



BUILDING CODE OF AUSTRALIA

Compliance Assessment Report

Property: All Saints Anglican Church
18 Boyle St Balgowlah
Amended scope of works – change of design

Report No: 14/229 dated 5 Feb 2016
Plans assessed prepared by Mackenzie Architects International dated **20.1.2016**

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DESCRIPTION

The proposed development is to undertake alterations and additions to All Saints Anglican Church at Balgowlah.

The original scope of works has been scaled back and this report relates to a new design.

A dwelling is located on the same allotment and is defined as a fire source feature.

Classification

Class 9b – assembly building
Class 5- offices

Rise in Storeys

2

Number of Storeys Contained

2

Floor area (supplied by architect)

Total 1020 m²

Fire Source Features (Distance measured from external wall/column)

Northern boundary	more than 20m
Southern boundary	less than 3.0m
Eastern boundary	less than 3.0m
Western boundary	adjoins Boyle St

Distance to other buildings on the allotment – dwelling to church = less than 6.0m

Existing Building Elements

Regulation 93 requires that Council determine if it is necessary to upgrade any part of an existing building to partial or full compliance with the BCA. This responsibility applies to Council at DA stage.

No changes are proposed to the existing external wall and windows located less than 3.0m from the southern boundary.

BCA COMPLIANCE ASSESSMENT – NEW WORK ONLY

Section C Fire Resistance

Part C1 Fire Resistance & Stability

BCA clause	Assessment comments	Compliance status
<i>C1.1 Type of construction required</i>	The building is required to be Type B Construction.	Note
<i>C1.3 Multiple classification</i>	The classification applying to the top storey applies to all storeys for determining Type of Construction - Class 9 applies.	Note
<i>C1.4 Mixed Types of Construction</i>	A building separated by a fire wall may be mixed Types of Construction.	N/A
<i>C1.5 Two storey Class 2 or 3 buildings</i>	Not applicable – building is Class 5, 9b.	N/A
<i>C1.6 Class 4 parts</i>	Not applicable – building is Class 5 & 9b.	N/A
<i>Spec C1.1 Type B Construction</i>	<p>The only external wall changes that are proposed are on the western side facing Boyle St.</p> <p>It is likely that this wall is more than 18m from the fire source feature (far side of the road) and therefore no fire resistance level is applicable.</p> <p>First floorno FRL Columns supporting roofno FRL – concession under (g) Roofno FRL</p>	<p>Note</p> <p>Distance to be confirmed.</p> <p>Note</p>
<i>C1.11 Performance of external walls</i>	Not applicable.	N/A

Part C2 Compartmentation & Separation

BCA clause	Assessment comments	Compliance status
<i>C2.1 Application</i>	Applies to this building.	Note
<i>C2.2 Floor area & volume limitations</i>	The total building = 1020m ² . Volume is well below the 33,000m ³ permitted.	Complies
<i>C2.3 Large isolated buildings</i>	Not applicable.	N/A
<i>C2.4 Open space & vehicle access</i>	Not applicable.	N/A
<i>C2.5 Class 9a & 9c</i>	Not applicable.	N/A
<i>C2.6 Vertical separation</i>	Only applicable to Type A construction.	N/A
<i>C2.7 Separation by fire walls</i>	Not applicable.	N/A

<i>C2.8 Separation of classifications in the same storey</i>	The same FRL's apply to Class 5 and Class 9. Separation not required.	Note
<i>C2.9 Separation of classifications in different storeys</i>	The same FRL's apply to Class 5 and Class 9. Separation not required.	Note
<i>C2.10 Separation of lift shafts</i>	The lift will connect only 2 storeys – no fire separation required.	N/A
<i>C2.11 Stairways & lifts in one shaft</i>	Not applicable.	N/A
<i>C2.12 Separation of equipment</i>	The building will not contain lift motor rooms, emergency generators, central smoke control plant, boilers or batteries.	N/A
<i>C2.13 Electricity supply system</i>	An electricity substation will not be located within the building. The main switchboard located within the building will not sustain emergency equipment operating in the emergency mode. No requirements.	N/A
<i>C2.14 Public corridors in Class 2 buildings</i>	Not applicable.	N/A

