compliance with Section 8 of AS1170.4-2007 with regard to the design of non-structural parts and components and their fastenings for horizontal and vertical earthquake forces and inter-storey drift.
+ In accordance with B1D3(a)(iv) a notional additional load of not less than 0.15kPa to support the addition of solar photovoltaic panels is to be applied to the roof structure.
+ The Importance Level provisions of BCA (Section B) are to be acknowledged by the Structural Engineer and addressed within the Structural Engineering design.
+ In addition to the above, the loadbearing capacity of existing balustrades (where retained) should be reviewed, particularly with respect to loadings under AS 1170.
+ New building works to the existing building must be compliant with earthquake provisions of AS1170.4 – Earthquake Actions in Australia.

Comment: Structural design details and certification will be required at CC application stage

3.2 Section C – Fire Resistance

C2D2 & Spec 5

Type of Construction Required: The building is required to comply with the requirements of Type C Construction as stated within Specification 5. The table below provides an overview of the requirements of each. Refer to Table C5C24 of Appendix 1 for the FRL requirements of Type A / C Construction.

Type C Construction:
+ External walls (and columns incorporated within) need not achieve an FRL if >3m from a boundary or separate building. Where required, external walls of Type C Construction only require an FRL from the outside and not in both directions. + Floors need not achieve an FRL, subject to Cl. S5C3. + Roofs need not achieve an FRL. + Internal columns need not achieve an FRL.

C2D3

Calculation of Rise in Storeys: The rise in storeys of a building is the sum of the greatest number of storeys at any part of the external walls of the building and any storeys within the roof space calculated in accordance with the requirements set out in this clause.

Comment: The building is considered to have a rise-in-storeys of 2.

C2D11 & Spec. 7

Fire Hazard Properties: A schedule of all wall, floor, and ceiling linings along with associated test reports are to be provided for review to ensure compliance with the fire hazard property requirements of the BCA. Noting:

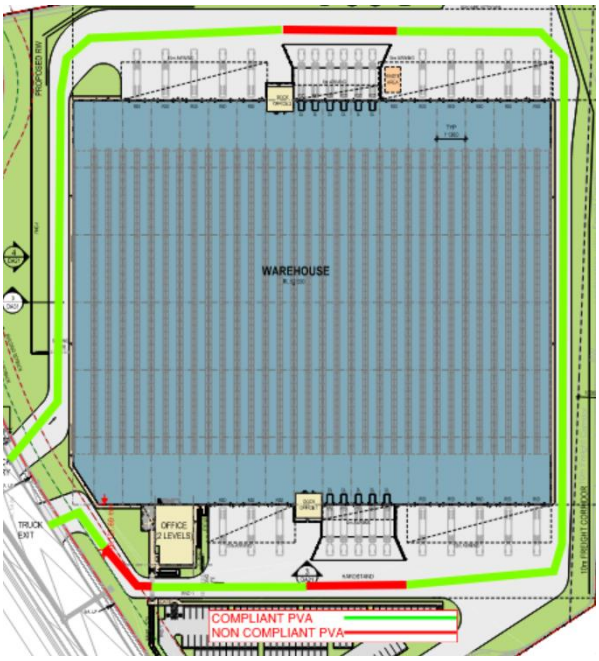
+ Minimum Group Numbers apply to wall and ceiling linings. AS 5637 test reports must be provided to determine compliance.
+ Minimum Critical Radiant Flux values apply to floor linings. AS ISO 9239.1 test reports must be provided to determine compliance

Refer to Table 2 and 3 in Appendix 1 below for the required fire hazard properties.

Comment: Details to be provided at CC stage.

C2D12

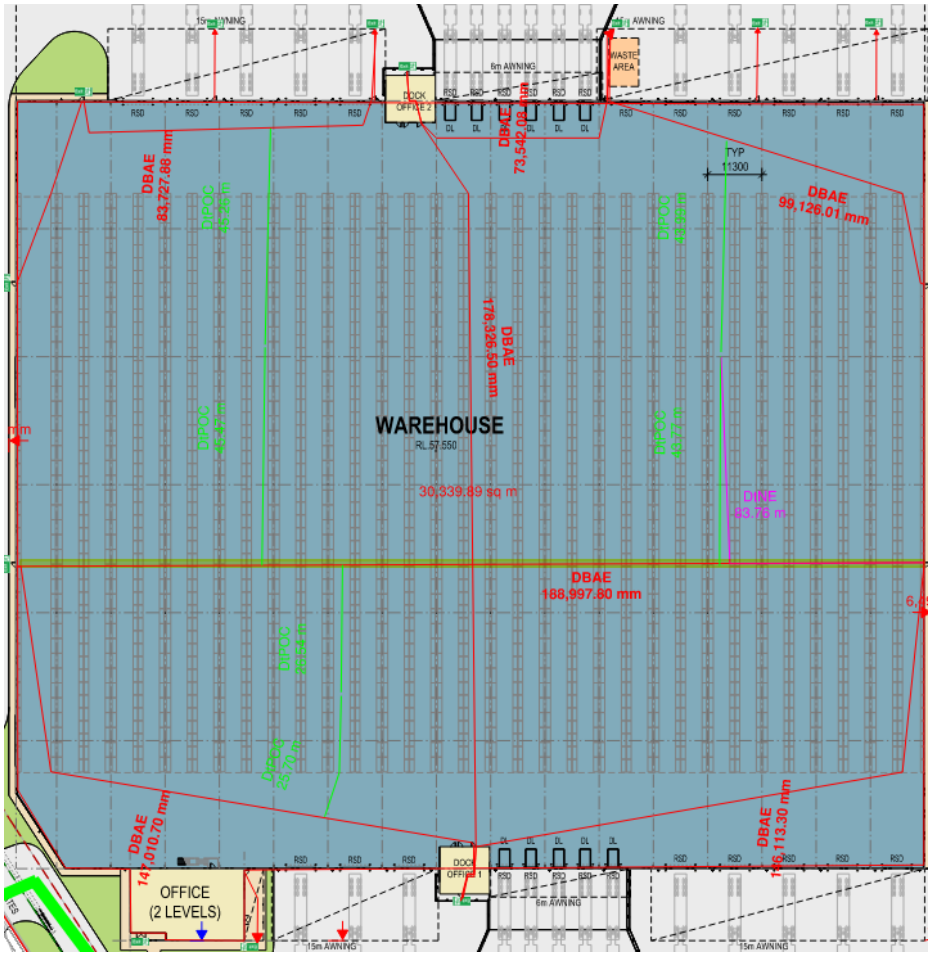
Performance of External Walls in Fire: Concrete, pre-cast/tilt-up wall panels in buildings with a rise in storeys of 1 or 2 are required to comply with the requirements of Spec. 8.

