



BCA Capability Statement

IC3 Super West
17-23 Talavera Road, Macquarie Park

Prepared for: Giddis Project Management
Our Ref: 21000275 | Issue date: 26 October 2022

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Authorisation

Revision	Comment / Reason for Issue	Issue Date	Prepared by	Reviewed by
1	DA Lodgement	26/10/2022		
			Rebecca Kilty	Heath McNab

Revision History

Revision	Comment / Reason for Issue	Issue Date	Prepared by
1	DA Lodgement	26/10/2022	Rebecca Kilty

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Executive Summary

As Accredited Certifiers, we have reviewed architectural design documents prepared by (refer Appendix A) for compliance with the National Construction Code - Building Code of Australia Volume One DRAFT 2022.

The purpose of the assessment is to provide surety to the Consent Authority, Ryde City Council that the buildings design is capable of complying with the BCA and that subsequent compliance with the provisions of Parts C, D E, F & J of the BCA will not give rise to further modifications to the building that may necessitate additional design changes.

A handwritten signature in black ink, appearing to read "Heath McNab".

Heath McNab
MBC Group

Introduction

The following MBC Group Team Members have contributed to this assessment:

- Rebecca Kilty – Senior Building Surveyor
- Heath McNab – Managing Director

Our assessment of the concept design documentation was based on the following:

- National Construction Code Series (Volume 1) Building Code of Australia DRAFT 2022 (BCA)
- Architectural Drawings – Refer to Appendix A
- Access to Premises – Buildings Standards 2010 (Access Code)
- Environmental Planning and Assessment Act 1979 (EP&A)
- Environmental Planning and Assessment Regulation 2001 (EP&AR)
- Environmental Planning and Assessment (Development Certification and Fire Safety) Regulation 2021

The objectives of this statement are to:

- Undertake an assessment of the proposed architectural design documentation against the Performance Requirements of National Construction Code Series DRAFT 2022 (Volume 1) - Building Code of Australia (BCA).
- Accompany the submission of the Development Application to Council to enable the Consent Authority to be satisfied that the building design is capable of complying with the BCA and that subsequent compliance with Parts C, D, E, F & J of the BCA will not give rise to further design changes to the building.
- Identify any BCA compliance issues that require resolution at the Construction Certificate stage. These matters are to be considered pursuant to Section 36 of the EP&A Regulation 2021.
- Enable the certifying authority to satisfy its statutory obligations under Section 19 of the Environmental Planning and Assessment (Development Certification and Fire Safety) Regulation 2021
- Enable the certifying authority to satisfy its statutory obligations under Clause 24 & 25 of the Building and Development Certifiers Regulation 2020.
- 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.

1.1 Conflict of Interest

This report 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 our report, 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.

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Building Description Summary

1.2 Proposed Works

The proposed development comprises the construction of an extension to an existing data centre.

The site is located at 17-23 Talavera Rd, Macquarie Park.

1.3 Building Assessment Data

Summary of Construction and Building	
Use(s)	Office, Carpark, Data Storage
Classifications(s)	5, 7a, 7b
Number of Storeys contained	7
Rise in Storeys	7
Type of Construction	A
Effective Height	40.89m

Assessment

1.4 Relevant BCA Edition

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.

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.

Please Note: An out of cycle BCA is intended to impact this project. BCA 2022 is due to be released and enforced as of the 1 Jul 2020.

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

1.5 Compliance with the BCA

A detailed 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:

A2GA Compliance with the Performance Requirements

Performance requirements are satisfied by one of the following:

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

Upon assessment of architectural plans, Modern Building Certifiers can verify that the proposed design can readily achieve compliance with the DtS provisions of the BCA and as such meet the performance requirements. The below identified non-compliances shall be addressed by Fire Engineered Performance Solution. In addition, any of the affected Category 2 Performance requirements will be referred to Fire and Rescue NSW.

