Development Application Preliminary BCA Assessment

Bankstown Town Hall

80 Rickard Street Bankstown

Report No 0069.10

January 2011

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January 2011

For and on behalf of
Chris Summers Building Certification Service

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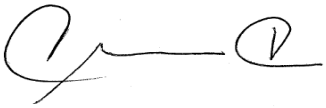

Date: 21 January 2011

This report has been prepared by Chris Summers Building Certification Service with all reasonable skill, care and diligence for ERM.

No inspection or assessment has been undertaken on parts of the building which are covered, unexposed or inaccessible. Chris Summers Building Certification Service is therefore unable to report that any such part of the building is free from defect or complies with any relevant Code or Legislation.

This report does not imply, nor should it be implied, that the subject buildings or upgrading works will comply fully with the Building Code of Australia. The report shall not be construed as relieving any other party of their responsibilities or obligations.

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TABLE OF CONTENTS

LIST OF ANNEXURES **2**

1.0 INTRODUCTION **3**

1.1 PURPOSE OF REPORT **3**
1.2 DESCRIPTION OF BUILDING **3**
1.3 BCA ASSESSMENT SYNOPSIS **3**
1.4 LITERATURE REVIEW AND ANALYSIS **4**

ANNEXURE 1 ..... **5**

DEVELOPMENT APPLICATION **5**
PRELIMINARY BCA ASSESSMENT **5**

ANNEXURE 2 ..... **23**

LIST OF ANNEXURES

ANNEXURE 1 …… Preliminary BCA Assessment

ANNEXURE 2 ……Reference & Bibliography

1.0 INTRODUCTION

1.1 Purpose of Report

This report has been prepared at the request of ERM. The purpose of this report is to undertake a preliminary assessment of the proposed building works in relation to the lodgement of a development application for the adaptive reuse of Bankstown town Hall.

1.2 Description of Building

The existing building is known as the Bankstown Town Hall and located at 80 Rickard Road Bankstown. The building comprises three levels and a lower level basement carpark. The building consists of a 1300 seating capacity auditorium, 300 seating capacity theatre, function rooms, art gallery, mayoral room, foyers, booking office, dressing rooms, several kitchens and associated amenity areas. The carpark accommodates 82 carparking spaces, plant rooms, kitchen, storage areas, switch room and substation.

Construction of the building comprises reinforced concrete construction, with a combination of pre-cast concrete panels, block work and a metal deck roof. A large plant room is located at roof level.

The building was constructed in 1973 and precedes the implementation of the Building Code of Australia (BCA).

The existing buildings would have a classification of Class 5 (offices), Class 6 (canteen), and Class 7a (carpark) Class 7b Storage and 9b (assembly building/entertainment venue). In accordance with BCA Clause C1.5 and BCA Specification C1.1 Clause 2.8, the building has a rise in storeys of 4 and would be required to comply with Type A Construction if built today.

1.3 BCA Assessment Synopsis

The proposal involves the lodgement of a development application for the adaptive reuse of the Bankstown Town Hall. The proposed reuse will comprise the following:

Basement carpark

- Demolition of the existing carpark entry and associated roof podium
- New carpark entry
- New plant rooms to the basement carpark
- Reconstruction of the existing western exit stair to form a fire isolated stair
- Upgrade of the existing lift
- Other minor refurbishment

Upper levels

- Demolition of the existing auditorium and construction of a new 3 level library
- Internal refurbishment to create ne office administration and staff facilities

- New exhibition areas and multipurpose rooms

The purpose of the BCA assessment is to undertake a preliminary assessment of the development application plans in relation to the new building work compliance with the BCA. No assessment has been undertaken of existing parts of the building or any necessary fire safety upgrading of existing parts of the building unless directly affected by the proposed building works. These items are identified in the attached preliminary BCA assessment (*see Annexure 1*).

This assessment has been based upon development plans prepared by FJMT Architects and dated 19 November 2010.

1.4 Literature review and analysis

To achieve the aims of this report the information referred to in *Annexure 2* of this report has been used in the development of this assessment. In addition to this, the site was inspected on 17 January 2011. The purpose of this inspection was to examine the site and to determine the extent of building works proposed with respect to the existing building.

ANNEXURE 1

DEVELOPMENT APPLICATION

PRELIMINARY BCA ASSESSMENT

TYPE A CONSTRUCTION

Description

Bankstown Town Hall Adaptive Reuse – 80 Rickard Road Bankstown

Classification

Class 9b Theatre
Class 9b Library
Class 5 Office Administration
Class 6 Café
Class 7a Carpark
Class 7b Storage

Rise in Storeys

4

BCA Version

BCA 2010

Type of Construction

Type A Construction required

Part C - Compartmentation

Table C2.2

	MAX AREA	MAX VOL	ACTUAL
Class 9b Theatre	8 000	48 000	To be verified
Class 9b Library	8 000	48 000	on construction
Class 5 Offices	8 000	48 000	drawings
Class 6 Café	5 000	30 000	
Class 7a Carpark	5 000	30 000	
Class 7b Storage	5 000	30 000	

