

ATTACHMENT 12

Building Code of Australia 2011 Review- Ryde Civic Centre – 14 June 2011

BUILDING CODE OF AUSTRALIA 2011

BCA Review Report for Existing Premises,
Ryde Civic Centre, 1 Devlin Street Ryde | 14 June 2011
Project No. 251527

									
									
									
									
									
									
									
									
Global property & construction consultants									

Project Contacts

Client: City of Ryde
Project Manager: Malcom Harvild, City of Ryde
Building Surveying: Robert Briant, Davis Langdon Australia Pty Ltd

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Appendix 1: BCA Provisions

Appendix 2: Fire Resistance Provisions

DL Quality System

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1. EXECUTIVE SUMMARY

This report also provides a full assessment for compliance with the current Building Code of Australia 2011. Due to the changes in building regulations from the time the building was constructed there are a number of non-compliances with the current regulations. The report identifies those issues and indicates the ones that should be addressed to achieve an acceptable level of fire safety or fire safety awareness to prevent fire, suppress fire, prevent the spread of fire and ensure and promote the safety of persons in the event of fire.

The inspection of the existing Class 5, 7a/7b and 9b Building revealed a structure that requires works to meet the current version of the Building Code of Australia. There is a considerable amount of work required if full compliance is to be achieved.

BCA Compliance

It is recommended that the following actions be undertaken to ensure fire safety, general and access issues are addressed:

- (a) C1 – Fire Resistance and Stability –
 - a. The change of the carpark to a storage use results in this area either needing a higher FRL or an alternate solution to address the fire load in the area.
 - b. The hall stage does not get the concession under Clause 3.2 of Specification C1.1 of the BCA as the space below is used for storage. All stored material will be required to be removed and this area blocked off to achieve compliance.
 - c. The materials used in the portable buildings in the lower ground floor will be required to the subject of test reports showing compliance with Fire Hazard Properties required under Clause C1.10 of the BCA.
 - d. The change of the carpark to a storage use results in this area either needing a higher FRL or an alternate solution to address the fire load in the area.
- (b) C3 – Protection of Openings –
 - a. The fire doors in the buildings are to be inspected, adjusted, altered or replaced and certified.
 - b. The materials used in the portable buildings in the lower ground floor will be required to the subject of test reports showing compliance with Fire Hazard Properties required under Clause C1.10 of the BCA.
 - c. There are penetrations and access hatches in the central fire isolated stair. There is a duct on lower ground level through the passageway from this stair and other services on the ground floor of the south eastern stair. These do not comply with Clause C3.9 of the BCA and are to be removed or boxed in by a shaft system.
 - d. All lift doors and fire dampers will be required inspected and certified as achieving an FRL of - /60/ - as required under Clause C3.10 of the BCA. This is part of the normal procedures required as part of the Annual Fire Safety Statement.
- (c) D2 – Construction of Exits –
 - a. The electrical switch board and telecommunications cupboards in the central core are not provided with a non-combustible backing or smoke seals on the doors required to achieve compliance with Clause D2.7 of the BCA. Either these or the fire hydrants and fire hose reels will be required to be relocated to achieve compliance.
 - b. The internal ramp and external exit ramp to the north of the library is steeper than 1:8. These should be changed to achieve compliance.
 - c. The risers of the front stair to the hall vary between 160 to 190mm and the treads of the south western stair from the lower ground floor of the civic building are part tapered and 230mm wide. Both these stairs will need to be rebuilt to achieve compliance.
 - d. The fire isolated stair balustrades are not 1.0m high at landings or 865mm above the line of stair nosings and are required to be raised to comply.

- e. The door knobs in the lower ground floor and to fire isolated passageway are to be replaced with lever action handles as required under Clause D2.21 of the BCA. Door knobs and snib latches in the library are to be replaced by lever action handles.
 - f. The doors to the fire isolated passageway and access door to the ground floor at lower ground floor level are not provided with the signage required under Clause D2.23 of the BCA stating 'FIRE SAFETY DOOR – DO NOT OBSTRUCT – DO NOT KEEP OPEN'.
- (d) E1 – Fire Fighting Equipment –
- a. Fire hydrants, fire hose reels, sprinklers and portable fire extinguishers are required to serve this facility under Clauses E1.3, E1.4, E1.5 and E1.6 of the BCA.
 - b. Hydrants are not placed in the fire isolated stairs, fittings are too low, there is no block plan, booster and the system does not comply with AS 2419.1 - 2005. A new fire hydrant system should be provided with the landing valves moved to within the central fire stair but care should be taken to ensure these do not affect the clear width of the stairs.
 - c. The fire hose reels system does not comply with the current Australian Standard and the reel must be moved to within 4.0m of the exit but at the correct height and clear of the electrical distribution board. The fittings in the hall and library should be moved to within 4.0m of the exit.
 - d. Sprinklers are provided throughout the old carpark area but this is not fire separated from the non sprinkler protected part of the building. The sprinklers are not required under the BCA (they are an option for the required smoke hazard management) but may be needed to justify the new storage use in the lower ground floor. There currently are no booster valves.
- (e) E2 – Smoke Hazard Management –
- a. The Building Occupant Warning System and connection to the fire alarm service provider is to be tested and certified as complying with Clause 3.22 of AS1670.1 – 2004 and AS1670.3 – 2004.
 - b. There does not appear to be any smoke detectors located above ceilings and many are located within 400mm of the air conditioning registers. These are to be upgraded but prior to changes the current system it should be checked to see if the current panel can be extended to incorporate the new detectors and if the VESDA is linked in.
 - c. If the sprinklers are to be removed from the lower ground floor the smoke detectors should be extended through this area.
 - d. Shutdown of all ducted air handling systems in the 9b portion and those that circulate air through separate fire compartments is required. The smoke exhaust system above the stage appears to be taped over as it either malfunctions or is overly sensitive. This must be addressed as part of regular maintenance.
- (f) E4 – Emergency Lighting, Exit and Warning Systems - The emergency lighting levels should be checked.
- (g) F4 – Light and Ventilation - The changes to the eastern wall of the lower ground floor have been made without any provision for maintaining the natural ventilation of this area. It is now expected that the whole of this area will be required to be mechanically ventilated.

Disability (Access to Premises – Buildings) Standard 2010

Access to the building has been upgraded as part of the recent works. The front entrance to the lobby, lift access to each level generally complies. Glazing to the entrance glass, tactile indicators (to stairs and the ramp on the mezzanine floor), Braille and tactile signage and compliance of the accessible sanitary facility do not comply with the BCA and AS1428.1 – 2001 or AS1428.1 - 2009.

There does not appear to be any way of using the old library without either triggering a full upgrade or gaining a major concession under the Disability Discrimination Act 1992.

The following issues would be required to be addressed to achieve compliance:

- (a) A ramp was provided to the hall but it does not comply. No access is available to the old library due to the threshold at the front door and stairs from there and throughout staff areas. The accessible toilet in the hall does not meet any of today's standards and will require extensive works as the pan is too close to the wall and none of the fittings comply.
- (b) Access to the Civic Building has been upgraded as part of the recent works. The grade of the front entrance to the lift lobby, lift access to each level complies but the lift call buttons are too high. The upgraded accessible sanitary facility on the Level 5 nearly meets the 2001 standards but the pan is too close to the wall and there is insufficient circulation space at the door.
- (c) Glazing to the entrance, tactile indicators (to stairs and the ramp), kerb and handrails, door hardware (knobs rather than lever handles), Braille and tactile signage and compliance of the accessible sanitary facility do not comply with the BCA and AS1428.1 – 2001 or AS1428.1 - 2009. The doors throughout the building do not provide 850mm clear opening or the required circulation space.
- (d) The main Council Chambers access is via stairs. The "accessible entrance" is through doors that do not provide the 850mm opening or the required hardware. Once in the chambers there is no appropriate place for a wheelchair. There is a hearing loop in the chambers but signage is poor.

No works are recommended at this time but any alteration to part of the building requiring approval will trigger a full upgrade to the affected part building and the main entrance to meet the current access standard.

2. INTRODUCTION

Property Description

The existing building is located at 1 Devlin Street Ryde in the north western suburbs of Sydney. The site is on the western side of Devlin Street with Blaxland Road to the south and west. The report is to assess compliance with the Building Code of Australia 2011 ("BCA").

The report is prepared based on a visual inspection of the premises/review of the documentation and the information provided by the client and is intended for their use only.

Reporting Team

The information contained within this report was prepared by Robert Briant, Accredited Certifier Grade A1 (BPB0048) from Davis Langdon.

Current Legislation

The applicable legislation governing the design of buildings is the Environmental Planning and Assessment Act 1979 (EP & A Act 1979).

The provisions of Section 80A(11) of this act and Clause 98 of the Environmental Planning and Assessment Regulation 2000 (EP & A Reg 2000) require that the building work be carried out in accordance with the Building Code of Australia. The application of compliance with the particular version of the BCA is the date on which an application is made for a construction certificate.

Clause 94 of the EP & A Reg 2000 as part of the Section 79C (1) (a) (iv) of the Act the consent authority in determining a development application where:

- (a) *the proposed building work, together with any other building work completed or authorised within the previous 3 years, represents more than half the total volume of the building, as it was before any such work was commenced, measured over its roof and external walls, or*
- (b) *the measures contained in the building are inadequate:*
 - (i) *to protect persons using the building, and to facilitate their egress from the building, in the event of fire, or*
 - (ii) *to restrict the spread of fire from the building to other buildings nearby,*

In determining a development application to which this clause applies, a consent authority is to take into consideration whether it would be appropriate to require the existing building to be brought into total or partial conformity with the Building Code of Australia.

Clause 143 of the Environmental Planning and Assessment Regulation 2000 requires a certifying authority must not issue a construction certificate for building work under a development consent that authorises a change of building use unless:

- (a) *the fire protection and structural capacity of the building will be appropriate to its new use, and*
- (b) *the building will comply with such of the Category 1 fire safety provisions as are applicable to the new use,*

Category 1 fire safety provisions are as follows:

Category 1 fire safety provision means the following provisions of the Building Code of Australia, namely, EP1.3 (fire hydrants), EP1.4 (sprinklers), EP1.6 (fire control centres), EP2.1 (smoke detection and alarms), EP2.2 (smoke hazard management) and EP3.2 (emergency lifts) in Volume One of that Code and P2.3.2 (smoke detection and alarms) in Volume Two of that Code.

