



20 January 2016

Align Projects
GF, 258 Stanmore Road
STANMORE NSW 2048

Attention: Alex Soovoroff
Email: alex@alignprojects.com.au

Dear Alex,

**RE: OPAL AGED CARE – LOT 2-5 STANLEY ST, BATHURST
DEVELOPMENT APPLICATION TO COUNCIL
BUILDING CODE OF AUSTRALIA (BCA) CAPABILITY STATEMENT**

Blackett Maguire + Goldsmith Pty Ltd have been commissioned to carry out an assessment of the proposed development against the requirements of the National Construction Code Series (Volume 1) - Building Code of Australia (BCA) 2015.

We have also undertaken a high-level assessment of the documentation against the National Construction Code Series (Volume 1) - Building Code of Australia (BCA) 2015.

It is understood that the proposed development will be subject to a Development Consent application and this BCA Capability Statement will form part of the submission to Council for their consideration as part of the determination.

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

- + National Construction Code Series (Volume 1) Building Code of Australia 2015 (BCA)
- + Guide to the Building Code of Australia 2015 (BCA Guide)
- + Environmental Planning and Assessment Act 1979 (EP&A)
- + Environmental Planning and Assessment Regulation 2000 (EP&AR)
- + Architectural plans prepared by Group GSA:

Drawing No.	Revision	Date
DA 0001	C	15 January 2016
DA 0100	B	17 December 2015
DA 0200	A	11 December 2015
DA 1100	B	17 December 2015
DA 1110	D	15 January 2016
DA 1200	A	11 December 2015
DA 2000	D	15 January 2016
DA 2001	B	17 December 2015
DA 2002	C	15 January 2016
DA 3000	B	17 December 2015
DA 3001	C	15 January 2016
DA 3100	B	17 December 2015
DA 8400	B	17 December 2015



A. BUILDING DESCRIPTION:

The proposed development involves the construction of a two-storey aged care facility (RACF) with 164 beds, and ancillary on grade carpark.

STATEMENT OBJECTIVES:

The objectives of this statement are to:

- + Confirm that a preliminary review of the DA architectural documentation has been reviewed by an appropriately qualified Building Surveyor and Accredited Certifier.
- + Confirm that the proposed new building works can readily achieve compliance with the BCA pursuant to clause 145 of the *Environmental Planning & Assessment Regulation 2000*.

B. LIMITATIONS & EXCLUSIONS

The limitations and exclusions of this report are as follows:

- + The following assessment is based upon a review of the architectural documentation.
- + No assessment has been undertaken with respect to the Disability Discrimination Act (DDA) 1992. The building owner should be satisfied that their obligations under the DDA have been addressed.
- + The Report does not address matters in relation to the following:
 - i. Local Government Act and Regulations.
 - ii. NSW Public Health Act 1991 and Regulations.
 - iii. Occupational Health and Safety (OH&S) Act and Regulations.
 - iv. Work Cover Authority requirements.
 - v. Water, drainage, gas, telecommunications and electricity supply authority requirements.
- + BM+G Pty Ltd do not guarantee acceptance of this report by Local Council, NSW Fire Brigades or other approval authorities.
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C. BUILDING CODE OF AUSTRALIA 2015 COMPLIANCE:

Arising from our preliminary assessment of the proposed development against the Deemed-to-Satisfy provisions and Performance Requirements of National Construction Code Series – Volume 1 – Building code of Australia 2015, the following key compliance matters are noted.

The principal building characteristics as defined by the BCA are as follows:

BCA CLASSIFICATION:	Class 9c
RISE IN STOREYS:	Two (2)
TYPE OF CONSTRUCTION:	Type C Construction
EFFECTIVE HEIGHT:	Less than 12m
FIRE COMPARTMENT SIZE:	Complies with C2.2 Limitations (as applicable)
CLIMATE ZONE:	Energy Efficiency Zone 5

C.1 - Terminology

Alternative Solution

A Building Solution which complies with the Performance Requirements other than by reason of satisfying the Dts Provisions.

