BCA Assessment Report

2022 SCEGGS Wilkinson House

Project:	2022 SCEGGS Wilkinson House
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Client:	SCEGGS Darlinghurst C/- Smart Design Studio and Sandrick Project Directions
Client Contact:	Ronald Wibisono and Warwick Smith
Email:	RonaldW@smartdesignstudio.com & Wsmith@sandrick.com
BCA Logic Contact:	Matthew McNamara
Direct:	8484 4050
Email:	mmcnamara@bcalogic.com.au

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		Prepared by	Verified by
		Matthew McNamara	Christopher Ward
		Registered Certifier Grade A1, No. BDC 0263 Manager of Building Regulations	Registered Certifier Grade A1, No. BDC 2789 Senior Building Regulations Consultant
			

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EXECUTIVE SUMMARY

This document provides an assessment of the architectural Development Application (DA) design drawings for the proposed adaptive re use of Wilkinson House, including alterations and additions to the heritage building, and retention of the existing heritage facades. Wilkinson House is an existing 5 storey education/ classroom assembly building at SCEGGS Darlinghurst and this 2022 re use proposal has been assessed against the Deemed-to-Satisfy provisions of the Building Code of Australia (BCA) 2019, Volume 1 Amendment 1.

Part 3 'Matters for Further Consideration' of this report outlines the identified BCA compliance issues that require further information or consideration and/or assessment as Performance Solutions.

Any Performance Solution will need to be detailed in a separate report and must clearly indicate methodologies for achieving compliance with the relevant BCA Performance Requirements.

Item	Description	BCA Provision
Performance Solutions Required		
1.	The new glass wall 'lift lobby box' of the upper levels of the southern elevation are not to be protected by external wall wetting sprinklers, which negates the Clause 2.5(d) of BCA Specification C1.1 concession permitting no fire resistance for these new glass and steel frame walls situated less than 3m from the Centenary Sports Hall building. Notwithstanding, a fire engineered performance solution is proposed to address no fire rating of the new glass and steel frame wall 'lift lobby box' external walls.	C1.1, Specification C1.1
2.	'Horizontal exits' albeit to another building that is not considered united being the Centenary Sports Hall building to the south, are proposed to serve the Level 2 (L02) and the Lower Ground (LG).	Part A7, D1.2, D1.4 and D1.11
3.	The central open circulating stairway serving Levels 3, 2, and 1 and discharging and connecting to the Ground Floor represents the only exit serving the topmost Level 3 (L03), in lieu of being one of at least two exits as required by BCA Clause D1.2(d)(v) for secondary schools with a rise in storeys of 2 or more	D1.2(d)(v)
4.	The upper lift landing to the Lower Ground floor connects with one 'horizontal' exit only, being lift lobby doors to the Centenary Sports Hall to the south, in lieu of being one of at least two exits for secondary schools with a rise in storeys of 2 or more.	D1.2(d)(v)
5.	The central open circulating stairway serving Levels 3, 2, and 1 and discharging and connecting to the Ground Floor connects four storeys, in lieu of being a fire isolated stairway separated from the whole building and discharging directly to outside the building.	D1.3 and D1.7
6.	A 1200mm wide lift car, in lieu of 1400mm as required for an accessible lift traveling more than 12m (12.94m proposed) is proposed.	E3.6 and Table E3.6b
7.	The construction of external walls is such that they will prevent the penetration of water that could cause unhealthy or dangerous conditions or loss of amenity to occupants and undue dampness or deterioration of building elements.	No DtS Provisions – FP1.4 Performance Provisions Only

Item	Description	BCA Provision
Building Code of Australia Compliance Matters to be Addressed		
1.	For a building with an *effective height* of not more than 25m, but with rise in storeys exceeding 3 and having a roof without an FRL in accordance with Clause 3.5, in the storey immediately below that roof, internal columns other than those referred to in Clause 3.1(f) and internal walls other than *fire walls* and shaft walls may have a 'one hour' fire resistance (*FRL* 60/60/60), in lieu of two hours (*FRL* 120/120/120) as is generally required for the Wilkinson House building.	Clause 3.7 of Specification C1.1
2.	With the uniting of the Wilkinson House and Joan Freeman buildings, a horizontal exit to the Joan Freeman building at the south western corner of proposed Level 1 (L01) is proposed. In addition, 'horizontal exits' albeit to another building that is not considered united being the Centenary Sports Hall building to the south, are proposed to serve proposed Levels 2 (L02) and Lower Ground (LG). These horizontal exits necessitate the provision of C2.7(c) fire walls to separate fire compartments and to C2.7(b) fire wall separate the Wilkinson House from the Centenary Sports Hall buildings.	C2.7
3.	For the existing windows of the existing heritage southern elevation, scaled at ~2.7m from the Centenary Sports Hall building, BCA Clause C3.2 requires the existing windows to be protected from the 'fire source' (other building) in accordance with BCA Clause C3.4, being: (a) external wall wetting sprinklers to permanently fixed shut windows/ or automatically closing windows; or (b) -/60/- FRL fire windows, permanently fixed shut or automatically closing; or (c) -/60/- FRL fire shutters; or (d) or a fire engineered performance based solution.	C3.2 and C3.4 of Specification C1.1
4.	The uniting of the re-built Wilkinson House building with the Joan Freeman building will require the western elevation with existing windows and new glass wall of the central stairway (refer to screenshot overleaf) to be considered an external wall exposed to an opposing external wall of other Joan Freeman compartment, less than 6m distant. Scaled at a separation distance of 3m, the subject Wilkinson House existing brick western wall is required to have a one hour' 60/60/60 FRL fire rating and the existing windows to be protected in accordance with BCA Clause C3.4, being: (a) external wall wetting sprinklers to permanently fixed shut windows/ or automatically closing windows; or (b) -/60/- FRL fire windows, permanently fixed shut or automatically closing; or (c) -/60/- FRL fire shutters; or	C3.3, C3.4 & 2.5 of Specification C1.1

