



*Building Code of Australia 2015*

## **BCA CAPABILITY STATEMENT**

### **Arthur Phillip High School 175 Macquarie Street, Parramatta**

Prepared for: Grimshaw Architects / BVN Architecture  
Issue date: 11 April 2016  
Reference No. 16000063

11 April 2016

Ms Louise Brown  
Grimshaw Architects  
Level 3, 24 Hickson Road  
Millers Point NSW 2000

Dear Louise,

**Re: Arthur Phillip High School, 175 Macquarie Street, Parramatta  
Schematic Design Report**

Modern Building Certifiers (MBC) have been commissioned to carry out an assessment of the proposed school building which is located at the subject address, against the requirements of the National Construction Code Series (Volume 1) – Building Code of Australia (BCA) 2015. The principals of the BCA 2016 have been considered in our assessment.

The purpose of the assessment is to provide surety to the Consent Authority that the buildings design is capable of complying with the Performance Requirements of 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.

The following Modern Building Certifiers Team Members have contributed to this assessment:

- Eric Bailey – Director & A1 Accredited Certifier
- Heath McNab – Director & Accredited Certifier

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

- National Construction Code Series (Volume 1) Building Code of Australia 2015 (BCA)
- Architectural Drawings referenced in annexure A prepared by Grimshaw Architects and BVN Architecture.
- Guide to the Building Code of Australia 2015 (BCA Guide)
- Access to Premises – Buildings Standards 2010 (Access Code)
- Environmental Planning and Assessment Act 1979 (EP&A)
- Environmental Planning and Assessment Regulation 2000 (EP&AR)
- Australian Building Codes Board Summary of amendments BCA 2016

### 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 2015 (Volume 1) - Building Code of Australia (BCA).
- Assist the Consent Authority to be satisfied that the building design is capable of complying with the Performance Requirements of the BCA and that subsequent compliance with Parts C, D, E, F & J of the BCA will not give rise to further significant design changes to the building.
- Identify any BCA compliance issue that require resolution at the Construction Certificate stage. These matters are to be considered pursuant to Cls 54 of the EP&A Regulation 2000.
- Enable the certifying authority to satisfy its statutory obligations under Clause 17 & 18 of the Building Professionals Regulation 2007.
- 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. Such matters are to be identified through further design development.

### Building Description Summary

The proposed development is a seventeen (17) storey educational building with ancillary administration and sports facilities.

SUMMARY OF CONSTRUCTION DETERMINATION	
Use(s)	Educational Facility with ancillary sports and administration facilities
Classification(s)	Class 9b & 5
No. of Storeys contained	Seventeen
Rise in Storeys	Seventeen
Type of Construction	Type A
Effective Height	Greater than 50m
Compartment Size	Floor area and compartment sizes to comply with Table 2.2 of the BCA
Climate Zone	Zone 5
Fire Protection	To be developed by Grimshaw Architects/ BVN and ARUP

## Proposed Development

The proposed development comprises a multi-storey educational facility with ancillary administration facilities and surrounding sports facilities. This development is believed to be the first of its kind in Australia.

## The Proposed Works are:

- Construction of a new multi-storey high school tower comprising seventeen stories.
- Construction of associated sports hall with surrounding sports pitches and external areas.

## Relevant BCA Edition

The proposed building will be subject to compliance with the relevant requirements of the BCA as in force at the time that the application for the Construction Certificate is made. In this regard it is assumed that the Construction Certificate application will be made post 1<sup>st</sup> May 2016, as such BCA 2016 Version applies to the new works proposed at the subject development.

## Compliance with the BCA

The assessment has been carried out of the schematic design against the technical provisions of the BCA and compliance matters will be addressed in further design development and 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 following:

- a) Complying with the Deemed-to-satisfy (DTS) Provisions; or
- b) Formulating an Alternative Solution which –
  - i) Complies with the performance requirements; or
  - ii) Is shown to be at least equivalent to the DTS provisions; or
- c) A combination of the above.

In accordance with the above, Modern Building Certifiers can verify that the proposed building design will entail a combination of compliance with the DTS provisions and Performance Requirements of the BCA, by the development and justification of Performance Based Alternative Solutions.

The relevant fire safety engineer, being Arup, have been appointed and have contributed to the current design. As part of this contribution, critical terms relative to this development will be outlined and elaborated on.

