

18 May 2018

Our Ref: 183604

Mark Bennett
Group GSA
Level 7, 80 William street ,
East Sydney, NSW 2011

Dear Mr Bennett,

**RE: BUILDING CODE OF AUSTRALIA ASSESSMENT
TAREE POLICE STATION**

1. INTRODUCTION

1.1 GENERAL

The premises subject to this report is located at Albert Street, Taree. The proposal involves the demolition of the existing police station and the construction of a new two storey police station connected to the existing two storey courthouse.

1.2 DESCRIPTION

The existing and proposed building will contain 2 storeys and consists of:

Basement	Pump room
Ground Floor & First Floor	Police offices, correctional service and associated uses
	Existing courthouse use

The proposed police building and the existing courthouse has been assessed as a united building

1.3 PURPOSE OF THE REPORT

This report has been prepared, on behalf of Group GSA, to establish compliance to the Building Code of Australia and relevant Acts and Regulations of the development application documentation for the proposed works

1.4 REPORT BASIS

This report is based on:

- i. Architectural plans prepared by Group GSA, as identified in the attached Appendix 1
- ii. The Building Code of Australia 2016 Amendment 1, inclusive of NSW variations (See Note 1).
- iii. Environmental Planning and Assessment Act 1979.
- iv. Environmental Planning and Assessment Regulation 2000.

Notes (1) Building Code of Australia (BCA) 2016 Amendment 1 was adopted in NSW on 12 March 2018. The amendment of the BCA in force at the date of at the invitation for tenders to carry out the Crown building work is the BCA version applicable for the purpose of the building design. Therefore, comments may be subject to changes to comply with updated versions of the Building Code of Australia.

1.5 EXCLUSIONS

This report does not consider the following except where specifically mentioned;

- 1) The BCA compliance status of the existing courthouse.
- 2) Structural design.
- 3) Access for people with disabilities.

2. BUILDING DESCRIPTION

- 2.1 The proposed police building and the existing courthouse has been assessed as a united building.
- 2.2 The building classification relevant to the proposed use is Class 5. The existing courthouse is Class 9b.
- 2.3 The Building has an effective height of less than 12 m.
- 2.4 The required type of construction under C1.1 of the BCA is Type B. This is the most resistant type of construction required by the BCA.
- 2.5 The building has a rise in storeys of 2.
- 2.6 The proposed fire safety schedule is provided in Appendix 2.

3. STRUCTURAL PROVISIONS

- 3.1 The structural elements are required to be designed in accordance with BCA Section B and the relevant standards.
- 3.2 New glazed assemblies are to comply with AS 2047-2014 and AS 1288-2006 Amdt 1 & 2.

3.3 Termite risk management is required in accordance with this section and AS 3660.1-2014.

4. FIRE RESISTANCE

4.1 The building is to be designed to Type B construction. Refer to Table 4 in BCA Specification C1.1. Typically:

- Loadbearing external walls and external columns less than 18 m from a side or rear boundary require 2 hrs fire resistance
- Non-Loadbearing external walls less than 3 m from a side or rear boundary require 2 hrs fire resistance
- Internal loadbearing walls and columns on the Ground Floor require 2 hrs fire resistance.

4.2 A load bearing internal wall must be constructed of concrete or masonry.

4.3 Lightweight fire resisting construction is to comply with BCA C1.8.

4.4 The following building elements and their components must be non-combustible:

- External walls and common walls, including all components incorporated in them including the façade covering, framing and insulation.
- The flooring and floor framing of lift pits.
- Non-loadbearing internal walls where they are required to be fire-resisting.

4.5 Fire Hazard properties of internal linings, materials or assemblies used in the building are required to comply with C1.10 and Specification C1.10 of the BCA.