Item	Description	BCA Provision
	(d) or a fire engineered performance based solution. Subject to the new glass wall of the central stairway being protected by external wall wetting sprinklers, Clause 2.5(d) of BCA Specification C1.1 permits the wall to not have a fire resistance level (a one hour fire resistance would otherwise be required by BCA C3.3 above). However, note that this precludes the ability to have any openable windows or 'ventilators' unless they were to be fitted with automatic closing upon fire trip actuators.	
5.	The ground floor (L00) heritage entry lobby has a Comms and DB cupboard that will need to strictly comply with BCA Clause D2.7 which requires any electricity meters, distribution boards or ducts, or telecommunications distribution boards installed in corridors/hallways/lobbies or the like to be enclosed with *non-combustible* construction or a fire protective covering (including ceiling void separation), with doorways suitably sealed against smoke spread.	D2.7
6.	With regard to a glass lift shaft, note that Clauses 2 and 4 of BCA Specification E3.1 'Lift Installations' will require: Clause 2 – Lift car • to have mechanical ventilation at the rate of one air change per minute; or • mechanical cooling; and • 2 hours of alternative power source in the event of normal power loss; Clause 4 – The Lift Shaft • to have cooling to ensure a dry bulb temperature in the shaft not exceeding 40°C; and • If cooling is by ventilation system, be provided at an air change rate using a temperature rise of no more than 5 K.	Specification E3.1, Clauses 2 and 4
7.	SCEGGS Darlinghurst is a female only secondary school and hence all student sanitary facilities proposed are primarily for the female students. Male and female staff have designated facilities proposed at Levels Ground (L00) and Level 3 (L03) being an accessible unisex (wheelchair) room and an ambulant toilet room at each of these levels. Based on a 50/ 50 male/ female staff split, these staff facilities will accommodate up to 20 male and 20 female staff. These staff facilities being separate rooms enable not more than 2 staff employees of the other sex may share toilet facilities. In addition, if not more than 10 staff are employed (or accommodated in the building), a unisex facility may be provided instead of separate facilities for each sex. The student facilities are proposed on level 2 (L02) and comprise an accessible unisex (wheelchair) room, an ambulant toilet cubicle and two able bodied toilet cubicles.	F2.3

Item	Description	BCA Provision
	These facilities will accommodate up to 75 female students. Notwithstanding, additional student facilities exist within the adjoining Joan Freeman Building.	

Annexure D to this report provides a detailed assessment of the proposal against ALL relevant Deemed-to-Satisfy Provisions of the BCA.

1 BASIS OF ASSESSMENT

1.1. Location and Description

The building development, the subject of this report, proposes an adaptive re use of Wilkinson House, including alterations and additions to the heritage building, and retention of the existing heritage facades.

Wilkinson House is an existing 5 storey education/ classroom assembly building at SCEGGS Darlinghurst.

1.2. Purpose

The purpose of this report is to assess the current design proposal against the Deemed-to-Satisfy Provisions of BCA 2019, and to clearly outline those areas (if any) where compliance is not achieved, where areas may warrant redesign to achieve strict BCA compliance or where areas may be able to be assessed against the relevant performance criteria of BCA 2019. Such assessment against relevant performance criteria will need to be addressed by means of a separate Performance Based Fire Safety Engineered Assessment Report to be prepared under separate cover.

1.3. Building Code of Australia

This report is based on the Deemed-to-Satisfy Provisions of the National Construction Code Series Volume 1 – Building Code of Australia, 2019 Amendment 1 Edition (BCA) incorporating the State variations where applicable. Please note that the version of the BCA applicable to new building works is the version applicable at the time of the lodgement of the Construction Certificate application to the Accredited Certifying Authority. The BCA is updated generally on a three-yearly cycle, starting from the 1st of May 2016.

1.4. Limitations

This report does not include nor imply any detailed assessment for design, compliance or upgrading for:

(a) the structural adequacy or design of the building;

(b) the inherent derived fire-resistance ratings of any proposed structural elements of the building (unless specifically referred to); and

(c) the design basis and/or operating capabilities of any proposed electrical, mechanical or hydraulic fire protection services.

This report does not include, or imply compliance with:

(a) the National Construction Code – Plumbing Code of Australia Volume 3;

(b) BCA Part D3 ‘Access for People with a Disability which is being undertaken by another Access consultant;

(c) the Disability Discrimination Act 1992 including the Disability ((Access to Premises – Buildings) Standards 2010 – unless specifically referred to), (Note: The provision of disabled access to the subject development is being undertaken by another Access consultant);

(d) BCA Section J ‘Energy Efficiency’ which is being undertaken by another ESD consultant;

(e) Demolition Standards not referred to by the BCA;

(f) Work Health and Safety Act 2011;

(g) Requirements of Australian Standards unless specifically referred to;

(h) Requirements of other Regulatory Authorities including, but not limited to, Telstra, Telecommunications Supply Authority, Water Supply Authority, Electricity Supply Authority, Work Cover, Roads and Maritime Services (RMS), Local Council, ARTC, Department of Planning and the like; and

(i) Conditions of Development Consent issued by the Local Consent Authority.

