BCA Capability Statement

Project Duke Data Centre – 2 & 10 – 22 Kent Road & 685 Gardeners Road Mascot 2020

Prepared for: Goodman Property Services

Our Ref: 24000341 | Issue date: 16 May 2025

Client Ref: Rev B SSDA Amendment

Contents

Authorisation

Revision	Comment / Reason for Issue	Issue Date	Prepared by	Reviewed by
04	Rev B SSDA Amendment	16 May 2025		
			Scott Gibbons	Matthew Marks

Revision History

Revision	Comment / Reason for Issue	Issue Date	Prepared by
01	SSDA submission	12 July 2024	Scott Gibbons
02	SSDA submission (Draft)	20 September 2024	Scott Gibbons
03	SSDA submission (Draft)	12 May 2025	Scott Gibbons

Commercial in Confidence

The report addressee may only reproduce this report in full for use with respect to the project specified in the report. No organizations or individuals are permitted to reproduce this report or any part thereof for any other purpose without the prior written consent of a Director of Modern Building Consultants Pty Ltd trading as MBC Group.

The copyright and intellectual property rights of Modern Building Consultants Pty Ltd trading as MBC Group extends to the data, methodologies and conclusions presented in this report.

1 Executive Summary

MBC Group have assessed architectural design documents prepared by GRIMSHAW (refer appendix A) for compliance with the National Construction Code - Building Code of Australia Volume One 2022 Amendment 1 (referred to as BCA).

The purpose of the assessment is to provide surety to the Consent Authority, Bayside Council,, that the proposed development has been assessed and is capable of complying with the BCA and that subsequent compliance with the provisions of Parts C, D and E of the BCA will not give rise to significant design amendments.

This statement does not consider Section 62 of the Environmental Planning and Assessment Regulation 2021, this clause is a consent authority consideration.

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 (Development Certification and Fire Safety) Regulation 2021.

2 Introduction

2.1 Purpose

The purpose of this statement is to assess the current design proposal against the Deemed-to-Satisfy (DtS) provisions of Sections C, D and E of the National Construction Code Series 2022 Amendment 1 (Volume 1) – Building Code of Australia (referred to as BCA), and provide surety to the Consent Authority that the design is capable of compliance without significant design amendments.

The following MBC Group Team Members have contributed to this assessment:
- Scott Gibbons
- Heath McNab
- Matthew Marks

This Capability Statement is not intended to identify all issues of compliance or non-compliance with the BCA with such other issues to be appropriately addressed prior to issue of the Construction Certificate.

2.2 Methodology

The methodology applied in undertaking this assessment has included: -
- A desktop review of architectural plans, as listed in Appendix A
- Assessment of the architectural plans against the following relevant codes:-
    - Sections C, D & E (as applicable / relevant) of the National Construction Code Series (Volume 1) Building Code of Australia 2022 Amendment 1 (BCA)
    - Environmental Planning and Assessment Act 1979 (EPAA)
    - Environmental Planning & Assessment (Development Certification and Fire Safety) Regulation 2021 (EPAR)
- Discussions with the design development team to gain an understanding of the development proposed.

2.3 Limitations

This statement **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 (including pressure & flows) of any proposed
    - electrical
    - mechanical
    - hydraulic
    - fire protection services.
- Section 62 of the Environmental Planning and Assessment Regulation 2021

This statement 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 D4 and F4D5 of BCA 2022 Amendment 1
- The deemed to satisfy provisions of Sections B, F, G, H & J of BCA 2022 Amendment 1
- Demolition Standards not referred to by the BCA;
- Work Health 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.

2.4 Conflict of Interest

This statement prepared by MBC Group was provided as part of MBC Group's contracted scope for this project, which is "Certification Work", as defined in the Building and Development Certifiers Regulation 2020.

Due to the strict requirements and limits in terms of conflicts of interest imposed under that regulation, MBC Group has not and cannot undertake any services other than Certification Work services on this project. Hence, the contents of this statement, and any associated correspondence, were provided in the context of a certification assessment, and should not be construed to constitute involvement in building design, the preparation of plans and specifications, the provision of advice on how to amend a plan or specification to ensure that the aspect will comply with legislative or code requirements, or to breach any other restriction or limitation imposed under the conflict of interest provisions of that or any other legislation.