	Comment: Certification to be provided by the Structural Engineer confirming compliance, where pre-cast/tilt-up wall panels are proposed.
C3D3	**General Floor Area and Volume Limitations:** The building is to achieve fire compartment sizes not in excess of the DtS requirements of this clause. **Comment:** The proposed building is a Class 7b Large Isolated Building and as such the provisions for maximum fire compartment size under Table C3D3 do not apply. Refer to comments under C3D4 & C3D5 below in relation to the Large Isolated Building provisions applicable to the proposed development.
C3D4	**Large Isolated Buildings:** A Large Isolated Building that contains Class 5, 6, 7, 8 or 9 parts, is required to be— + Protected throughout with a sprinkler system complying with Specification 17; and + Provided with a perimeter vehicular access complying with C3D5(2). **Comment:** The proposed building is required to be sprinkler protected and provided with a 6m wide perimeter vehicular accessway in accordance with Clause C3D5(2) throughout (see notes below). **Note 1:** Any proposed gates are to achieve no less than 6m unobstructed width or the reduced width will need to be included in the above Performance Solution. **Note 2:** The driveways providing vehicular perimeter access must be designed with adequate loading capacities, gradients and swept paths to accommodate a fire truck, having regard to the FRNSW Fire Safety Guideline – Access for Fire Brigade Vehicles and Firefighters. **Note 3:** The Trial Design for the Fire Engineered Performance Solution must take into consideration and detail the proposed security access to the site and how this may impact on FRNSW vehicular access.
C3D5	**Requirements for Open Spaces and Vehicular Access:** Open space and vehicular access required by C3D4 must comply with the requirements of sub-clauses (a) & (b) of this Part whereby they must be 6m wide within 18m of the external walls of the building and of a suitable bearing capacity and unobstructed height to permit the operation and passage of FRNSW vehicles. **Comment:** There are areas where the furthest part of the PVA is more than 18m from the building: 
C3D9 & C3D10	**Separation of Classifications:** Separate classifications will either need to be separated by a fire wall achieving the higher FRL requirement between the two classes, or alternatively the higher FRL must apply to both areas subject to Spec 5. Note: Refer to C3D8 comments above in regard to structural elements crossing a fire wall at roof level.

	Comment: The higher FRLS applying to class 7b will apply in this instance.
C3D13 / C3D14	**Separation of Equipment:** Equipment as listed below must be separated from the remainder of the building with construction that achieves an FRL of 120/120/120 (or that required by Spec. 5, whichever is greater) and doorways being self-closing -/120/30 fire doors: + Lift motors and lift control panels; or + Emergency generators used to sustain emergency equipment operating in emergency mode; or + Central smoke control plant; or + Boilers; or + A battery or battery system installed in the building that has a voltage of 12 volts or more and a storage capacity of 200kWh or more. Confirmation is required as to whether any of the above will be applicable to this development. **Comment:** Details of fire separation for any of the above equipment is to be provided as part of the Construction Certificate documentation.
C4D3 / C4D5	**Protection of Openings in External Walls:** Openings that are less than 3m from the allotment boundary or less than 6m from another Class 2-9 building on the allotment are required to be protected in accordance with BCA Clause C4D5. **Comment:** No openings are within 6m – complies in this regard.
Spec. 5	**Fire Resisting Construction:** The new building works are required to comply with the requirements detailed under Specification 5. The below details the FRL requirements for building elements for each proposed warehouse. **Comment:** The building will be subject to compliance with the Type C Construction provisions of tables S5C24 as summarised below: + All external walls & loadbearing elements incorporated in or attached to an external wall are to achieve the required FRL per Table S5C24a. + All loadbearing external columns are to achieve the required FRL per Table S5C24b. + Any Fire Walls that are proposed to separate different classifications per C3D9 above are to achieve the required FRL per Table S5C24c. + All internal stair shaft walls and walls bounding SOUs, as well as any associated columns, walls, beams and trusses throughout are to achieve the required FRL per Table S5C21d. Note: Any proposal to reduce the FRLs of building elements that are required to be fire rated must be addressed as a Performance Solution from the Fire Engineer.
Spec. 7	**Fire Hazard Properties:** As noted above, this Specification sets out the requirements in relation to the fire hazard properties of linings, materials and assemblies in Class 2 to 9 buildings. Table S7C2 outlines the applicable requirements of Spec. 7 to the different types of Linings, Materials and Assemblies. **Comment:** Certification will be required to be provided at both CC and OC application stages.
Spec. 8	**Performance of External Walls in Fire:** This specification contains measures to minimise in the event of fire the likelihood of external walls collapsing outwards as complete panels and the likelihood of panels separating from supporting members. **Comment:** Structural Design certification and details demonstrating compliance are required to be provided at CC Application Stage for the proposed warehouses.
Spec. 12	**Fire Doors, Smoke Doors, Fire Windows and Shutters:** Fire doors and smoke doors must comply with the requirements of this specification. **Comment:** Certification will be required to be provided at both CC and OC application stages