1.5. Design Documentation

This report has been based on the Design plans and Specifications listed in Annexure A of this Report.

2 BUILDING DESCRIPTION

For the purposes of the Building Code of Australia (BCA) the development may be described as follows.

2.1. Rise in Storeys (Clause C1.2)

The building is to have a rise in storeys of five (5), being from Lower Ground (LG) to Level 03 (L03).

2.2. Classification (Clause A6.0)

The building's proposed storeys have been classified as follows.

Table 1. Building Classification

Level	Class of Use	Use Description
Level 3 (L03)	9b	Assembly – Education (Secondary School)
Level 2 (L02)	9b	Assembly – Education (Secondary School)
Level 1 (L01)	9b	Assembly – Education (Secondary School)
Ground (L00)	9b	Assembly – Education (Secondary School)
Lower Ground (LG)	9b	Assembly – Education (Secondary School)

2.3. Effective Height (Clause A1.0)

The building has an *effective height* of more than 12 metres, being 12.94m (L03 RL 42.62 to LG RL 29.68 = 12.94m) and less than 25 metres as it relates to the BCA.

2.4. Type of Construction Required (Table C1.1)

The building is required to be of Type A Construction, the most fire resistant.

2.5. Floor Area and Volume Limitations (Table C2.2)

The building is subject to maximum floor area and volume limits of:-

Class 9b	Maximum Floor Area	8 000m^2
	Maximum Volume	48 000m^3

2.6. Fire Compartments

The following *fire compartments* have been determined:

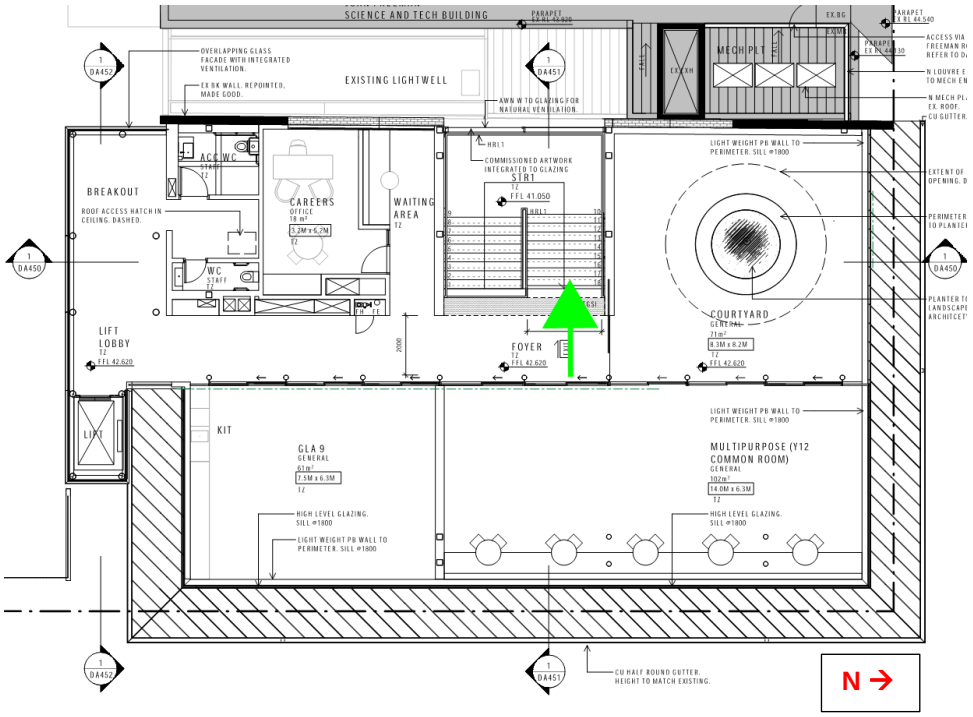
(a) Ground Floor (L00) through to Level 3 (L03) as connected via the central open stairway - ~ 1 800m^2

(b) Lower Ground Floor (LG) - ~ 450m^2

2.7. Exits

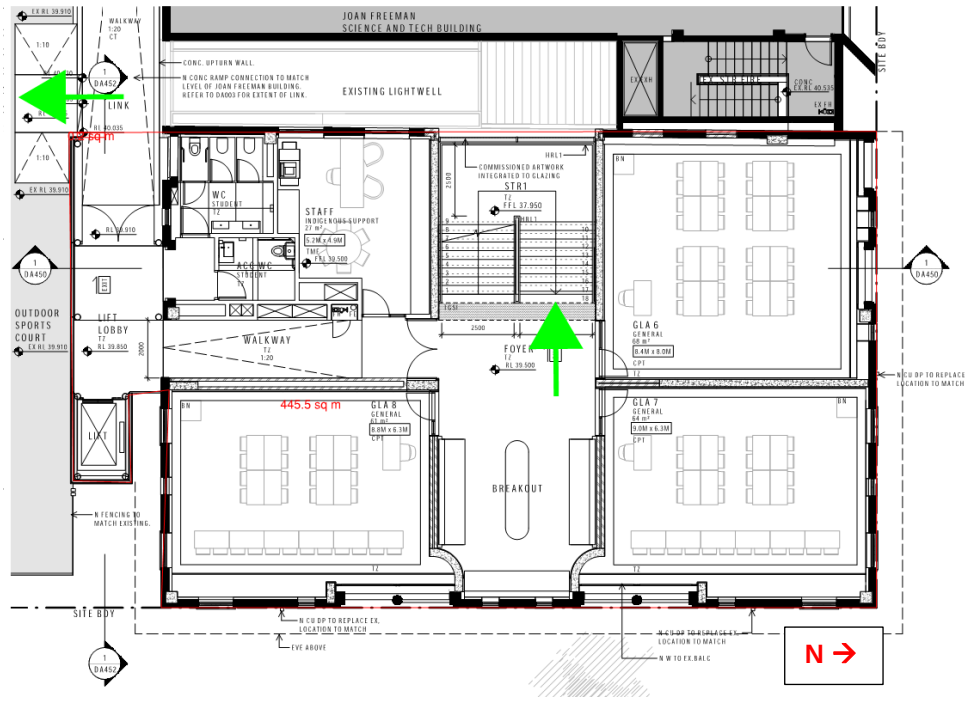
The following points in the building have been considered as the proposed exits:

(a) Level 3 (L03) - the central open stairway descending to ground floor level;



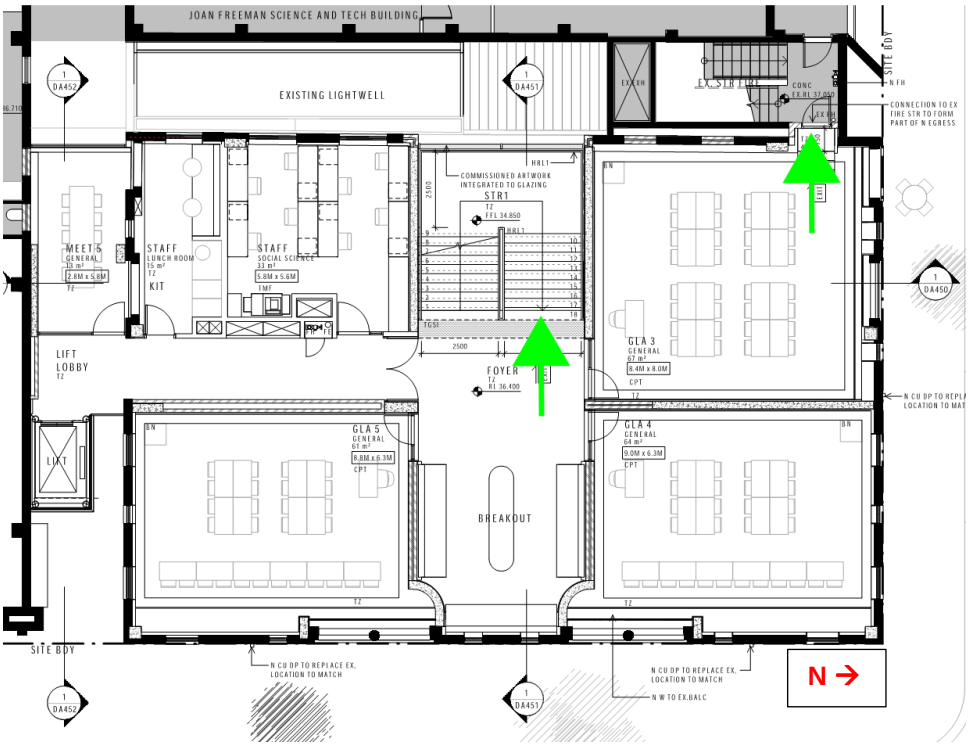
(b) Level 2 (L02) - the central open stairway descending to ground floor level;

- ‘horizontal’ exit to Centenary Sports Hall rooftop sports field, other building



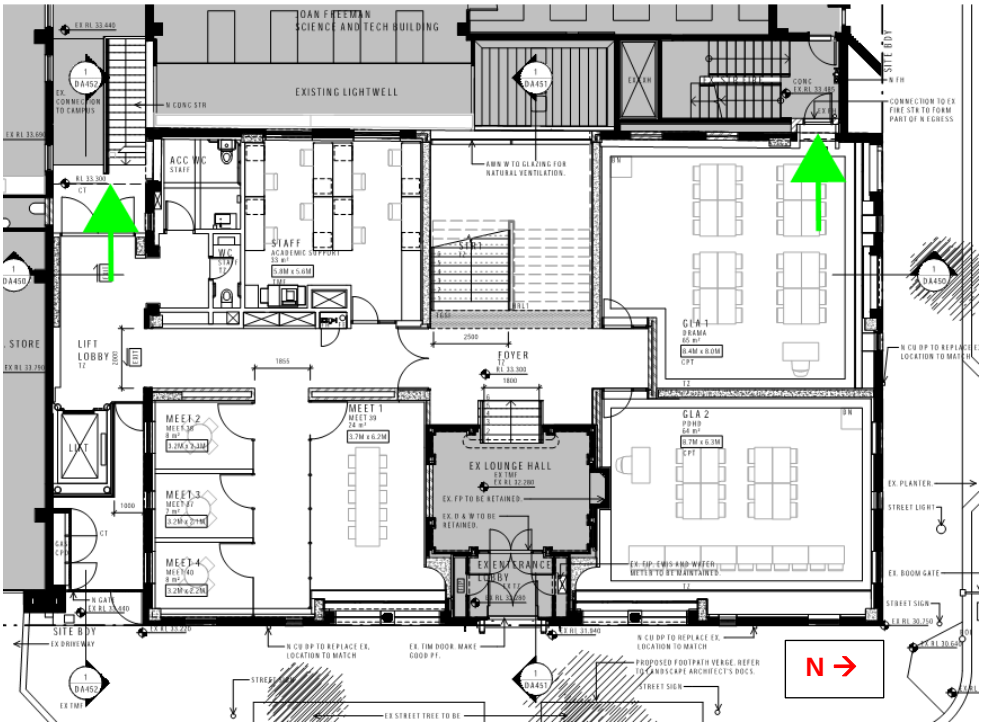
(c) Level 1 (L01) - the central open stairway descending to ground floor level;