3 Development Description

3.1 Proposed Development

The proposed development (SSD-71368959) will seek approval for the construction of an 120MVA Data Centre. The proposal seeks to demolish existing structures on the site, construct, fit out and the 24/7 operation of a Data Centre, with associated works.

The works subject to SSD-71368959 include the following:

- Site preparation works including demolition, bulk excavation, and removal of existing structures on the site, tree and vegetation clearing, and bulk earthworks,

  Construction, fit out and 24/7 operation of a 120 MVA data centre with a maximum building height of 40m (from natural ground level) and total gross floor area of approximately 26,052m^2 comprising:

  - At-grade parking for thirty-four (34) car parking spaces and one (1) accessible car parking spaces,
  - Two (2) 12.5m loading dock spaces,
  - Four (4) levels of technical data hall floor space with one data hall on ground level, three (3) data halls on levels one and two (2) data halls on level three.
  - Secure entrance lobby on ground level and ancillary office space on each level and mezzanine level,
- Provision of required plant and utilities, including:
  - Six (6) 33kV switch rooms on ground level
  - 1,172,000L above ground diesel storage tanks,
  - 5,125kL above ground water storage tanks,
  - 72 diesel generators
- Acoustic screen parapet,
- Vehicle access provided via Gardeners Road and Ricketty Street,

3.2 Location

The Site

The project is located on land known as 2 and 10-22 Kent Road, and 685 Gardeners Road, Mascot, legally referred to as Lot 1 DP529177, Lot 1 DP1009083 and Lot 2 DP529177. The site is located on Country of the Gadigal people within the local government area of Bayside Council.

It has a land area of approximately 23,470m^2 with frontages to Ricketty Street, Kent Road and Gardeners Road, all of which are classified roads.

The site forms part of the Mascot West Employment lands which comprises a mix of land zoned for industrial, commercial and business park uses. To the east of the site is Mascot Station Town Centre which comprises a mix of retail, commercial, residential and recreational open space land uses.

Surrounding land uses in the immediate vicinity of the include:

- **North**: Gardeners Road, which is the LGA boundary with the City of Sydney. Further to the north is existing industrial development with Alexandra Canal beyond.
- **South**: Ricketty Street is immediately south, with predominantly one (1) to four (4) storey commercial and industrial development beyond.
- **East**: Kent Road is immediately to the east, with four (4) to 14 storey high density residential development beyond.
- **West**: To the west is light industrial development typically one (1) to two (2) storey in height.

The site is zoned E3 Productivity Support under the Bayside Local Environmental Plan 2012 (**BLEP 2021**). The proposal is permissible with development consent in the E3 zone and meets the zone objectives.

In its existing state, the site itself contains two large warehouse buildings which are currently leased out to multiple tenants. Large extents of the site consist of hardstand for vehicle circulation and parking with a number of mature trees are located along the site's boundaries.

A summary of the site is provided in **Table 1** below.

Table 1 – Site Description summary

Item	Description
Site Area	23,470m^2
Ownership	Goodman
Legal Description	Lot 1 in DP529177, Lot 1 in DP1009083 and Lot 2 DP529177

