30 June 2021

Arncliffe Eden Property Pty Ltd
Locked Bag 1400
Meadowbank NSW 2114

Attention: Saul Moran

Dear Saul,

RE: PROPOSED MIXED USE DEVELOPMENT – EDEN STREET & PRINCESS HIGHWAY, ARNCLIFFE
BCA COMPLIANCE STATEMENT FOR DA SUBMISSION

INTRODUCTION

This BCA Compliance Statement for DA is submitted to the Department of Planning, Industry and Environment (DPIE) in support of a State Significant Development Application (SSDA-11429726) for the development of land identified at 26-42 Eden Street and 161-179 Princes Highway, Arncliffe (the site) for the purposes of a mixed-use precinct with open space, retail, and residential uses, comprising social and market housing as part of the NSW Land and Housing Corporation (LAHC)'s 'Communities Plus' program.

SSDA-11429726 seeks approval for the following development:

- *Demolition of all existing buildings and structures on the site;*
- *Site preparation works, excavation and tree removal;*
- *The construction of a mixed-use development comprising:*
    - *744 apartments across (4) buildings between 19-23 storeys in height, as follows:*
        - *186 market housing apartments in Building A;*
        - *202 market housing apartments in Building B;*
        - *180 social housing apartments in Building C; and*
        - *176 market housing apartments in Building D;*
    - *3,113m2 retail gross floor area;*
    - *240m2 for a future childcare centre;*
    - *3,706m2 of communal open space;*
    - *813 spaces of lower ground and basement car parking; and*

This statement has been prepared to verify that Blackett Maguire + Goldsmith Pty Ltd have undertaken a review of the architectural documentation that will accompany the Development Application submission to Bayside Council for the proposed development which comprises of approximately 764 residential apartments (four residential towers), retail shopping centre, shared community facilities and surrounding public open space and infrastructure against the Building Code of Australia 2019, Amendment 1 (BCA).

Address Suite 2.01, 22-36 Mountain St Ultimo NSW 2007
Postal PO Box 167 Broadway NSW 2007
ABN 18 408 985 851
Contact Ph: 02 9211 7777 Fax: 02 9211 7774 Email: admin@bmplusg.com.au

Proposed Development (South East elevation – Rendered)

Proposed Development (North West elevation – Rendered)

COMPLIANCE STATEMENT OBJECTIVES

The objectives of this statement are to:

a) Confirm that the DA architectural documentation has been reviewed by an appropriately qualified and Registered Building Surveyor.

b) Confirm that the proposed new building works can readily achieve compliance with BCA 2019, Amendment 1 pursuant to Clause 145 of the *Environmental Planning & Assessment Regulation 2000*.

c) 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.

REFERENCED DOCUMENTATION

This report has been prepared based on a review of the preliminary DA architectural plans prepared by Group GSA:

DRAWING NO.	DRAWING TITLE.	REVISION	DATE
DA2001	Basement Level 3	A	28.05.2021
DA2002	Basement Level 2	A	28.05.2021
DA2003	Basement Level 1	A	28.05.2021
DA2004	Lower Ground Floor	B	24.06.2021
DA2005	Upper Ground Floor	B	24.06.2021
DA2006	Level 1	A	28.05.2021
DA2007	Level 2	A	28.05.2021
DA2008	Level 3	A	28.05.2021
DA2009	Level 4	A	28.05.2021
DA2010	Level 5	A	28.05.2021
DA2011	Level 6	A	28.05.2021
DA2012	Level 7	A	28.05.2021
DA2013	Level 8-12	A	28.05.2021
DA2018	Level 13-15	A	28.05.2021
DA2021	Level 16-17	A	28.05.2021
DA2023	Level 18	A	28.05.2021
DA2024	Level 19	A	28.05.2021
DA2025	Level 20	A	28.05.2021
DA2026	Level 21	A	28.05.2021
DA2027	Level 22	A	28.05.2021
DA2028	Roof Plan	A	28.05.2021
DA3010	Tower A Northeast Elevation	A	28.05.2021
DA3011	Tower A Northwest Elevation	A	28.05.2021
DA3012	Tower A Southeast Elevation	A	28.05.2021
DA3013	Tower A Southwest Elevation	A	28.05.2021