- the fire-isolated stairway of the united Joan Freeman Building



(d) Ground Floor (L00) horizontal exit to united Joan Freeman Building;

the fire-isolated stairway of the united Joan Freeman Building

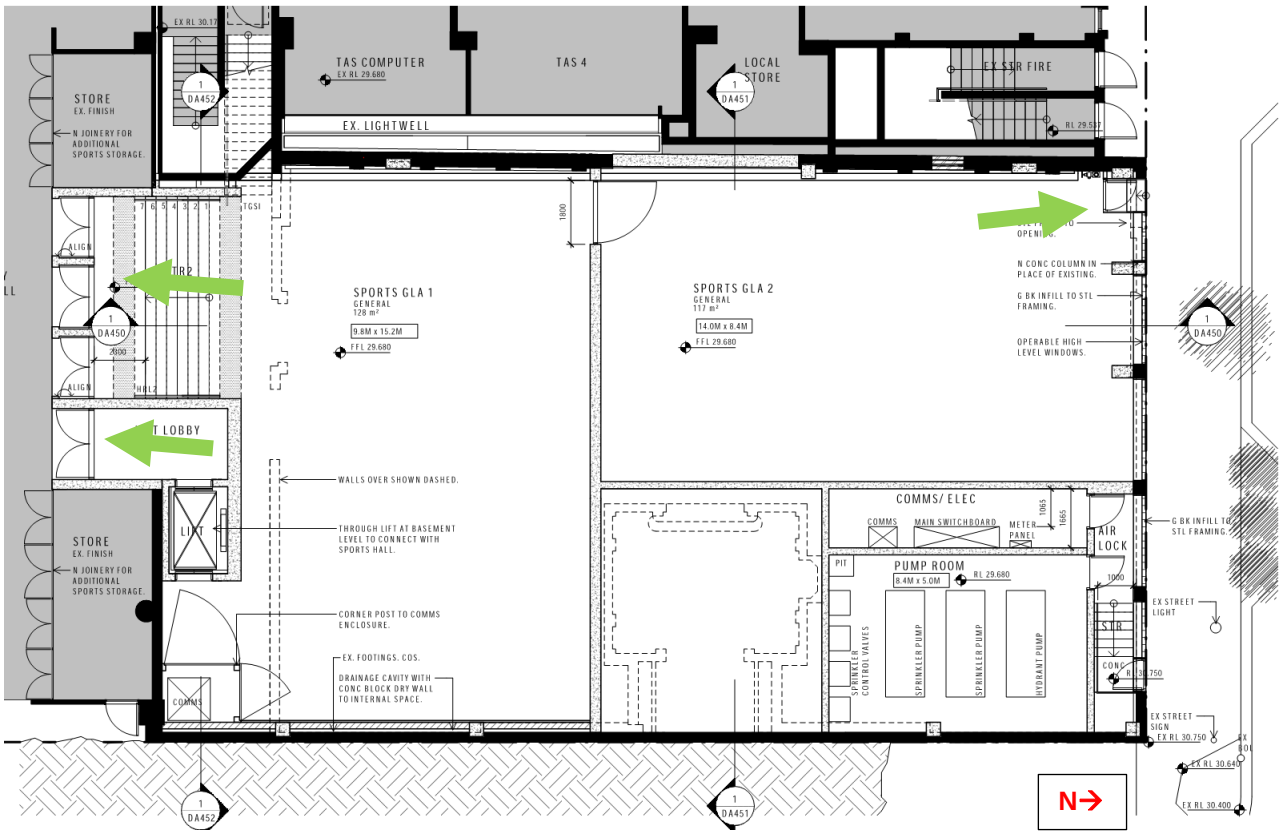


(e) Lower Ground Floor (LG)

'horizontal' exit serving the Sports GLA 1 room to Centenary Sports Hall other building;

''horizontal' exit from lift lobby to Centenary Sports Hall other building

entry/ exit door serving Sports GLA 2 room to St Peter's Street



2.8. Climate Zone (Clause A1.0)

The building is located within Climate Zone 5.

2.9. Location of Fire-source features

The fire source features for the subject development are:

North:	The far side of St Peter's Street	-	more than 6m distant (~12m as scaled);
South:	Centenary Sports Hall	-	less than 3m (~2.7m as scaled);
East:	The far side of Forbes Street	-	more than 6m distant (~19.5m as scaled);
West:	The Joan Freeman Building	-	0 to 3m as scaled;
	and beyond this United building, the school's western side boundary	-	0m setback assumed

In accordance with Clause 2.1 of Specification C1.1, a part of a building element is exposed to a *fire-source feature* if any of the horizontal straight lines between that part and the fire-source feature, or vertical projection of the feature, is not obstructed by another part of the building that–

(a) has an FRL of not less than 30/–/–; and

(b) is neither transparent nor translucent.

3 MATTERS FOR FURTHER CONSIDERATION

3.1. General

Assessment of the Architectural design documentation against the Deemed-to Satisfy Provisions of the Building Code of Australia, 2019 (BCA) has revealed the following areas where compliance with the BCA may require further consideration and/or may involve assessment as Performance Based (Fire Engineered) *Performance Solutions*. Any *Performance Solutions* will be required to clearly indicate methodologies for achieving compliance with the relevant *Performance Requirements*.