Part C3 Protection of Openings

<i>BCA clause</i>	<i>Assessment comments</i>	<i>Compliance status</i>
<i>C3.1 Application</i>	Applies to window and door openings in external walls required to be fire-resistant.	Note
<i>C3.2 Protection of openings in external walls</i>	No new openings are proposed in eastern or southern walls. No new openings are proposed in northern wall near dwelling on site.	No protection required.
<i>C3.3 Separation of external walls & associated openings in fire compartments</i>	Not applicable.	N/A
<i>C3.4 Acceptable methods of construction</i>	Not applicable.	NA
<i>C3.5 Doorways in fire walls</i>	Not applicable.	N/A
<i>C3.6 Sliding fire doors</i>	Not applicable.	N/A
<i>C3.7 Protection of doorways in horizontal exits</i>	Not applicable.	N/A
<i>C3.8 Openings in fire-isolated exits</i>	Not applicable – no exits are required to be fire-isolated.	N/A
<i>C3.9 Service penetrations in fire-isolated exits</i>	Not applicable – no exits are required to be fire-isolated.	N/A
<i>C3.10 Openings in fire-isolated lift shafts</i>	Not applicable.	N/A

<i>C3.11 Bounding construction</i>	Not applicable – this building is Class 5, 9.	N/A
<i>C3.12 Openings in floors & ceilings</i>	Not applicable – floor is not required to have an FRL.	N/A
<i>C3.13 Openings in shafts</i>	Not applicable to Type B construction.	N/A
<i>C3.15 Openings for services</i>	Not applicable.	N/A

Section D Access & Egress

Part D1 Provision for Escape

<i>BCA clause</i>	Assessment comments	Compliance status
<i>D1.1 Application</i>	Applies to this building.	Note
<i>D1.2 Number of exits required</i>	Each storey of the Class 9b building can accommodate more than 50 people and therefore a minimum of 2 exits are required from each storey. Three double doors are shown at front entry and a double door has been added to side wall of hall.	Complies
<i>D1.3 When fire-isolated exits are required</i>	Not required – building is only 2 storey.	Not required.
<i>D1.4 Exit travel distances</i>	The building design complies with the 20m and 40m criteria.	Complies
<i>D1.5 Distance between alternate exits</i>	Exit doors have been added to the external northern wall of the main hall to provide an alternate exit path to the main entry/exit doorways. Existing single doorways in the external walls are to remain. Alternate exits in the building are: (a) distributed as uniformly as practicable within or around the storey served and in positions where unobstructed access to at least 2 exits is readily available from all points on the floor ; and (b) not less than 9 m apart; and (c) not more than 60 m apart; and (d) located so that alternative paths of travel do not converge such that they become less than 6 m apart	Complies. The doorways must be connected to the street via a hard surface path.
<i>D1.6 Dimensions of exits</i>	Egress widths provided are sufficient for populations listed under D1.13 below. The max number of occupants is listed on attached advice from the church.	Complies
<i>D1.7 Travel via fire-isolated exits</i>	Not applicable - no exits are required to be fire isolated. Openings within 6m of the egress path are not required to be fire protected because the exits are not required to be fire-isolated.	N/A Note
<i>D1.8 External stairways</i>	No external stairways are proposed in lieu of fire-isolated exits.	N/A
<i>D1.9 Travel by non-fire isolated stairs</i>	All exit stairs discharge at ground level. Max travel distance down the exit stair from any point to open space	Complies Complies

	is less than 80m. Discharge point for central stair near proposed lift must be less than 20m from door leading to open space. Architect advised that it measures 15.7m.	Complies.
<i>D1.10 Discharge from exits</i>	Exit doors from the building do not require external bollards to prevent vehicles blocking the egress path. Exit doors must be connected to street via a hard surface path.	Note To be shown at CC stage.
<i>D1.11 Horizontal exits</i>	Not applicable – the building is not divided by fire walls.	N/A
<i>D1.12 Non – required stairs, ramps, escalators</i>	Not applicable.	N/A
<i>D1.13 No. of persons accommodated</i>	The church has advised that the max number of occupants at any time will be usually be 120, absolute maximum - 200	Noted
<i>D1.16 Plant & lift room</i>	Not applicable.	N/A
<i>D1.17 Access to lift pits</i>	Not applicable.	N/A