DA3020	Tower B Northeast Elevation	A	28.05.2021
DA3021	Tower B Northwest Elevation	A	28.05.2021
DA3022	Tower B Southeast Elevation	A	28.05.2021
DA3023	Tower B West Elevation	A	28.05.2021
DA3030	Tower C Northeast Elevation	A	28.05.2021
DA3031	Tower C Northwest Elevation	A	28.05.2021
DA3032	Tower C Southeast Elevation	A	28.05.2021
DA3033	Tower C Southwest Elevation	A	28.05.2021
DA3040	Tower D Northeast Elevation	A	28.05.2021
DA3041	Tower D Northwest Elevation	A	28.05.2021
DA3042	Tower D Southeast Elevation	A	28.05.2021
DA3043	Tower D Southwest Elevation	A	28.05.2021

BUILDING CLASSIFICATION

The new building works have been classified as follows:

BCA Classification:	Class 2 (Residential) Class 6 (Retail) Class 7a (Car Park) Class 7b (Loading Dock) Class 9b (Early childcare Centre)
Rise in Storeys:	Twenty-three (23)
Storeys Contained: Storeys	Twenty-seven (27)
Type of Construction:	Type A Construction
Importance Level (Structural):	3
Sprinkler Protected Throughout:	Yes
Effective Height:	71.05m (L22 90.300 – LGF 19.250)
Max. Fire Compartment Size:	8,000m^2 & 48,000m^3
Climate Zone:	Zone 5

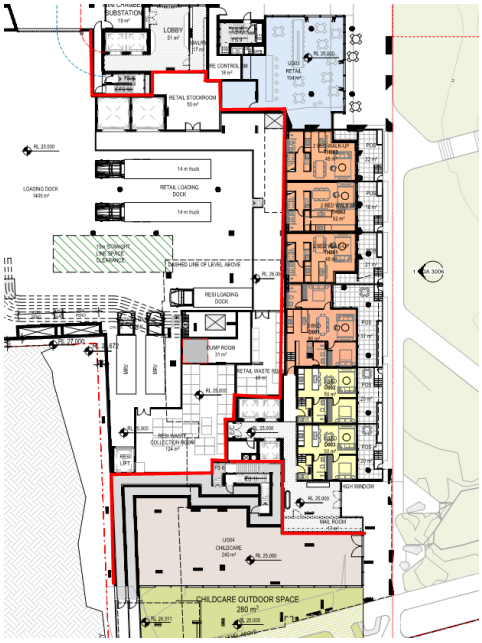
Note 2: Buildings A, B, C and D are connected via common basement carpark and have been assessed as a single building, therefore the effective height, rise in storeys and storeys contained will be taken to be the greatest measured from Building A, B, C and D.