Annexure D to this report provides a detailed assessment of the proposal against ALL relevant Deemed-to-Satisfy Provisions of the BCA.

Note: It is important that Annexure D is read in conjunction with the items below, as some matters may not have had sufficient information provided to allow a detailed assessment to be undertaken.

3.2. Dimensions and Tolerances

The BCA contains the minimum standards for building construction and safety, and therefore generally stipulates minimum dimensions which must be met. BCA Logic's assessment of the plans and specifications has been undertaken to ensure the minimal dimensions have been met.

The designer and builder should ensure that the minimum dimensions are met onsite and consideration needs to be given to construction tolerances for wall set outs, applied finishes and skirtings to corridors and bathrooms for example, tiling bed thicknesses and the like which can adversely impact on critical maters such as access for people with disabilities, stair and corridor widths and balustrade heights.

3.3. Performance Based Design – Performance Solutions

There are specific areas throughout the development where strict Deemed-to-Satisfy BCA Compliance will not be achieved by the proposed design and site constraints. These matters will need to be address in a detailed Fire Safety Engineering Report to be prepared for this development under separate cover:

Table 2. Performance Solutions

Item	Description of Performance Solution	DTS Provision	Relevant Performance Requirements
1.	The new glass wall 'lift lobby box' of the upper levels of the southern elevation are not to be protected by external wall wetting sprinklers, which negates the Clause 2.5(d) of BCA Specification C1.1 concession permitting no fire resistance for these new glass and steel frame walls situated less than 3m from the Centenary Sports Hall building. Notwithstanding, a fire engineered performance solution is proposed to address no fire rating of the new glass and steel frame wall 'lift lobby box' external walls.	C1.1, Specification C1.1	CP1
2.	'Horizontal exits' albeit to another building that is not considered united being the Centenary Sports Hall building to the south, are proposed to serve proposed Levels 2 (L02) and Lower Ground (LG).	Part A7, D1.2, D1.4 and D1.11	DP4 and EP2.2

Item	Description of Performance Solution	DTS Provision	Relevant Performance Requirements
3.	The central open circulating stairway serving Levels 3, 2, and 1 and discharging and connecting to the Ground Floor represents the only exit serving the topmost Level 3 (L03), in lieu of being one of at least two exits as required by BCA Clause D1.2(d)(v) for secondary schools with a rise in storeys of 2 or more	D1.2(d)(v)	DP4 and EP2.2
4.	The upper lift landing to the Lower Ground floor connects with one 'horizontal' exit only, being lift lobby doors to the Centenary Sports Hall to the south, in lieu of being one of at least two exits for secondary schools with a rise in storeys of 2 or more.	D1.2(d)(v)	DP4 and EP2.2
5.	The central open circulating stairway serving Levels 3, 2, and 1 and discharging and connecting to the Ground Floor connects four storeys, in lieu of being a fire isolated stairway separated from the whole building and discharging directly to outside the building.	D1.3 and D1.7	DP5 and EP2.2
6.	A 1200mm wide lift car, in lieu of 1400mm as required for an accessible lift traveling more than 12m (12.94m proposed) is proposed.	E3.6 and Table E3.6b	EP3.4
7.	The construction of the external walls is such that they will prevent the penetration of water that could cause unhealthy or dangerous conditions or loss of amenity to occupants and undue dampness or deterioration of building elements.	No DtS Provisions	FP1.4

3.4. Façade Construction – Non-Combustible

As the building is required to be of Type A, the external façade is required to be *non-combustible* and comply with Clause C1.9 of BCA2019 which states as follows:

(a) In a building required to be of Type A or B construction, the following building elements and their components must be *non-combustible*:

(i) External walls and common walls, including all components incorporated in them including the facade covering, framing and insulation.

(ii) The flooring and floor framing of lift pits.

(iii) Non-*loadbearing* internal walls where they are required to be fire-resisting.

(b) A shaft, being a lift, ventilating, pipe, garbage, or similar shaft that is not for the discharge of hot products of combustion, that is non-loadbearing, must be of *non-combustible* construction in—

(i) a building required to be of Type A construction; and

(ii) a building required to be of Type B construction, subject to C2.10, in—

(A) a Class 2, 3 or 9 building; and

(B) a Class 5, 6, 7 or 8 building if the shaft connects more than 2 storeys.

(c) A l*oadbearing* internal wall and a *loadbearing fire wall*, including those that are part of a *loadbearing* shaft, must comply with Specification C1.1.

(d) The requirements of (a) and (b) do not apply to gaskets, caulking, sealants, termite management systems, Glass including laminated glass, thermal breaks associated with glazing systems and damp-proof courses.

(e) The following materials, may be used wherever a *non-combustible* material is required:

(i) Plasterboard.

(ii) Perforated gypsum lath with a normal paper finish

(iii) Fibrous-plaster sheet.

(iv) Fibre-reinforced cement sheeting.

(v) Pre-finished metal sheeting having a combustible surface finish not exceeding 1 mm thickness and where the Spread-of-Flame Index of the product is not greater than 0.

(vi) *Sarking-type materials* that do not exceed 1 mm in thickness and have a *Flammability Index* not greater than 5.