An Order No. 6 under Section 121B the Environmental Planning and Assessment Act allows the Council to order the owner to do or refrain from doing such things as are specified in the order so as to ensure or promote adequate fire safety or fire safety awareness where:

- a) Provisions for fire safety or fire safety awareness are not adequate to prevent fire, suppress fire or prevent the spread of fire or ensure or promote the safety of persons in the event of fire*
- (b) Maintenance or use of the premises constitutes a significant fire hazard*

There are also rules in this legislation in relation to building works carried out without development or building approval but this is not addressed in this report.

Planning Controls

State Environmental Planning Policy (Exempt and Complying Codes) 2008 provides exempt and complying development codes that have State-wide application, and identifies in the General Exempt Development Code, types of development that are of minimal environmental impact that may be carried out without the need for development consent, and identifies in the complying development codes, types of complying development that may be carried out in accordance with a complying development certificate as defined in the Act.

Most alterations to an existing office building involving new walls can be carried out as Complying Development. Clause 5.3 of this policy identifies BCA matters that are development standards under the General Commercial and Industrial Code. Where a proposed alteration that involves an area of more than 500m² of commercial premises, the policy requires that that area must:

- (i) comply with the requirements set out in DP2–DP5 of Volume 1 of the Building Code of Australia, and*
- (ii) comply with the number of sanitary and other facilities set out in FP2.1, FP2.5 and FP2.6 of Volume 1 of the Building Code of Australia, and*
- (iii) comply with the light and ventilation requirements set out in FP4.1–FP4.5 of Volume 1 of the Building Code of Australia,*

Disability (Access to Premises — Buildings) Standards 2010

The Disability (Access to Premises — Buildings) Standards 2010 commenced on 1 May 2011. These take effect subject to subsection 31 (4) of the Disability Discrimination Act 1992. The objects of these Standards are:

- (a) to ensure that dignified, equitable, cost-effective and reasonably achievable access to buildings, and facilities and services within buildings, is provided for people with a disability; and*
- (b) to give certainty to building certifiers, building developers and building managers that, if access to buildings is provided in accordance with these Standards, the provision of that access, to the extent covered by these Standards, will not be unlawful under the Act.*

This Standards is to be applied to a new buildings (including Class 3, 5, 6, 7, 8, 9 or 10), a new part of a building (an extension to the building or a modified part of the building) and an affected part. An affected part is defined as:

- (a) the principal pedestrian entrance of an existing building that contains a new part; and*
- (b) any part of an existing building, that contains a new part, that is necessary to provide a continuous accessible path of travel from the entrance to the new part.*

The Standards apply to the following persons to the extent that they are responsible for, or have control over, matters in the Access Code for a relevant building:

- (a) a building certifier;
- (b) a building developer (includes property developers, property owners, building designers, builders, project managers and property lessees);
- (c) a building manager (includes property owners, property lessees, property managers and operational staff).

3. BUILDING DESCRIPTION

The Project

The existing Civic Centre building was opened on 15 August 1964 is constructed from reinforced concrete floors, concrete frame, full brick and aluminium / glass walls and a concrete and metal clad roof. The adjoining Civic Hall and Centenary Library Building was completed on 7 November 1970 and is of similar construction. The building consists of a lower ground floor carpark (now used for storage), offices and meeting rooms from ground floor to Level 5 and Council Chambers, Function Rooms and Lord Majors Office on Level 6 with plant areas above. The Library is located at lower ground floor level with the lobby on the ground floor and offices throughout the rest of the levels with the top storey being plant rooms.

The report is for the assessment of the building to assess compliance with the Building Code of Australia 2011 ("BCA") in respect to fire and life safety matters and provide recommendations for an overall cost effective approach to fire and life safety issues through a compliance strategy for the building including alternative solution strategy as identified by the Fire Safety Engineer where appropriate. A summary of all relevant clauses of Parts C, D and E of the BCA is attached under Appendix 1. It is also required as part of the report to identifying any areas of non-compliance and issues regarding access for people with a disability in respect to BCA 2011 and the Disability (Access to Premises – Buildings) Standard 2010 requirements.

Due to the age of the building it would have been constructed prior to the introduction of the BCA. The Building Regulations immediately prior to that being Ordinance 70 were introduced on 1 July 1974. Prior to that time a building was required to comply with the Height of Buildings Act 1912 or Ordinance 71 subject to the height.

Building Description

Building Use:	Office, Carpark / Storage & Assembly Building
Class of Occupancy:	Class 5, 7a/7b & 9b
Type of Construction:	A
Rise in Storeys:	8
Levels Contained:	9
Effective Height:	Estimated at 21.0m

Determination of the effective height for the building has been assessed on the basis that the lowest level where access from the building is provided and the topmost occupied floor of the building. The effective height is determined as under 25.0m.

4. BCA REQUIREMENTS

The following assessment will provide an overview of compliance with the BCA and identify issues that have been included in the Council Notice.

C1 – Fire Resistance and Stability

The existing construction of the building is likely to have met the required fire resistance levels (FRL) for a building of Type 1 Construction under Ordinance 70 / 71. This most closely equates to Type A Construction under the BCA with a general FRL of 120 minutes being required for all structural elements in the office areas and assembly areas.

The change of the carpark to a storage use results in this area either needing a higher FRL or an alternate solution to address the fire load in the area.

The hall stage does not get the concession under Clause 3.2 of Specification C1.1 of the BCA as the space below is used for storage. All stored material will be required to be removed and this area blocked off to achieve compliance.

The Fire Hazard Properties for assemblies and wall, floor and ceiling linings have been assumed as compliant at the time of installation. Whilst it may be possible to obtain test reports for the plasterboard used in the building it is not likely that the carpet, vinyl or ceiling tiles will be able to be identified or test reports will be available unless these were retained from the time of the original construction. The new carpet in the council Chamber is likely to comply.

The materials used in the portable buildings in the lower ground floor will be required to the subject of test reports showing compliance with Fire Hazard Properties required under Clause C1.10 of the BCA.

C2 – Compartmentation and Separation

Scale or dimensioned floor plans have not been provided for assessment but from the surveys provided each of the upper floors level being approximately 500m² is less than the maximum compartment size for an assembly building (maximum 5,000m²) and less than the maximum for an office (maximum 8,000m²) in Type A Construction. The library is not separated from the carpark / storage area but this is still less than the maximum compartment floor area.

The building appears to be provided with vertical separation between storeys as required under Clause C2.6 of the BCA.

Separation of classifications on the lower ground floor may be required if the alternate solution for FRLs required under Table C1.1 is not pursued (as detailed above).

C3 – Protection of Openings

The doors to fire isolated exits were not all self-closing at the time of the inspection as required under Clause C3.8 of the BCA. The exit door to the northern end of the lower ground floor does not appear to be a fire door as required. The door separating the lower ground floor from the access stair is not tagged and is required to be a fire door (separating sprinkler protected and non sprinkler protected areas). The fire doors in the buildings are to be inspected, adjusted, altered or replaced and certified.

There are penetrations and access hatches in the central fire isolated stair. There is a duct on lower ground level through the passageway from this stair and other services on the ground floor of the south eastern stair. These do not comply with Clause C3.9 of the BCA and are to be removed or boxed in by a shaft system.

All lift doors will be required inspected and certified as achieving an FRL of - /60/ - as required under Clause C3.10 of the BCA. This is part of the normal procedures required as part of the Annual Fire Safety Statement.

The metal stack work in the ceiling of the lower ground floor level is connected into by unprotected PVC pipe work. Either the PVC pipes are to be replaced with metal or the junction be boxed in and fitted with a fire collar. This detail is likely to be repeated in the stack work throughout the building and will need to be inspected and certified.

Fire dampers are to be tested and certified as part of the Annual Fire Safety Statement.

D1 – Provision for Escape

The widths of exits are compliant other than the stage stairs being only 700mm wide rather than the required 1.0m. The maximum population of the hall with the current exits will be 740 persons but this could be changed to 1,000 with changes to the hardware at the main entrance.

At the time of the inspection each of the hall exits was partially blocked by furniture. The bar and store rooms in the hall were under 2.1m in height and should not be used without a report from an Occupational Health and Safety review. The new beams in the eastern side of the lower ground floor result in reduced clearance but these are not in the path of travel to exits.

D2 – Construction of Exits

The electrical switch board and telecommunications cupboards in the central core are not provided with a non-combustible backing or smoke seals on the doors required to achieve compliance with Clause D2.7 of the BCA. Either these or the fire hydrants and fire hose reels will be required to be relocated to achieve compliance.

The internal ramp and external exit ramp to the north of the library is steeper than 1:8. These should be changed to achieve compliance.

The risers of the front stair to the hall vary between 160 to 190mm and the treads of the south western stair from the lower ground floor of the civic building are part tapered and 230mm wide. Both these stairs will need to be rebuilt to achieve compliance.

The fire isolated stair balustrades are not 1.0m high at landings or 865mm above the line of stair nosings and are required to be raised to comply.

The door knobs in the lower ground floor and to fire isolated passageway are to be replaced with lever action handles as required under Clause D2.21 of the BCA. Door knobs and snib latches in the library are to be replaced by lever action handles.

The doors to the fire isolated passageway and access door to the ground floor at lower ground floor level are not provided with the signage required under Clause D2.23 of the BCA stating 'FIRE SAFETY DOOR – DO NOT OBSTRUCT – DO NOT KEEP OPEN'.

D3 – Access for People with Disabilities

A ramp was provided to the hall but no access is available to the old library due to the threshold at the front door and stairs from there and throughout staff areas. The accessible toilet in the hall does not meet any of today's standards and will require extensive works as the pan is too close to the wall and none of the fittings comply. There appears to be a hearing loop in the hall.

Access to the Civic Building has been upgraded as part of the recent works. The grade of the front entrance to the lift lobby, lift access to each level complies but the lift call buttons are too high. The

upgraded accessible sanitary facility on the Level 5 nearly meets the 2001 standards but the pan is too close to the wall and there is insufficient circulation space at the door.

Glazing to the entrance, tactile indicators (to stairs and the ramp), kerb and handrails, door hardware (knobs rather than lever handles), Braille and tactile signage and compliance of the accessible sanitary facility do not comply with the BCA and AS1428.1 – 2001 or AS1428.1 - 2009. The doors throughout the building do not provide 850mm clear opening or the required circulation space.