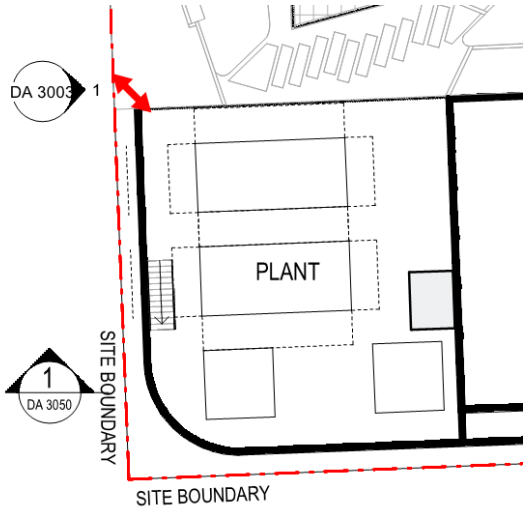
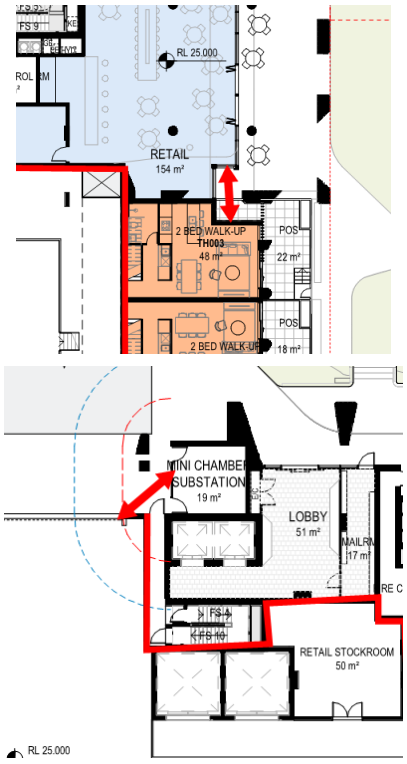
BCA ASSESSMENT

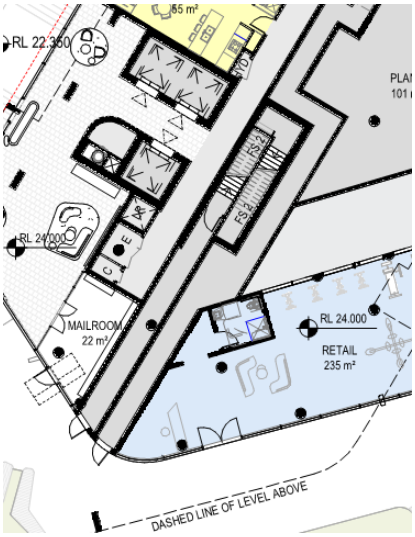
The following comprises a summary of the key compliance issues of this report that will be addressed

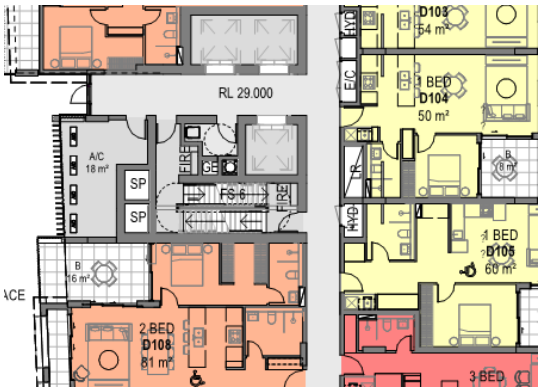
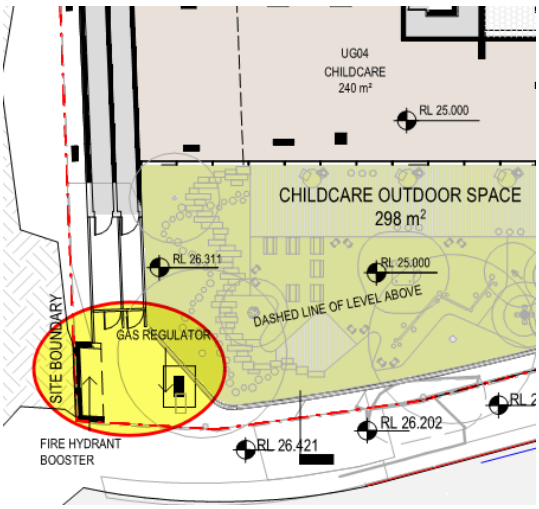
MATTERS REQUIRING ADDITIONAL INFORMATION OR DESIGN CHANGES:

It is noted that the proposed building is capable of complying with the deemed-to-satisfy provisions of the BCA. Notwithstanding, the below is a preliminary list of matters that based on the current design documentation require further verification, consideration for design changes:

	BCA (DTS) CLAUSE	DESCRIPTION
1.	**C2.2** Compartment limitations	In order to stay within the maximum fire compartment limitations for retail use, a 180min firewall is required to be constructed on the Lower Ground Floor to separate the class 7a carpark from the adjoining class 6 retail. The figure below shows an indicative line of fire separation. Confirmation is required that the strategy for fire separation, indicative outlined below;  *Figure 1: Lower Ground Floor Indicative Line of Fire Separation (red line)*
2.	**C2.8** Separation of Classifications in the Same Storey	As the class 7b Loading Dock adjoins the Class 2 Townhouses on the Upper Ground Floor across buildings C and D, the higher FRL (being 4hrs for 7b) is to be applied throughout the entire level or, the adjoining parts are to be separated by a 4hr firewall. Confirmation is required that the strategy for fire separation as outlined below is supported by the team.  *Figure 2: Upper Ground Floor Indicative Line of Fire Separation (red line)*

	BCA (DTS) CLAUSE	DESCRIPTION
3.	**C3.2** **Protection of opening in external walls**	The external wall of the plant room on Level 2 between Building C and D is exposed to the southern boundary and will need to be protected;  *Figure 4: Level 2 Southern plant room exposure to site boundary.*
4.	**C3.3** Separation of external walls and associated openings in different fire compartments	As shown in Figure 4, there are openings in adjoining fire compartments between the class 2 townhouses and the adjoining retail compartment, and the mini chamber substation and loading dock. As such, protection of external wall and associated openings in different fire compartments is required in accordance with C3.4.  *Figure 5: External Walls in Different Fire Compartments*

	BCA (DtS) Clause	Description
5.	**D1.2, D1.4, D1.5 & D2.19** Number of exits and travel distance	Noting that roller shutters cannot be relied upon for egress under BCA Cl. D2.19, there are currently no compliant exit discharge doors serving the Loading Dock which has resulted in non-compliant travel distances throughout. As the building has an effective height over 25m, two exits are required from the Loading Dock and additional doors will be required.
6.	**Clause D1.6** Dimensions of exits and paths of travel to exits	Alternative exits as required under D1.6 are required to be independent of each other. In this regard, clarification is required as to whether the fire-stairs below comprise separate scissor stairs or whether they are the same fire-stair with two entry doors. In which case, they would be considered as the same exit in lieu of alternative exits.  *Figure 6: Building A, FS1 Alternative Exit*  *Figure 7: Building B, FS2 Alternative Exit*

BCA (DTS) Clause	Description
	 *Figure 8: Building D, FS 6 Alternative Exit*
7. **D1.7(b)** Fire Isolated Stairways	Noting that each fire-isolated stairway must provide independent egress outside (or by way of its own fire-isolated passageway), the following fire-stairs are to be re-designed to facilitate independent discharge. + Lower Ground Floor: FS1 & FS7 + Upper Ground Floor FS2 + Upper Ground Floor: FS4 & FS10 + Upper Ground Floor: FS5 & FS9
8. **D1.7(c)** Fire Isolated Stairways	As Fire-stairs 1, 4, 6, 7, 8, 10 and 11 discharge into locations which necessitate passing within 6m of the external wall of the building, those parts of the wall must have an FRL of 60/60/60.
9. **D3.2**	Clarification is required as to how equitable access is proposed to the residential lobby of building AB noting that no ramps have been proposed.
10. **E1.3**	+ The Fire Pumproom is proposed to be located on Basement 2 which does not comply with FRNSW operational requirements. FRNSW have stated in the FEBQ response that *"FRNSW do not support the… pump room/s more than 1 level above or below ground, this needs to be addressed in the next version of this FEBQ or the FER."* + The Fire Hydrant/Sprinkler Booster shall be re-orientated to face the street on line with FRNSW requirements. + As per Clause 7.3 of AS 2419.1-2005, the hydrant booster assembly is to be located not less than 10m from liquified petroleum gas and other combustible storage.  *Figure 9: Fire Hydrant and Sprinkler Booster location*