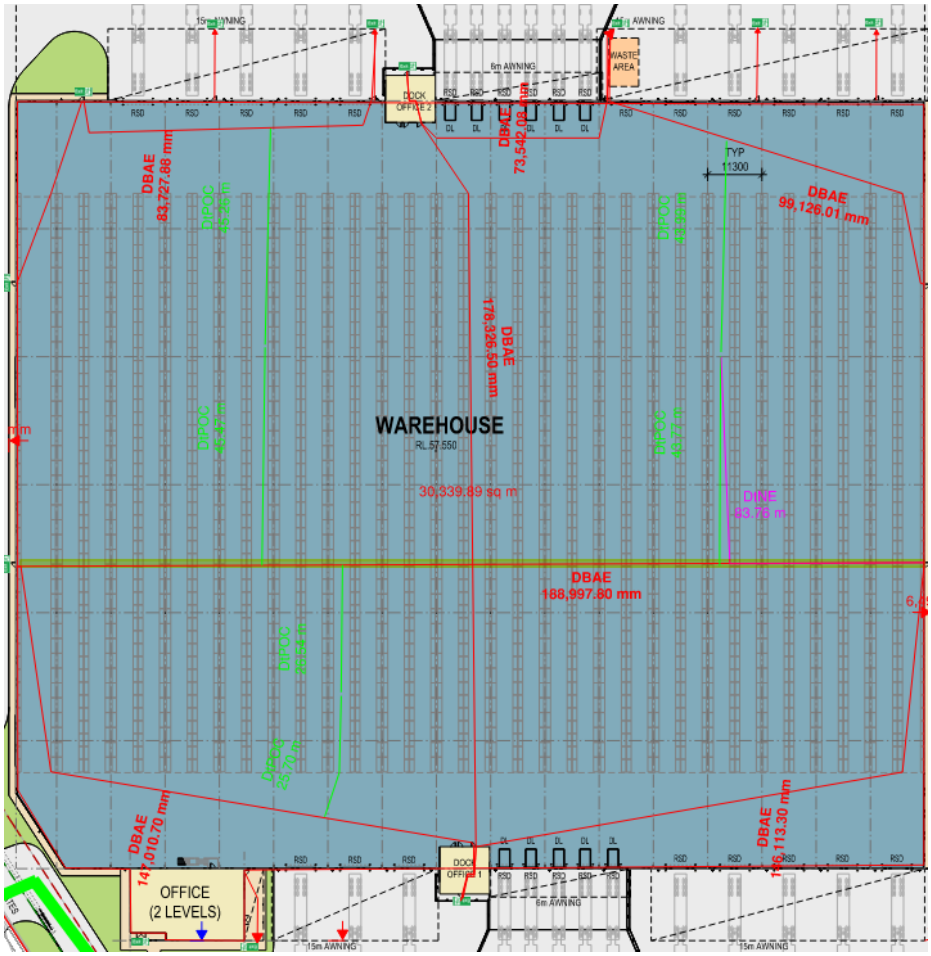
3.3 Section D – Access and Egress

D2D3	**Number of Exits Required:** The building is required to be provided with 2 exits to each storey. **Comment:** Complies.
D2D5	**Exit Travel Distances:** This clause specifies the permitted travel distances allowable from Class 2 to Class 9 buildings. Sub-clauses (1) to (6) specify the maximum distances to be taken into account for the various uses in each Class of building. In a Class 5, 6, 7, 8 & 9 Buildings no point on a floor must be more than 20m for a single exit or to a point of choice to alternative exits; and no point on a floor must be more than 40m to an exit where 2 or more alternative exits are available for egress. **Comment:** Exit travel distances to the point of choice are measured at 46 m and 84 m to the nearest exits. These distances exceed the prescriptive provisions and are therefore to be addressed under a fire-engineered performance solution. BM+G has allowed for an undercroft racking aisle between the vertical racks, which is to be reflected on the Construction Certificate architectural plans.

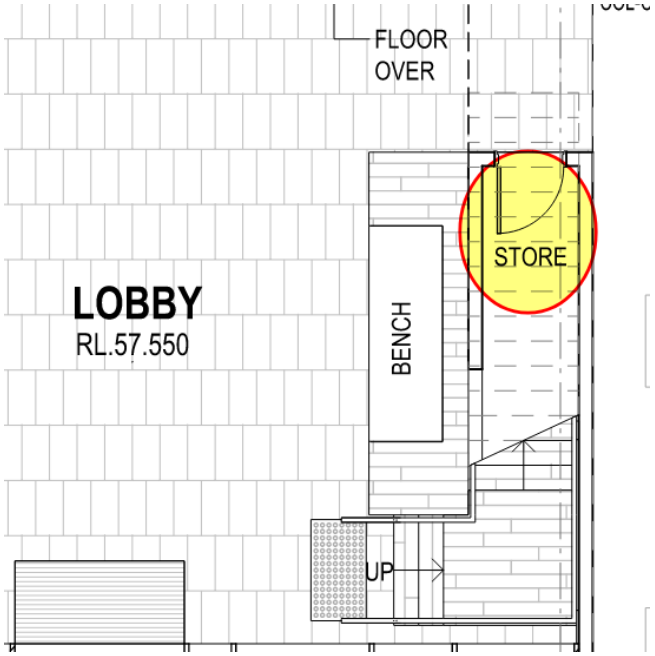


D2D6	**Distance Between Alternative Exits:** Exits required as alternative exits must be – + Distributed as uniformly as practicable within or around the storey served and in positions where unobstructed access to at least 2 exits is readily available from all points on the floor including lift lobby areas; and + not less than 9m apart; and + not more than – 60m apart. + Located so that the alternative paths of travel do not converge such that they become less than 6m apart.

Comment: Exit travel distances between alternative exits are measured at 189m. These distances exceed the prescriptive provisions and are therefore to be addressed under a fire-engineered performance solution. BM+G has allowed for an undercroft racking aisle between the vertical racks, which is to be reflected on the Construction Certificate architectural plans.