Building Code of Australia (BCA)



Document published on behalf of the Australian Building Codes Board. The BCA is a uniform set of technical provisions for the design and construction of buildings and other structures throughout Australia and is adopted in New South Wales (NSW) under the provisions of the EPA Act and Regulation. Building regulatory legislation stipulates that compliance with the BCA Performance Requirements must be attained and hence this reveals BCA's performance based format.

Construction Certificate

Building Approval issued by the Certifying Authority pursuant to Part 4A of the EP&A Act 1979.

Construction Type

The construction type is a measure of a buildings ability to resist a fire. The minimum type of fire-resistant construction of a building must be that specified in Table C1.1 and Specification C1.1, except as allowed for—

- (i) certain Class 2, 3 or 9c buildings in C1.5; and
- (ii) a Class 4 part of a building located on the top storey in C1.3(b); and
- (iii) open spectator stands and indoor sports stadiums in C1.7.

Note: Type A construction is the most fire-resistant and Type C the least fire-resistant of the types of construction.

Climatic Zone

Is an area defined in BCA Figure A1.1 and in Table A1.1 for specific locations, having energy efficiency provisions based on a range of similar climatic characteristics.

Deemed to Satisfy Provisions (DtS)

Provisions which are deemed to satisfy the Performance Requirements.

Exit

An exit means –

- i. Any of a combination of the following if they provide egress to a road or open space:
 - a. An internal or external stairway
 - b. A ramp;
 - c. A fire isolated passageway
 - d. A doorway leading to a road or open space
- ii. A horizontal exit or a fire isolated passageway leading to a horizontal exit

Effective Height

The height to 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) from the floor of the lowest storey providing direct egress to a road or open space.

Fire Resistance Level (FRL)

The grading periods in minutes for the following criteria—

- (a) structural adequacy; and
- (b) integrity; and
- (c) insulation,

and expressed in that order.

Fire Source Feature (FSF)

The far boundary of a road which adjoins the allotment; or a side or rear boundary of the allotment; or an external wall of another building on the allotment which is not a Class 10 building.

National Construction Code Series (NCC)

The NCC was introduced 01 May 2011 by the Council of Australian Governments. The BCA Volume One (Class 2 to 9 Buildings) is now referenced as the National Construction Code Series Volume One — BCA.

Occupation Certificate

Building Occupation Approval issued by the Principal Certifying Authority pursuant to Part 4A of the EPA Act 1979.

Open Space

A space on the allotment, or a roof or other part of the building suitably protected from fire, open to the sky and connected directly with a public road.



Performance Requirements of the BCA

A Building Solution will comply with the BCA if it satisfies the Performance Requirements. A Performance requirement states the level of performance that a Building Solution must meet.