MATTERS REQUIRING FIRE SAFETY ENGINEERED PERFORMANCE SOLUTIONS: (TO BE REFINED AS THE DESIGN DEVELOPS)

	BCA (DTS) CLAUSE	DESCRIPTION	PERFORMANCE REQUIREMENT
1.	**Clause C1.1 / Spec. C1.1** Fire resisting construction	+ To reduce the Fire Resistance Level (FRL) of the building elements associated with the Class 6 retail tenancies from 180 minutes to 120 minutes. + To reduce the Fire Resistance Level (FRL) of the building elements associated with the Class 7b loading dock from 240 minutes to 120 minutes	CP1, CP2
2.	**Clause C1.1 / Spec. C1.1** Fire resisting construction	The gap between the slab edge and the curtain wall construction will be sealed using a tested fire rated cavity barrier, however, the barrier will be installed between a fire rated slab edge and a non-fire rated external wall which has not been tested in this configuration.	CP1, CP2
3.	**Clause C3.3 –** Protection of Opening	To have a performance-based approach to protected opening in external wall of different fire compartment	CP2
4.	**Clause D1.2** Number of exits required	To have a single exit from the following locations in lieu of 2 exits as required for buildings with an effective height of more than 25m: + Residential Lobbies + Townhouse TW003 + Townhouse TW002 + Townhouse TW001 + Upper Ground Floor Retail tenancies on Princess Hwy frontage of Building AB + Plant rooms	DP4
5.	**Clause D1.4** Exit travel distances	To have the following extended exit travel distances: + Up to 28m to a point of choice from which travel in different directions to 2 exits is available, in lieu of 20m within Basement Levels and Lower Ground carpark + Up to 70m to one of two exits in lieu of 40m within Basement Levels and Lower Ground carpark + Up to 32m to a single exit from the residential lobby of Building D + Up to 35m to a point of choice from which travel in different directions to 2 exits is available, in lieu of 20m from Communal Open Space in residential parts. + Up to 12 to a point of choice from which travel in different directions to 2 exits is available from residential corridors in lieu of 6m.	DP4 & EP2.2
6.	**Clause D1.5** Distance between alternative exits	To have the following extended exit travel distances between exits: + Up to 110m between alternative exits within the basement levels and Lower Ground carpark, when measured back through the point of choice, in lieu of 60m. + To allow FS7 on Basement Level 1 to provide alternative exits which are located within 9m of each other. *Note, this travel distance has been measured based on occupants travelling around the car spaces but through shared spaces of accessible parking spaces and other paths of travel where a minimum 1m clear width has been proposed), confirmation should be sought from Certifier that they agree with the approach to measuring travel distances.*	DP4 & EP2.2
7.	**Clause D1.7 –** Travel via fire isolated exits.	To not protect opening that are within 6m of discharge of fire isolated stairway	DP4, DP5

	BCA (DtS) Clause	Description	Performance Requirement
8.	**Clause E1.3** Fire Hydrant Booster Location	To permit the hydrant booster to not be located within sight of the main entrance of the building, not adjacent to the principal vehicular access and within 10m of the building contrary to Clause 7.3(d) of AS 2419.1-2005	EP1.3
9.	**E1.8** Fire Control Room	Door to the fire control room does not have access from the front entrance of the building	EP1.6
10.	**Clause E2.2 / Spec. E2.2a** Smoke hazard management	To rationalize/omit provide a zone smoke control system to the ground floor lobby and tenancies	EP2.2
11.	**Clause E2.2 / Spec. E2.2a** Smoke hazard management	To have a performance-based solution for the Class 6 retail smoke exhaust system	EP2.2
12.	**Clause E2.2 / Spec. E2.2a** Occupant warning	To not evacuate the entire development in the event of a fire alarm. It is proposed to evacuate the fire affected buildings / areas of the development only.	EP2.1

MATTERS REQUIRING OTHER PERFORMANCE SOLUTIONS

	BCA (DtS) Clause	Description	Performance Requirement
1.	No DtS Clause Applies	A Performance is required to be documented at the Construction Certificate stage which demonstrates that the weatherproofing of external walls (including openings around windows and doors) prevents 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.	FP1.4

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 final design and the Fire Safety Engineering Report.

