



BCA Capability Statement

Cessnock Hospital Redevelopment



Prepared for: HINSW

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Authorisation

Revision	Comment / Reason for Issue	Issue Date	Prepared by	Reviewed by
03	Final	23 October 2024		
			Ethan Davies	Mathew Marks

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Revision	Comment / Reason for Issue	Issue Date	Prepared by
01	Draft issue for comment	6 September 2024	Ethan Davies
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1 Introduction

1.1 Purpose

This BCA Capability report has been prepared by MBC Group on behalf of Health Infrastructure to assess the potential environmental impacts that could arise from the redevelopment of the Cessnock Hospital health service at 24 View Street, Cessnock.

This report has been prepared to assess compliance capability of the project with the National Construction Code Series (Volume 1) Building Code of Australia 2022 (BCA).

This report accompanies a Review of Environment Factors that seeks approval for the construction and operation of a new two-storey clinical services building including:

- Demolition of select existing structures.
- Construction of a new hospital building on the site's northern portion.
- Realignment of internal roads and a new primary vehicular and pedestrian entrance to the hospital campus from Jurd Street.
- Refurbishment of existing at-grade car park.
- Installation and realignment of selected services.
- Installation of selected services.
- Installation of ancillary development including, but not limited to, lighting and signage.
- Landscaping.
- New kerb, gutter and road resurfacing to Jurd Street.

For a detailed project description, refer to the Review of Environmental Factors prepared by Ethos Urban.

Statement of Significance regarding the National Construction Code 2022 Volume One - Building Code of Australia (BCA) Class 2 to 9 buildings

Based on the identification of potential issues and an assessment of the nature and extent of the impacts of the proposed development in relation to National Construction Code 2022 Volume One - Building Code of Australia (BCA) Class 2 to 9 buildings compliance, it is determined that:

The extent and nature of potential impacts are low/moderate and primarily relate to structure, fire safety, energy efficiency and sustainability. Potential impacts can be appropriately mitigated through compliance with the BCA which as outlined in this report, the design can do so either through design compliance with DtS or performance-based solution.

This will ensure that potential impacts are mitigated effectively, resulting no effect on the locality, community and environment.

1.2 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 (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.

1.3 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
- The deemed to satisfy provisions of Sections B, F, G, H & J of BCA 2022
- 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 Development Description

2.1 Proposed Development

The proposed development comprises the construction of a new two-storey clinical services building including:

- Demolition of select existing structures.
- Construction of a new hospital building on the site's northern portion.
- Realignment of some areas within the existing main hospital building.
- Realignment of internal roads and a new primary vehicular and pedestrian entrance to the hospital campus from Jurd Street.
- Refurbishment of existing at-grade car park.
- Installation and realignment of selected services.
- Installation of selected services.
- Installation of ancillary development including, but not limited to, lighting and signage.
- New kerb, gutter and road resurfacing to Jurd Street

2.2 Location

The site is located at 24 View Street Cessnock, in Cessnock Local Government Area. It is occupied by Cessnock Hospital health service, a district-level hospital in the Hunter England Local Health District. The site comprises the following lots.

- Lot 2 DP1173784
- Lot 7 DP13203
- Lot 8 DP13203
- Lot 1 DP103663
- Lot 10 DP5542
- Lot B DP103664
- Lot 2 Section 20 DP5442
- Lot 1 DP254743
- Lot 11 DP882585

An aerial image of the site is shown at **Figure 1**.



Figure 1 - Figure 1 Site Aerial

2.3 BCA Classification (Part A6)

The proposed development shall contain the following classifications: -

- Class 9a: being a healthcare facility

2.4 Rise in Storeys (Clause C2D3)

The proposed development has been assessed to have a rise in storeys of two (2).

2.5 Effective Heights (Part A1)

The proposed development has been assessed to have an effective height of 4.5m, this is measured from ground floor (RL 82.400) to level 1 (86.900).

Please note the definition of effective height of a building was changed 1 May 2016. 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).”

Note: The rooftop plant is not considered a storey for the purposes of effective height.

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

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

2.7 Building Data Summary

Part of Development	Use	Class	Floor Area (approx.) m ²	Population (using D2D18)
Ground floor	Emergency department Treatment rooms Imaging Ancillary rooms	9a	3,379m ²	Staff – 84 Patients – 76
Level 1	Patient care areas Ancillary rooms	9a	2,593m ²	Staff – 40 IPU Staff Patients – 56 (beds)
Roof	Plant	-	-	-

Figure 2 - New build

Summary of Construction and Building	
Use(s)	Health Care Building
Classifications(s)	9a
Number of Storeys contained	2
Rise in Storeys	2
Type of Construction	B
Effective Height	<12m (4.5m)
Climate Zone	5
Importance Level	4

Figure 3 - New build

3 Assessment

3.1 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 Certificate is made.