Parts B - H

BCA CLAUSE	DESCRIPTION	COMMENTS	COMPLIANCE
PART B - STRUCTURE			
B1.1	Resistance to actions	Critical actions to be determined in accordance with B1.2 and AS 1170. building resistance to be determined in accordance with B1.4	To be specified on construction drawings
B1.2	Determination of individual actions	Determined in accordance with B1.2	To be specified on construction drawings
B1.3	Loads	Determined in accordance with B1.3 & AS 1170	To be specified on construction drawings
B1.4	Determination of structural resistance of materials and forms of construction	• Determined in accordance with B1.4 • TMS required where principal building elements do not comprise termite resistant materials	To be specified on construction drawings
PART C1 - FIRE RESISTANCE AND STABILITY			
C1.1	Type of construction	Type of construction determined in accordance with Table C1.1	Type A
C1.2	Calculation of rise in storeys	Rise in storeys determined in accordance with C1.2	4
C1.3	Multiple classifications	Type of construction is determined by applying classification of top floor to whole of building	Type A
C1.4	Mixed types of construction	Applies where building is fire separated in accordance with C2.7	Applies
C1.5	Two storey Class 2, 3 & 9c buildings	Type C construction applies where building complies with C1.5	N/A
C1.6	Class 4 parts of a building	Class 4 building requires same FRL for Class 2 building	N/A
C1.7	Open spectator stands & indoor stadiums	Type C construction applies where building complies with C1.7	N/A
C1.8	Lightweight construction	Compliance with Specification C1.8 applies where lightweight construction is used to achieve required FRL's	To be specified on construction drawings
C1.10	Fire hazard properties	Compliance with Specification C1.10 and/or C1.10a	To be specified on construction drawings
C1.11	Performance of external walls	Compliance with Specification C1.11 required where concrete panel walls used in a building having a rise of more than 2 storeys	N/A
C1.12	Non-combustible materials	Materials deemed to be non-combustible. Applies where used in fire resisting construction	Noted
Table 3 of Specification C1.1 – Type A Construction			

BCA CLAUSE	DESCRIPTION	COMMENTS			COMPLIANCE
		Class 5, 7a & 9	***Class 6***	***Class 7a***	
External loadbearing walls					
	Less than 1.5m	120/120/120	180/180/180	120/120/120	To be specified on construction drawings
	1.5 – 3.0m	120/90/90	180/180/120	120/90/90	To be specified on construction drawings
	Greater than 3.0m	120/60/30	180/120/90	120/60/30	To be specified on construction drawings
External non-loadbearing walls					
	Less than 1.5m	-/120/120	-/180/180	-/120/120	To be specified on construction drawings
	1.5 – 3.0m	-/90/90	-/180/120	-/90/90	To be specified on construction drawings
	Greater than 3.0m	-/-/-	-/-/-	-/-/-	
	External columns				
	Less than 3.0m	120/-/-	180/-/-	120/-/-	To be specified on construction drawings
	Greater than 3.0m	-/-/-	-/-/-	-/-/-	
Fire walls & common walls					
		120/120/120	180/180/180	120/120/120	To be specified on construction drawings
Internal loadbearing walls					
	Lift and stairs	120/120/120	180/120/120	120/120/120	To be specified on construction drawings
	Halls, corridors etc	120/-/-	180/-/-	120/-/-	To be specified on construction drawings
	Bounding SOU's	120/-/-	180/-/-	120/-/-	N/A
	Shafts	120/90/90	180/120/120	120/90/90	To be specified on construction drawings
Internal non-loadbearing walls					
	Lift and stairs	-/120/120	-/120/120	-/120/120	To be specified on construction drawings
	Halls, corridors etc	-/-/-	-/-/-	-/-/-	To be specified on construction drawings
	Bounding SOU's	-/-/-	-/-/-	-/-/-	N/A
	Shafts	-/90/90	-/120/120	-/90/90	To be specified on construction drawings
Other internal loadbearing walls, columns					
		120/-/-	180/-/-	120/-/-	To be specified on construction drawings
Floors					
		120/120/120	180/180/180	120/120/120	To be specified on construction drawings
Roof					
		120/60/30	180/600/30	120/60/30	N/A – see Clause 3.5
Clause 3 of Specification C1.1					
3.1(a)	Compliance with Table 3	See above			Noted
3.1(b)	External walls, common walls, lift pit walls & framing	To comprise non-combustible construction			To be specified on construction drawings
3.1(c)	Construction of internal walls	Internal walls required to achieve an FRL must extend to: • Underneath side of the floor above; or			To be specified on construction drawings