Imagine by https://maps.six.nsw.gov.au/

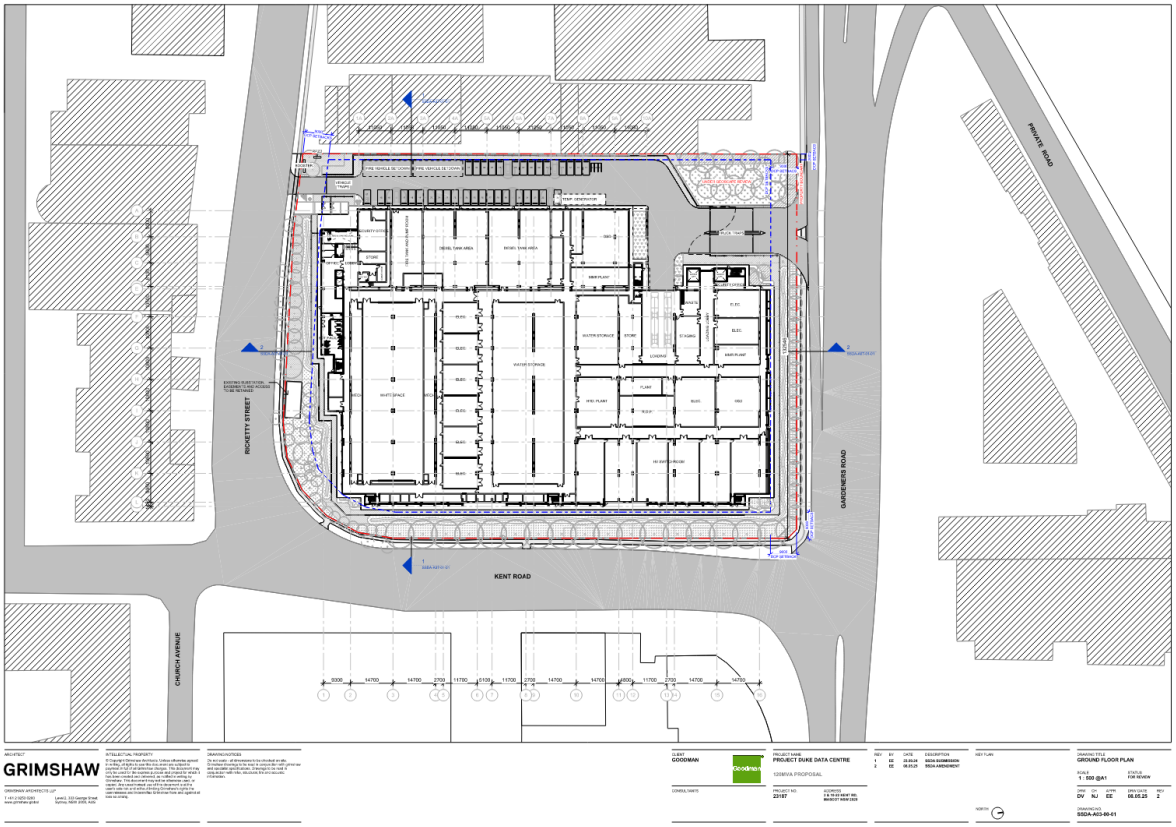

Image by Grimshaw

3.3 BCA Classification (Part A6)

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 C2D3)

The proposed development is within a building that has been assessed to have a rise in storeys of eight (8)

3.5 Effective Heights (Part A1)

The proposed development has been assessed to have an effective height of less than 25m, assumed.

The BCA now defines effective height as: -

"Effective height means the vertical distance between the floor of the lowest storey included in a determination 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)."

3.6 Type of Construction Required (Clause C2D2 / Table C2D2)

The proposed development is required to be Type A Construction. Specification 5 outlines the fire resistance required by certain building elements.

3.7 Building Data Summary

Part of Development	Use	Class	Floor Area (approx.) m^2
GF	Office - storage & plant	5 & 7b	420 - 13,621
GF - Mezz	Office	5	424
Level 1	Office - storage & plant	5 & 7b	460 - 13,770
Level 1 - Mezz	Office	5	460
Level 2	Office - storage & plant	5 & 7b	460 - 13,770
Level 2 - Mezz	Office	5	460
Level 3	Office - storage & plant	5 & 7b	460 - 13,770
Level 3 - Mezz	Office & Roof terrace	5	451
Roof	Plant	7b	13,767

Summary of Construction and Building				
Use(s)	Office & data storage			
Classifications(s)	5 & 7b			
Number of Storeys contained	8			
Rise in Storeys	8			
Type of Construction	Type A			
Effective Height	23.6m (<25m)			
Largest Fire Compartment	Area	TBC	Volume	TBC
Climate Zone	5			
Importance Level	Structural Engineer is to determine importance level in accordance with BCA and AS1170 Part 0-2002, this must be specified in their design certificate			

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
Section 78 of the Environmental Planning and Assessment (Development Certification and Fire Safety) Regulation 2021

Premises: Project Duke
Address: 10 & 2 – 22 Kent Road, Mascot 2020

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 Section 78 of the Environmental Planning and Assessment (Development Certification and Fire Safety) Regulation 2021, is deemed to be the current fire safety schedule for the building.