The main Council Chambers access is via stairs. The “accessible entrance” is through doors that do not provide the 850mm opening or the required hardware. Once in the chambers there is no appropriate place for a wheelchair. There is a hearing loop in the chambers but signage is poor.

Under the State Environmental Planning Policy (Exempt and Complying Codes) 2008 all works comprising of alterations to walls or partitions needs approval. Any application for either a Construction Certificate or Complying Development Certificate will trigger an upgrade from the main entrance to the individual floor in which the tenancy is located. Provided the glazing to the main entrance doors is upgraded to comply with AS1428.1 – 2009 with a 75mm strip and framing of the glass panels by decals access can readily comply.

E1 – Fire Fighting Equipment

Fire hydrants, fire hose reels, sprinklers and portable fire extinguishers are required to serve this facility under Clauses E1.3, E1.4, E1.5 and E1.6 of the BCA.

Hydrants are not placed in the fire isolated stairs, fittings are too low, there is no block plan, booster and the system does not comply with AS 2419.1 - 2005. A new fire hydrant system should be provided with the landing valves moved to within the central fire stair but care should be taken to ensure these do not affect the clear width of the stairs.

The fire hose reels system does not comply with the current Australian Standard and the reel must be moved to within 4.0m of the exit but at the correct height and clear of the electrical distribution board. The fittings in the hall and library should be moved to within 4.0m of the exit.

Sprinklers are provided throughout the old carpark area but this is not fire separated from the non sprinkler protected part of the building. The sprinklers are not required under the BCA (they are an option for the required smoke hazard management) but may be needed to justify the new storage use in the lower ground floor. There currently are no booster valves.

E2 – Smoke Hazard Management

Under Table E2.2a a system of smoke hazard management is required due to the building having a rise in storeys of more than 3 (smoke detectors and sprinklers are used to meet this requirement). There is a VESDA and gas suppression system in the server room. A Building Occupant Warning System and connection to the fire alarm service provider is installed but will need to be tested and certified as complying with Clause 3.22 of AS1670.1 – 2004 and AS1670.3 – 2004. There does not appear to be any smoke detectors located above ceilings and many are located within 400mm of the air conditioning registers. Prior to upgrading of the current system it should be checked to see if the current panel can be extended to incorporate the new detectors and if the VESDA is linked in.

If the sprinklers are to be removed from the lower ground floor the smoke detectors should be extended through this area.

Shutdown of all ducted air handling systems in the 9b portion and those that circulate air through separate fire compartments is required. The smoke exhaust system above the stage appears to be taped over as it either malfunctions or is overly sensitive. This must be addressed as part of regular maintenance.

E3 – Lift Installations

The lift system appears to regularly malfunction and does not have room for a stretcher. The size complies with the old access code.

E4 – Emergency Lighting, Exit and Warning Systems

The current system is all running man (AS/NZS 2293.1 – 2005). Exit signage location was acceptable but emergency lighting levels should be checked.

F2 – Sanitary and Other Facilities

The current BCA requires doors on fully enclosed sanitary facilities to swing outwards (where the pan is within 1.2m of the doorway) and male and female toilets to be provide with a cubical suitable for a person with an ambulant disability. These are not provided in the building and should be considered as part of any upgrade of the building.

F4 – Light and Ventilation

The changes to the eastern wall of the lower ground floor have been made without any provision for maintaining the natural ventilation of this area. It is now expected that the whole of this area will be required to be mechanically ventilated.

Documentation Assessed

The following documents have also been reviewed:

- Survey Reports by Norton Survey Partners, Reference 33678 of Civic Hall, Library and Level 5.
- City of Ryde Proposed Floor Plans dated 03 07 2005.

5. ESSENTIAL FIRE & OTHER SAFETY MEASURES

All services are required to be inspected by a competent person for installation compliance to the relevant Australian Standard and the BCA and certified accordingly. This is required to be carried out on a yearly basis and in accordance with AS 1851.

Fire Safety Measure	Standard	BCA Clause(s)	Existing Fire Safety Measures *	Proposed Fire Safety Measures **
Access panels, doors & hoppers to fire resisting shafts	Ord 70 Cl 22.12 AS 1530.4 – 2005	C3.13	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Automatic fire detection & alarm systems	AS 1670 – 1986 AS 1670.1 - 2004	Spec E2.2a	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Building Occupant Warning System and ASE	? AS 1670.3 - 2004	Spec E2.2a	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Automatic fire suppression systems (part lower ground floor)	? AS 2118.1 – 1999	Spec E1.5	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Emergency lighting	AS/NZS 2293.1 – 1998 AS 2293.1 – 2005	E4.2, E4.4	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Exit signs	AS 2293.1 – 2005	E4.5, NSW E4.6 & E4.8	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Fire alarm monitoring system	AS 1670.3 – 2004 AS 4428.6 – 1997	Spec E2.2, Spec E1.5	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Fire dampers	AS1682.2 - 1990	Spec E2.2a	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Fire doors	AS 1735.11 – 1986 ASCA57.1 – 1958 AS 1905.1 – 1990 AS 1905.1 – 2005	Spec C3.4, C3.10	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Fire hose reel systems	ORD 70 Cl 27.2, Min Spec 10 Div 3 AS2441 - 2005	-	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Fire hydrant systems	ORD 70 Cl 27.3 Min Spec 10 AS 2419.1 - 2005	-	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Fire seals (protecting openings in fire resisting components of the building)	AS 4072.1 – 2005 AS 1530.4 – 2005 AS 1038.15 – 1995	C3.12, C3.13, C3.15	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Mechanical air handling systems <ul style="list-style-type: none"> Auto shutdown Stage Smoke Exhaust 	AS/NZS 1668.1 – 1974 AS 1668.2 – 1980	E2.2, Spec E2.2a,	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Portable fire extinguishers & fire blankets	AS 2444 – 1995 AS 2444 – 2001	E1.6	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Warning and operational signs	-	E3.3 & D2.23	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Paths of Travel	EP A Reg 2000 Cl 186	-	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Alternative Solution, <ul style="list-style-type: none"> FRL Lower Ground Level? ? 	-		<input type="checkbox"/>	<input checked="" type="checkbox"/>

* Standard of installation of existing measures has not been confirmed. The services listed include those measures not listed on the current Annual Fire Safety Statement

** Proposed services are subject to change base on negotiation with Council

6. CONCLUSIONS

BCA Report

Due to the age of the building and changes to building regulations over that time the building does not comply with the current BCA.

This report provides a full assessment of the existing building for compliance with the Building Code of Australia 2011. The full list of issues is provided in Part 4 of the report.

The main shortfalls in relation to the current BCA requirements are the FRLs of the Lower Ground Floor Area, protection of openings in fire rated elements, sealing of electrical distribution boards, stair and ramp construction, balustrade to the fire stairs and hall ramp, use of door knobs rather than lever action handles, access for persons with a disability (including sanitary facilities), the fire hydrant system, fire hose reel system, smoke detection and alarm system, stage smoke control system, shutdown and the ventilation of the lower ground floor area.

Under the current legislation governing the design of buildings the Environmental Planning and Assessment Act 1979 and Environmental Planning and Assessment Regulation 2000 there is no requirement for a building to be upgraded to meet the new requirements unless either a Development Application is submitted or Council serves an order on the owner to upgrade the premises. Extracts of this legislation are included in Part 2 of this report.

Consideration is required to be made in determining an application for a change in use or where the alterations are to effect more the half the floor area as to whether the measures contained in the building are inadequate:

- (i) *to protect persons using the building, and to facilitate their egress from the building, in the event of fire, or*
- (ii) *to restrict the spread of fire from the building to other buildings nearby,*

At any time the Council may order the owner to do or refrain from doing such things as are specified in the order so as to ensure or promote adequate fire safety or fire safety awareness where:

- a) *Provisions for fire safety or fire safety awareness are not adequate to prevent fire, suppress fire or prevent the spread of fire or ensure or promote the safety of persons in the event of fire*
- (b) *Maintenance or use of the premises constitutes a significant fire hazard*

Further obligations exist under Occupational Health and Safety Legislation.

Disability (Access to Premises – Buildings) Standard 2010

Access to the building has been upgraded as part of the recent works. The front entrance to the lobby, lift access to each level complies.

The Disability (Access to Premises — Buildings) Standards 2010 commenced on 1 May 2011. This Standards is to be applied to a modified part a building and an affected part. An affected part is defined as:

- (a) the principal pedestrian entrance of an existing building that contains a new part; and*
- (b) any part of an existing building, that contains a new part, that is necessary to provide a continuous accessible path of travel from the entrance to the new part.*

Glazing to the entrance glass, tactile indicators (to stairs and the ramp on the mezzanine floor), Braille and tactile signage and compliance of the accessible sanitary facility do not comply with the BCA and AS1428.1 - 2001.

Any application for either a Construction Certificate or Complying Development Certificate will trigger an upgrade from the main entrance to the individual floor in which the tenancy is located. Provided the glazing to the main entrance doors is upgraded to comply with AS1428.1 – 2009 with a 75mm strip and framing of the glass panels by decals access can readily comply.

7. RECOMMENDATIONS

The inspection of the existing Class 5, 7a / 7b and 9b Building revealed a structure that requires works to meet the current version of the Building Code of Australia.