BCA CLAUSE	DESCRIPTION	COMMENTS	COMPLIANCE
		• Underneath side of roof covering; or • Ceiling with resistance to incipient spread of fire not less than 60 minutes	
3.1(d)	Loadbearing internal walls, shaft walls and fire walls	To be of concrete or masonry construction	To be specified on construction drawings
3.1(e)	Fire rated non-loadbearing internal walls & shaft walls	To be of non-combustible construction	To be specified on construction drawings
3.1(f)	Internal columns within 1.5m of a window	Deemed to be exposed to a fire source feature and comply as external column	To be verified on construction drawings
3.2	Concession for floors	Floors do not require an FRL where: • Floor is laid directly on ground; • Space is not a storey or used for ancillary purposes in a Class 2, 3, 5 or 9 building; • Certain timber stage floors in Class 9b buildings; • Floor is within a SOU in Class 2 – 4 building; and • An open access floor for services above floor with required FRL	Applies to basement level
3.3	Floor loadings for Class 5 & 9b buildings	Reduced FRL's for floors and roofs where floor has a designed live load of 3kPa	To be verified on construction drawings
3.4	Superimposed roofs	Concession for superimposed roofs on concrete roof slabs complying with Table 3	N/A
3.5	Concession for roofs	Roof does not require an FRL where building complies with Clause 3.5	Applies as building will be sprinkled
3.6	Roof lights	Requirements for roof lights where roof is required to achieve an FRL	N/A
3.7	Internal columns & walls	Reduced FRL's for internal walls and columns in storey immediately below the roof	To be verified on construction drawings
3.8	Spectator stands	Concessions for open spectator stands	N/A
3.9	Carparks	Concessions for open-deck carparks & carparks protected with a sprinkler system	Floor of storey above to achieve FRL specified in Table 3 of Specification C1.1
3.10	Class 2 buildings	Concessions for Class 2 buildings having a rise in storeys of 3 or a rise in storeys of 4 with the bottom storey comprising a carpark	N/A
Clause 2 of Specification C1.1			
2.1	Exposure to fire source feature	Determination of building elements exposed to fire source feature	Noted
2.2	Fire support to other parts of the building	Parts of a building providing vertical or lateral support to construction that must	To be specified on construction

BCA CLAUSE	DESCRIPTION	COMMENTS	COMPLIANCE
		achieve an FRL need to achieve the same FRL	drawings
2.3	Lintels	Lintels spanning openings in walls required to achieve an FRL	To be verified on construction drawings
2.4	Attachments to FRC	Applies to combustible attachments to external walls	To be specified on construction drawings
2.5	General concessions	Concessions apply to: • steel columns, • timber columns, • structures on roofs, • curtain & panel walls; and • balconies & verandahs; where compliance with Clause 2.5 is achieved	N/A
2.6	Mezzanine floors	Concessions for mezzanine floors	N/A
2.7	Enclosure of shafts	Roof and floor of shafts to achieve FRL required for walls except shafts extending beyond roof covering and bottom of shaft on ground. Does not apply to fire isolated stair and ramp shaft	To be specified on construction drawings
2.8	Carparks in Class 2 & 3 buildings	Concessions for FRL of carparks in Class 2 buildings (4 storeys) & Class 3 buildings (3 storeys)	N/A
2.9	Residential aged care buildings	Concessions for Class 3 buildings used as residential aged care buildings	N/A
PART C2 - COMPARTMENTATION AND SEPARATION			
C2.2	Floor area limitations	See Table C2.2 above	To be verified on construction drawings
C2.3	Large isolated buildings	Compliance with C2.3 required	N/A
C2.4	Open space	Compliance with C2.4 required	N/A
C2.5	Class 9a & 9c buildings	Compartmentation requirements applicable to Class 9a & 9c buildings	N/A
C2.6	Vertical separation in external walls	Openings above other opening in another storey to be separated in accordance with C2.6	To be specified on construction drawings
C2.7	Fire walls	Applies where fire walls are used to create separate fire compartments or separate buildings	To be specified on construction drawings
C2.8	Separation of classifications in the same storey	Classifications alongside each other to be separated by a fire wall or achieve the FRL of the higher classification. Concessions for carparks apply	To be specified on construction drawings
C2.9	Separation of classifications in the different storeys	Classifications above one another to have the FRL required for lower storey	To be specified on construction drawings
C2.10	Separation of lift shafts	Lift walls in Type A construction to achieve FRL specified in Table 3	To be specified on construction

BCA CLAUSE	DESCRIPTION	COMMENTS	COMPLIANCE
			drawings
C2.11	Separation of lift and stair shafts	Stairs required to be fire resisting to be in a separate shaft to a lift	To be specified on construction drawings
C2.12	Separation of equipment	Equipment specified in C2.12 to be separated by walls having an FRL of 120/120/120 and doors with an FRL of -/120/30	To be specified on construction drawings
C2.13	Separation of electrical equipment	Sub-stations & MSB's within a building sustaining emergency power to comply as follows: • Be separated by walls having an FRL of 120/120/120 and doors with an FRL of -/120/30; • Electrical conductors comply AS 3013 or enclosed in construction having FRL of 120/120/120; • Switchgear is separated from non-emergency switch-gear	To be specified on construction drawings
C2.14	Public corridors in Class 2 & 3 buildings	Public corridors greater than 40.0m to smoke separated in accordance with Specification C2.5	N/A
PART C3 - PROTECTION OF OPENINGS			
C3.1	Application of Part C3	Applies to openings in walls required to achieve FRL	Noted
C3.2	Openings in external walls	Openings in external walls less than the specified distances from a fire source feature (including openings in return walls) are to be protected in accordance with C3.4	See below
	• *Applies to southern wall of library – to be specified on construction drawings*		
C3.3	Openings in different fire compartments	Applies to openings in external walls where fire compartments are used	To be specified on construction drawings
C3.4	Methods of protection	Applies to openings referred to in C3.2 & C3.3	To be specified on construction drawings
C3.5	Doorways in fire walls	Applies to openings in fire walls	To be specified on construction drawings
C3.6	Sliding fire doors	Applies to sliding fire doors in fire walls	N/A
C3.7	Doors in horizontal exits	Applies to exits in fire walls	To be specified on construction drawings
C3.8	Doors in fire isolated exits	Doorway & window openings in fire isolated stairs or passageways to be protected in accordance with C3.8	To be specified on construction drawings
C3.9	Penetrations in fire isolated exits	Fire isolated exits must not be penetrated by services other than those specified in C3.9	To be specified on construction drawings
C3.10	Openings in fire isolated lift shafts	Doorways to be protected with –/60/- doors and comply with C3.10. Other openings to comply with C3.10	To be specified on construction drawings
C3.11	Bounding construction in	Openings to be protected as follows:	N/A