Compliance with the Performance Requirements can only be achieved by-

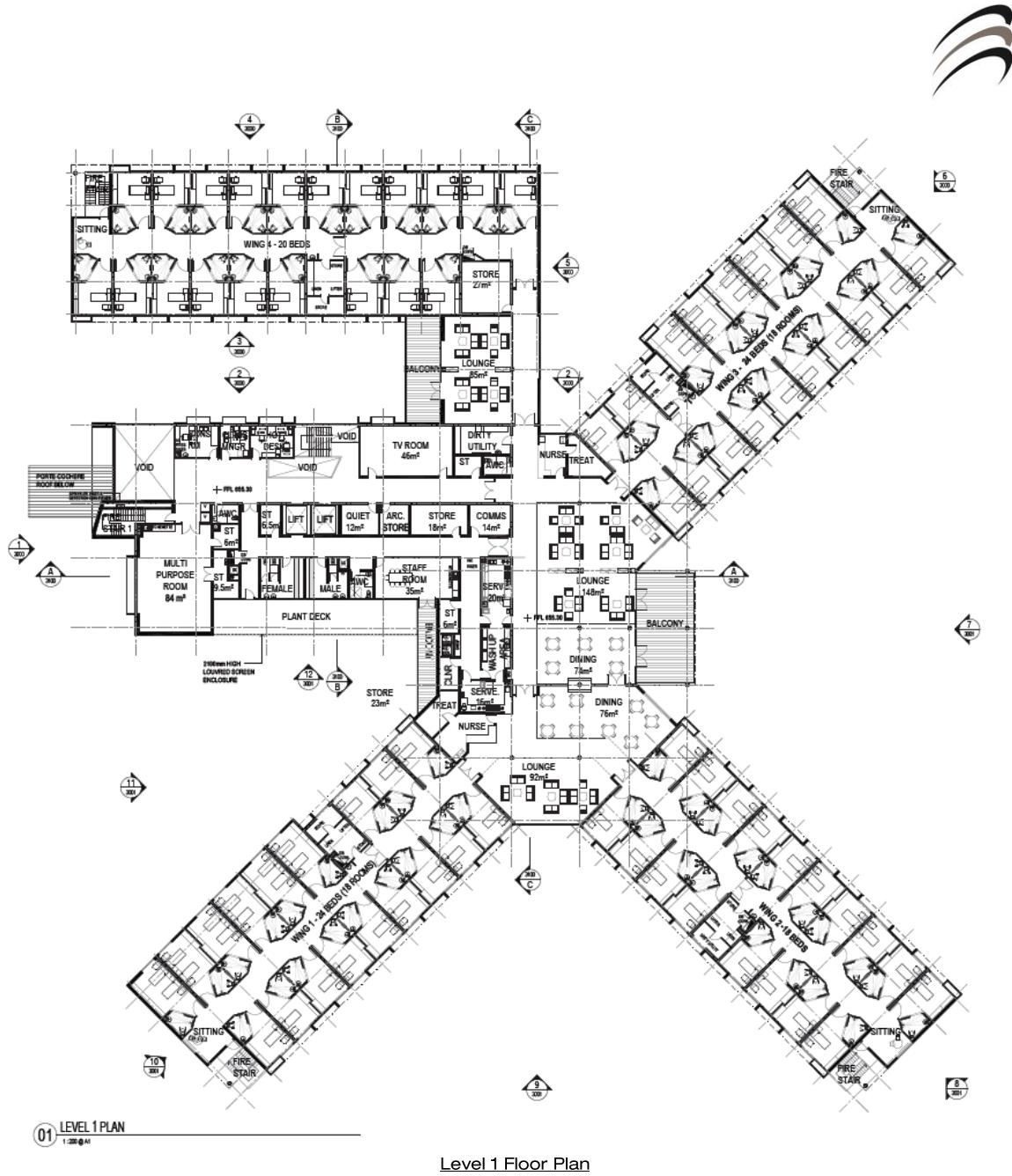
- (a) complying with the DtS Provisions; or
- (b) formulating an Alternative Solution which-
 - (i) complies with the Performance Requirements; or
 - (ii) is shown to be at least equivalent to the DtS Provisions; or
- (c) a combination of (a) and (b).

Sole Occupancy Unit (SOU)

A room or other part of a building for occupation by one or joint owner, lessee, tenant, or other occupier to the exclusion of any other owner, lessee, tenant, or other occupier and includes a dwelling.