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

In this regard it is assumed the Construction Certificate application is proposed to be made after the 1st May 2023. As such this statement is based upon the Deemed-to-Satisfy provisions of BCA 2022.

3.2 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:

3.2.1 A2GA Compliance with the Performance Requirements for the new building

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, MBC Group can verify that the proposed design can readily achieve compliance with the BCA via the DtS provisions or a performance solution and as such meet the performance requirements. The following is a table of proposed performance solutions that are capable of meeting the performance requirements of the BCA.

DTS Clause	Description of DtS Departure	Performance Requirement
	Class 9 Buildings	
	Smoke compartments are proposed to be in excess of that permitted for ward and treatment areas:	
C3D6	Ward areas – Smoke compartments are proposed to exceed 500m ² .	C1P2, C1P3
	Treatment Areas – Smoke compartments are proposed to exceed 1,000m ² .	

DTS Clause	Description of DtS Departure	Performance Requirement
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Separation of Buildings and protection of openings

C3D8/
C4D3/ Spec 5

Link bridge must comply with C3D8 - separation from the existing building on site via fire wall construction and protection of openings. The protection is proposed only to one side via a performance solution.

Note the structure of the link bridge must also be documented to comply with the united building provisions of the BCA. i.e. the bridge must be supported from the new hospital and not the existing building.

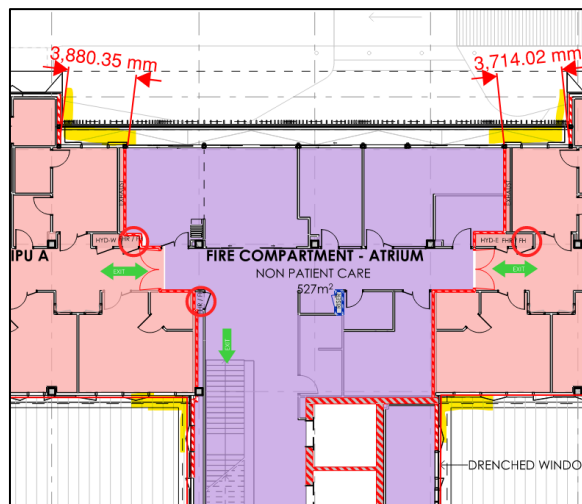
C1P2

Structural engineer shall verify the link bridge is independent of the existing building on site.

Protection of openings

Protection of openings between openings in external walls and differing fire compartments is not proposed as per C4D5 of the BCA. This is proposed to be rationalised.

C4D4



C1P2,
C1P3

DTS Clause	Description of DtS Departure	Performance Requirement
Doors in fire walls		
C4D6	Doors separating the link bridge from the existing building occupy 100% of the fire wall (or close to). This is greater than 1/3 of the fire wall at this location.	C1P2
Fire rating		
C2D2, Spec 5, C3D3, C3D6, C3D8	Slab edge details are yet to be provided. It is anticipated that slab edge protection is proposed to be rationalised. This is applicable where curtain wall design is proposed.	C1P1, C1P2
Enclosure of shafts		
C4D13, Spec 5C8	S5C8 - The mechanical riser shafts are not proposed to be enclosed at the bottom with fire rated construction.	C1P2, C1P2
Smoke Hazard Management		
C4D15/ E2D3	Omission of smoke dampers to ductwork that is required to continue to operate	C1P3
Extended travel distances		
Extended travel distances are proposed throughout the building.		
Ground Floor (Patient care OT + SSU)		
<ul style="list-style-type: none"> • 15m to a POC in lieu of 12m • 38m to an exit in lieu of 30m • 65m between alternative exit in lieu of 45m 		
C2D4/ C2D5	Ground Floor (ED) <ul style="list-style-type: none"> • 15m to a POC in lieu of 12m • 50m to an exit in lieu of 30m (due to external awning) • 75m between alternative exit in lieu of 45m (taken beyond awnings) 	D1P4, E2P2
Ground floor (non-patient care)		
<ul style="list-style-type: none"> • 27m to a POC in lieu of 20m 		
Level 1		
<ul style="list-style-type: none"> • 28m to a single exit in lieu of 20m (Staff room to required non-fire isolated stairway) 		