BCA CLAUSE	DESCRIPTION	COMMENTS	COMPLIANCE
	Class 2 & 3 buildings	• Doorways to be protected with self closing –/60/30 fire doors. • Other openings to be protected in accordance with C3.11. • Paths of travel to be protected in accordance with C3.11	
C3.12	Openings in floors and walls	Openings for services that pass through a floor or ceiling required to achieve an FRL must be enclosed in fire rated shafts or comply with C3.15	To be specified on construction drawings
C3.13	Openings in shafts	Openings in shafts required to be fire rated to be protected in accordance with C3.13	To be specified on construction drawings
C3.15	Openings for service installations	Openings for services that pass through construction required to achieve an FRL not enclosed in fire rated shafts to comply with C3.15	To be specified on construction drawings
C3.16	Construction joints	Construction joints in fire rated construction to be sealed with fire rated sealants	To be specified on construction drawings
C3.17	Columns with lightweight construction	Applies where columns are protected with lightweight construction to achieve FRL	To be specified on construction drawings
PART D1 - PROVISION FOR ESCAPE			
D1.2	Number of exits required as determined by D1.2		
	Floor	***Class***	***Required***	***Actual***	
	Basement	7a/7b	1	5	See also D1.4 below
	Ground	5 & 9b	2	6	
	Level 1	9b	2	6	
	Level 2	9b	2	6	
D1.3	For buildings, other than open spectator stands, fire isolated stairs required where stair connects or passes through more than:		
	Class 5 – 9	2 consecutive storeys – add 1 more storey where compliance with D1.3(b)(iii) is achieved	Yes – building to be sprinkled
D1.4	Exit travel distances		
	Basement	Maximum travel distance of 20.0m to a point where travel is available in different directions. Maximum travel distance of 40.0m to nearest exit	See below
	• *Travel distance to mid-section of southern end of Carpark exceeds 40.0m to nearest exit – To be verified on construction drawings* • *Egress from Plant Room 1 will comply providing access to Passageway 1 and Stair 8A is available – see also D2.20 & D2.21* • *Egress from Plant Room 5 will comply providing access to the exit door located between the switch room and substation is available* • *Stair 1/1B does not comply as an exit – see D2.4*		
	Ground Level	Maximum travel distance of 20.0m to a point where travel is available in different directions. Maximum travel distance of 40.0m to nearest exit	See below

BCA CLAUSE	DESCRIPTION	COMMENTS	COMPLIANCE
	• *Travel distance from Reading Gardens and northern end of library will exceed 40.0m to nearest exit and 20.0m to point where travel is available in different directions – To be verified on construction drawings* • *Travel distance from southern end of library will exceed 20.0m to point where travel is available in different directions – To be verified on construction drawings* • *Enclosure under Stair 4 not permitted – see D2.8* • *Stair 1/1B does not comply as an exit – see D2.4*		
	Level 1	Maximum travel distance of 20.0m to a point where travel is available in different directions. Maximum travel distance of 40.0m to nearest exit	See below
	• *Stair 1/1B does not comply as an exit – see D2.4*		
	Level 2	Maximum travel distance of 12.0m to a point where travel is available in different directions. Maximum travel distance of 30.0m to nearest exit	See below
	• *Stair 1/1B does not comply as an exit – see D2.4*		
D1.5	Distance between alternative exits	Alternative exits to be located as follows: • Not less than 9.0m apart; • Not greater than 60.0m apart in a Class 5-9 building; and • Alternative paths of travel must not converge so as to be less than 6.0m apart	To be verified on construction drawings
D1.6	Width of exits	Aggregate width of exits to comply with D1.6	See separate schedule
D1.7	Travel via FIS	Travel from FIS t comply as follows: • Restrictions on openings into FIS/FIP • Discharge of FIS/FIP to comply with D1.7 • Protection of path of travel from FIS/FIP • Smoke lobbies to FIS/FIP	Yes
D1.8	External stairs in lieu of fire isolated stairs	Applies where external stairs or ramps used in lieu of FIS	N/A
D1.9	Travel via non-FIS	Applies to stairs not required to be fire isolated – NB Stairs must discharge to level of road or open space	To be verified on construction drawings
D1.10	Discharge from exits	Discharge from exits to comply as follows: • Exits must not be blocked at the point of discharge; and • The path of travel to the road or open space must have a clear width no less than the required width of the exit. • See also Class 9b buildings	To be verified on construction drawings
D1.11	Horizontal exits	Applies to exits in fire walls	To be verified on construction drawings
D1.12	Non-required stairs, ramps and escalators	Restrictions on the use of or number of storeys connected	N/A
D1.13	No of persons accommodated	Number of persons to be determined in accordance with D1.13	See separate schedule
D1.16	Concession for plant rooms & lift motor rooms	Applies to egress from plant rooms	N/A
D1.17	Access to lift pits	Applies to required access to lift pit areas	To be verified on construction drawings
PART D2 CONSTRUCTION OF EXITS			
D2.2	FIS construction	Applies to FIS.	To be specified