Part D2 Construction of exits

<i>BCA clause</i>	<i>Assessment comments</i>	<i>Compliance status</i>
<i>D2.1 Application</i>	Applies to this building.	Note
<i>D2.2 Fire-isolated stairs & ramps</i>	No stairs are required to be fire-isolated.	N/A
<i>D2.3 Non-fire isolated stairs</i>	The new required exit stairs are to be constructed of – <ul style="list-style-type: none"> Stair near entry – timber Must be min 6mm thick Must have a finished thickness not less than 44mm, average density of 800kg/m³, moisture content of 12% Stair near toilets – steel 	Architect to specify compliance
<i>D2.4 Separation of rising & descending stairs</i>	Not applicable - no stairs are required to be fire-isolated.	N/A
<i>D2.5 Open access ramps & balconies</i>	Applies to balconies required to meet the smoke hazard management requirements of Table E2.2a.	N/A
<i>D2.6 Smoke lobbies</i>	Applies to smoke lobbies required by D1.7.	N/A
<i>D2.7 Installations in exits and paths of travel</i>	Gas or other fuel services must not be installed in a required exit. Electrical & telecommunications installations must be enclosed in non-combustible cupboards with smoke seals.	Architect to specify compliance
<i>D2.8 Enclosure of space under stairs</i>	The space under the exit stairs must be enclosed in fire rated construction with a self-closing fire door.	Architect to specify compliance
<i>D2.11 Fire-isolated stairways</i>	Not applicable.	N/A

D2.12 Roof as open space	No exits discharge to a roof.	N/A
D2.13 Goings and risers	<p>The exit stairs must have—</p> <p>(a) not more than 18 nor less than 2 risers in each flight; and</p> <p>(b) except as permitted by (i), going (G), riser (R) and quantity (2R + G) in accordance with Table D2.13; and</p> <p>(c) except as permitted by (i), goings and risers that are constant throughout in one flight; and</p> <p>(d) risers which do not have any openings that would allow a 125 mm sphere to pass through between the treads; and</p> <p>(e) treads which have a non-slip finish or an adequate non-skid strip near the edge of the nosings; and</p> <p>(f) treads of solid construction (g) in a Class 9b building... ..and</p> <p>(h) in the case of a required stairway, no winders in lieu of a landing;</p>	<p>Architect to specify compliance</p> <p>Complies.</p>
D2.14 Landings	Landings must be not less than 750mm long and have a non-slip finish throughout or a non-skid strip on the nosings.	Architect to specify compliance
D2.15 Thresholds	<p>The threshold of a doorway must not incorporate a step or ramp at any point closer to the doorway than the width of the door leaf unless—</p> <p>(i) the doorway opens to a road or open space, external stair landing or external balcony; and</p> <p>(ii) the door sill is not more than 190 mm above the finished surface of the ground, balcony, or the like, to which the doorway opens.</p>	Architect to specify compliance
D2.16 Balustrades	<p>A continuous balustrade or other barrier must be provided if—</p> <p>(ii) the height above the surface beneath, is more than—</p> <p>(A) 4 m where it is possible for a person to fall through an openable window; or</p> <p>(B) 1 m in any other case.</p> <p>Balustrades to be 865mm min high (stairs) or 1.0m min high (balconies), no openings larger than 125mm diameter and not facilitate climbing if located more than 4m above ground.</p>	Architect to specify compliance
D2.17 Handrails	Handrails are required in stairways.	Not shown on plan
D2.18 Fixed platforms, walkways & ladders	Applies to access to plant rooms and non-habitable rooms in a Class 2 such as attics.	N/A
D2.19 Doorways & doors	All exit doors are swinging doors.	Complies
D2.20 Swinging doors	<p>All nominated exit doors must swing outwards in the direction of egress.</p> <p>The internal doors which swing against direction of travel are doors in the path of travel to an exit – allowed to swing inwards.</p> <p>The sliding doors separating the main hall from entry lobby are permissible if the can be opened by a single handed pushing action.</p>	<p>Complies.</p> <p>Note</p> <p>Architect to specify compliance</p>

D2.21 Operation of latch	A door in a <i>required exit</i> , forming part of a <i>required exit</i> or in the path of travel to a <i>required exit</i> must be readily openable without a key from the side that faces a person seeking egress, by a single hand downward action or pushing action on a single device which is located between 900 mm and 1.2 m from the floor.	Architect to specify compliance
D2.22 Re-entry from fire-isolated exits	Not applicable – exits are not required to be fire-isolated.	N/A
D2.23 Signs on doors	Not applicable- the building will not contain fire-isolated exits, horizontal exits or smoke doors.	N/A
D2.24 Protection of openable windows	Not applicable.	N/A

Part D3 Access for people with disabilities

The Premises Standard applies.

The “*new part*” must comply – this is all the new work.