DTS Clause	Description of DtS Departure	Performance Requirement
<p>IPUs</p> <ul style="list-style-type: none"> 40m to an exit in lieu of 30m 70m between alternative exits in lieu of 45m <p>Link Bridge</p> <ul style="list-style-type: none"> 68m to a single exit in lieu of 20m – The southern discharge point of the link bridge provides access into an existing building on site. This is not a DtS exit. <p>Rooftop plant</p> <ul style="list-style-type: none"> 25m to a POC in lieu of 20m 105m to an exit in lieu of 40m 150m between alternative exits in lieu of 60m <p>All egress paths shall be further reviewed through Design Development.</p>		
D3D24	<p>Sliding doors</p> <p>Patient care area having sliding doors (internal door of airlocks) that don't lead directly to a road or open space.</p>	D1P2, E2P2
<p>Swinging Doors</p> <p>Doors forming part of horizontal exits swing in one direction only.</p> <p>Ground Floor</p> <p>Doors providing egress from medical imaging into adjacent fire compartments, do not swing in the direction of egress.</p> <p>Doors providing egress from OT + SSU into adjacent fire compartment, do not swing in the direction of egress.</p> <p>Level 1</p> <p>Doors providing egress from the IPU's into non-patient care area, do not swing in the direction of egress.</p>		
E1D2, AS2419.1-2021 E1D4, AS2118.1-2017	<p>Fire Hydrant/ Sprinkler booster</p> <p>The booster assembly is not proposed with sight of the main entrance to the building.</p>	E1P3, E1P4

DTS Clause	Description of DtS Departure	Performance Requirement
Internal Hydrant Coverage		
	Additional internal hydrants are provided within 4m of horizontal exits.	
Fire Hose reels		
E1D3	Fire hose reel coverage is not proposed to all rooms in the building. This is due to the smoke and fire compartment strategy in which fire hose reels cannot pass through fire doors.	E1P1
Suppression		
E1D4, Spec 17	Use of concealed sprinklers in operating theatres which do not meet quick response requirement of AS 2118.1	E1P4
Suppression		
E1D4, spec 17 Clause 9	Omit sprinkler connection to smoke hazard management system	E1P4
Sprinklers		
E1D4,	It is noted that HINSW require sprinkler protection throughout the building in accordance with AS2118.1-2017.	E1P4
	Sprinkler coverage is not proposed to electrical rooms, MSB rooms and EDB cupboards. This is a departure from AS2118.1-2017.	
Smoke Detection and Alarm Systems		
E2D11 Spec C20C4	Manual call points are not proposed for all evacuation routes so that no point on a floor is more than 30m from a manual call point.	E2P2
	MCP are proposed to be located in FHR cupboards and therefore don't achieve the clearance requirements of AS 1670.1 when door is closed.	
Location of Fire Brigade Panel		
E2D3/ AS1670.1- 2018 Cl 2.2.1	The FBP is not proposed to be located at the designated building entry point. This is beyond the entrance foyer.	E2P2
Smoke Hazard Management		
E2D3/ AS1670.1 Cl 3.27	Smoke detection to the top of lift shafts to be omitted - this will be a departure from AS1670.1 Cl 3.27.11 which requires detection at the top of the lift shafts	E2P2

DTS Clause	Description of DtS Departure	Performance Requirement
Emergency Warning and intercom systems		
E4D9	EWIS speakers are not proposed to all patient care rooms/ operating suites as this may be detrimental.	E4P3

DTS Clause	Description of DtS Departure	Performance Requirement
Accessibility		
D4	Access performance solutions are likely required. Refer to access consultant report.	D1P1

DTS Clause	Description of DtS Departure	Performance Requirement
Weatherproofing		
Part F	A weatherproofing performance solution report is required for the building. This shall be provided by façade engineer.	F1P1
Facilities in a class 9a building		
F4D4(8)(d)	A performance solution is needed to omit the plunge bath requirement for the level 1 ward area. This is required from a suitably qualified person.	F4F1
Energy Efficiency		
Part J	A part J consultant shall provide an energy efficiency report for the building	J1P1

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.

As outlined in section 1.3 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 is readily achievable.

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

Best regards,



Ethan Davies
Senior Building Surveyor
MBC Group

4 Appendix A – Design Documentation

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

Drawing No.	Title	Date	Drawn By	Revision
CHR-AR-DRG-100000	Department Plans Ground Floor	09/08/2024	Fitzpatrick and Partners	E
CHR-AR-DRG-100100	Department Plans Level 01	09/08/2024	Fitzpatrick and Partners	E
CHR-AR-DRG-100200	Department Plans Level 2 Plant	09/08/2024	Fitzpatrick and Partners	E
CHR-AR-DRG-100300	Department Plans Roof	09/08/2024	Fitzpatrick and Partners	E



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