BCA CLAUSE	DESCRIPTION	COMMENTS	COMPLIANCE
		Compliance with D2.2 required	on construction drawings
D2.3	Non-fire isolated stairs	Applies to non-FIS. Compliance with D2.3 required	N/A
D2.4	Separation of rising and descending flights	Stairs from basement level to be fire separated from upper level stairs	See below
	• *Stair 1/1B has direct connection between rising and descending flights*		
D2.5	Open access ramps	Applies where open access ramps or lobbies used to comply with smoke hazard requirements of E2.2	N/A
D2.6	Smoke lobbies	Compliance with D2.6 required where more than 2 access doors open into fire isolated stair/passageway	N/A
D2.7	Installation in exits	Installation in exits to comply with D2.7 required	To be specified on construction drawings
D2.8	Enclosures under stairs	No enclosures permitted under fire isolated stairs. Enclosures under stairs to comply with D2.8	See below
	• *Book return room cannot be located under FIS 4*		
D2.9	Width of stairs	Clear width of exit to be measured to a height of 2.0m	To be specified on construction drawings
D2.10	Fire isolated ramps	Compliance with D2.10 required	N/A
D2.11	FIS passageways	Construction of FIP to comply with D2.11	To be specified on construction drawings
D2.12	Roof as open space	Compliance with D2.13 required	N/A
D2.13	Treads and risers	Compliance with D2.13 required	To be specified on construction drawings
D2.14	Landings	Compliance with D2.14 required	
D2.15	Thresholds	Compliance with D2.15 required	
D2.16	Balustrades	Compliance with D2.16 required	
D2.17	Handrails	Compliance with D2.17 required	
D2.18	Fixed platforms, walkways etc	Compliance with D2.18 required	
D2.19	Doorways and doors	Compliance with D2.19 required	
D2.20	Swing of doors	Compliance with D2.20 required	See below
	• *Swing of doors to Passageway 1 does not comply with D2.20*		
D2.21	Operation of latch	Compliance with D2.21 required	See below
	• *Exit doors to and from Passageway 1 to comply with D2.21*		
D2.22	Re-entry from fire isolated exits	Applies to Class 9a, 9c and buildings greater than 25.0m in effective heights	N/A
D2.23	Signs on doors	Applies to the following: • Doors in horizontal exits; • Smoke doors in exits • Fire doors in FIS/ FIP	To be specified on construction drawings
D2.101	Doors entertainment venues	Applies to doors in path of travel in Class 9b building used as entertainment venue	N/A
PART D3 - ACCESS FOR PEOPLE WITH DISABILITIES			

BCA CLAUSE	DESCRIPTION	COMMENTS	COMPLIANCE
D3.1	Application	Applies to building	Noted
D3.2	General access requirements	Required to: • Buildings in Table D3.2 and • Within the entrance floor and in accordance with AS 1428.1	Refer to Access Report prepared by Accessibility Solutions
D3.2 (c)	External Access	From the allotment boundary at the main entrance	
		From any accessible carparking space	
		From any accessible adjacent building	
		Through the principal public entrance	
D3.3	Parts to be accessible	To sanitary compartments	
		To areas normally used by occupants	
		Handrails to ramps where lift not provided	
		Accessible lifts	
		Accessible paths not to include impediments	
		Access finishes and fittings to comply with AS 1428.1	
D3.4	Concessions	Applies to Class 6 & 9b buildings as specified or areas where access would be inappropriate due to the use of the building	
D3.5	Car parking	Required to buildings that are accessible. To comply with AS 2890.1	
Table D3.5	Required car parking	Parking required to each class as if it were a separate building	
D3.6	Signage to accessible facilities`	Signage required were an accessible facility provided	
D3.8	Tactile indicators	Required to access ramps and stairs used by the public	
PART E1 - FIRE FIGHTING EQUIPMENT			
E1.3	Fire hydrants	• Fire hydrant system required in accordance with AS 2419 • Hydrants not to be located in stairs unless they are fire isolated • Where booster connection required to be located in accordance with AS 2419 • Hydrant pump system required where reticulated water supply does not achieve flow rates specified in AS 2419	To be specified on construction drawings
E1.4	Hose reels	• Hose reels required in accordance with AS 2441 • Hose reels to be located so that the nozzle of the hose reel reaches all parts of the building • Hose reel locations to comply with E1.4 • Hose reels must not be located in FIS	To be specified on construction drawings
E1.5	Sprinklers	• Sprinkler system required in accordance with Specification E1.5 & AS 2118 • Sprinklered areas to be fire separated from non-sprinklered areas of the building where applicable	To be specified on construction drawings
E1.6	Fire extinguishers	Fire extinguishers required as follows:	To be specified