BCA Compliance

It is recommended that the following actions be undertaken to ensure fire safety, general and access issues are addressed:

- (a) C1 – Fire Resistance and Stability –
 - a. The change of the carpark to a storage use results in this area either needing a higher FRL or an alternate solution to address the fire load in the area.
 - b. The hall stage does not get the concession under Clause 3.2 of Specification C1.1 of the BCA as the space below is used for storage. All stored material will be required to be removed and this area blocked off to achieve compliance.
 - c. The materials used in the portable buildings in the lower ground floor will be required to the subject of test reports showing compliance with Fire Hazard Properties required under Clause C1.10 of the BCA.
 - d. The change of the carpark to a storage use results in this area either needing a higher FRL or an alternate solution to address the fire load in the area.
- (b) C3 – Protection of Openings –
 - e. The fire doors in the buildings are to be inspected, adjusted, altered or replaced and certified.
 - f. The materials used in the portable buildings in the lower ground floor will be required to the subject of test reports showing compliance with Fire Hazard Properties required under Clause C1.10 of the BCA.
 - g. There are penetrations and access hatches in the central fire isolated stair. There is a duct on lower ground level through the passageway from this stair and other services on the ground floor of the south eastern stair. These do not comply with Clause C3.9 of the BCA and are to be removed or boxed in by a shaft system.
 - h. All lift doors and fire dampers will be required inspected and certified as achieving an FRL of - /60/- as required under Clause C3.10 of the BCA. This is part of the normal procedures required as part of the Annual Fire Safety Statement.
- (c) D2 – Construction of Exits –
 - i. The electrical switch board and telecommunications cupboards in the central core are not provided with a non-combustible backing or smoke seals on the doors required to achieve compliance with Clause D2.7 of the BCA. Either these or the fire hydrants and fire hose reels will be required to be relocated to achieve compliance.
 - j. The internal ramp and external exit ramp to the north of the library is steeper than 1:8. These should be changed to achieve compliance.
 - k. The risers of the front stair to the hall vary between 160 to 190mm and the treads of the south western stair from the lower ground floor of the civic building are part tapered and 230mm wide. Both these stairs will need to be rebuilt to achieve compliance.
 - l. The fire isolated stair balustrades are not 1.0m high at landings or 865mm above the line of stair nosings and are required to be raised to comply.
 - m. The door knobs in the lower ground floor and to fire isolated passageway are to be replaced with lever action handles as required under Clause D2.21 of the BCA. Door knobs and snib latches in the library are to be replaced by lever action handles.
 - n. The doors to the fire isolated passageway and access door to the ground floor at lower ground floor level are not provided with the signage required under Clause D2.23 of the BCA stating 'FIRE SAFETY DOOR – DO NOT OBSTRUCT – DO NOT KEEP OPEN'.

- (d) E1 – Fire Fighting Equipment –
 - o. Fire hydrants, fire hose reels, sprinklers and portable fire extinguishers are required to serve this facility under Clauses E1.3, E1.4, E1.5 and E1.6 of the BCA.
 - p. Hydrants are not placed in the fire isolated stairs, fittings are too low, there is no block plan, booster and the system does not comply with AS 2419.1 - 2005. A new fire hydrant system should be provided with the landing valves moved to within the central fire stair but care should be taken to ensure these do not affect the clear width of the stairs.
 - q. The fire hose reels system does not comply with the current Australian Standard and the reel must be moved to within 4.0m of the exit but at the correct height and clear of the electrical distribution board. The fittings in the hall and library should be moved to within 4.0m of the exit.
 - r. Sprinklers are provided throughout the old carpark area but this is not fire separated from the non sprinkler protected part of the building. The sprinklers are not required under the BCA (they are an option for the required smoke hazard management) but may be needed to justify the new storage use in the lower ground floor. There currently are no booster valves.
- (e) E2 – Smoke Hazard Management –
 - s. The Building Occupant Warning System and connection to the fire alarm service provider is to be tested and certified as complying with Clause 3.22 of AS1670.1 – 2004 and AS1670.3 – 2004.
 - t. There does not appear to be any smoke detectors located above ceilings and many are located within 400mm of the air conditioning registers. These are to be upgraded but prior to changes the current system it should be checked to see if the current panel can be extended to incorporate the new detectors and if the VESDA is linked in.
 - u. If the sprinklers are to be removed from the lower ground floor the smoke detectors should be extended through this area.
 - v. Shutdown of all ducted air handling systems in the 9b portion and those that circulate air through separate fire compartments is required. The smoke exhaust system above the stage appears to be taped over as it either malfunctions or is overly sensitive. This must be addressed as part of regular maintenance.
- (f) E4 – Emergency Lighting, Exit and Warning Systems - The emergency lighting levels should be checked.
- (g) F4 – Light and Ventilation - The changes to the eastern wall of the lower ground floor have been made without any provision for maintaining the natural ventilation of this area. It is now expected that the whole of this area will be required to be mechanically ventilated.

Disability (Access to Premises – Buildings) Standard 2010

Access to the building has been upgraded as part of the recent works. The front entrance to the lobby, lift access to each level generally complies. Glazing to the entrance glass, tactile indicators (to stairs and the ramp on the mezzanine floor), Braille and tactile signage and compliance of the accessible sanitary facility do not comply with the BCA and AS1428.1 – 2001 or AS1428.1 - 2009.

No works are recommended at this time but any alteration to part of the building requiring approval will trigger a full upgrade to the affected part building and the main entrance to meet the current access standard.

There does not appear to be any way of using the old library without either triggering a full upgrade or gaining a major concession under the Disability Discrimination Act 1992.

Appendix 1

BCA Provisions

The following is a clause-by-clause assessment of the building against the deemed-to-satisfy provisions of the BCA 2011.

Notes:

- ✓ The building complies with this clause.
- X The building does not comply with this clause.
- ? Further documentation required.
- CR** Design statement (or other means) required from appropriate persons that the building will comply with this clause at the design stage & completion of the project.
- N/A** This clause is not applicable to this project.
- AS** Alternative Solution using Performance Requirements.
- Noted** This clause is for information.

Section A: General Provisions

Icon	Clause	Reference	Comment
	A3	Classification of buildings and structures	
Noted / ?		The classification of a building is determined by the purpose for which it is designed, constructed or adapted.	Class 5 (office), 7a/7b (carpark / storage) & 9b (hall, library and council chambers)
	A3.3	Multiple classification	
Noted		Each part must be classified separately: (a) Classified to the major use if not more than 10% of the floor area of the storey. Laboratory must be a separate classification (b) Class 1a, 1b, 7a, 7b, 9a, 9b, 9c, 10a and 10b are separate classifications. (c) Reference to Class 1 is to Class 1a and 1b etc. (d) Plant rooms are classified as the same part.	Level 6 is part Class 5 and part Class 9b. Lower Ground Floor is Part Class 9b and Part Class 7a / 7b.
	A4	PART A4 – UNITED BUILDINGS	
	A4.1	When buildings are united	
N/A		Two or more buildings adjoining each other form one united building if they are connected through openings in the walls dividing them and both buildings comply with the requirements of the BCA as though they are a single building.	This clause is not applicable to this project.

Section B: Structural Provisions

Icon	Clause	Reference	Comment
	B1.0	Deemed to Satisfy Provisions	
Noted		<p>(a) Where DTS compliance is achieved by complying with either -</p> <p>(i) by complying with B1.1, B1.2 and B1.4; or</p> <p>(ii) for the earthquake component of the Performance Requirement by complying with B1.3 and B1.4</p>	No structural review was carried out as part of our engagement.
	B1.1	Resistance to actions	
?		<p>The resistance of a building or structure must be greater than the most critical action effect resulting from different combinations of actions, where—</p> <p>(a) the most critical action effect on a building or structure is determined in accordance with B1.2 and the general design procedures contained in AS/NZS 1170.0; and</p> <p>(b) the resistance of a building or structure is determined in accordance with B1.4</p>	No structural review was carried out as part of our engagement.
	B1.2	Determination of individual actions	
?		<p>The building or structure must resist loads determined in accordance with the following:</p> <p>(a) Dead and live load combinations: AS 1170.1</p> <p>(b) Wind loads AS 1170.2</p> <p>(c) Snow loads AS 1170.3</p> <p>(d) Earthquake loads AS 1170.4</p>	No structural review was carried out as part of our engagement.
	B1.3	Materials and forms of construction	
?		<p>The building or structure must resist earthquake loads determined in accordance with AS1170.3 (1993)</p>	No structural review was carried out as part of our engagement.
	B1.4	Materials and forms of construction	
?		<p>New materials and forms of construction are to be designed to the following Australian Standards as applicable (NB: summary provided only):</p> <p>(a) AS 3700</p> <p>(b) AS 3600</p> <p>(c) AS 4100</p> <p>(d) AS 1288 or AS 2047</p> <p>(e) AS 1562.1</p> <p>(f) AS 1720.1</p> <p>(g) AS 3660.1</p>	No structural review was carried out as part of our engagement.

Section C: Fire Provisions

Part C1 – Fire Resistance and Stability

Icon	Clause	Reference	Comment
?	C1.1	Type of construction Type of Construction required is determined by the Table C1.1	Type A Construction required (see Spec C1.1). The change of the carpark to a storage use results in FRLs from 120 to 240 minutes
Noted	C.1.2	Calculation of rise in storeys The rise in storeys is the greatest number of storeys at any part of the external walls of the building above the finished ground next to that part.	RIS of 8.
Noted	C1.3	Building of multiple classification The Type of construction required is determined on the basis that the classification of the top storey applies to all storeys.	Top storey is Class 5 / 9b.
N/A	C1.4	Mixed types of construction Building may be of mixed Types of Construction where it is separated in accordance with C2.7	This clause is not applicable to this project.
N/A	C1.5	Two storey Class 2 or 9c buildings Class 2 or 3 of two storeys may be Type C construction if each SOU has: 1. Access to at least 2 exits; or 2. Its own direct access to a road or open space.	This clause is not applicable to this project.
N/A	C1.6	Class 4 parts of a building Class 4 part of a building requires same FRL as that required by a Class 2 in similar circumstances.	This clause is not applicable to this project.
N/A	C1.7	Open spectator stands and indoor sports stadium May be of Type C construction if it contains only 1 tier and is of non-combustible material.	This clause is not applicable to this project.
N/A	C1.8	Lightweight construction Lightweight construction may be used if it is in compliance with Specification C1.8.	This clause is not applicable to this project.

Icon	Clause	Reference	Comment
	C1.10	Fire hazard properties	
Noted		<p>Materials and assemblies used in the building must comply with the requirements of Specification C1.10. In the case of a sarking material the Flammability Index shall not be more than 5.</p> <p>Floor materials – Critical Radiant Flux of not less than 2.2</p> <p>Wall and Ceiling materials – Either Group 1 or 2 material</p> <p>If unsprinklered additional requirements apply, as well as lift finishes, and fire isolated exits have different requirements</p>	Materials to comply with Spec C1.10a and assemblies to comply with Spec C1.10.
	C1.11	Performance of external wall in fire	
N/A		In buildings of up to two storeys, any concrete external walls that could collapse as complete panels to comply with specification C1.11.	This clause is not applicable to this project.
	C1.12	Non-combustible materials	
Noted		<p>The following materials may be used where non-combustible materials are required:</p> <ol style="list-style-type: none"> 1. Plasterboard. 2. Perforated gypsum. 3. Fibrous-plaster sheeting to AS 2185. 4. Fibre-reinforced cement sheeting. 5. Pre-finished metal sheeting. 6. Bonded laminated materials. 	This clause is for information only.