D2D7 – D2D11	**Dimensions of Paths of Travel to an Exit:** The minimum clear height through all egress paths is required to be no less than 2m, and a minimum of 1m wide (this width dimension is measured clear of any obstructions such as handrails and joinery). Aggregate exit widths must be achieved which are driven by occupancy numbers of each floor. **Comment:** Complies.
D2D15	**Discharge from Exits:** The path of travel to the road from a required exit leading to open space must have an unobstructed exit width of that of the required exit, or if larger, 1m. If the discharge point of the exit is at a different level from the road, a stairway or ramp achieving no more than 1:10 must be provided, or, if the area is accessible, 1:14. **Comment:** Where discharges from exits open to hard stand, bollards are to be installed.
D2D14	**Travel Via Non Fire Isolated Required Stairways:** A non-fire-isolated stairway or non-fire-isolated ramp serving as a required exit must provide a continuous means of travel by its own flights and landings from every storey served to the level at which egress to a road or open space is provided. The distance from any point on the floor to a point of road or open space must not exceed 80m. The stair must discharge at a point not more than 20m to a single exit providing egress to open space, or from a fire-isolated passage, or 40m from one of two such points. **Comment:** The distance from the office stair is approximately 75 m, exceeding the Deemed-to-Satisfy (DtS) limit of 40 m to the exit door leading to open space. The maximum travel distance from any point on the first floor is approximately 103 m, which exceeds the DtS limit of 80 m.

	Confirmation is to be obtained from the Fire Engineer as to whether a performance solution can be prepared to address this non-compliance.
D2D18	**Number of Persons Accommodated:** Clause D2D18 and Table D2D18 are used to calculate the anticipated number of people in particular types of buildings so that minimum exit widths and the required number of sanitary and other facilities can be calculated. This clause and table are not to be used for non-BCA purposes. **Comment:** Confirmation is to be provided by Mirvac detailing the intended population numbers for the development.
D3D8	**Installations in Exits and Paths of Travel:** This clause restricts the installation of certain services in fire-isolated exits, non-fire-isolated exits and certain paths of travel to exits. Sub-clauses (1) to (6) prescribe which services shall not be installed as well as the circumstances in which certain services may be installed in fire-isolated and non-fire-isolated exits. **Comment:** Architect to note.
D3D9	**Enclosure of Space under Stairs and Ramps:** The space below a required, non-fire isolated stairway/ramp must not be enclosed to form a cupboard or other enclosed space, unless the cupboard is bound by construction achieving an FRL of at least 60/60/60, with a self-closing -/60/30 door. **Comment:** The storeroom located beneath the internal office stair is to be enclosed within a fire-rated construction achieving a minimum Fire Resistance Level (FRL) of 60/60/60, and provided with a self-closing -/60/30 fire door. 
D3D14/ D3D15/ D3D16/ D3D20/ D3D22	**Stairways, Balustrades, and Handrails:** <u>Stairways:</u> + A stairway must have no more than 18, nor less than 2, risers in each flight. + Landings must be not less than 750mm in length. <u>Balustrades:</u> + All balustrades must achieve a minimum height of 1m above finished floor level. + Balustrades (except for fire-isolated stairs) must not permit a 125mm sphere to pass through any opening. + Balustrades in fire-isolated exits must comprise no gap larger than 150mm between nosing line (or landing) and bottom rail. Other openings in the balustrade must not exceed 460mm. If

	the fire-isolated exit also functions as a circulation stair, the 125mm gap requirement applies in lieu of these reduced provisions. + A barrier required by D3D17, located on a floor more than 1m above the surface beneath, must not incorporate horizontal or near horizontal elements that could facilitate climbing between 150mm and 760mm above the floor. This does not apply to fire isolated stairways, fire-isolated ramps and other areas used primarily for emergency purposes, other than – - external stairways; and - external ramps; and Handrails: + Handrails must be located on both sides of all stairways and ramps except for fire-isolated stairs. Handrails must comply with AS 1428.1 as relevant. + Handrails must be fixed at a minimum height of 865mm and be continuous between stair flight landings and have no obstructions on or above them that may break the hand hold. If in a required exit serving an accessible area, must comply with AS 1428.1. **Comment:** Stair details are to be provided as part of the Construction Certificate submission.
D2D23	**Fixed Platforms, Walkways, Stairways and Ladders:** A fixed platform, walkway, stairway, ladder, any going and riser, landing, handrail or barrier attached thereto may comply with AS 1657 if it only serves a machinery room, boiler house, lift-machine rooms, plant rooms or the like. **Comments:** Design certification to be provided at CC stage.
D3D24	**Doorways and Doors:** This clause applies to all doorways that form an exit and refers to the types of doors that cannot be used in buildings of prescribed uses, the use of power operated doors and the force required to operate sliding doors. If an exit door is power operated, it must be opened manually under a force of not more than 110N if there is a malfunction or failure to the power source; and it must open automatically if there is a power failure to the door and upon the activation of a fire or smoke alarm anywhere in the fire compartment served by the door. **Comment:** Design certification to be provided at CC stage.
D3D25 & D3D26	**Doors and Latching:** All egress doorways must swing in the direction of egress and must be readily openable without a key from the side that faces a person seeking egress, by a single handed downward or pushing action on a single device which is located between 900mm and 1100mm from the floor. **Comment:** Details to be provided at CC stage.
Part D4	**Access for People with a Disability:** The extent of access required depends on the classification of the building. Buildings and parts of buildings must be accessible as set out in Clause D4D2 unless exempted by Clause D4D5. The building is required to comply with AS 1428.1-2021. **Comment:** We understand a separate access consultant has been engaged to provide advice in this regard.

3.4 Section E – Services and Equipment

E1D2	**Fire Hydrants:** + E1D2(1) – A fire hydrant system must be provided to serve a building having a total floor area greater than 500m² and where a fire brigade is available to attend a building fire. + E1D2(2) – Requires that the fire hydrant system must be installed in accordance with the provisions of AS2419.1-2021 and details where internal hydrants must be located.