BCA CLAUSE	DESCRIPTION	COMMENTS	COMPLIANCE
		• Class AE or E fire risks associated with emergency switchboards; • Class A fire risks associated with storage areas; and • Located in accordance with Sections 1 – 4 of AS 2444	on construction drawings
E1.8	Fire control centres	Applies to buildings with • An effective height of more than 25m or • Class 6 – 9 building with floor area greater than 18000m^2	N/A
E1.9	Fire precautions during construction	Required in accordance with E1.9	To be specified on construction drawings
E1.10	Special hazards	Applies where the nature of materials stored presents additional hazards or the location of the building in relation to water supply – see also E1.5 *Occupancies of Excessive Hazard*	N/A
Spec. E1.5	Sprinklers	See E1.5 above	To be specified on construction drawings
PART E2 - SMOKE HAZARD MANAGEMENT			
E2.2	General requirements	Tables E2.2a & E2.2b apply to each Class as if they were separate buildings Air handling systems not forming part of SHM System to comply with E2.2(b)	To be specified on construction drawings
E2.2	Table E2.2 & Table E2.2b – see below		
Class 5 - 9	Smoke detection system in accordance with AS 1670 or other smoke hazard management system specified in Table E2.2a or Table E2.2b		To be specified on construction drawings
Class 7a	Mechanical ventilation system to comply with AS 1668.2 and Clause 5.5 of AS 1668.1		
E.2.3	Special hazards	Applies measures may apply where special hazards occur as specified in E2.3	N/A
PART E3 – LIFT INSTALLATIONS			
E3.2	Stretcher lifts	Required in buildings with an effective height of more than 12.0m or where required in accordance with E3.4	To be verified on construction drawings
E3.3	Warning signs	Warning signs against the operation of the lift to be installed in accordance with E3.3	To be specified on construction drawings
E3.4	Emergency lifts	Emergency lifts required in buildings having an effective height of more than 25.0m or in multi-storey Class 9a buildings	N/A
E3.5	Landings	Landings to be provided in accordance with Part D	To be verified
E3.6	Facilities for people with disabilities	Lift to comply with D3.6 and AS 1735.12	Refer to Access Report prepared by Accessibility Solutions
E3.7	Fire service controls	To be provided to lifts in buildings with	To be verified

BCA CLAUSE	DESCRIPTION	COMMENTS	COMPLIANCE
		an effective height of more than 12.0m	on construction drawings
E3.8	Aged care buildings	Lifts with stretcher facilities to be provided in multi-storey Class 9c buildings or a ramp complying with AS 1428.1	N/A
PART E4 - EMERGENCY LIGHTING & EXIT SIGNS			
E4.2	Emergency lighting	Required throughout the building	To be specified on construction drawings
E4.3	Measurement	Applies	
E4.4	Design	Compliance with AS 2293 required	
E4.5	Exit signs	Required throughout the building	
E4.6	Directional exit signs	Required throughout the building	
E4.7	Exemptions	Applies to Class 2, 3 & 4 buildings	
E4.8	Design	Compliance with AS 2293 required	
E4.9	EWIS	Required to: • Buildings with an effective height of 25m; • Certain Cass 3 buildings; • Certain Class 9a & 9b buildings	
PART F1 - DAMP AND WATERPROOFING			
F1.1	Stormwater drainage	Compliance with AS 3500.3 required	Yes
F1.5	Roof covering	Roof covering to comply with F1.5	To be specified on construction drawings
F1.6	Sarking	Compliance with AS 4200.1 & 2 required	To be specified on construction drawings
F1.7	Water proofing of wet areas	Compliance with F1.7 and AS 3740 required	To be specified on construction drawings
F1.9	Damp-proofing	Compliance with AS 2904 required for damp-proofing of suspended floors	N/A
F1.10	Damp-proofing of floors	Compliance with AS 2870 required	N/A
F1.11	Floor wastes	Sanitary compartments of class 2, 3 & 4 buildings to be provided with floor wastes	N/A
F1.12	Sub-floor ventilation	Required to suspended floors	N/A
F1.13	Glazed assemblies	Glazed assemblies to comply with AS 2407 & AS 1288	To be specified on construction drawings
PART F2 - SANITARY FACILITIES			
F2.1	Facilities in residential buildings	Facilities to be provided in accordance with Table F2.1	N/A
Table F2.1	Facilities in residential buildings	Required facilities in Class 2, 3, 4 & 9c buildings	N/A
F2.2	Calculation of occupants & fixtures	Criteria applicable to determining number of occupants and facilities	See below
F2.3	Facilities in Class 3 – 9 buildings	Compliance with Table F2.3 – see separate schedule	See separate schedule
F2.4	Facilities for people with disabilities	Minimum of 1 unisex accessible facility required for Class 5 & 6 portions	Refer to Access Report