The “*affected part*” must comply. The path from the front door to all new parts must be upgraded to comply.

RL’s are shown for path from front footpath, in through front door and to each part of ground floor.

Design has been amended – a lift will be installed near the accessible toilet.

Comment: Complies.

Wheelchair circulation spaces to be shown at doorways to the offices.

Section E Services and Equipment

Part E1 Fire fighting equipment

<i>BCA clause</i>	Assessment comments	Compliance status
<i>E1.3 Fire Hydrants</i>	A hydrant system is required to be installed as the building has a floor area exceeding 500m ² .	Existing street coverage to be investigated for compliance
<i>E1.4 Fire hose reels</i>	Hose reels are required to be installed in the building as it exceeds 500m ² .	Required
<i>E1.5 Sprinklers</i>	Not required.	Not required.
<i>E1.6 Portable fire extinguishers</i>	Required – to be selected and installed in accordance with AS2444.	Architect to specify compliance
<i>E1.8 Fire control centres</i>	Not required – building is less than 25m high and is not a Class 6,7, 8 or 9 exceeding 18,000m ² .	Not required
<i>E1.10 Special hazards</i>	No additional fire fighting equipment is necessary.	Not required.

<i>E1.9 Fire precautions during construction</i>	In a building under construction— (a) not less than one fire extinguisher to suit Class A, B and C fires and electrical fires must be provided at all times on each <i>storey</i> adjacent to each <i>required exit</i> or temporary stairway or <i>exit</i>	Note
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Part E2 Smoke hazard management

<i>BCA clause</i>	Assessment comments	Compliance status
<i>E2.1 Application</i>	These provisions apply to this building.	Note
<i>E2.2 General requirements</i>	NSW variation. Table E2.2a ducted air conditioning systems must be shut down on activation of smoke detectors.	Architect to specify compliance.
<i>E2.3 Provisions for special hazards</i>	Additional smoke hazard management is not required.	N/A

Part E3 Lift installations

<i>BCA clause</i>	Assessment comments	Compliance status
<i>E3.2 Stretcher facility in lifts</i>	A stretcher facility is required in buildings with an effective height of more than 12m. The proposed building is only 2 storeys.	Not required
<i>E3.3 Warning against use of lifts in a fire</i>	“DO NOT USE LIFTS IF THERE IS A FIRE” signs to be installed.	Architect to specify compliance
<i>E3.4 Emergency lifts</i>	Only required in buildings exceeding 25m or Class 9a buildings.	Not required
<i>E3.5 Landings</i>	Access and egress to and from lift well landings must comply with the <i>Deemed-to-Satisfy Provisions</i> of <u>Section D</u> .	Complies
<i>E3.6 Facilities for people with disabilities</i>	Lift must comply with provisions listed.	Architect to specify compliance
<i>E3.7 Fire service controls</i>	All passenger lift cars must be provided with fire service controls in accordance with <u>AS 1735.2</u> or Appendix A of AS 1735.1 .	Architect to specify compliance

Part E4 Emergency Lighting, Exit signs and Warning systems

<i>BCA clause</i>	<i>Assessment comments</i>	<i>Compliance status</i>
<i>E4.2 Emergency lighting requirements</i>	Emergency lighting must be installed throughout the building.	Required
<i>E4.4 Design & operation of emergency lighting</i>	Every <i>required</i> emergency lighting system must comply with <u>AS/NZS 2293.1</u> .	Design details to be submitted at CC stage.
<i>E4.5 Exit signs</i>	An exit sign must be clearly visible to persons approaching the exit, and must be installed on, above or adjacent to each— (a) door providing direct egress from a storey to— (i) an enclosed stairway, passageway or ramp serving as a required exit; and (ii) an external stairway, passageway or ramp serving as a required exit; and (iii) an external access balcony leading to a required exit; and (b) door from an enclosed stairway, passageway or ramp at every level of discharge to a road or open space; and (c) horizontal exit; and (d) door serving as, or forming part of, a required exit in a storey required to be provided with emergency lighting in accordance with E4.2.	To be shown on electrical plans at CC stage
<i>E4.6 Direction signs</i>	If an exit is not readily apparent to persons occupying or visiting the building then exit signs must be installed in appropriate positions in corridors, hallways, lobbies, and the like, indicating the direction to a required exit.	To be shown on electrical plans at CC stage
<i>E4.7 Class 2 & 3 buildings-exemptions</i>	Not applicable.	N/A
<i>E4.8 Design & operation of exit signs</i>	Every <i>required</i> exit sign must— (a) comply with <u>AS/NZS 2293.1</u> ; and (b) be clearly visible at all times when the building is occupied by any person having the right of legal entry to the building.	Design details to be submitted at CC stage.
<i>E4.9 Emergency Warning & Inter-communication Systems</i>	Only required in buildings exceeding 25m high and certain Class 3 & 9 buildings.	N/A