	+ E1D2(3) – details concessions to AS 2419.1-2021 compliance associated with Class 8 Electricity Network Substations, and Hydrant Booster assembly locations where buildings are sprinkler protected. + E1D2(4) – states that internal fire hydrants must serve the level in which they are installed. **Comment:** + Fire hydrant coverage plans are to be prepared and provided by the Hydraulic Consultant prior to the issue of the Construction Certificate, demonstrating compliance with AS 2419.1–2021. The fire hydrant coverage documentation is to incorporate the following details: - Fire hydrant booster location - Fire pump location - Fire hydrant locations - Hose layout plans demonstrating how coverage is achieved throughout the building + It is noted that the proposed fire sprinkler booster assembly does not comply with AS 2419.1–2021 and will require a Performance Solution, as it is not located within sight of the principal pedestrian entrance. Confirmation of the final location of the sprinkler and hydrant booster is to be provided. *Note: Where a Large Isolated Building (LIB) exceeds 108,000 m³, or incorporates an automated racking system, a Performance Solution is required for the design of the hydrant system in accordance with Appendix E of AS 2419.1–2021.*
E1D3	**Fire Hose Reels:** A fire hose reel system must be provided to serve a building where one or more internal fire hydrants are installed or in a building with a floor area greater than 500m². This clause requires that the fire hose reel system must be installed in accordance with AS 2441 and sets out the detail for location and uses of fire hose reels. **Comment:** Hose reel coverage plans are to be provided prior to the Construction Certificate stage. Any shortfalls in coverage beyond the DtS 36 m hose length and 4 m spray radius are to be assessed under a fire-engineered performance solution.
NSW E1D4, E1D12 & E1D13	**Sprinklers:** A sprinkler system must be installed in a building or part of a building when required by Clauses E1D5 to E1D13 and comply with Specification 17 or 18. Specification 17 sets out requirements for the design and installation of sprinkler systems in Class 2-9 Buildings, and details the required design standards, including AS 2118.1-2017 and AS 2118.6-2012. **Comment:** + The sprinkler system is required to be designed and installed in accordance with Specification 17. + If an FM Global sprinkler system is proposed, this is to be clearly acknowledged and addressed within the Fire Engineering Report, including any associated departures from the BCA requirements. Note: The location of the sprinkler booster is likely to require a Performance Solution, as compliance with AS 2419.1–2021 for booster placement may not be achievable in its current proposed position.
E1D14	**Portable Fire Extinguishers:** To be provided and designed in accordance with Sections 1, 2 and 3 of AS 2444-2001. **Comment:** Certification to be provided prior to the issue of the CC.
E1D15	**Fire Control Centre:** A fire control centre is to be provided based on the total building floor area comprising more than 18,000m2. A fire control centre must: + Be located in a building so that egress from any part of its floor to a public road or open space does not involve changes in level which in aggregate exceed 300mm. + Provide an area from which fire-fighting operations or other emergency procedures can be controlled. Must not be used for any other purpose. **Comment:** Compliance achievable.

E1D17	**Provisions for Special Hazards:** Suitable additional provisions must be made for fire-fighting if unique problems could arise due to; + The nature or quantity of materials stored, displayed or used in a building on the allotment; or + The location of the building in relation to a water supply for firefighting purposed. **Comment:** Details of the proposed additional firefighting systems are required to address the additional hazard resulting from the proposed storage or use of the building.
E2D3	**General Requirements:** Class 2 to 9 buildings must comply with the provisions of this Clause to remove smoke during a fire, to control the operation of air handling systems and to prevent the spread of smoke between compartments. Buildings must comply with the provisions of E2D4, as applicable to Class 2 to 9 buildings. It deals with the design and construction of air handling systems that are part of a smoke hazard management system and air handling system that are not part of a smoke hazard management system. The details relating to the installation and operation of the systems are set out in Specifications 20, 21, & 22. **Comment:** Note only – no action required.
E2D10	**Smoke Hazard Management:** The following smoke hazard management systems are to be installed to the building and will be required throughout: + An Automatic Fire Detection and Alarm System and Building Occupant Warning System complying with AS 1670.1 – 2018 and S20C6 (10m grid). + Automatic Smoke Exhaust System in accordance with Specification 21 and AS 1668.1. + Automatic shut-down of mechanical air handling systems upon fire trip in accordance with Section 5 and 6 of AS 1668.1. **Comment:** If detection is proposed to be omitted from the facility, a fire engineered performance solution must be submitted before the construction certificate is issued.
E2D21	**Provisions for Special Hazards:** Additional smoke hazard management measures may be necessary due to the— + Special characteristics of the building; or + Special function or use of the building; or + Special type or quantity of material stored, displayed or used in a building; or + Special mix of classifications within a building or fire compartment, which are not addressed in E2D4 to E2D20. **Comment:** Details of the proposed additional smoke hazard management systems are required to address the additional hazard resulting from the proposed storage or use of the building.
E3D4	**Warning Against use of Lifts in Fire:** Warning signs required be provided must be displayed where they can be readily seen and must comply with the details and dimensions of Figure E3D4. **Comment:** Compliance achievable. Design certification to be provided prior to the issue of the Construction Certificate.
E3D6	**Landings:** Access and egress to and from lift well landings must comply with the Deemed-to-Satisfy Provisions of Parts D2 & D3. **Comment:** Compliance achievable. Design certification to be provided prior to the issue of the Construction Certificate.
E3D7	**Passenger Lift Types and Their Limitations:** In an accessible building, every passenger lift must be one of the types identified in sub-clause (1) and not rely on a constant pressure device for its operation if the lift car is fully enclosed. **Comment:** Design certification to be provided prior to the issue of the Construction Certificate.
E4D2 – E4D8	**Emergency Lighting and Exits Signs:** Emergency lighting and exit signage to be provided in accordance with E4D2 - E4D5 complying with AS 2293.1 – 2018.