DTS Clause	Description of Non-Compliance	Performance Requirement
C2D1	Type A Construction is required however a reduction in FRL's is proposed from 240 minutes to 120 minutes for the fire walls separating IC3E & IC3W. Columns and slabs are to be DTS 240 minutes. A part of the floor on Level 1 does not have the required FRL in accordance with BCA Spec S5C1. This will form part of a Performance Solution addressing Performance Requirement C1P1.	C1P1

DTS Clause	Description of Non-Compliance	Performance Requirement
C3D5	The road on the western side of the building providing vehicle access for the brigade is required to be a minimum of 6m. Update the drawings to comply or alternatively this shall form part of a Performance Solution addressing Performance Requirement C1P9. As this is a Category 2 Performance Requirement referral to Fire and Rescue NSW will be required	C1P9
C4D4	Clause C4D4 requires that the distance between external walls and any openings within them in different fire compartments to be not less than that set out in Table C4D4, unless they have an FRL 60/60/60 and any openings protected in accordance with C4D5. Ground level and level one are exposed between the adjoining fire compartments (IC2 and IC3 A performance solution addressing C1P2 & C1P8 is proposed to address this.	C1P2 C1P8
C4D6	A number of double doors will be fitted with bolts that would affect the self-closing action of the door if the bolt is engaged at the time of closing. A performance solution addressing C1P2 and C1P8 is proposed to address this.	C1P2 C1P8
C4D16	Penetrations of some services through fire resistant construction with FRL 240/240/240 will not achieve an FRL -/240/240 as required. A performance solution addressing C1P2 and C1P8 is proposed.	C1P2 C1P8
D2D3	BCA D2D3 states that a building that has an effective height of more than 25m must have at least 2 exits serving each storey. The lift lobby area which serves, ground, level 1 and the mezzanine is only provided with 1 exit. A performance solution addressing D1P4 is proposed.	D1P4
D2D5	DtS provisions require; 20m to a point of choice 40m total distance to an exit. Non-compliant travel distances have been identified as the following - Up to 30m to a point of choice or single exit in lieu of 20m and, - Up to 75m to the nearest exit in lieu of 40m Final distances are proposed to form part of a Performance Solution addressing Performance Requirement D1P4 & E2P2. As this is a Category 2 Performance Requirement referral to Fire and Rescue NSW will be required.	D1P4 E2P2
D2D6	DtS provisions require; No less than 9m between alternative exits No more than 60m apart Located so that alternative paths of travel do not converge such that they become less than 6 m apart.	D1P4 E2P2

DTS Clause	Description of Non-Compliance	Performance Requirement
	Distance between exits have been assessed as; 110m apart (through the POC) As this is a Category 2 Performance Requirement referral to Fire and Rescue NSW will be required.	
D2D16	Clause D1.11 requires that horizontal exits not comprise more than 50% of the required exits. The proposed lift lobby area which serves, ground, level 1 and the mezzanine are provided a single exit, which is a horizontal exit that egresses via IC2.	D1P4
D2D8	The unobstructed width of an exit or path of travel to an exit must be not less than 1m, except for a doorway which may be reduced by 250 mm. It has been confirmed that areas of the data hall will have reduced dimensions (width) of paths of travel to exits to less than 1m i.e. 650mm. The stairs leading from the TX Rooms to ground level have a reduced path of travel width of 880mm. This is proposed to be addressed by a Fire Engineering report as stated in the PBDB.	D1P6
D2D12	Where a path of travel from the point of discharge of a fire-isolated exit necessitates passing within 6 m of any part of an external wall of the same building, measured horizontally at right angles to the path of travel, the following applies: That part of the wall must have – (a)an FRL of not less than 60/60/60; and (i)any openings protected internally in accordance with C4D5. The northern fire isolated stair discharges within 6m of the external wall of the carpark on ground floor. This is proposed to be addressed by a Fire Engineering report as stated in the PBDB.	D1P5
D2D13	An external stairway or ramp may serve as a required exit in lieu of a fire isolated exit serving a storey below an effective height of 25m. The two (2) stairs serving IC3W are proposed to be constructed as external stairs, representing a non-compliance with BCA D2D13. A performance solution addressed D1P5 and E2P2 is proposed. As this is a Category 2 Performance Requirement referral to Fire & Rescue NSW will be required.	D1P5 E2P2
D3D27	Clause D2.22 requires the doors of fire isolated stairs in a building having an effective height of more than 25 m to not be locked from the inside unless the doors automatically upon activation of a fire alarm and an intercommunication system is provided in the stair. The doors do not unlock automatically on fire alarm.	D1P2 D1P4
E1D2	The fire hydrant system is proposed to rely upon internal hydrants which require double lengths of hose in lieu of	E1P3