Part C2 – Compartmentation and Separation

Icon	Clause	Reference	Comment
	C2.2	General floor area limitations	
✓		<p>Table C2.2 limits the size of fire compartments to:-</p> <ul style="list-style-type: none"> • Class 5 or 9b <ul style="list-style-type: none"> Type A, 8,000m² & 48,000m³ Type B, 5,500m² & 33,000m³ Type C, 3,000m² & 18,000m³ • Class 6, 7, 8 <ul style="list-style-type: none"> Type A, 5,000 m² & 30,000 m³ Type B 3,500m² & 21,000m³ Type C, 2,000m² & 12,000m³ <p>See Section 3,4 or 5 of Specification C1.1 for specific fire rating requirements (a brief table of FRL's is included in the appendix for information – detailed requirements in abovementioned section of the BCA)</p>	Complies as less than the maximum values). Each floor originally was a separate fire compartment. The door from the internal stairs from

Icon	Clause	Reference	Comment
	C2.3	Large isolated buildings	
N/A		<p>A fire compartment may exceed that specified in Table C2.2. Buildings under of exceeding 18,000m² in floor area to be provided with specific requirements</p> <p>Generally a sprinkler system complying with Specification E1.5 provided with a perimeter vehicular access complying with C2.4 (b) – additional measures may include a smoke exhaust system in accordance with Specification E2.2b or smoke-and-heat vents in accordance with Specification E2.2c.</p>	This clause is not applicable to this project.
N/A		<p>A fire compartment may exceed that specified in Table C2.2, subject to:</p> <p>(a) Buildings does not exceed 18,000m² in floor area or 108,000m³ in volume, being class 7 or 8, not more than 2 storeys and having open space complying with C2.4(a) not less than 18m wide; <u>or</u> being of class 5 to 9, sprinklered throughout, and having perimeter vehicle access complying with C2.4(b).</p>	This clause is not applicable to this project.
N/A		<p>(b) Buildings exceeding 18,000m² in floor area or 108,000m³ in volume to be protected throughout with a sprinkler system complying with Specification E1.5, provided with a perimeter vehicular access complying with C2.4 (b) and has a smoke exhaust system in accordance with Specification E2.2b <u>or</u> smoke-and-heat vents in accordance with Specification E2.2c (Vents only allowable as an option if less than 12m ceiling height – otherwise exhaust system mandatory).</p> <p>Buildings closer than 6m are regarded as one building and collectively must comply with the above.</p>	This clause is not applicable to this project.
	C2.4	Requirements for open spaces and vehicular access	
N/A		<p>Requirements for open spaces and vehicular access capable of supporting emergency vehicles, 6m wide not more than 18m from the building.</p> <p>Part a – 18m wide open space without any buildings or obstructions whatsoever, and must also comply with part b of this section.</p>	This clause is not applicable to this project.
	C2.5	Class 9a & 9c buildings	
N/A		Class 9a & 9c Fire Compartmentation and separation requirements	This clause is not applicable to this project.

Icon	Clause	Reference	Comment
	C2.6	Vertical separation of openings in external walls	
✓		Only applicable to a building of Type A Construction, that is not sprinkler-protected. – no requirement is applicable for spandrel separation of a Sprinkler protected building. If not Sprinkler protected either 900mm vertical spandrel required, or 1m horizontal projecting spandrel – specific details in this clause of the BCA	Assume complies as constructed.
	C2.7	Separation by fire walls	
N/A		A part of a building separated by firewall construction may be considered a separate building for the purposes of Parts C, D and E. (Must continue directly from on ground floor slab straight up through the building to top)	This clause is not applicable to this project (but see Clause E1.5).
	C2.8	Separation of classifications in the same storey	
?		Firewalls are needed to separate different classifications, or the building must be built to the higher fire resistance level.	The change from carpark to storage results in FRLs needing to be increased.
	C2.9	Separation of classifications in different storeys	
✓		The separating floors must have an FRL not less than that required for the lower storey use.	Assume complies as constructed.
	C2.10	Separation of lift shafts	
✓		The lift is to be enclosed in a fire-isolated shaft if it connects more than two storeys or three storeys if provided with a sprinkler system.	Assume complies as constructed. See Clause C3.9 for access hatch in central fire isolated stair.
	C2.11	Stairs and lift in one shaft	
✓		Not to be within the same shaft if either is required to be fire isolated.	Complies as constructed.
	C2.12	Separation of equipment	
✓		Equipment comprising lift motors and control plant, emergency generators or central smoke control plant; boilers or batteries are required to be separated from the remainder of the building by construction achieving a FRL of 120/120/120.	Roof plant not accessed but separation of lift motor room and boiler room assumed provided.
	C2.13	Electricity supply system	
✓		A substation located within a building or main switchboard, which sustains emergency equipment, must be separated from the remainder of the building by construction achieving a FRL of not less than 120/120/120.	Complies as constructed. Door to be certified.
	C2.14	Public corridors in Class 2 & 3 buildings	
N/A		In a Class 3 building, a public corridor, if more than 40m in length, must be divided at intervals of not more than 40m with smoke-proof walls complying with Cl. 2 of Spec C2.5.	This clause is not applicable to this project.

Part C3 – Protection of Openings

Icon	Clause	Reference	Comment
	C3.2	Protection of opening in external walls	
Noted		<p>Openings in the external walls are to be protected in accordance with C3.4 if:-</p> <ul style="list-style-type: none"> <input type="checkbox"/> less than 3m to side or rear boundary <input type="checkbox"/> less than 6m from the far boundary of a road if not located at or near ground level <input type="checkbox"/> less than 6m from another building on the same allotment. 	No openings require protection due to setbacks.
	C3.3	Separation of external walls and associated openings in different fire compartment	
✓		External walls of a different fire compartment to be separated by a fire wall of not less than FRL 60/60/60 or any openings must be protected in accordance with Clause C3.4 if within the distance set out in Table C3.3.	6.0m separation provided.
	C3.4	Acceptable methods of protection	
N/A		Where exposed to be protected by external or internal drenchers (side of protection specified by relevant clause that calls up protection), fire doors, windows or shutters.	None required.
	C3.5	Doorways in fire walls	
N/A		<p>Doorways in a fire wall which are not part of a horizontal exit, must not exceed ½ the length of the fire wall, and:</p> <ol style="list-style-type: none"> 1. have the FRL required for the fire wall, and 2. be self-closing or automatic-closing; and 3. if held open be tripped by AS1670.1 by smoke detectors. 	This clause is not applicable to this project at this time (subject to lower ground floor storage being addressed).
	C3.6	Sliding fire doors	
N/A		If utilised must fail safe in the closed position, be suitably signposted with an audible alarm, signage and directional arrow to indicate direction to slide door to open when in the closed position.	This clause is not applicable to this project at this time.
	C3.7	Doorways in horizontal exits	
N/A		To be suitably protected by fire doors with FRL of not less than that required for the fire wall, and be self-closing or automatic-closing. And must swing in the direction of travel (this may be both ways if so either two doors or a multi directional swing fire door is required)	This clause is not applicable to this project.
	C3.8	Openings in fire isolated exits	
?		To be automatic magnamatic or self closing -/60/30 fire doors.	Doors to be inspected. Northern lower ground floor exit door does not self-close and is not tagged.

Icon	Clause	Reference	Comment
	C3.9	Service penetrations in fire isolated exits	
X		Fire exits must not be penetrated by services other than electrical wiring associated with lighting, stair pressurisation or the intercommunication system & hydrant system.	Access hatch to lift in central stair. Duct and cables on ground floor is not fire protected. Duct of lower ground floor.
	C3.10	Openings in fire rated lift shafts	
?		<input type="checkbox"/> Doors to be - /60/ - fire doors to AS1735.11. <input type="checkbox"/> Lift indicator panels to be backed by - /60/60 construction if exceeding 35,000mm ² in area.	Lift and dumb waiter doors to be inspected and certified.
	C3.11	Bounding Construction; Class 2, 3 & 4 buildings	
N/A		Doorway to each SOU to be protected; <ul style="list-style-type: none"> -/60/30 in Type A construction Self-closing, tight fitting, solid core door, not less than 35mm thick in Type B or C construction 	This clause is not applicable to this project.
	C3.12	Openings in floors for services	
X		To be enclosed in a fire rated shaft with a FRL in accordance with Specification C1.1 or protected by Clause C3.15 of BCA	PVC plumbing connected to metal stack work in basement and expected on other levels. Fire dampers and other seals signed off as part of AFSS.
	C3.13	Openings in shafts	
?		Openings in ventilating, pipe, garbage or other service shaft to be protected by:- -/60/30 fire doors / hoppers / access panel.	Access panels and dampers to shafts to be inspected and certified.
	C3.15	Openings for service installations	
X		Electrical, plumbing mechanical ventilation shafts etc not to impair the FRL of rated members.	See C3.12 and C3.13 above.