	Comment: Design certification to be provided prior to the issue of the Construction Certificate.
E4D4	**Design & Operation of Emergency Lighting:** Every required emergency lighting system must comply with AS 2293.1-2018. **Comment:** Design certification to be provided prior to the issue of the Construction Certificate.
E4D5	**Exit Signs:** An exit sign must be clearly visible to persons approaching the exit and must be installed on, above or adjacent to each door providing egress from a building. Sub-clauses (a) to (d) set out the situations where exit signs are required to be installed. **Comment:** Design certification to be provided prior to the issue of the Construction Certificate.
E4D6	**Direction Signs:** If an exit is not readily apparent to persons occupying or visiting the building then exit signs must be installed in appropriate positions in corridors, hallways, lobbies, and the like, indicating the direction to a required exit. **Comment:** Design certification to be provided prior to the issue of the Construction Certificate.

3.5 Section F – Health and Amenity

F1D3	**Stormwater Drainage:** A roof balcony, podium or similar must have a system of stormwater drainage and the structural substrate must be graded with a minimum fall of 1:80 to a drainage outlet. **Comment:** Design certification to be provided prior to the issue of the Construction Certificate.
F1D5	**External Waterproofing Membranes:** External waterproofing membranes are required to comply with AS 4654.1 & 2. **Comment:** Design certification to be provided prior to the issue of the Construction Certificate.
F1D6	**Damp-Proofing:** + This sub-clause requires that moisture from the ground must be prevented from reaching certain parts of buildings as listed. + This sub-clause requires that all damp-proofing materials and termite shields used as damp-proofing must comply with AS/NZS 2904 and AS 3660.1. + This sub-clause lists the buildings and parts of a building that do not need to comply with (a). **Comment:** Design certification to be provided prior to the issue of the Construction Certificate.
F1D7	**Damp Proofing of Floors on the Ground:** If the floor of a room is laid on the ground or on fill, moisture from the ground must be prevented from reaching the upper surface of the floor and adjacent walls by the insertion of a vapour barrier in accordance with AS 2870. Damp-proofing need not be provided if weatherproofing is not required or the floor is the base of a stair, lift or similar shaft which is adequately drained by gravitation or mechanical means. **Comment:** Note Only.
F2D3 & F2D4	**Wet Area Construction:** These clauses set out the construction requirements for wet areas in Class 2-9 Building, in relation to floor and wall materials, surface grading, floor wastes and drainage. **Comment:** Design certification to be provided prior to the issue of the Construction Certificate.
F2D4	**Floor Wastes:** Where a floor waste is provided, the fall of the floor plane to the floor waste is required to be between 1:80–1:50. **Comment:** Design certification to be provided prior to the issue of the Construction Certificate.
F3D2	**Roof Coverings:** This clause details the materials and appropriate standards, with which roofs must be covered with. The roofing requirements are set out in sub-clauses (a) to (g) which

	identifies the types of materials that may be used and the adopted Australian Standards that apply to their quality and installation. **Comment:** Design certification to be provided prior to the issue of the Construction Certificate.
F3D3	**Sarking:** Sarking-type materials used for weatherproofing of roofs must comply with AS/NZS 4200 parts 1 and 2 **Comment:** Design certification to be provided prior to the issue of the Construction Certificate.
F3D4	**Glazed Assemblies:** Glazed assemblies in an external wall must comply with AS2047 requirements for resistance to water penetration for windows, sliding doors with a frame, adjustable louvres, shop fronts and windows with one-piece framing **Comment:** Design certification to be provided prior to the issue of the Construction Certificate.
F3D5	**Wall Cladding:** The following wall cladding materials are deemed to satisfy Performance Requirement F3P1: + Masonry, including masonry veneer, unreinforced and reinforced masonry, complying with AS 3700, + Autoclaved aerated concrete, complying with AS 5146.3, + Metal wall cladding, complying with AS 1562.1. **Comment:** If external wall materials other than masonry, autoclaved aerated concrete, or metal wall cladding are proposed, the architect must provide a performance solution per F3P1 below.
F3P1 & F3D5	**Performance Requirement F3P1:** A roof and external wall (including openings around windows and doors) must prevent the penetration of water that could cause + Unhealthy or dangerous conditions, or loss of amenity for occupants; and + Undue dampness or deterioration of building elements. Note 1: There are limited Deemed-to-Satisfy provisions for this Performance Requirement in respect to External Walls. DtS wall types include; masonry; autoclaved aerated concrete; and metal wall cladding only. Note 2: Refer to Clause F3D2 for roof coverings. **Comment:** A Performance Solution Report will be required to address the above, noting that the proposed design does not comprise of wholly DtS materials.
F4D3	**Calculation Of Number Of Occupants And Facilities:** This clause sets out the requirements for the calculation of the number of occupants and the number of sanitary facilities required to be installed in Class 2 to 9 buildings. The parameters for the calculation are set out in sub-clauses (a) to (d). **Comment:** The figures have been determined according to the proposed facilities. Final confirmation of the toilet provisions will be supplied by Mirvac.
F4D4	**Facilities in Class 3 to 9 Buildings:** This clause provides the requirements for sanitary facilities to be installed in Class 3-9 buildings in accordance with Tables F4D4a – F4D4l. The requirements and variations are set out in sub-clauses (1)-(11). **Comment:** The figures have been determined according to the proposed facilities. Final confirmation of the toilet provisions will be supplied by Mirvac.

+ Office Staff (L1 Facilities) [up to 50 males and 45 females]

Occupancy Class as per F4D4

	Closet Pans		Urinals		Washbasins		Complies
	Proposed	Pop. Served	Proposed	Pop. Served	Proposed	Pop. Served	Yes/No
Male	3	60	2	50	3	90	
Female	3	45	-	-	3	90	

+ Warehouse Staff (Ground floor + Dock Office) [Up to 120 males and 120 females]

Occupancy Class as per F4D4							
	Closet Pans		Urinals		Washbasins		Complies
	Proposed	Pop. Served	Proposed	Pop. Served	Proposed	Pop. Served	Yes/No
Male	6	120	4	150	6	120	TBC
Female	8	120	-	-	6	120	TBC

Note 1: Where sanitary compartments are noted as Unisex on the floor plans they are required to be allocated as either Male or Female per Clause F2D4(1).