BCA CLAUSE	DESCRIPTION	COMMENTS	COMPLIANCE
			prepared by Accessibility Solutions
F2.5	Construction of sanitary compartments	Compliance with F2.5 required	To be specified on construction drawings
F2.6	Urinals and washbasins	Compliance with F2.6 required	To be specified on construction drawings
F2.8	Waste management	Applies to Class 9a & 9c buildings	N/A
PART F3 - ROOM SIZES			
F3.1	Room heights	Compliance with F3.1 required	Yes
PART F4 - LIGHT & VENTILATION			
F4.1	Provision of natural light	Applies to Class 2, 3, 4 & 9 buildings	To be specified on construction drawings
F4.2	Extent of natural lighting	To be determined in accordance with F4.2	To be specified on construction drawings
F4.3	Borrowed light	Applies to Class 2, 3 & 4 buildings	N/A
F4.4	Artificial light	Artificial lighting to be provided in accordance with F4.4	To be specified on construction drawings
F4.5	Ventilation	Ventilation to be provided in accordance with F4.6 or AS 1668.2	To be specified on construction drawings
F4.6	Natural ventilation	Natural ventilation to comply with F4.6	To be specified on construction drawings
F4.7	Borrowed ventilation	Borrowed ventilation to comply with F4.7	N/A
F4.8	Restriction of WC openings	WC's must not open directly into a workplace unless airlock provided	Yes
F4.9	Construction of airlocks	Airlocks to comply with F4.9	N/A
F4.11	Carparks	Carparks to be provided with natural ventilation or in accordance with AS 1668.2	To be specified on construction drawings
F4.12	Kitchens	Commercial kitchens to be provided with ventilation complying with AS 1668.1 & AS 1668.2	To be specified on construction drawings
PART F5 - SOUND TRANSMISSION			
F5.2	Determination of airborne sound insulation ratings	Applies to Class 2, 3 & 9c portions. Forms of construction to comply with AS 1276.1 or BCA Specification F5.2	N/A
F5.3	Determination of impact sound insulation ratings	Impact sound insulation ratings apply as follows: • Floor required to have impact sound insulation to comply with Specification F5.2 or AS ISO 717.2 • Wall in Class 2 or 3 building required to have impact sound insulation must comprise discontinuous construction	N/A

BCA CLAUSE	DESCRIPTION	COMMENTS	COMPLIANCE
		• Wall in Class 9c building required to have impact sound insulation must comply with F5.3(b)(ii)	
F5.4	Sound insulation between floors	A floor in a Class 2 or 3 building must have an Rw + Ctr (airborne) not less than 50 and an Ln,w+CI (impact) not more than 62 if it separates- (i) sole-occupancy units; or (ii) a sole-occupancy unit from a plant room, lift shaft, stairway, public corridor, public lobby or the like, or parts of a different classification. A floor in a Class 9c building separating sole-occupancy units must have an Rw of not less than 45	N/A
F5.5	Sound insulation of walls	Sound insulation of walls to comply as follows: • Rw + Ctr (airborne) index of 50 between sole occupancy units; • Rw (airborne) index of 50 between sole occupancy units and other parts of the building; • Walls separating bathrooms, kitchens, laundries etc in one SOU from a habitable room in another SOU or wall separating SOU from plant room or lift shaft must be of discontinuous construction. • Rw index of 30 for entrance doorways opening into public corridors; • Walls separating SOU's or SOU's from bathrooms, kitchens, laundries, plant rooms or utility rooms in Class 9c building to have Rw (airborne) index of 45; • Walls separating SOU's from kitchens or laundries in Class 9c building must comply with F3.5(b); and • Where a wall required to have sound insulation has a roof/floor above, the wall must continue to- (a) the underside of the roof/floor above; or (b) a ceiling that provides the sound insulation required for the wall.	N/A
F5.6	Sound insulation between soil waste pipes and units	If a duct, soil, waste or water supply pipe, including a duct or pipe that is located in a wall or floor cavity, serves or passes through more than one sole-occupancy unit, the duct or pipe must be separated from the rooms of any sole-occupancy unit by construction with an Rw + Ctr (airborne) not less than- (i) 40 if the adjacent room is a habitable room (other than a kitchen); or (ii) 25 if the adjacent room is a kitchen or non-habitable room. If a storm water pipe passes through a sole-occupancy unit it must be separated in accordance with (i) and (ii).	N/A
F5.7	Isolation of pumps	Flexible couplings required between service pipes and circulating or other pumps	N/A
PART G1 - MINOR STRUCTURES			
G1.1	Swimming pools	NSW G1.1 swimming pool water reticulation and filtration system to comply with AS 1926.3	N/A
G1.2	Cool rooms	Cool rooms/Vaults to comply with G1.2	To be specified

BCA CLAUSE	DESCRIPTION	COMMENTS	COMPLIANCE
			on construction drawings
G1.101	Provision for window cleaning	Windows located 3 or more storeys above ground level to be capable of being cleaned wholly from within the building or provision being made for the cleaning of windows in accordance with the Occupational Health & Safety Act	To be specified on construction drawings
PART G2 – HEATING APPLIANCES			
G2.2	Installation of appliances	Applies to oil-fire, solid fuel burning or pressure appliances	N/A
G2.3	Open fire places	Open fire places to comply with G2.3	N/A
G2.4	Incinerator rooms	Incinerator rooms to comply with G2.4	N/A
PART G3 - ATRIUMS			
G3.1	Application of Part	Applies to atriums referred to in G3.1	N/A
G3.2	Dimensions of atrium wells	Minimum diameter of 6.0m applies	N/A
G3.4	Construction of bounding walls	Compliance with G3.4 required	N/A
G3.5	Construction at balconies	Compliance with G3.5 required	N/A
G3.6	Separation of roof	Compliance with G3.6 required	N/A
G3.7	Means of egress	Minimum 2 exits required	N/A
G3.8	Fire and smoke control	Systems to comply with Specification G3.8	N/A
PART G4 – CONSTRUCTION IN ALPINE AREAS			
G4.1	Application of Part	Applies to construction in alpine areas referred to in G4.1	N/A
PART G4 – CONSTRUCTION IN BUSHFIRE PRONE AREAS			
G5.1	Application of Part	Applies to construction in designated bushfire prone areas referred to in G5.1	N/A
G5.2	Protection	Compliance with AS 3959 & Planning for Bushfire Guidelines	N/A
PART H1 – THEATRES, STAGES & PUBLIC HALLS			
H1.1	Application of Part	Applies to enclosed Class 9b building not used as POPE as follows: • School assembly, church or community hall with a stage and backstage area greater than 300m^2 • All other buildings with a stage and backstage area greater than 300m^2 • Class 9b buildings with stage and rigging loft	N/A
H1.2	Fire separation	Building to have sprinkler system or have stage and backstage area separated from audience with a proscenium wall	N/A
H1.3	Proscenium walls	Compliance with Specification H1.3 required	N/A
H1.4	Seating areas	Applies to all open or enclosed Class 9b buildings not used as POPE. Compliance with H1.4 required	N/A