Specification C1.1 – Fire Resisting Construction

Icon	Clause	Reference	Comment
	3	Type A Fire Resisting Construction.	
X	3	<p>The building is to be designed to comply with Table 3.</p> <p>External Walls within 3.0m of the boundary (or other fire source feature) require a FRL of 60/60/60.</p> <p>External Walls 3.0m or more from the boundary (or other fire source feature) require no FRL.</p> <p>Lift & Stair Shaft Walls require an FRL of 60/60/60.</p> <p>Floor Slab requires an FRL of 60/60/60</p>	<p>Assume complies as constructed but the change of the carpark to a storage use results in a required increase in FRLs from 120 to 240 minutes.</p> <p>Stage floor does not comply as used for storage under.</p>

Specification C1.10 – Early Fire Hazard Indices

Icon	Clause	Reference	Comment
	2	Class 2 to 9 buildings: General Requirements	
✓		<p>Except where superseded by Clause 3 or 4, any material or assembly as specified in Clause 1, used in a Class 2 to 9 building must—</p> <p>(a) in the case of a sarking-type material, have a Flammability Index not more than 5; or</p> <p>(b) in the case of other materials, have—</p> <p>(i) a Spread-of-Flame Index not more than 9; and</p> <p>(ii) a Smoke-Developed Index not more than 8 if the Spread-of-Flame Index is more than 5; or</p> <p>(c) be completely covered on all faces by concrete or masonry not less than 50 mm thick</p>	<p>Assume complies as constructed.</p> <p>Hall curtains are tagged.</p> <p>Chairs are not closed back.</p>

Specification C1.10a – Fire Hazard Properties – Floors, Walls and Ceilings

Icon	Clause	Reference	Comment
	2	Floor materials and floor coverings	
✓		<p>A floor material or floor covering must have</p> <p>(a) a Critical radiant heat flux not less than that listed in Table 1; and</p> <p>(b) in a building not protected by a sprinkler system complying with specification E1.5, a maximum smoke development rate of 750 percent-minutes.</p>	<p>Assume complies as constructed. Test Reports for new carpet in council chambers should be provided.</p>

Icon	Clause	Reference	Comment
	3	<i>Walls and ceilings</i>	
✓/?		<p>A material used as a finish, surface, lining or attachment to a wall or ceiling must be a Group 1, 2 or 3 material used in accordance with Table 2 and for a building not protected by a sprinkler system complying with specification E1.5, have -</p> <ul style="list-style-type: none"> (iii) a smoke growth rate of not more than 100; or (iv) an average specific extinction area less than 250m²/kg.. 	Assume complies as constructed but portable buildings in the basement may not comply. Details are required.
	4	<i>Lift cars</i>	
✓		In a lift car, the floor materials and floor coverings must have a Critical radiant heat flux not less than 2.2 and wall and ceiling linings must be a Group 1 or Group 2 material in accordance with Clause 3(b).	Assumed compliant.

Section D: Access and Egress

Part D1 – Provision for Escape

Icon	Clause	Reference	Comment
	D1.2	Number of exits required	
✓		<p>The number of exits is to be designed to satisfy performance standard DP4 of the BCA.</p> <p>A minimum of one exit is required from all buildings, and</p> <p>Two (2) exits for each storey are required for buildings over 25m, basement storeys or for class 9b of 6 storey or greater, buildings that exceed 50 persons, school buildings, class 9a patient care areas or class 9c sleeping areas, etc.</p>	<p>Basement (lower ground floor) Level 6, hall and library has two exits as required.</p> <p>See Clause H1.5 for hall stage issues.</p>
	D1.3	When fire isolated exits are required	
✓		<p>Every stair in a building must be fire isolated unless it does not connect or pass through more than 3 consecutive floors in a sprinkler protected building or 2 storeys in a non-sprinkler protected building.</p> <p>Class 9a & 9c buildings require stairs to be fire isolated.</p> <p>Those stairs not requiring fire isolating must discharge at a level of road or open space</p>	<p>Stairs connecting more than two storeys are fire isolated as required.</p>
	D1.4	Exit travel distances	
✓/X		<p>No point on the floor must be more than 20m to an exit or a point in which travel in different directions to 2 exits is available, in which case, the maximum distance to 1 exit cannot exceed 40m.</p> <p>Class 5 or 6 buildings with only one exit, and opening to road or street may have greater distance of up to 30m to that single exit.</p>	<p>Travel distance is compliant provided the stair and northern door from the lower ground floor can be corrected.</p>
N/A		<p>Class 7 Car Park - No point on the floor must be more than 20m to an exit or a point in which travel in different directions to 2 exits is available, in which case, the maximum distance to 1 exit cannot exceed 40m.</p> <p>Class 2 and 3 buildings -</p> <p>(i) The entrance doorway of any sole occupancy unit must be not more than:</p> <p>(A) 6m from an exit or from a point from which travel in different directions to 2 exits is available; or</p> <p>(B) 20m from a single exit serving the storey at the level of egress to a road or open space; and</p> <p>(ii) No point on the floor of a room which is not in a sole occupancy unit must be more than 20m from an exit or from a point at which travel in different directions to 2 exits is available.</p>	<p>This clause is not applicable to this project.</p>

Icon	Clause	Reference	Comment
	D1.5	Distance between alternative exits	
✓		To be no less than 9m or more than 45m in a Class 2, 3, and 9a, or 60m in all other classes, uniformly distributed with access to 2 exits if required and not converge so they become less than 6m apart.	Complies.
	D1.6	Dimensions of exits and paths of travel	
X		<p>(a) height – minimum 2m: doorways 1980mm</p> <p>(b) width 1m minimum</p> <p>(c);(d) Width change based upon populations – generally for populations up to 100 persons require 1m of egress, up to 200 2m and then varies according to use over 200 person per floor / storey.</p> <p>(f) door width minimum 800mm [AS 1428]</p> <p>(g) not to diminish in direction of travel.</p> <p>Note: see also re number of exits for certain uses Clause D1.2 as may require additional exits no matter the population of the storey.</p>	<p>Generally height and widths are compliant. There are areas of low clearance in the plant room. The bar and storeroom at the rear of the hall are 1870mm high. Stage Stairs 700mm wide.</p> <p>Hall doors cater for a total population 740 persons (could be altered for 1,000 persons).</p>
	D1.7	Travel by fire isolated stairs	
✓		Must provide independent egress and discharge to road or open space or complying covered area.	Complies as constructed.
	D1.8	External stairs or ramps in lieu of fire isolated exits	
N/A		External stairs or ramps may be used in lieu of a fire-isolated stair or ramp to a building under 25m in effective height.	This clause is not applicable to this project.
	D1.9	Travel by non fire isolated stairs	
✓		<p>Travel by Non-Fire Isolated Stairs:-</p> <p>(c) The distance from any point on the floor to a point of egress not to exceed 80m.</p> <p>(e) The stairway not to discharge at a point more than:</p> <p>(i) 20m to an exit</p> <p>(ii) 40m to one of 2 exits.</p>	Complies as constructed.
	D1.10	Discharge from exits	
X		<p>An exit must not be blocked nor be capable of being blocked at its point of discharge.</p> <p>Ramp to a grade of 1:8 is required to connect with open space or AS1428.1 - 2001.</p>	The grade of the library ramp is over 1:8.

Icon	Clause	Reference	Comment
	D1.11	Horizontal exits	
N/A		May be counted as required exits if the path of travel from a fire compartment leads by one or more horizontal exits directly into another fire compartments which has at least one required exit which is not a horizontal exit. Cannot be utilised in some classes or areas of buildings details to be assessed to ensure compliance with specific clause	This clause is not applicable to this project.
	D1.12	Non required stairs	
Noted		May connect 2 levels in a non-sprinkler protected building. Within a sprinkler protected building may serve 3 storeys.	Not used at this time.
	D1.13	Number of persons accommodated	
Noted		To be in accordance with Table D1.13 of the BCA or count seats.	Office 10m ² per person and council chambers less than 250 persons. Hall can accommodate 890 persons standing without those on the stage (see Clause D1.6).
	D1.16	Plant rooms and lift motor rooms: Concessions	
Noted		(a) A ladder may be used in lieu of a stairway to provide egress from - <ul style="list-style-type: none"> (i) a plant room with a floor area of not more than 100 m²; or (ii) all but one point of egress from a plant room or a lift machine room with a <u>floor area</u> of not more than 200 m². (b) A ladder permitted under (a) - <ul style="list-style-type: none"> (i) may form part of an <u>exit</u> provided that in the case of a <u>fire-isolated stairway</u> it is contained within the <u>shaft</u>; or (ii) may discharge within a <u>storey</u> in which case it must be considered as forming part of the path of travel; and (iii) must comply with AS 1657 for a plant room ; and AS 1735.2 for a lift machine room. 	Stair or ladder access to plant / motor room.

Part D2 – Construction of Exits

Icon	Clause	Reference	Comment
	D2.2	Fire isolated stairs	
✓		Must be in a fire resisting shaft and be constructed of non-combustible materials and if there is local failure not cause structural damage or impair the fire resistance of the shaft.	Stairs provided appear compliant.
	D2.3	Non fire isolated stairs	
✓		Non fire isolated stairways must be constructed of either:- (a) reinforced or pre stressed concrete (b) 6mm thick steel (c) 44mm thick timber	Stairs provided are compliant (reinforced concrete).
	D2.4	Separation of rising and descending stairs flights	
✓		A required fire isolated stair cannot connect above and below ground flights unless separated by fire and smoke separation.	Separated as required.
	D2.5	Open access ramps and balconies	
N/A		Open access ramp or balcony is provided to meet the requirements of smoke hazard management E2.2a, it must; 1. have ventilation openings to the outside air; & 2. not be enclosed on its open sides above height of 1m.	This clause is not applicable to this project.
	D2.6	Smoke lobbies	
N/A		Smoke lobby required by D1.7 must; 1. have a floor area not less than 6sqm; and 2. be separated by walls impervious to smoke; and 3. be fitted with smoke doors; and 4. be pressurised if the exit is required to be.	This clause is not applicable to this project.
	D2.7	Installations in exits and paths of travel	
X		(b) No openings to ducts conveying hot products of combustion permitted. (c) Gas or fuel services not permitted in required exits. (d) Electric or services equipment not permitted unless in a non-combustible and smoke sealed enclosure.	Comms Room / EDB cupboards in central core do not have smoke seals or non-combustible backing.

Icon	Clause	Reference	Comment
	D2.8	Enclosure of space beneath stairs	
X		(a) in a fire stair no cupboards are permitted under the stair (b) the space beneath the non-fire isolated stairs are not to be enclosed unless in 60/60/60 construction with 60/60/30 fire doors.	Fire hose reel cabinet in the hall under stairs (and used for storage).
	D2.9	Width of stairs	
✓		When a measurement taken the width is to be measured clear of all obstructions and the stair must extend a minimum 2.0m above nosings. (unless specified elsewhere to require a greater height)	Stairs are 1.0m wide (other than to the stage).
	D2.10	Pedestrian ramps	
X		Pedestrian ramp to be installed in accordance with AS 1428.1, and not have a gradient steeper than 1:8, and be finished with a non-slip surface.	Internal and external library ramps over 1:8 see D1.10 and D3.2 for AS1428.1 (library and hall ramps).
	D2.11	Fire-isolated passageways	
✓		To attain the same FRL as the fire isolated stair	Assume complies but see C3.9 for services.
	D2.12	Roof as open space	
✓		If an exit discharges to a roof of a building, the roof must; 1. have an FRL 120/120/120; & 2. not have roof lights or other openings within 3m of the path of travel.	Complies as slab assumed FRL of 120/120/120.
	D2.13	Treads and risers	
X		(a) minimum 2 risers / maximum 18 in each flight (b) risers 115mm min 190 mm max - going 250mm min 355mm max - 2R+G 550mm min 700mm max. (c) goings and risers to be constant. (d) risers not to permit 125mm sphere to pass through (e) treads to be non slip (h) no stepped quarter landings	Main stairs to hall are different top to bottom 160/170/190. South western stair from lower ground floor has 230mm and tapered treads.
	D2.14	Landings	
✓		Maximum gradient not to exceed 1:50 and be a minimum 750 long measured from the inside edge of the landing.	Size complies but room for hydrant landing valves is unlikely.