4.6 An ancillary element must not be fixed, installed or attached to the internal parts or external face of an external wall that is required to be non-combustible unless it is one of the following:

- (a) An ancillary element that is non-combustible.
- (b) A gutter, downpipe or other plumbing fixture or fitting.
- (c) A flashing.
- (d) A grate or grille not more than 2m² in area associated with a building service.
- (e) An electrical switch, socket-outlet, cover plate or the like.
- (f) A light fitting.
- (g) A required sign.
- (h) A sign other than one provided under (a) or (g) that-
 - (i) Achieves a ground number of 1 or 2; and
 - (ii) Does not extend beyond one storey; and
 - (iii) Does not extend beyond one fire compartment; and
 - (iv) Is separated vertically from other signs permitted under (h) by at least 2 storeys.
- (i) An awning, sunshade, canopy, blind or shading hood other than one provided under that –
 - (i) Meets the requirements of Table 4 of Specification C1.10 as for an internal element; and
 - (ii) Serves a storey –
 - a. at ground level; or

- b. immediately above a storey at ground level; and
- (iii) Does not serve an exit, where it would render the exit unusable in a fire.
- (j) A part of a security, intercom or announcement system.
- (k) Wiring.
- (l) A paint, lacquer or a similar finish.
- (m) A gasket, caulking, sealant or adhesive directly associated with (a) to (k).

4.7 BCA Clause C2.2 requires that the building must not contain fire compartments of more than 5,500 m² or 33,000 m³. The united building is within these fire compartment limits.

5. ACCESS AND EGRESS

5.1 The number of exits provided complies.

5.2 The internal stairs may be non-fire isolated stairs, as designed.

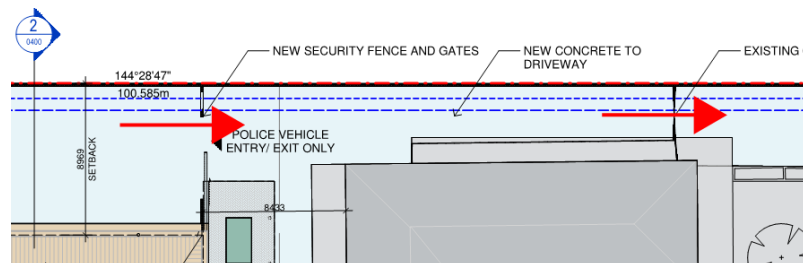
5.3 The distance between alternative exits complies.

5.4 Exit widths comply.

5.5 Travel by the exit stairs complies.

5.6 Installations in exits and paths of travel are to comply with BCA D2.7.

5.7 Pedestrian egress is to be provided through the existing and proposed gates to the north. Egress must be by single handed free action (or unlock on fire trip). Same applies to the south.



- 5.8 The egress stairs must be designed in accordance with D2.3 of the BCA which specifies reinforced concrete or steel in no part less than 6 mm thick.
- 5.9 Installation in exits and paths of travel are to comply with BCA D2.7. Electrical and Communication cupboards opening into corridors or lobbies are to be sealed against smoke spreading from the cupboard including smoke seals to doors and metal lining on inside face of doors.
- 5.10 Goings and risers of stairways are required to be designed to comply with D2.13 of the BCA, including slip resistance requirements.
- 5.11 Landings of stairways and ramps must comply with BCA D2.14, including slip resistance requirements.
- 5.12 Thresholds at doorways are to comply with BCA D2.15.
- 5.13 Barriers to prevent falls are to be provided in accordance with BCA D2.16.
- 5.14 Handrails are to be provided to stairs and ramps in accordance with BCA D2.17 Handrails must comply with Clause 12 of AS1428.1-2009 Amdt 1.
- 5.15 Door hardware is to comply with BCA D2.21.
- 5.16 Access for people with disabilities has been assessed by others.

6. SERVICES AND EQUIPMENT

The following services are required to be installed to service the building;

- 6.1 The building is required to be served by a hydrant system in accordance with BCA Clause E1.3 and AS2419.1-2005 Amdt 1. This includes the courthouse building.

The hydrant pump room is to be fire separated from the remainder of the building by 2 hr fire rated construction. This includes a two way 2 hr fire rated ceiling.
- 6.2 Fire hose reels are required in accordance with BCA E1.4 & AS 2441-2005 Amdt 1.
- 6.3 Portable fire extinguishers must be provided in accordance with BCA clause E1.6 and AS2444-2001.
- 6.4 The police building and the courthouse building is to be provided with a smoke detection and alarm system complying with Clause 4 of BCA Specification E2.2a to address the smoke hazard management requirements for fire compartments containing class 9b uses under NSW Table E2.2b. The courthouse is to also comply with Clause 5 of BCA Specification E2.2a.
- 6.5 Lifts are required to be designed in accordance with BCA Part E3, in particular:
 - (a) Compliance with Specification E3.1
 - (b) Warning signs in accordance with BCA E3.3
 - (c) Access for people with disability requirements of BCA E3.6
- 6.6 One of the lifts serving each floor is to be of a size that can accommodate a stretcher in accordance with BCA E3.2.