BCA CLAUSE	DESCRIPTION	COMMENTS	COMPLIANCE
H1.5	Exits from theatre stages	Compliance with H1.5 required	N/A
H1.6	Access to platforms and lofts	Compliance with H1.6 required	N/A
H1.7	Aisle lights in theatres	Applies to all enclosed Class 9b buildings not used as POPE. Compliance with H1.7 required	N/A
PART H101 – ENTERTAINMENT VENUES			
H101.2	Fire separation	Applies where only part of the building is used as an entertainment venue. EV area or part containing *stage, backstage & auditorium* to be separated from remainder of the building.	Existing
H101.3	Foyer space	Foyer space to be provided where building is used for films or live stage	Existing
H101.4	Sprinkler systems for common foyers	Applies where common foyers used for multiple auditoriums	Existing
H101.5	Conventional stages	Applies to stages separated from auditorium by proscenium wall. Compliance with H101.5 required	Applies to stage extension – To be specified on construction drawings
H101.6	Non-conventional stages	Applies to stages ***not*** separated from auditorium by proscenium wall. Compliance with H101.6 required	N/A
H101.7	Flying scenery	Applies where grid or flying scenery used. Compliance with H101.7 required	Existing
H101.8	Load notices to stage areas	Compliance with H101.8	Applies to stage extension – To be specified on construction drawings
H101.10	Safety curtains	Applies to safety curtains used in stages. Compliance with H101.10 required	Existing
H101.11	Seating in rows	Applies to seating used in auditoriums but does not apply to: • *Continental seating or* • *Seating at tables* Compliance with H101.11 required	See below
	• *Compliance required where any alteration to existing seating proposed – To be specified on construction drawings*		
H101.12	Continental seating	Applies to *continental seating* used in auditoriums. Compliance with H101.12 required	N/A
H101.13	Guardrails	Applies where guardrails are used in areas other than seating. Compliance with H101.13 required	N/A
H101.14	Guardrails to seating areas	Applies where guardrails are used in seating areas. Compliance with H101.14 required	N/A

BCA CLAUSE	DESCRIPTION	COMMENTS	COMPLIANCE
H101.15	Dressing rooms	Applies to dressing rooms with floor area greater than 50m^2 Compliance with H101.15 required	Existing
H101.16	Store rooms	Applies to fire separation of storerooms. Compliance with H101.16 required	Existing
H101.17	Projection suites	Applies where projection suites are provided. Compliance with H101.17 required	Existing
H101.18	Basement storeys	Applies to basement storeys used as a POPE. Compliance with H101.18 required	N/A
H101.19	Electrical mains switchboard	Applies to protection of MSB's and electrical circuits in POPE's. Compliance with H101.19 required	Existing
H101.20	Lighting	Applies to lighting and lighting levels in POPE's. Compliance with H101.20 required	Existing
H101.22	Smoke and heat vents	Applies where smoke and heat vents are required by E2.2b. Compliance with H101.22 required	Existing
H101.23	Stoves and open fire places	Restriction on the installation of solid fuel burning stoves and open fire places where building is used for films or live stage	N/A
H101.24	Fuel gas cylinders	Applies where fuel gas cylinders are used in POPE	N/A
PART J – ENERGY EFFICIENCY – NSW CLASS 3 – 9 BUILDINGS			
J(B)1 – Energy Efficiency for Class 3 – 9 Buildings			
J(B)1	Compliance with BCA	Compliance with Section J except where varied by NSW variations	Outside the scope of this report

Schedule of sanitary facilities

1. Employees

Required – To be verified on construction drawings

2. Public – Library, Multipurpose Rooms and Exhibition areas

Required

		WC'S	URINALS	HANDBASINS
Male	622	4	9	5
Female	622	10	-	5

Population

USE	AREA	RATE	POPULATION
Basement Level			
Carpark & storage	2 900	30.0	97
Total			**97**
Ground Floor Level			
Office	240	10	24
Storage	96	30	4
Library	690	2	345
Exhibition	219	4	42
Café	53	1	53
Total			**468**
Level 1			
Library	400	2	200
Total			**200**
Level 2			
Library	400	2	175
Multipurpose Rooms	337	1.2	281
Kitchen	21	10	3
Total			**459**

Aggregate widths

USE	REQUIRED	ACTUAL
Basement	1.0m	To be specified on construction drawings
Ground Floor Level	4.0m	
Level 1	2.0m	
Level 2	4.5m	

ANNEXURE 2

References & Bibliography

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