Note 2: Where individual stand-alone sanitary compartments are they must be allocated for use by Males or Females only unless they are designed as a unisex accessible compartment per Clause F2D4(1).

Note 3: As mentioned under D2D18 above, these population numbers have been based on the proposed facilities and hence more accurate population numbers may be provided by Mirvac and or the tenant.

F4D5

Accessible Sanitary Facilities: Accessible unisex sanitary compartments must be provided, in accordance with F4D6 and unisex showers must be provided in accordance with Table F4D7, in buildings or parts that are required to be accessible. The details for the provision of disable facilities and the standard, AS 1428.1, are set out in sub-clauses (a) to (i).

Comments: Details and report to be provided from Access consultant prior to the issue of the Construction Certificate.

F4D8

Construction of Sanitary Compartments: Other than in an early childhood centre, sanitary compartments must have doors and partitions that separate adjacent compartments and extend:

- From floor level to the ceiling in the case of a unisex facility; or
- A height of not less than 1.5m above the floor if primary school children are the principal users; or
- 1.8m above the floor in all other cases.

The door to a fully enclosed sanitary compartment must open outwards; or slide: or be readily removable from the outside of the sanitary compartment, unless there is a clear space of at least 1.2m, measured in accordance with Figure F4D8 between the closet pan within the sanitary compartment and the doorway.

Comment: Architect to note.

F5D2

Height of Rooms and Other Spaces: The ceiling heights in Class 2 to 9 buildings must not be less than required in sub-clauses (1) to (8) of this clause.

The minimum ceiling heights for a Class 5, 6 & 7 building are as follows:

- Corridor or Passage, Bathroom, Storeroom, etc. – 2.1m
- Remainder – 2.4m.

The minimum ceiling heights for a Class 9b building are as follows:

- A part (including a corridor serving the part) that accommodates not more than 100 persons – 2.4m; A part (including a corridor serving the part) that accommodates more than 100 persons – 2.7m.

Comment:

- A physical barrier is to be provided under the internal stairs from level 1 office to warehouse if the clearance at the bottom is under 2.1m.
- Architect to ensure compliance. Ceiling heights are to be reviewed at the Construction Certificate state with the detailed section drawings.

F6D5

Artificial Lighting: Artificial lighting is required where it is necessary to minimise the hazard to occupants during an emergency evacuation. Sub-clauses (1) - (3) sets out the places where

	artificial lighting is always required in all classes of buildings and the standard to which it must be installed. **Comment:** Design certification to be submitted at CC Application.
F6D6	**Ventilation of Rooms:** A habitable room, office, shop, factory, workroom, sanitary compartment, bathroom, shower room, laundry and any other room occupied by a person for any purpose must have natural ventilation complying with F6D7 or a mechanical or air-conditioning system complying with AS1668.2 and AS/NZS 3666.1. **Comment:** Design certification to be submitted at CC Application.
F6D8	**Ventilation Borrowed from Adjoining Room:** Natural ventilation must consist of openings, windows, doors or other devices which can be opened— with a ventilating area not less than 5% of the floor area of the room required to be ventilated. Additionally, open to a suitably sized space open to the sky or an adjoining room in accordance with F6D8. **Comment:** Design certification to be submitted at CC Application.

3.6 Section J – Energy Efficiency

Part J4	**Building Fabric:** The provision of insulation of the building envelope will be required in the proposed Building, in accordance with Clauses J4D3 to J4D7, and the Tables therein, including Thermal Construction General, Roof and Ceiling Construction, Rooflights, Walls, and Floors. Design details and/or certification of design will be required to be provided in this regard. **Comment:** This section applies to the building envelope of any air-conditioned spaces proposed within the Warehouse buildings. Design details and/or certification of building envelope design will be required to be submitted with the application for a Construction Certificate.
Part J5	**Building Sealing:** The provision of a compliant building sealing is required to all chimneys & flues, roof lights, windows & doors, Exhaust Fans, Ceilings Walls, & floors in accordance with Clauses J5D3 to J5D7. **Comment:** This section applies to any air-conditioned spaces proposed within the Warehouses buildings. Design details and/or certification of building envelope design will be required to be submitted with the application for a Construction Certificate.
Part J6	**Airconditioning & Ventilation Systems:** Details and/or design certification which confirm that any proposed air-conditioning system or unit within the proposed building achieves compliance with the relevant requirements of Part J6 will be required to be provided from the mechanical engineer. **Comment:** Details or certification demonstrating compliance will need to be submitted with the application for a Construction Certificate.
Part J7	**Artificial Light & Power:** Details and/or design certification which confirm that all artificial lighting, power control, and boiling/chilled water units within the proposed building achieves compliance with the relevant requirements of Part J7 will be required to be provided from the electrical engineer **Comment:** Consultant certification required at CC Application Stage.
Part J8	**Hot Water Supply, & Swimming Pool & Spa Pool Plant:** Details and/or design certification which confirm that any proposed hot water supply system within the proposed building achieves compliance with the relevant requirements of Part J8 (Section 8 of AS 3500.4) will be required to be provided from the hydraulic engineer. **Comment:** Details and certification demonstrating compliance will need to be submitted with the application for a Construction Certificate.
Part J9	**Facilities for Energy Monitoring:** Provision for monitoring of energy consumption must be provided to a building where the floor area exceeds 500m², and must be capable of recording the

consumption of gas and electricity. In addition, where the floor area of the building exceeds 2,500m² the energy monitoring facilities must be capable of individually recording air-conditioning, lighting, appliance power, central hot water supply, lifts/escalators, and other ancillary plant and being connected to a single interface monitoring system.

Comment: Details or certification demonstrating compliance with J9D3 for energy monitoring, J9D4 for provision for EV charging stations, and J9D5 for solar, will need to be submitted with the application for a Construction Certificate.

4.0 Conclusion

This report contains an assessment of the referenced architectural documentation for the proposed warehouse 4 development at 788/882 Mamre Rd, Kemps Creek NSW 2178 against the Deemed-to-Satisfy provisions of the Building Code of Australia 2022 Amendment 2.