SCHEDULE – Base Building BCA 2022 Amendment 1
Type of Construction A
Effective height = 23.6m

	Measure	**Status**	**Existing Performance Standard**
1.	Access panels, doors and hoppers to fire-resisting shafts	New	BCA 2022 Clause C4D14, AS 1905.1-2015, AS1905.2-2005 & Manufacturer's specifications
2.	Automatic fail safe devices	New	BCA 2022 Clause C4D7, D3D24, D3D26, D3D27, Spec 12, AS 2118.1-2017, AS 1670.1-2018
3.	Automatic fire detection and alarm system	New	BCA 2022 Clause E2D2, E2D3, E2D9, E2D21 Spec 20 Clause S20C4, S20C5, S20C6, S20C7 AS 1670.1-2018
4.	Automatic fire suppression system	New	BCA 2022 Clause E1D4, Spec 17, AS 2118.1-2017, AS 2118.6-2012 (Combined System)
5.	Emergency lift	New	BCA 2022 Clause E3D5, AS 1735.1-2016 AS 1735.2-2001, AS1735.11-1986, AS1735.12 1999
6.	Emergency lighting	New	BCA 2022 Clause E4D2, E4D3 E4D4, AS 2293.1-2018
7.	Exit and directional signage	New	BCA 2022 Clause E4D5, NSW E4D6 & E4D8, Spec 25 AS 2293.1-2018

	Measure	Status	Existing Performance Standard
8.	Fire alarm monitoring system	New	BCA 2022 Spec 20 Clause S20C8, AS 1670.3-2018
9.	Fire control centres and rooms	New	BCA 2022 Clause E1D15, Spec 19
10.	Fire & Smoke dampers	New	BCA 2022 Clause E2D3, C3D6, C4D13, C4D15, Spec 11, Spec 19 AS/NZS 1668.1-2015, AS 1682.1-2015, AS 1682.2-2015, Manufacturer's specifications
11.	Fire doors	New	BCA 2022 Clause C3D13, C3D14, C4D5, C4D7, C4D9, C4D12, S5C45, Spec 12, AS 1905.1-2015
12.	Fire hose reel systems	New	BCA 2022 Clause E1D3, AS 2441-2005
13.	Fire hydrant systems	New	BCA 2022 Clause E1D2, AS 2419.1-2021, AS 2118.6-2012 (Combined System)
14.	Fire seals (protecting openings and service penetrations in fire resisting components of the building)	New	BCA 2022 Clause C4D15, Spec 13, AS 4072.1-2005, AS 1530.4-2014, Manufacturer's specifications
15.	Lightweight construction	New	BCA 2022 Clause C2D9, Spec 6, AS 1530.4-2014, Manufacturer's specifications
16.	Mechanical air handling systems	New	BCA 2022 E2 and NSW Part E2, Spec 19, Spec 21, Spec 22, Spec 24 AS/NZS 1668.1-2015, AS 1668.2-2012
17.	Openings in fire-isolated lift shafts	new	BCA 2022 Clause C3D11 AS 1735.11-1986
18.	Occupant warning system	NA	BCA 2022 Clause E2D3, S17C8, Spec 20 Clause S20C7, AS 1670.1-2018
19.	Path of travel for stairways, passageway and ramps	New	Section 107-109 of the Environmental Planning and Assessment (Development Certification and Fire Safety) Regulation 2021
20.	Portable fire extinguishers	New	BCA 2022 Clause E1D14, AS 2444-2001
21.	Wall wetting sprinkler and drencher systems	New	BCA 2022 Clause C4D5 AS 2118.2-2021
22.	Warning and operational signs	New	BCA 2022 Clause C4D7, D3D28, E3D4, Spec 31, Section 108 of the Environmental Planning and Assessment (Development Certification and Fire Safety) Regulation 2021
23.	Add in performance solution requirement e.g. Storage of XXXX materials on storey XXXX must be less than XXXX above finished floor level	New	Performance Solution Report XXXXX, prepared by XXXX dated XXXX

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

5 Assessment

5.1 Relevant BCA Edition

The proposed development will be subject to compliance with the relevant provisions of the Building Code of Australia (BCA) as in force at the time the application for a Construction Certificate is made.