C.2 - Architectural Plans







D. SUMMARY OF KEY COMPLIANCE ISSUES

The following comprises a summary of the key compliance issues that will need to be addressed prior to issue of the Construction Certificate:

- 1) **Clause C1.1 – Type of Construction Required:** The minimum type of fire-resisting construction of a building must be that specified in Table 3 of Specification C1.1 for Type C Construction. The building will comply with the following FRLs:-

Table 5 TYPE C CONSTRUCTION: FRL OF BUILDING ELEMENTS

Building element	Class of building—FRL: (in minutes)			
	2, 3 or 4 part	5, 7a or 9	6	7b or 8
EXTERNAL WALL (including any column and other building element incorporated therein) or other external building element, where the distance from any <i>fire-source feature</i> to which it is exposed is—				
Less than 1.5 m	90/ 90/ 90	90/ 90/ 90	90/ 90/ 90	90/ 90/ 90
1.5 to less than 3 m	—/—	60/ 60/ 60	60/ 60/ 60	60/ 60/ 60
3 m or more	—/—	—/—	—/—	—/—
EXTERNAL COLUMN not incorporated in an <i>external wall</i> , where the distance from any <i>fire-source feature</i> to which it is exposed is—				
Less than 1.5 m	90/—/—	90/—/—	90/—/—	90/—/—
1.5 to less than 3 m	—/—	60/—/—	60/—/—	60/—/—
3 m or more	—/—	—/—	—/—	—/—
COMMON WALLS and FIRE WALLS—				
	90/ 90/ 90	90/ 90/ 90	90/ 90/ 90	90/ 90/ 90
INTERNAL WALLS-				
Bounding <i>public corridors</i> , public lobbies and the like—	60/ 60/ 60	—/—	—/—	—/—
Between or bounding <i>sole-occupancy units</i> —	60/ 60/ 60	—/—	—/—	—/—
Bounding a stair if <i>required</i> to be rated—	60/ 60/ 60	60/ 60/ 60	60/ 60/ 60	60/ 60/ 60
ROOFS	—/—	—/—	—/—	—/—

- 2) **Clause C1.5 – Two storey Class 2, 3 or 9c buildings:** Type C construction in accordance with this clause in lieu of the required Type B construction.
- 3) **Clause C3.2 – Protection of Openings in External Walls:** All openings in external walls are proposed to be greater than 3m of a side or rear property boundary.
- 4) **Clause C3.3 – Separation of external walls and associated openings in different fire compartments:** Any openings in adjacent fire compartments are required to be protected in accordance with Table C3.3 and Clause C3.4. Any departures will be required to be addressed as a fire engineered alternative solution.
- 5) **Clause C3.15 – Openings for service installations:** Where service installations penetrate the walls or floors required to have an FRL with respect to integrity and insulation they are to be protected by fire seals having an FRL of the building element concerned. Fire seals are required to comply with Specification C3.15
- 6) **Clause D1.2 – Exit Travel Distance:** Exit travel distances within the building are required to be not more than 20m to a single exit, or a point of choice of two exits. Where there is a point of choice of two exits, all points
- 7) **Clause D1.3 – When fire-isolated stairways are required:** All stairways in the building are required to be fire-isolated (or external stairways in lieu of fire-isolated stairways). The plans show a number of different solutions for compliance where they are either fire-isolated stairways, external stairways in lieu of fire-isolated stairways or non-required stairways that will be subject to a fire engineered alternative solution.
- 8) **Clause D1.4 – Exit Travel Distance:** Exit travel distances within the building are required to be not more than 20m to a single exit, or a point of choice of two exits. Where there is a point of choice of two exits, all points on the floor are required to be within 40m to one of the exits.

It is understood that travel distances will be achieved by horizontal exits in a number of locations.



9) Clause D1.5 – Distance between alternative exits: The distance between alternative exits is required to be no greater than 60m throughout the building.

10) Clause D1.6 – Dimensions of paths of travel to an exit: The minimum clear height through all egress paths is required to be no less than 2m.
The minimum width of paths of travel must be not less than 1m wide generally (this width dimension is measured clear of any obstructions such as handrails and joinery), 1.5m for all public corridors and 1.8m in front of doorways to resident rooms and communal bathrooms.
In a required exit or path of travel to an exit there is concession for the unobstructed width of a doorway to be reduced to 850mm min in lieu of 1m, and the unobstructed height for an exit doorway can be reduced to 1,980mm min.
Doorways to resident rooms are to be not less than 1070mm and all other resident use areas must be not less than 870mm.