DTS Clause	Description of Non-Compliance	Performance Requirement
	single lengths, as well as additional internal on floor hydrants outside of the fire isolated exits, to achieve coverage. A performance solution addressing E1P3 is proposed. As this is a Category 2 Performance Requirement referral to Fire and Rescue NSW will be required. Note: In accordance with AS2419.1-2021, the Hydrant Design for large Isolated Building to be designed in consultation with FRNSW.	
E1D3	Fire hose reels shall not be provided within the Class 7b storage areas due to the high electrical content and risk to occupants associated. A Performance Solution addressing Performance Requirement E1P1 is proposed. This is proposed to be addressed by a Fire Engineering report as stated in the PEDB	E1P1
E1D4	A pre-action sprinkler system is proposed that relies upon a detection system to AS1670.1-2018. It is proposed that the alarm signalling equipment required by AS2118.1-2017 will activate on activation of the sprinkler system and not the pre-action detection system that triggers the firing of the sprinkler system with water. This shall form part of a Performance Solution addressing Performance Requirement E1P4 of the BCA. As this is a Category 2 Performance Requirement referral to Fire and Rescue NSW will be required. This is proposed to be addressed by a Fire Engineering report as stated in the FEDB.	E1P4
E1D15	The required fire control centre is not proposed to be located within the designated building entry point. As such a Performance Solution addressing Performance Requirement E1P6 is proposed. As this is a Category 2 Performance Requirement referral to Fire and Rescue NSW will be required. This is proposed to be addressed by a Fire Engineering report as stated in the PBDB.	E1P6
E2D3	An air-handling system which does not form part of a smoke hazard management system in accordance with E2D4 to E2D20 and which recycles air from one fire compartment to another fire compartment or operates in a manner that may unduly contribute to the spread of smoke from one fire compartment to another fire compartment must, subject to (2), be designed and installed – to operate as a smoke control system in accordance with AS 1668.1. A smoke detection system must be installed in accordance with S20C6 to operate AS 1668.1 systems that are provided for zone pressurisation and automatic air pressurisation for fire-isolated exits. Stair pressurisation to the fire isolated stairs is proposed to be removed.	

DTS Clause	Description of Non-Compliance	Performance Requirement
	Performance Requirement E2P2 is proposed. As this is a Category 2 Performance Requirement referral to Fire and Rescue NSW will be required. This is proposed to be addressed by a Fire Engineering report as stated in the PBDB.	
E2D6	Due to being a Large Isolated Building, an automatic smoke exhaust system compliant with Specification 21 or an automatic smoke-and-heat vent system compliant with Specification 22 is required. A building having an effective height of >25m is required to be provided with zone smoke control and Specification 20 states that the installation of a smoke detection system must be connected to a fire alarm monitoring system connected to a fire station or fire station dispatch centre. The building is not provided with either smoke exhaust nor smoke control. A Performance Solution addressing Performance Requirement E2P2 is proposed. As this is a Category 2 Performance Requirement referral to Fire and Rescue NSW will be required. This is proposed to be addressed by a Fire Engineering report as stated in the PBDB.	E2P2
E3D5	Emergency lifts are required to be provided. The proposed lifts in IC3E & IC2 are not proposed to be emergency lifts This is proposed to be addressed by a Fire Engineering report.	E3P2

The above items shall be addressed prior to the issuance of a Construction Certificate to meet A2G1 of the BCA.