As the Construction Certificate is expected to be lodged after 1 May 2025, the applicable version of the BCA will be NCC 2022, incorporating Amendment 1, in accordance with the transitional provisions set by the Australian Building Codes Board (ABCB).

At the time of this report, the adoption date for NCC 2025 has not been confirmed. Should the CC application occur after the commencement of NCC 2025, this report will require review and potential amendment to address any updated or additional requirements that become applicable at that time.

It is the responsibility of the applicant and design team to monitor the timing of the CC submission and to ensure alignment with the applicable version of the NCC at the time of lodgement.

5.2 Compliance with the BCA

A desktop assessment was carried out against the technical provisions of the BCA and compliance matters will be addressed in the Construction Certificate documentation. It is noted that the proposed development must comply with the relevant requirements, and this can be achieved by complying with the Performance Requirements of the BCA:

5.2.1 A2GA Compliance with the Performance Requirements

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

Upon assessment of architectural plans, MBC Group can verify that the proposed design can readily achieve compliance with the performance requirements of the BCA.

Departures from the Deemed to Satisfy Provisions of the BCA are identified below and will need to be addressed during design development:

DTS Clause	Description of Non-Compliance	Performance Requirement
C2D14	**Ancillary elements** External signage to the proposed façade and pergola to the office terrace may not be accordance with C2D14 i.e. it is not non-combustible and/ or does not achieve a group rating.	C1P2

DTS Clause	Description of Non-Compliance	Performance Requirement
C3D3	**General floor area and volume limitations** Compartmentation strategy to be confirmed and finalised with the Fire engineer and the design team for rationalisation of oversized floor areas and compartmentation for Type A Construction	C1P1 & C1P2
C4D4	**Separation of openings in external walls and associated openings in different fire compartments** The proposed design shows the west elevation of the office facade is within 90° of the generator fire compartment and is not proposed to be protected in accordance with C4D5.	C1P1, C1P2, C1P8
C4D13	**Openings in floors and ceilings for services** The generator rooms have openings in the floor slabs that are not proposed to be protected.	C1P1, C1P2, C1P8
D2D5	**Exit travel distances.** The following areas exceed the maximum allowable travel distances within the date centre: **Ground Floor** - Up to 30m to a POC in lieu of 20m. - Up to 74m to an exit in lieu of 40m **Level 1** - Up to 30m to a POC in lieu of 20m. - Up to 74 m to an exit in lieu of 40m **Level 2** - Up to 30m to a POC in lieu of 20m. - Up to 74 m to an exit in lieu of 40m **Level 3** - Up to 30 m to a POC in lieu of 20m. - Up to 74 m to an exit in lieu of 40m **Level 4 (plant)** - Up to 68 m to an exit in lieu of 40m	D1P4 E2P2
D2D6	**Distance between alternative exits** The following areas exceed the maximum allowable travel distances within the date centre: **Ground Floor** - Up to 147m between alternative exits in lieu of 60m. **Level 1** - Up to 147 m between alternative exits in lieu of 60m. **Level 2** - Up to 147 m between alternative exits in lieu of 60m. **Level 3** - Up to 147m between alternative exits in lieu of 60m. **Level 4 (plant)** - Up to 135 m between alternative exits in lieu of 60m	D1P4 E2P2

DTS Clause	Description of Non-Compliance	Performance Requirement
D2D8	**Exit widths** Hot isles may have reduced with egress paths <1m.	D1P6, E2P2
E1D2, AS 2419.1-2021	**Fire hydrants** Insufficient fire hydrant coverage across all levels, excluding the office area, necessitates the use of two hose lengths to achieve adequate coverage and the use of a on floor fire. AS2419.1-2021 – The standard applies to a building with a total volume not more than 108,000m^3. The booster assembly is not adjacent to the main entrance.	E1P3, E1P6
E1D3	**Fire hose reels** To allow for the exclusion of fire hose reels from multiple rooms and from the roof level due to extended distances located from exits.	E1P1
E1D4, Spec 17 AS2118.1	**Sprinklers** Proposed omission of sprinklers in various sections of the data centre. The sprinkler pre action valve enclosure is located on the upper levels which does not have direct egress to the road or open space. The booster assembly is not adjacent to the main entrance.	E1P4

Any Performance Solution will be subject to consultation and approval by Fire and Rescue NSW as part of the Construction Certificate process.