Icon	Clause	Reference	Comment
	D2.15	Thresholds	
X		<p>No step or ramp at any point closer to the door than the width of the door leaf.</p> <p>Generally doors opening to outside are able to be provided with a maximum 190mm step or 50mm if Class 9b POPE</p>	<p>Library door to ramp has a 190mm threshold with a slope. Hall did not comply with POPE rules 50mm.</p>
	D2.16	Balustrades	
X		<p>A continuous balustrade or barrier must be provided along the side of any roof to which public access is provided, any stairway or ramp, any floor, corridor, hallway, balcony, veranda, mezzanine, access bridge or the like and along any side of any access path to a building if it is not bounded by a wall and the level above the floor or ground surface is more than 4m where it is possible to fall through an open window or 1m in any other case.</p> <p>Note: Frameless glass balustrades are no longer a feasible option to achieve compliance with the BCA – see AS 1288-2006 for details of balustrade to ensure design achieves compliance.</p>	<p>Fire stair balustrade requires full upgrade due to access. Height varies from 800 to 900mm.</p> <p>Hall balustrade to exit stairs and disabled ramp has gaps over 125mm only 900mm high.</p>
	D2.17	Handrails	
X		<p>Required along one side and on both sides of stairs / ramps over 2m in width, 865mm above nosings and be continuous.</p>	<p>No handrail to stairs (final flight) from foyer to lower ground floor and to stage. None in library comply with AS1428.1.</p>
	D2.18	Fixed platforms, walkways, stairways and ladders	
?		<p>Treads, risers, handrails and balustrades in plant rooms etc must comply with AS 1657</p>	<p>No access to roof plant. Hall plant all at one level.</p>
	D2.19	Doorways and doors	
✓		<p>Must not be revolving door, roller shutter or tilt door. Can be fitted with a sliding door if it leads directly to open space and can be opened manually under a force of not more than 110N and be fitted with a fail-safe device if the door is power operated.</p> <p>Class 9b POPE has specific details relating to exit doors, sliding doors and the swing of doors anywhere in the building.</p>	<p>Complies as constructed.</p>
	D2.20	Swinging doors	
X		<p>Must not encroach more than 500mm into the required width of the stair or 100mm when fully open and swing in the direction of travel.</p> <p>Note: Class 9b POPE doors and smoke doors must swing in the direction of egress – if multi exit required then the doors must swing in both directions</p>	<p>South western door from lower ground floor (Civic Building), rear exit to the library and gate to fire tunnel does not swing in the direction of egress.</p>

Icon	Clause	Reference	Comment
	D2.21	Operation of latch	
X		<p>To be located 900mm to 1100mm above the floor and be openable with a single-handed downward action.</p> <p>Fail safe unlock is permitted as long as linked to the base building fire alarm system.</p> <p>Class 9b or POPE doors if to be secured must be provided with panic bars only (fail safe option does not comply)</p>	<p>Library has snib latches at 1250mm high. Snib latch to fire tunnel gate. North western exit door to lower ground floor has a door knob.</p> <p>Door knobs on fire doors to be replaced with lever action handles.</p>
	D2.22	Re-entry from fire-isolated exits	
N/A		<p>Every door in a fire stair must not be locked from inside the fire- isolated stairway to prevent re-entry to the storey or room it services for any stair that serves a storey over 25m in height.</p> <p>Specific details of compliance are defined in this clause of the BCA – the doors all must unlock on fire trip, if needed to be locked may be provided with alarm to allow re entry in a non-fire situation</p>	Does not apply but is provided.
	D2.23	Signs on doors	
X		To fire doors signage required to alert persons that blockage, obstruction or being chocked open is not allowable	Required signage is provided on the fire isolated stair doors other than basement stair.
	NSW D2.10123	Doors in the path of travel in entertainment venues	
N/A		In a Class 9b building used as an entertainment venue, a doorway in a path of travel must comply with NSW D2.19(b)(v).	This clause is no longer applicable to this project but has been used for hall main doors.

Part D3 – Access for People with Disabilities

Icon	Clause	Reference	Comment
	D3.2	Access to building in general	
Noted		a) From the boundary to main points of entry b) From a disabled car space c) Other buildings on the allotment d) Through the principal public entrance. Access to and within the building must comply with AS 1428.1 and Part D3 of the BCA.	Access required from the street, parking and within all areas used by occupants.
	D3.3	Parts to be accessible	
X		a) (i) (A) To sanitary compartment: (B) To areas normally used by occupants (excluding plant and service areas) (iii) Every lift to comply with E3.6.	Insufficient access to library and within other buildings. Ramp to the library 1:10 and steps once inside. Hall ramp does not have compliant kerb rails, no access to the stage.
	D3.4	Concessions	
Noted		It is not necessary to provide access for people with disabilities to: a) more than 30% of the public space in Class 6 restaurant, café, bar b) any area if access would be inappropriate due to use.	Not required to plant area.
	D3.5	Car parking	
X		Spaces provided as to AS 2890.1 Disabled car spaces must be provided within the carpark at the ratio of 1 disabled car space per 50 /100 spaces.	New spaces marked but no signage as yet.
	D3.6	Signage regarding disabled access	
X		To be provided at entrance, lifts and sanitary accommodation.	Provided to lifts only (not to sanitary facilities or access paths).
	D3.7	Hearing augmentation	
?		Where an inbuilt amplification system other than an EWIS is provided a hearing augmentation system is to be provided in the following locations:- <ul style="list-style-type: none"> • Conference room with a floor area greater than 100m², • Judicatory room, • Auditorium in a Class 9b building, • Ticket office, reception area where the public is screened from the service provider. 	There appears to be a system in the hall and council Chambers but minimal signage.
	D3.8	Tactile indicators	
X		Required to public stairs and ramps in accordance with AS 1428.4.	Not provided in most stairs or ramps.

Section E: Services and Equipment

Part E1 – Fire Fighting Equipment

Icon	Clause	Reference	Comment
	E1.3	Hydrants	
X		a) System to be provided to serve whole building:- (i) Floor area exceeds 500m ² b) (i) Installed to AS 2419.1-2005 (iii) Pump set to AS 2419.1.	Fire hydrants are not within the fire stairs, no block plan, booster, mounting height wrong and not to AS2419.1 - 2005.
	E1.4	Hose reels	
X		a) System to be provided to serve whole building:- (i) Where hydrants installed internally or to serve any fire compartment greater than 500m ² : b) (i) Installed to AS 2441-2005 (iii) Hose to reach every part (iv) (A) Located externally or, (B) Within 4m of exit or, (C) Adjacent to hydrant (not within fire isolated exit).	Fire hose reels installed within 4.0m of exit in office area but not at the correct height (as in hall under stairs).
	E1.5	Sprinklers	
X		System may be required to be provided to serve the entire building to AS 2118.1 and Spec E1.5 as applicable, see Table E1.5 for details when required	No booster assembly and not to AS2118.1. No fire separation to non sprinkler protected areas and portable buildings not covered. BOWS to be checked.
	E1.6	Portable fire extinguishers	
X		To be installed to Table E1.6 and AS 2444.	Provided as required other than no installation in kitchen for fat fires.
	E1.8	Fire control centres	
N/A		A fire control centre facility is required for a building that exceeds 18,000m ² in total floor space or where the building exceeds 25m effective height. A Building that exceeds 50m in height is required to be provided with a dedicated fire control room that complies with Spec E1.8	This clause is not applicable to this project.
	E1.10	Provisions for special hazards	
N/A		Additional provision must be made if special problems of fire fighting could arise because of: a) the nature or quantity of materials stored, displayed or used in a building. b) the location of the building in relation to water supply for fire fighting purposes.	This clause is not applicable to this project.

Part E2 – Smoke Hazard Management

Icon	Clause	Reference	Comment
	E2.2	General requirements	
X	E2.2a	<p>One the following smoke hazard management strategies is required:-</p> <p>Stair pressurisation, or</p> <p>Zone smoke control, or</p> <p>Automatic smoke detection and alarm system to Spec E2.2a and AS 1670.1-2004 , or</p> <p>Automatic sprinkler system to Spec E1.5 & AS 2118.1-1999.</p>	<p>A system of smoke hazard management is required due to the building having a rise in storeys of more than 3 (smoke detectors / sprinklers used). Building Occupant Warning System installed. No detectors provided above the ceiling. Separate VESDA for computer server room</p> <p>Shutdown of all ducted air handling systems that circulate air through separate fire compartments is required.</p> <p>Many smoke detectors too close to A/C registers.</p>
X	E2.2b	<p>All Class 9b Buildings are required to be provided with automatic shutdown.</p> <p>Unless otherwise described in (b), in a building or part of a building used as an assembly building (not being a night club, discotheque or the like; or an exhibition hall, museum or art gallery) where the floor area of a fire compartment is more than 2,000 m², the fire compartment must be provided with:-</p> <p>(a) in an auditorium</p> <ol style="list-style-type: none"> 1. Automatic smoke exhausting to Spec E2.2b, or 2. Automatic smoke and heat vents to Spec E2.2c , 	<p>Shutdown provided but stage smoke exhaust detector covered.</p>
	E2.3	Provision for special hazards	
N/A		<p>Additional smoke hazard management measures may be necessary due to the:</p> <p>a) Special characteristics of the building</p>	<p>This clause is not applicable to this project.</p>

Part E3 – Lift Installations

Icon	Clause	Reference	Comment
	E3.2	Stretcher facility in lifts	
?	(a)	Must be provided with: (i) at least 1 emergency lift required by E3.4 (ii) where emergency lift is not required, in at least 1 passenger lift in buildings over 12m. (b) Not less than 600mm wide and 2,000mm long x 1,400mm height.	Lifts do not appear to have sufficient space.
	E3.3	Warning against use of lift in fire	
✓		Warning signs are required at each lift landing located near every call button in accordance with Figure E3.3.	Complies.
	E3.4	Emergency lifts	
N/A		Required to buildings over 25m in effective height, complying with AS 1735.2.	This cause is for information only.
	E3.6	Facilities for people with disabilities	
X		Where required by D3.3 (a) every lift must be installed to meet requirements of AS 1735.2 and AS 1735.12.	Size complies with old standard but call buttons too high.
	E3.7	Fire service controls	
✓		All passenger lift cars require fire service controls in accordance with AS 1735.2	Complies.