11) Clause D1.8 – External stairways or ramps in lieu of fire-isolated stairways: A number of the stairways are provided to be external stairways in lieu of fire-isolated stairways. These stairways are required to be protected from the building by walls achieving an FRL of 60/60/60 and openings within 6m being protected in accordance with C3.4.

12) Clause D1.11 – Horizontal exits: It is understood that each wing on level 1 will be a separate fire compartment and therefore the doorways through these walls are to be utilised as horizontal exits.

13) Clause D1.12 – Non-required stairways, ramps or escalators: The open stairway adjacent to the entry is understood to be subject to a fire engineered alternative solution.

14) Clause D2.7 – Installations in Exits and Paths of Travel: Electricity and communications cupboards located within a nominated egress paths within the proposed building will be required to be suitably smoke sealed and enclosed in non-combustible construction in accordance with D2.7(d).

15) Clause D2.13 – Goings and Risers: Stairways are required to have risers and goings in accordance with Table D2.14 and most have no winders in the required egress stairways.

16) Clause D2.16 – Balustrades or other barriers: Balustrades are required where the fall to the level below is more than 1m in height. The minimum height of a balustrade is 1m above the floor of the landing, walkway or the like; and 865mm above the floor of a stairway or a ramp. Balustrades must be constructed so as to not permit a sphere of 125mm diameter to pass through.

17) Clause D2.17 – Handrails: Handrails must be provided along both sides of every passageway or corridor used by resident and where practical, continuous for the full length.

18) Clause D2.20 – Swinging Doors: All swinging doorways in a required exit (final exit door from the building) are required to swing in the direction of egress.

19) Part D3 – Access for People with a Disability: The extent of access required depends on the classification of the building. Buildings and parts of buildings must be accessible as set out in Table D3.1 unless exempted by Clause D3.4. The building is required to comply with AS1428.1-2009.

20) Clause E1.3 – Fire Hydrants: Fire hydrants are required to serve the building and comply with AS2419.1-2005. A FH booster assembly is to be located to the front of the site to comply with BCA and related standards.

21) Clause E1.5 – Sprinklers: Sprinklers are required to be provided throughout the building to comply with AS2118.4-2012.

22) Clause E1.6 – Portable Fire Extinguishers: Portable fire extinguishers are required to serve the building and comply with AS2444-2001.

23) Part E2 – Smoke Hazard Management: A smoke detection system is required to be provided in accordance with Specification E2.2a and AS1670.1-2004.



24) Part E3 Lift Installations: The building is required to have lifts capable of being used as a stretcher facility in accordance with Clause E3.2, have dimensions comply with E3.6 and comply with AS 1428.1-2009.

25) Part E4 – Emergency lighting, exit signs and warning systems: Emergency lighting and exits signs are required to be provided in accordance with AS2293.1-2005 and Part E4.

26) Clause F2.1 – Facilities in residential buildings: Sanitary facilities, such as closet pans, showers, and baths are required to be provided in accordance with Table F2.1.

27) Part F3 – Room Sizes: The floor to ceiling heights in the Class 9c building must not be less than 2.4 metres in habitable rooms, corridors and passageways, and 2.1 metres in kitchens, laundries, and bathrooms. In addition, the floor to ceiling heights car parking areas must be not less than 2.1 metres.

28) Part F4 – Light and Ventilation: Any installations or modifications to the existing artificial lighting system are required to comply with Clause F4.4 and AS 1680. All mechanical or air-conditioning installations or modifications within the tenancy must be undertaken in accordance with Clauses F4.5(b) and AS 1668.2-1991.

Window sill heights must not be greater than 1m high in all windows in resident rooms. Resident room windows must also be >3m from any adjacent wall or side boundary.