(vii) Bonded laminated materials where—

(A) each lamina, including any core, is *non-combustible*; and

(B) each adhesive layer does not exceed 1 mm in thickness and the total thickness of the adhesive layers does not exceed 2 mm; and

(C) the Spread-of-Flame Index and the Smoke-Developed Index of the bonded laminated material as a whole do not exceed 0 and 3 respectively.

Currently the external façade construction has been nominated on the plans as follows:

- Northern elevation – existing non-combustible brick heritage façade with timber framed casement windows to remain as existing;
- Southern elevation – existing non-combustible brick heritage façade with timber framed casement windows to remain as existing;

- Eastern elevation – existing non-combustible brick heritage façade with timber framed casement windows to remain as existing;
- Western elevation – existing non-combustible brick heritage façade with timber framed casement windows to remain as existing.

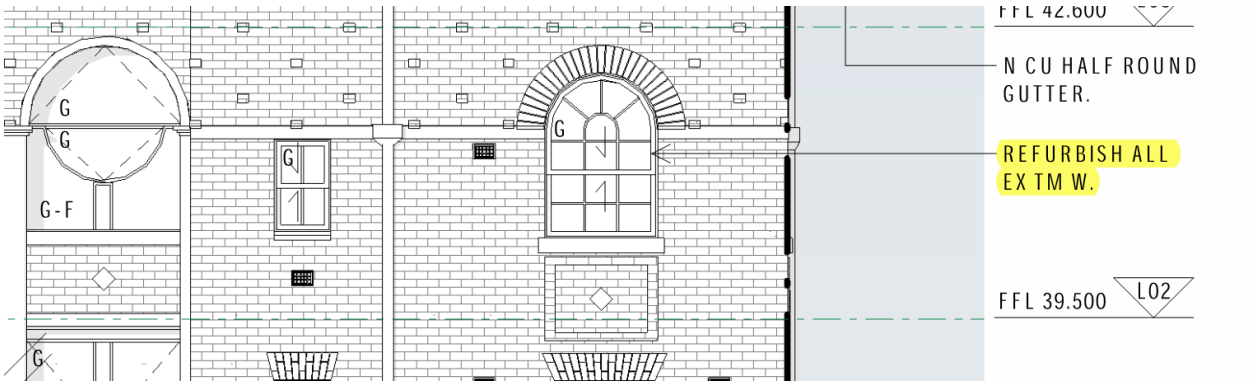
It is also noted that this clause also prohibits the use of in situ formwork containing combustible elements including PVC lined formwork products where the PVC lining remains in place for the life of the building where proposed to be used as an external wall element, common walls, the flooring and floor framing of lift pits, services riser shafts or non-*loadbearing* internal walls required to be fire resisting.

Adjacent Joan Freeman Building

With reference to the United Building discussions below at item 3.5 below, note that the Joan Freeman building has aluminium composite panel (ACP) external wall cladding of an as yet unknown compliance status. SCEGGS is presently investigating this matter for resolution.

Existing Windows of Wilkinson House

With reference to the proposed Elevation drawings, with part of the East elevation re printed below, the 2022 SCEGGS Wilkinson House project is a complete re-build except that the existing brick heritage façade is to remain. With this, existing timber framed casement windows are to be refurbished and converted from single to double hung on a maintenance upgrade basis. Whilst it is acknowledged that timber framed windows are combustible, it must be recognised that the facades of the building to remain are existing and do not form part of the scope of works of the 2022 SCEGGS Wilkinson House project.



3.5. BCA Part A7 & D1.11 - United Building and Horizontal Exits

The Wilkinson House building and the adjacent Joan Freeman building to the west currently share and will continue to share hydrant and sprinkler infrastructure with the shared pump and sprinkler valve room located at the north eastern corner of the Lower Ground of Wilkinson House. The hydrant booster is located in an external wall cupboard outside the pump room on Forbes Street.

For this reason and given that the Wilkinson House proposal will utilise and share the fire isolated stairway at the north eastern corner of the Joan Freeman building that abuts, with exits into the Joan Freeman stairway proposed at Levels 1 (L01) and Ground (L00), the proposed Wilkinson House re-build and the Joan Freeman building must be considered a United building as defined by BCA Part A7.

For the ongoing detailed design and Construction Certificate phase of the 2022 SCEGGS Wilkinson House project works, configuring and alignment of the fire safety measures and their standards of performance of the two buildings will need to be comprehensively documented.

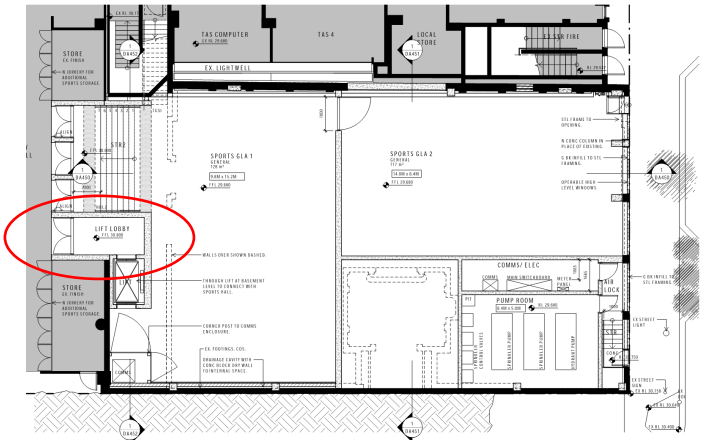
In addition to the shared fire-isolated stairway and fire services, the 2022 SCEGGS Wilkinson House project works, as detailed at item 2.7 above, proposes to create a horizontal exit to the Joan Freeman building at the south western corner of proposed Level 1 (L01).