Section F Health & Amenity

Part F2 Sanitary & Other Facilities

<i>BCA clause</i>	Assessment comments	Compliance status
<i>F2.1 Facilities in Class 5-9 buildings</i>	<p>The max number of occupants have been determined as: 200 (advice from church)</p> <p><u>Proposed facilities</u></p> <p><u>Ground floor</u></p> <p>Male 1wc + 2 urinal + 2 basins</p> <p>Female 3wc + 2 basins patrons</p> <p>Unisex accessible 1wc + 1 basin</p> <p><u>First floor</u></p> <p>1wc + 1 basin</p>	Complies
<i>F2.4 Facilities for people with disabilities</i>	<p>A unisex facility is shown on ground floor.</p> <p>One male ambulant toilet + one female ambulant toilet is shown on plan.</p>	Complies
<i>F2.5 Construction of sanitary compartments</i>	<p>The door to a fully enclosed <i>sanitary compartment</i> must—</p> <p>(i) open outwards; or</p> <p>(ii) slide; or</p> <p>(iii) be readily removable from the outside of the <i>sanitary compartment</i>,</p> <p>unless there is a clear space of at least 1.2 m between the closet pan within the <i>sanitary compartment</i> and the nearest part of the doorway.</p>	Doors are not full height – not applicable.
<i>F2.8 Waste Management</i>	Only applicable to Class 9a buildings.	N/A

Part F3 Room sizes

<i>BCA clause</i>	Assessment comments	Compliance status
<i>F3.1 Height of rooms</i>	The ceiling height will be greater than 2.4m in the offices and assembly areas.	Complies.

Part F4 Light and Ventilation

<i>BCA clause</i>	Assessment comments	Compliance status
<i>F4.1 Natural light</i>	Not mandatory for this building.	N/A
<i>F4.3 Natural light borrowed from an adjoining room</i>	Not applicable.	N/A
<i>F4.4 Artificial lighting</i>	<p>Artificial lighting must be provided in stairways, passageways.</p> <p>The artificial lighting system must comply with AS/NZS 1680.0.</p>	Architect to specify compliance.

<i>F4.5 Ventilation</i>	Each room can be naturally or mechanically ventilated.	Architect to specify compliance.
<i>F4.8 Restrictions on position of water closets & urinals</i>	A room containing a closet pan or urinal must not open directly into— (a) a kitchen or pantry; or (b) a public dining room or restaurant; or (c) a dormitory in a Class 3 building; or (d) a room used for public assembly (which is not an early childhood centre, primary school or open spectator stand); or (e) a workplace normally occupied by more than one person.	Complies
<i>F4.9 Airlocks</i>	Airlocks are proposed.	Complies.
<i>F4.11 Carparks</i>	Not applicable.	N/A
<i>F4.11 Kitchen exhaust</i>	A commercial kitchen must be provided with a kitchen exhaust hood complying with AS/NZS 1668.1 and AS 1668.2 where— (a) any cooking apparatus has— (i) a total maximum electrical power input exceeding 8 kW; or (ii) a total gas power input exceeding 29 MJ/h; or (b) the total maximum power input to more than one apparatus exceeds— (i) 0.5 kW electrical power; or (ii) 1.8 MJ gas, per m2 of floor area of the room or enclosure.	To be confirmed at CC stage

Part F5 Sound Transmission and Insulation

Not applicable to Class 5 & 9b buildings.

Section G Ancillary Provisions

Part G1 Minor Structures and Components

<i>G1.2 Refrigerated chambers, strong rooms & vaults</i>	Not applicable.	N/A
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NSW Part G1.101 Provision for cleaning of windows

<i>G1.101 Provision for cleaning of windows.</i>	Not applicable – only applies to buildings containing 3 or more storeys.	N/A
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Sect J Energy Efficiency

Not part of this assessment

Conclusion

This report demonstrates that the new work proposed can comply with the deemed-to-satisfy provisions of the BCA.

G Watts
Accredited Certifier
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