It is also advised that the proposed design and associated Fire Engineering proposal will be

requiring formal referral to Fire & Rescue NSW pursuant to Clause 144 of the Environmental Planning & Assessment Regulation 2000 (due to the Category 2 fire safety provisions identified in the Fire Schedule below), and this process will need to be undertaken prior to a Part 4a Construction Certificate being issued by the Principal Certifying Authority (PCA).

### Matters Requiring a Performance Assessment

Item	Non-Compliance	DTS Clause	Description	Performance Requirement	Comments
1.	Reduction in FRL's and use of non-combustible materials in lieu of concrete or masonry	C1.1 & Spec C1.1	External balconies / breezeways are proposed to be supported with steel in lieu of concrete or masonry construction. These elements will achieve an FRL of 70 mins in lieu of 120 mins	CP1	To Be Addressed by the Fire Safety Engineer
2.	Floor area & Volume limitations exceeded	C2.2	The building is to be compartmentalized so that compartments are not more than 8000m <sup>2</sup> in area or 48000m <sup>3</sup> in volume are provided. If not then the building is to be assessed as oversized compartments due to intermittent voids between storeys	CP2	To Be Addressed by the Fire Safety Engineer
3.	Exit Travel	D1.4 & D 1.5	Travel distance to an exit & between exits exceed to prescribed distances of 20/40/60 throughout the new building	DP4 & EP2.2	To Be Addressed by the Fire Safety Engineer
4.	Distance between alternative exits	D1.5	Doors to fire isolated scissors stairs will be less than 9m apart and acting as alternative exits.	DP4	To be address by the fire safety engineer
5.	Disabled Access	Part D3	Accessibility to and within the building will require further assessment by an Access Consultant	DP 1, 2, 4 & 6	To be addressed by the access Consultants



6.	Smoke hazard management	E2.2	A mechanical smoke exhaust system is proposed in lieu of a zone smoke control system	EP2.2	To be address by the fire safety engineer
7.	Energy Efficiency	Part J	JV3 Analysis to be Undertaken	JP1, JP2 & JP3	To be Addressed by an Energy Consultant

This report contains an assessment of the referenced architectural documentation for the proposed buildings against the Deemed-to-Satisfy provisions & Performance Requirements of the National Construction Code Series (Volume 1) Building Code of Australia 2015.

In view of the above assessment we can confirm that subject to the above measures being appropriately considered, that compliance with the Deemed-to-Satisfy Provisions and Performance Requirements of the BCA are 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 me.

Best regards,



Eric Bailey  
**Director**  
**Modern Building Certifiers**

## Annexure A – Architectural Drawings

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

Drawing No.	Title	Date	Drawn By	Revision
AR A02 1001	Site Plans Context Plan Roof	21.03.16	Grimshaw	4
AR A03 1201	General Arrangement Floor Plan APHS – GA – Lower Ground	21.03.16	Grimshaw	4
AR A03 1202	General Arrangement Floor Plan APHS – GA – Ground Floor	21.03.16	Grimshaw	4
AR A03 1203	General Arrangement Floor Plan APHS – GA – Level 1	21.03.16	Grimshaw	4
AR A03 1204	General Arrangement Floor Plan APHS – GA – Level 2	21.03.16	Grimshaw	4
AR A03 1205	General Arrangement Floor Plan APHS – GA – Level 3	21.03.16	Grimshaw	4
AR A03 1206	General Arrangement Floor Plan APHS – GA – Level 4	21.03.16	Grimshaw	4
AR A03 1207	General Arrangement Floor Plan APHS – GA – Level 5	21.03.16	Grimshaw	4
AR A03 1208	General Arrangement Floor Plan APHS – GA – Level 6	21.03.16	Grimshaw	4
AR A03 1209	General Arrangement Floor Plan APHS – GA – Level 7	21.03.16	Grimshaw	4
AR A03 1210	General Arrangement Floor Plan APHS – GA – Level 8	21.03.16	Grimshaw	4
AR A03 1211	General Arrangement Floor Plan APHS – GA – Level 9	21.03.16	Grimshaw	4
Job No. 247436	ARUP Draft Schematic Design Report	11.03.16	ARUP	Draft 2