Arising from the assessment, key compliance issues have been identified that require further resolution, either by way of fire engineered Performance Solutions or plan amendments prior to the Construction Certificate stage.

Notwithstanding the above, it is considered that the proposed development can readily achieve compliance with the BCA subject to resolution of the matters identified in this report.

Appendices

+ Appendix 1 – References Tables

Table 1: Fire Hazard Properties Requirements – Floor Linings and Floor Coverings

+ Table S7C3 of Specification 7 Critical Radiant Flux of Floor Linings and Floor Coverings			
+ Class of Building	**Building Not Fitted with a Sprinkler System**	**Building Fitted with a Sprinkler System** (other than a FPAA101D or FPAA10H System)	**Fire-isolated Exits and Fire Control Rooms**
Class 2, 3, 5, 6, 7, 8 or 9b, excluding: + Class 3 accommodation for the aged; and + Class 9b	2.2 kW/m^2	1.2 kW/m^2	2.2 kW/m^2

Table 2: Fire-Resisting Construction – Type C Construction

+ 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:				
For loadbearing parts:				
Less than 1.5m	90/90/90	90/90/90	90/90/90	90/90/90
1.5 to less than 3m	–/–/–	60/60/60	60/60/60	60/60/60
3m or more	–/–/–	–/–/–	–/–/–	–/–/–
EXTERNAL COLUMN - Not incorporated in an external wall				
Less than 1.5m	90/–/–	90/–/–	90/–/–	90/–/–
1.5 to less than 3m	–/–/–	60/–/–	60/–/–	60/–/–
3m or more	–/–/–	–/–/–	–/–/–	–/–/–
COMMON WALLS and FIRE WALLS	90/90/90	90/90/90	90/90/90	90/90/90
INTERNAL WALLS				
Bounding public corridors, public lobbies and the like:	60/60/60	–/–/–	–/–/–	–/–/–
Between or bounding sole-occupancy units:	60/60/60	–/–/–	–/–/–	–/–/–
Bounding a stair if required to be rated:	60/60/60	60/60/60	60/60/60	60/60/60
ROOFS	–/–/–	–/–/–	–/–/–	–/–/–

Notes:

1. New external walls that are located 1.5m or more from an allotment boundary/fire source feature require no FRLs.
2. Where a part of a building required to have an FRL depends upon direct vertical or lateral support from another part to maintain its FRL, that supporting part must typically achieve the same FRL. Where that part is also required to be non-combustible, the supporting part must also be non-combustible.
3. An external wall required to have an FRL is only required from the outside.
4. Any lightweight construction in a fire wall or an internal wall required to have an FRL is to comply with Specification 6.
5. The method of attaching or installing a finish, lining, ancillary element, or service installation to a building must not reduce the fire-resistance of that element to below that required.
6. No structural elements are permitted to pass through fire-rated walls.

+ Appendix 2 – Fire Safety Schedule

The following table is a list of the required fire safety measures within the building. These measures may be subject to further change pending the outcomes of the final Fire Safety Engineering Review.

Table 7: Fire Safety Schedule

+ Statutory Fire Safety Measure	+ Design/Installation Standard	+ Proposed
ALARM SIGNALING EQUIPMENT	AS 1670.3 – 2018	✓
AUTOMATIC FIRE DETECTION & ALARM SYSTEM	BCA 2022 AMDT. 2 SPEC. 20 AS 1670.1 – 2018	✓
AUTOMATIC FIRE SUPPRESSION SYSTEMS	BCA SPEC. 17 AS 2118.1 – 2017	✓
BUILDING OCCUPANT WARNING SYSTEM ACTIVATED BY THE SPRINKLER SYSTEM	BCA SPEC. 17 CLAUSE 3.22 OF AS 1670.1 – 2018	✓
EMERGENCY LIGHTING	BCA CLAUSE E4D4 AS 2293.1 – 2018	✓
EMERGENCY EVACUATION PLAN	AS 3745 - 2010	✓
EXIT SIGNS	BCA CLAUSES E4D5, E4D6 & E4D8 AS 2293.1 – 2018	✓
FIRE CONTROL CENTRE	BCA CLAUSE E1D15 AND SPEC.19	✓
FIRE DOORS	BCA CLAUSE C3D13 AS 1905.1 – 2015 MANUFACTURER'S SPECIFICATION	✓
FIRE HOSE REELS (CLASS 7B PARTS ONLY)	BCA CLAUSE E1D3 AS 2441 – 2005	✓
FIRE HYDRANT SYSTEMS	BCA CLAUSE E1D2 AS 2419.1 – 2021 INCL. APPENDIX C	✓
FIRE SEALS	BCA CLAUSE C4D15 AS 1530.4 – 2014 & AS 4072.1 – 2018 MANUFACTURER'S SPECIFICATION	✓
LIGHTWEIGHT CONSTRUCTION	BCA CLAUSE C2D9 AS 1530.4 – 2014 MANUFACTURER'S SPECIFICATION	✓
PERIMETER VEHICULAR ACCESS	BCA CLAUSE C3D5	✓
PORTABLE FIRE EXTINGUISHERS	BCA CLAUSE E1D14 AS 2444 – 2001	✓
SMOKE HAZARD MANAGEMENT SYSTEMS SMOKE EXHAUST	BCA PART E2 AND SPEC. 21 AS/NZS 1668.1 – 2015	✓
WARNING & OPERATIONAL SIGNS	BCA CLAUSE D4D7 & E3D4 AS 1905.1 – 2015	✓

+ Statutory Fire Safety Measure	+ Design/Installation Standard	+ Proposed
Fire Engineered Performance Solutions relating to: TBC	BCA 2022 Performance Requirements … Fire Safety Engineering Report prepared by … Report No. … Revision … dated …	✓

Please note that the above schedule will need to be revised prior to issue of the Construction Certificate to reference any proposed Fire Engineering Report and incorporate any additional measures required by the proposed Performance Solutions.