Where and if a fire engineer proposes any performance solutions that identify Category 2 fire safety provisions, this will require formal referral to Fire & Rescue NSW pursuant to Section 25 of the Environmental Planning & Assessment (Development Certification and Fire Safety) Regulation 2021.

Conclusion

This report contains an assessment of the referenced architectural documentation for the proposed development against the Deemed-to-Satisfy provisions & Performance Requirements of the National Construction Code Series (Volume 1) Building Code of Australia DRAFT 2022

In view of the above assessment, we can confirm that subject to the above identified non-compliances being appropriately considered, that compliance with the A2G1 of the BCA 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 me.

Best regards,

A handwritten signature in black ink, appearing to read "Heath McNab", with a stylized flourish at the end.

Heath McNab
Managing Director
MBC Group

Appendix A – Design Documentation

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

Drawing No.	Title	Date	Drawn By	Revision
A1001	COVER PAGE	26/10/2022	HDR	B
A1301	SITE PLAN	26/10/2022	HDR	G
A1302	LOCATION PLAN	26/10/2022	HDR	F
A2001	GFA – SHEET 1	26/10/2022	HDR	G
A2002	GFA – SHEET 2	26/10/2022	HDR	G
A2003	GFA – SHEET 3	26/10/2022	HDR	C
A2003	GFA – SHEET 3	26/10/2022	HDR	C
A2101	GENERAL ARRANGEMENT – GROUND LEVEL	26/10/2022	HDR	E
A2102	GENERAL ARRANGEMENT – LEVEL 01	26/10/2022	HDR	E
A2101.1	GENERAL ARRANGEMENT – LEVEL 01B	26/10/2022	HDR	C
A2103	GENERAL ARRANGEMENT – LEVEL 02	26/10/2022	HDR	E
A2104	GENERAL ARRANGEMENT – LEVEL 03	26/10/2022	HDR	E
A2105	GENERAL ARRANGEMENT – LEVEL 04	26/10/2022	HDR	E
A2106	GENERAL ARRANGEMENT – LEVEL 05	26/10/2022	HDR	E
A2107	GENERAL ARRANGEMENT – LEVEL 06	26/10/2022	HDR	E
A2108	GENERAL ARRANGEMENT – ROOF LEVEL	26/10/2022	HDR	D
A3011	NORTH ELEVATION	26/10/2022	HDR	E
A3012	WEST ELEVATION	26/10/2022	HDR	E
A3103	SOUTH ELEVATION	26/10/2022	HDR	E
A3014	EAST ELEVATION	26/10/2022	HDR	D
ADA-3001	OVERALL SITE ELEVATIONS	26/10/2022	HDR	F
ADA-3101	SECTION-1	11/04/2022	HDR	C
ADA-3102	SECTION-2	11/04/2022	HDR	C
ADA-3103	SECTION-3	11/04/2022	HDR	C
ADA-3105	SECTION-5	11/04/2022	HDR	C
ADA-3104	SECTION-4	11/04/2022	HDR	C
A8001	3D PERSPECTIVE -1	26/10/2022	HDR	E
A8010	INDICATIVE VIEW OF ENTRY	26/10/2022	HDR	C
A8011	INDICATIVE VIEWS FROM TALAVERA RD	26/10/2022	HDR	C
A8051	SHADOW DIAGRAM – SPRING-SUMMER	26/10/2022	HDR	D
A8052	SHADOW DIAGRAM – AUTUMN-WINTER	26/10/2022	HDR	D

Disclaimer

This report is based upon a single site inspection only. No testing of any fire safety measures was conducted. This report is a summary of non-compliances with the applicable parts of C, D and E of the BCA that are able to be visually sighted ONLY. Aspects excluded from this report include structural design, general building services, DDA, Part B, Part F, Part G, Part H, Part J and the requirements of service or utility providers such as phone, gas, water and energy.

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