29) Part F5 – Sound Transmission and Insulation: The walls within the Class 9c Residential part of the building that are required to have an impact sound insulation rating must be identical with a prototype that is no less resistant to the transmission of sound when testing in accordance with Specification F5.5. The floors are also required to be provided with airbourne and impact sound insulation.

30) Section J – Energy Efficiency: The building is subject to compliance with the Energy Efficiency Provisions of BCA Section J relating to:

- + J1: Building Fabric
- + J2: External Glazing
- + J3: Building Sealing
- + J5: Air-conditioning and ventilation systems
- + J6: Artificial lighting and power
- + J7: Hot water supply
- + J8: Access for maintenance

D.1 - Fire Engineering Strategies

In accordance with the above, BM+G 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 prepared by suitably Accredited Consultants.

The fire engineered solutions will be prepared in relation to the Construction Certificate documentation for the assessment and approval of the Certifying Authority.

D.2 - Proposed Essential Fire & Other Safety Measures:

Based on the information provided to date, the following fire safety measures are required to be incorporated into the design to satisfy the requirements of the BCA.

Essential Fire and Other Safety Measures	Standard of Performance
Alarm Signalling Equipment	AS 1670.3 – 2004
Automatic Fail Safe Devices	BCA Clause D2.21
Automatic Fire Detection & Alarm System	BCA Spec. E2.2a, AS 1670.1 - 2004 & AS 3786 - 1993
Automatic Fire Suppression Systems	BCA Spec. E1.5 & AS 2118.4 – 2012
Building Occupant Warning System	BCA Spec. E1.5, Clause 8 & BCA Clause 3.22 of AS 1670.1 – 2004
Emergency Lighting	BCA Clause E4.4 & AS 2293.1 – 2005



Essential Fire and Other Safety Measures	Standard of Performance
Emergency Evacuation Plan	AS 3745
Exit Signs	BCA Clauses E4.5, E4.6 & E4.8 and AS 2293.1 – 2005
Fire Blankets	AS 3504 – 1995 & AS2444 – 2001
Fire Dampers	BCA Clause C3.15, AS 1668.1 – 1998 & AS 1682.1 & 2 – 1990
Fire Doors	BCA Clause C2.12, C2.13, C3.4, C3.5, and AS 1905.1 – 2005
Fire Hydrant Systems	BCA Clause E1.3 & AS 2419.1 – 2005
Fire Seals	BCA Clause C3.15 & AS 1530.4 – 2005 & AS 4072.1 – 2005
Lightweight Construction	BCA Clause C1.8 & AS 1530.3 – 1999 and manufacturer's specification
Mechanical Air Handling Systems	BCA Clause E2.2, AS/NZS 1668.1 – 1998 & AS 1668.2 – 1991
Paths of Travel	EP & A Regulation Clause 186
Portable Fire Extinguishers	BCA Clause E1.6 & AS 2444 – 2001
Smoke Dampers	AS/NZS 1668.1 – 1998
Smoke Doors & Walls	BCA Spec C3.4 & C2.5
Warning & Operational signs	Section 183 of the EP & A Regulations 2000, AS 1905.1 – 2005, BCA Clause C3.6, D2.23, D3.6, E3.3
Wall-Wetting Sprinklers	BCA Clause C3.4 & AS 2118.2 – 1995

Note: The above measures may be subject to further change pending the outcomes of the final Fire Safety Engineering Review to confirm the works are permissible and do not contradict the base building Alternative Solutions.

E. CONCLUSION:

This report contains an assessment of the referenced architectural documentation for the proposed development located at Lot 2-5 Stanley Street, Bathurst against the Deemed-to-Satisfy provisions and 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 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.

Should you require further assistance or clarification please do not hesitate to contact the undersigned on 02 9211 7777 or michael@btplusg.com.au.

Yours sincerely



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