- 6.7 Emergency lighting must be provided in accordance with BCA Part E4 & AS 2293.1-2005 Amdt 1 & 2.
- 6.8 Exit signs are required in accordance with BCA Part E4 and & AS 2293.1-2005 Amdt 1 & 2.

7. HEALTH & AMENITY

- 7.1 The external walls must prevent the penetration of water that could cause—
 - a) unhealthy or dangerous conditions, or loss of amenity for occupants; and
 - b) undue dampness or deterioration of building elements.
- 7.2 Waterproofing membranes for external above ground use must comply with AS 4654.1-2012 & AS 4654.2 -2012.
- 7.3 Roof coverings must comply with BCA F1.7.
- 7.4 Sparking type materials used for weatherproofing of roofs and walls must comply with AS/NZS 4200.1-1994 Amdt 1 & AS/NZS 4200.2-1994.
- 7.5 Stormwater drainage must comply with AS/NZS 3500.3-2015
- 7.6 Waterproofing of wet areas must comply with BCA F1.7 & AS 3740-2010 Amdt 1.
- 7.7 Damp-proofing of walls is required to prevent rising damp in accordance with BCA clause F1.9.
- 7.8 Damp-proofing of floors on ground is required to prevent moisture from the ground from reaching the upper surface of the floor and adjacent walls by the insertion of a vapour barrier in accordance with AS 2870-2011.
- 7.9 Glazed assemblies are to comply with BCA F1.13 & AS 2047-2014.
- 7.10 Sanitary facilities are to be provided in accordance with BCA Part F2.
- 7.11 Where sanitary compartment doors swing into the sanitary compartment room and the hinge side of the door is less than 1.2 m from the WC pan, lift off hinges are required to the door. Refer to BCA F2.5(b).
- 7.12 The ceiling height must be not less than 2.4 m. Corridors may be not less than 2.1m.
- 7.13 Artificial lighting is required to be provided in accordance with BCA Clause F4.4 and AS/NZS 1680.0- 2009.
- 7.14 Rooms not provided with natural ventilation in accordance with BCA Clause F4.6, are required to be ventilated in accordance with AS1668.2-2012 Amdt 1.

8. ENERGY EFFICIENCY

- 8.1 The building must be designed in accordance with energy efficiency measures as outlined the NSW variation of the BCA Part J(A) and J(B). In particular, your attention is drawn to the following provisions:
 - a) Building fabric including insulation (BCA Part J1)

- b) Glazing (BCA Part J2);
- c) Building sealing (BCA Part J3);
- d) Air conditioning and ventilating systems (BCA Part J5)
- e) Artificial lighting and power (BCA Part J6);
- f) Heated water supply (BCA J7);
- g) Facilities for energy monitoring (BCA Part J8)

9. CONCLUSION

The design as proposed is capable of complying with the Building Code of Australia, and will be subject to construction documentation that will provide appropriate details to demonstrate compliance.

Should you need to discuss any issues, please do not hesitate to contact the undersigned on 8270-3500.

Yours Faithfully,



Chris Michaels
Director

On behalf of City Plan Services

APPENDIX 1

Assessed plans prepared by Group GSA P/L

Plan Title	Drawing No	Revision	Date
Location Plan & Drawing List	TAR-AR-DA000	A	-
Site Plan – Proposed	TAR-AR-DA100	A	-
Site Plan – Demolition	TAR-AR-DA105	A	-
Site Plan – Analysis	TAR-AR-DA110	A	-
Site – Photos	TAR-AR-DA115	A	-
Floor Plan – Ground	TAR-AR-DA200	A	-
Floor Plan – Level 1	TAR-AR-DA201	A	-
Roof Plan	TAR-AR-DA202	A	-
Entry, Rear Parking, Pump Room & Fire Tank	TAR-AR-DA210	A	-
Elevations – Southeast & Northeast	TAR-AR-DA300	A	-
Elevations – Northwest & Southwest	TAR-AR-DA301	A	-
Sections – Sheet 1	TAR-AR-DA400	A	-
Sections – Sheet 2	TAR-AR-DA401	A	-
Shadow Diagrams – Autumn and Winter	TAR-AR-DA500	A	-
Shadow Diagrams – Spring	TAR-AR-DA501	A	-
External Finishes	TAR-AR-DA520	A	-
Perspectives – Exterior – Sheet 1 of 2	TAR-AR-DA550	A	-
Perspectives – Exterior – Sheet 2 of 2	TAR-AR-DA551	A	-
Notification Plan – Sheet 1 of 2	TAR-AR-DA560	A	-
Notification Plan – Sheet 2 of 2	TAR-AR-DA561	A	-
Signage Plans	TAR-AR-DA600	A	-