Statutory Fire Safety Measure	Design / Installation Standard
Access Panels, Doors & Hoppers	BCA Clause C3.13 & AS 1530.4 – 2014 and Manufacturer's specifications
Alarm Signalling Equipment	AS 1670.3 – 2018
Automatic Fail-Safe Devices	BCA Clause D2.21
Automatic Fire Detection & Alarm System	BCA Spec. E2.2a, AS 1670.1 – 2018
Automatic Fire Suppression Systems	BCA Spec. E1.5. AS 2118.1-2017, AS 2118.6 - 2012
Emergency Lifts	BCA Clause E3.4,
Emergency Lighting	BCA Clause E4.4 & AS 2293.1 – 2018
Emergency Warning Intercom System (EWIS)	BCA E4.9, AS 1670.4 - 2018
Exit Signs	BCA Clauses E4.5, E4.6 & E4.8; and AS 2293.1 – 2018
Fire Blankets	AS 3504 – 2006 & AS 2444 – 2001
Fire Control Rooms	BCA E1.8
Fire Dampers	BCA Clause C3.15, AS 1668.1 – 2015 & AS 1682.1 & 2 – 2015 and manufacturer's specification
Fire Doors	BCA Clause C2.12, C2.13, C3.4, C3.5, C3.8 & C3.11; and AS 1905.1 – 2015 and manufacturer's specification
Fire Hydrant Systems	BCA Clause E1.3, AS 2419.1-2005, AS 2118.6
Fire Hose Reels	BCA Clause E1.4, AS 2441-2005
Fire Seals	BCA Clause C3.15, AS 1530.4 – 2014 & AS 4072.1 – 2014 and manufacturer's specification
Lightweight Construction	BCA Clause C1.8 & AS 1530.4 – 2014 and manufacturer's specification
Mechanical Air Handling System	BCA Clause E2.2, AS/NZS 1668.1 – 2015 & AS 1668.2 – 2012
Smoke Hazard Management System; + Stair Pressurisation + Zone Smoke Control + Smoke Exhaust	BCA Clause E2.2, AS/NZS 1668.1 – 2015 & AS 1668.2 – 2012
Paths of Travel	Clause 186 of the EP&A Regulation 2000
Portable Fire Extinguishers	BCA Clause E1.6, AS 2444 – 2001
Smoke Alarms	BCA Spec E2.2a and AS 3786-2014
Smoke Doors	BCA Clause C2.14
Warning & Operational Signs	Section 183 of the EP&A Regulation 2000, AS 1905.1 – 2015, BCA Clause D2.23, E3.3
Fire Engineered Performance Solutions	TBA

CONCLUSION

This report contains an assessment of the referenced architectural documentation for the proposed development which comprises the construction of a new twenty-seven (27) storey mixed use retail residential tower with three (3) levels of underground basement car park at the subject site against the Building Code of Australia 2019, Amendment 1.

In view of the above assessment, we can confirm that subject to the above measures being appropriately addressed by the project design team, compliance with the provisions of the BCA is readily achievable.

In addition, it is considered that such matters can adequately be addressed in the preparation of the Construction Certificate documentation without giving rise to any inconsistencies with the Development Approval.

If you have any questions or require further information, please do not hesitate to contact us on 9211 7777.

Prepared by:

Aaron Redfern
Senior Building Surveyor
Blackett Maguire + Goldsmith
Registered Building Surveyor (Unrestricted) – BDC No. 2321

Reviewed by:

Dean Goldsmith
Director
Blackett Maguire + Goldsmith
Registered Building Surveyor (Unrestricted) – BDC No. 0141