6 Conclusion

This statement outlines the findings of an assessment of the referenced architectural documentation for the proposed development against the Deemed-to-Satisfy provisions of the National Construction Code Series (Volume 1) Building Code of Australia 2022 Amendment 1.

As outlined in section 2.3 of this report excludes the design basis and/or operating capabilities proposed hydraulic and fire protection services. Mains water pressure and flows must be obtained and assessed by hydraulic engineer fire services engineers immediately to ascertain if mains are adequate or onsite water storage is required which can often be substantial in size and require modification of the development consent.

In view of this assessment we can confirm that compliance with the National Construction Code Series (Volume 1) Building Code of Australia 2022 Amendment 1 is readily achievable.

We trust that the above submission is of assistance to Council and should you wish to discuss any aspect of this advice, please do not hesitate to contact the undersigned.

Best regards,

Scott Gibbons
Senior Building Surveyor
MBC Group

7 Appendix A – Design Documentation

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

Drawing No.	Title	Date	Revision
SSDA-A01-01-01	PROPOSED SITE PLAN	08.05.25	2
SSDA-A01-01-02	DEMOLITION PLAN	08.05.25	2
SSDA-A03-00-01	GROUND FLOOR PLAN	08.05.25	2
SSDA-A03-00M-01	GROUND MEZZANINE FLOOR PLAN	08.05.25	2
SSDA-A03-01-01	LEVEL 01 FLOOR PLAN	08.05.25	2
SSDA-A03-01M-01	LEVEL 01 MEZZANINE FLOOR PLAN	08.05.25	2
SSDA-A03-02-01	LEVEL 02 FLOOR PLAN	08.05.25	2
SSDA-A03-02M-01	LEVEL 02 MEZZANINE FLOOR PLAN	08.05.25	2
SSDA-A03-03-01	LEVEL 03 FLOOR PLAN	08.05.25	2
SSDA-A03-03M-01	LEVEL 03 MEZZANINE FLOOR PLAN	08.05.25	2
SSDA-A03-04-01	ROOF PLAN	08.05.25	2
SSDA-A03-05-01	TOP OF SCREEN LEVEL PLAN	08.05.25	2
SSDA-A06-00-01	ELEVATIONS SHEET 1 OF 4	08.05.25	2
SSDA-A06-00-02	ELEVATIONS SHEET 2 OF 4	08.05.25	2
SSDA-A06-00-03	ELEVATIONS SHEET 3 OF 4	08.05.25	2
SSDA-A06-00-04	ELEVATIONS SHEET 4 OF 4	08.05.25	2
SSDA-A06-01-01	SITE ELEVATIONS	08.05.25	2
SSDA-A07-01-01	SECTIONS	08.05.25	2
SSDA-A10-01-01	GFA AREA DRAWINGS	08.05.25	2
SSDA-A90-00-01	GROUND FLOOR SIGNAGE PLAN	08.05.25	2
SSDA-A90-00-04	ROOF SIGNAGE PLAN	08.05.25	2
SSDA-A90-99-01	SIGNAGE TYPES	08.05.25	2
SSDA-A90-99-02	SIGNAGE TYPE S1	08.05.25	2
SSDA-A90-99-03	SIGNAGE TYPE S2A	08.05.25	2
SSDA-A90-99-04	SIGNAGE TYPE S2B	08.05.25	2
SSDA-A90-99-05	SIGNAGE TYPE S3A	08.05.25	2
SSDA-A90-99-06	SIGNAGE TYPE S3B	08.05.25	2
SSDA-A90-99-08	SIGNAGE TYPE S5	08.05.25	2


MBC GROUP
www.mbc-group.com.au