Part E4 – Emergency Lighting, Exit and Warning Systems

Icon	Clause	Reference	Comment
	E4.2	Emergency lighting	
?		Required in every path of travel to an exit and any room having a floor area more than 100m ² that does not open to a corridor or space with emergency lighting and any room having a floor area in excess of 300m ² required in every required non fire isolated stair. Emergency signage to be installed to AS 2293.1	Complies, but lighting levels should be investigated by an appropriate services engineer.
	E4.3	Measurement of distance	
Noted		Distances other than vertical rise must be measured along the shortest path of travel whether by straight lines, curves or a combination of both.	This cause is for information only.
	E4.4	Design and operation of exit signs	
Noted		Every required exit sign must comply with AS 2293.1	This cause is for information only.

Icon	Clause	Reference	Comment
	E4.5	Exit signage	
✓		Required above egress doors and doors from an enclosed stair to open space. Directorial signs required to designate paths of travel. Exit signage to be installed to AS 2293.1	Complies.
	E4.6	Direction signs	
✓		Where an exit is not apparent, exit signs with directional arrows are required. Class 9b POPE must have exit signs external to the building to show the way to the road if not apparent when in the open space.	Complies.
	E4.7	Class 2, 3 and 4 parts: Exemptions	
N/A		E4.5 does not apply to- 1. Class 2 building if the word "EXIT" is placed on the side of door remote from an exit, 2. An entrance door of a SOU in Class 2, 3 or 4.	This clause is not applicable to this project.
	E4.8	Design and operation of exit signs	
Noted		Every required exit sign must - (a) Comply with AS 2293.1; and (b) Be clearly visible at all times when the building is occupied.	This clause is for information only.
	E4.9	Sound systems and intercom systems for emergency purposes	
N/A		Sound systems and intercom systems for emergency purposes required to comply with AS 1670.4-2004; 1. Class 9b used as a school with RIS of more than 3, or public Hall/POPE with floor area over 1000m2 or RIS of more than 2. 2. A building with an effective height over 25m.	This clause is not applicable to this project.

Appendix 2

Fire Resistance Provisions

Table 3 – Type A Construction: FRL of Building Elements

Building Element	Class of Building – FRL (in minutes) Structural Adequacy/Integrity/Insulation			
	Class 2, 3 or 4 part	Class 5, 9 or 7 (car park)	Class 6	Class 7 (other than carpark) or 8
External Wall (including any column and other building element incorporated therein) or other external building element, where the distance from and fire-source feature to which it is exposed is:				
<i>For Loadbearing Parts:</i>				
Less than 1.5m	90/90/60	120/120/120	180/180/180	240/240/240
1.5m to less than 3m	90/60/60	120/90/90	180/180/120	240/240/180
3m or more	90/60/30	120/60/30	180/120/90	240/180/90
<i>For Non-Loadbearing Parts:</i>				
less than 1.5m	- /90/90	- /120/120	- /180/180	- /240/240
1.5m to less than 3m	- /60/60	- /90/90	- /180/120	- /240/180
3m or more	- / - / -	- / - / -	- / - / -	- / - / -
External Column not incorporated in an external wall, where the distance from any fire source feature to which it is exposed is:				
Less than 3m	90/-/-	120/-/-	180/-/-	240/-/-
3m or more	-/-/-	-/-/-	-/-/-	-/-/-
Common Walls and Fire Walls:				
	90/90/90	120/120/120	180/180/180	240/240/240
Internal Walls – Fire Resisting lift and stair shafts:				
Loadbearing	90/90/90	120/120/120	180/120/120	240/120/120
Non-Loadbearing	- /90/90	- /120/120	- /120/120	- /120/120
Bounding Public Corridors public lobbies and the like:				
Loadbearing	90/90/90	120/ - / -	180/ - / -	240/-/-
Non-Loadbearing	- /60/60	- / - / -	- / - / -	- / - / -
Between or Bounding Sole Occupancy Units:				
Loadbearing	90/90/90	120/ - / -	180/ - / -	240/-/-
Non-Loadbearing	- /60/60	- / - / -	- / - / -	- / - / -
Ventilating, pipe, garbage and like shafts not used for the discharge of hot products of combustion:				
Loadbearing	90/90/90	120/90/90	180/120/120	240/120/120
Non-Loadbearing	- /90/90	- /90/90	- /120/120	- /120/120
Other Loadbearing Internal Walls, Internal Beams, Trusses and Columns:				
	90/ - / -	120/ - / -	180/-/-	240/-/-
Floors:	90/90/90	120/120/120	180/180/180	240/240/240
Roofs:	90/60/30	120/60/30	180/60/30	240/90/60

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ATTACHMENT 13

Regular Project Plan (A3)

Qtr 3, 2013			Qtr 4, 2013			Qtr 1, 2014			Qtr 2, 2014			Qtr 3, 2014			Qtr 4, 2014			Qtr 1, 2015			Qtr 2, 2015			Qtr 3, 2015			Qtr 4, 2015			Qtr 1, 2016			Qtr 2, 2016		
Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun

















Project: Project Plan Final Draft Date: Mon 10/10/11	Task		Milestone		Rolled Up Critical Task		Split		Group By Summary	
	Critical Task		Summary		Rolled Up Milestone		External Tasks		Deadline	
	Progress		Rolled Up Task		Rolled Up Progress		Project Summary			

ATTACHMENT 14

Delayed Project Plan (A3)

ID	Task Name	Duration	Start	Finish	Predecessors	Qtr 4, 2011	Qtr 1, 2012	Qtr 2, 2012	Qtr 3, 2012						
						Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	
1	Delayed Civic Precinct Stages 3-4 Program	1294 days?	Tue 18/10/11	Mon 26/09/16											
2															
3	LEP/DCP	87 days?	Tue 18/10/11	Tue 14/02/12											
4															
5	Potential Council Resolution of Planning Proposal	1 day?	Tue 18/10/11	Tue 18/10/11											
6	DCP Development Control Plan Workshop Exhibition	1 day	Tue 15/11/11	Tue 15/11/11											
7	Planning Amendment Gazettal	1 day?	Mon 16/01/12	Mon 16/01/12											
8	Consolidate DCP / Assess Submissions	67 days?	Tue 15/11/11	Tue 14/02/12											
9	Council Resolution of DCP Workshop & Resolution	1 day	Tue 14/02/12	Tue 14/02/12											
10															
11	Consultant Appointment	89 days?	Tue 14/02/12	Fri 15/06/12											
12															
13	Council Resolve EOI Process	11 days?	Tue 14/02/12	Tue 28/02/12											
14	Complete new tender scopes for consulting team	22 days	Thu 1/03/12	Fri 30/03/12											
15	Tender new scopes of work	32 days	Mon 2/04/12	Tue 15/05/12											
16	Asses tenders	12 days	Tue 15/05/12	Wed 30/05/12											
17	Engage new consulting team	13 days	Wed 30/05/12	Fri 15/06/12											
18															
19	Civic Precinct Land Sale	1129 days?	Mon 4/06/12	Mon 26/09/16											
20															
21	Preparation of Civic and Performance Brief	69 days	Mon 18/06/12	Mon 17/09/12											
22	Preparation of Tender Documentation for sale of land	69 days?	Mon 18/06/12	Mon 17/09/12											
23	Develop Expressions Of Interest (EOI) document	26 days?	Mon 4/06/12	Thu 5/07/12											
24	Present EOI to Council	1 day	Mon 9/07/12	Mon 9/07/12											
25	EOI from Developers	24 days?	Tue 10/07/12	Thu 9/08/12	24										
26	Shortlist from EOI	19 days?	Wed 22/08/12	Mon 17/09/12											
27	Council Election and Establishment Period	34 days?	Mon 17/09/12	Thu 1/11/12											
28	Resolution for tender	11 days?	Thu 1/11/12	Thu 15/11/12											
29	Tender Ryde Civic Precinct Project	45 days	Thu 15/11/12	Wed 16/01/13											
30	Tender evaluation	14 days?	Thu 17/01/13	Tue 5/02/13	29										
31	Shortlist Tenders (2 No)	1 day	Wed 6/02/13	Wed 6/02/13	30										
32	Negotiate with selected tenders	9 days?	Thu 7/02/13	Tue 19/02/13	31										
33	Agree to award to 1 tenderer	0 days?	Tue 19/02/13	Tue 19/02/13											
34	Final contract documentation	51 days?	Wed 20/02/13	Wed 1/05/13											
35	Council Approval for Contract and proceed to Gateway 4	9 days?	Wed 8/05/13	Mon 20/05/13											
36	Preparation of DA	125 days	Tue 21/05/13	Mon 11/11/13											
37	DA Assessment (Agreed Performance Space Design)	128 days	Mon 18/11/13	Wed 14/05/14											
38	CC & Early Works / Presales / Financial Close	254 days	Thu 15/05/14	Tue 5/05/15											
39	Construction of Ryde Civic Precinct Project	519 days	Wed 1/10/14	Mon 26/09/16											
40	Fitout of Performance Space	172 days	Fri 29/01/16	Mon 26/09/16											

Project: Project Plan Final Draft
Date: Tue 11/10/11

Task		Milestone		Rolled Up Critical Task		Split		Group By Summary	
Critical Task		Summary		Rolled Up Milestone		External Tasks		Deadline	
Progress		Rolled Up Task		Rolled Up Progress		Project Summary			

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new consulting team