APPENDIX 2

The following table is a list of the required fire safety measures for this development.

NO:	FIRE SAFETY MEASURES (AS SET OUT UNDER CLAUSE 166 OF EP&A REGULATIONS)	STANDARD OF PERFORMANCE	EXISTING	PROPOSED
1.	Automatic fire detection and alarm system	BCA 2016 Amdt 1 E2.2, Spec E2.2a Clause 4 (smoke detection system) & AS 1670.1-2015 Courthouse: BCA 2016 Amdt 1 E2.2, Spec E2.2a Clause 4 & 5 (smoke detection system) & AS 1670.1-2015.	No	Yes
2.	Building occupant warning system	BCA 2016 Amdt 1 Spec E2.2a (Clause 6) & AS1670.1-2015 (Clause 3.22)	No	Yes
3.	Emergency lighting	BCA 2016 Amdt 1 Clause E4.2, E4.3, E4.4 & AS 2293.1 – 2005Amdt 1 & 2 Courthouse: BCA E4.2, E4.3, E4.4 Spec E4.8 & AS 2293.1-1995	No Yes	Yes Yes
4.	Emergency warning and communication system (courthouse)	BCA E4.9, AS 2220.	Yes	Yes
5.	Exit signs	BCA 2016 Amdt 1 E4.5, E4.6 & AS 2293.1-2005Amdt 1 & 2 Courthouse: BCA 2016 E4.5, E4.6, E4.8 Spec E4.8 & AS 2293.1-1995	No Yes	Yes Yes
6.	Fire blanket (courthouse)	BCA E1.6, AS 2444-2001	Yes	Yes
7.	Fire Hose reel systems	BCA 2016 Amdt 1 E1.4 & AS 2441-2005Amdt 1 Courthouse: BCA E1.4 & AS 2441-1988	No Yes	Yes Yes
8.	Fire hydrant systems	BCA 2016 Amdt 1 E1.3 & AS 2419.1-2005Amdt 1	No	Yes
9.	Portable fire extinguishers	BCA 2016 E1.6 & AS 2444-2001 Courthouse: BCA E1.6, AS 2444-2001	No Yes	Yes Yes
10.	Smoke detectors & heat detectors	BCA 2016 Amdt 1 E2.2, Spec E2.2a Clause 4 (smoke detection system) & AS 1670.1-2015 Courthouse: BCA 2016 Amdt 1 E2.2, Spec E2.2a Clause 4 & 5 (smoke detection system) & AS 1670.1-2015.	No	Yes
11.	Automatic communications link to NSWFB (courthouse)	AS4428.6-1997 AS1670.3-2004 AS3013-2005 BCA Spec E2.2a	Yes	Yes
12.	Automatic fail safe devices (courthouse)	BCA D2.19, D2.21	Yes	Yes
13.	Warning and operational signs	BCA E3.3 (lifts)	Yes	Yes

NO:	FIRE SAFETY MEASURES (AS SET OUT UNDER CLAUSE 166 OF EP&A REGULATIONS)	STANDARD OF PERFORMANCE	EXISTING	PROPOSED
14.	Paths of travel (courthouse)	BCA Section D=& EP7A res-2000 part 9 Division 7 Cl 186	Yes	Yes
15.	Exit doors (courthouse)	BCA D2.2	Yes	Yes
16.	Fire doors (courthouse)	BCA Spec C3.4, As1905.1-2005	Yes	Yes
17.	Mechanical air handling systems (automatic shutdown) (Courthouse)	BCA 2016 Amdt 1 NSW table E2.2b		Yes
18.	Fire dampers (Courthouse)	BCA Clause C3.15, As1668.1.	Yes	Yes