In addition, 'horizontal exits' albeit to another building that is not considered united being the Centenary Sports Hall building to the south, are proposed to serve proposed Levels 2 (L02) and Lower Ground (LG). These 'horizontal' exits to another building that is not united, will require a performance based solution.

3.6. BCA Clause D1.2 - Number of Exits

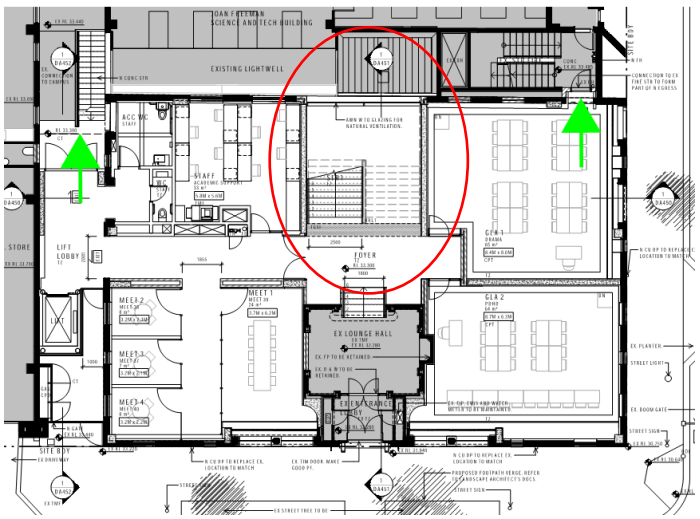
The central open circulating stairway serving Levels 3, 2, and 1 and discharging and connecting to the Ground Floor represents the only exit serving the topmost Level 3 (L03), in lieu of being one of at least two exits as required by BCA Clause D1.2(d)(v) for secondary schools with a rise in storeys of 2 or more. This single exit serving Level 3 will require a performance based solution.

The upper lift landing to the Lower Ground floor connects with one 'horizontal' exit only, being lift lobby doors to the Centenary Sports Hall to the south, in lieu of being one of at least two exits as required by BCA Clause D1.2(d)(v) for secondary schools with a rise in storeys of 2 or more. This single exit serving the Lower Ground upper lift landing will require a performance based solution.



3.7. BCA Clauses D1.3 & D1.7 - Fire Isolated Exits

The central open circulating stairway serving Levels 3, 2, and 1 and discharging and connecting to the Ground Floor connects four storeys, in lieu of being a fire isolated stairway separated from the whole building and discharging directly to outside the building. This will require a performance based solution.



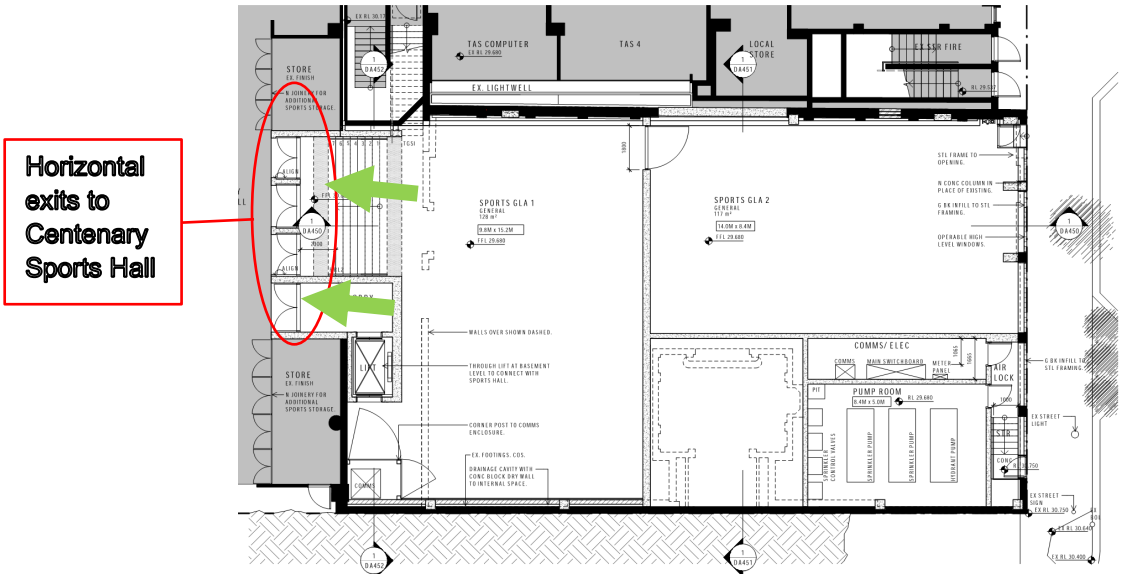
3.8. Clause 3.7 of BCA Specification C1.1 – Internal Columns and Walls: Concession

For a building with an *effective height* of not more than 25 m, but with rise in storeys exceeding 3 and having a roof without an FRL in accordance with Clause 3.5, in the storey immediately below that roof, internal columns other than those referred to in Clause 3.1(f) and internal walls other than *fire walls* and shaft walls may have a 'one hour' fire resistance (*FRL* 60/60/60), in lieu of two hours (*FRL* 120/120/120) as is generally required for the Wilkinson House building.

3.9. BCA Clauses C2.7(c) - Separation by Fire Walls

With the uniting of the Wilkinson House and Joan Freeman buildings, a horizontal exit to the Joan Freeman building at the south western corner of proposed Level 1 (L01) is proposed. In addition, 'horizontal exits' albeit to another building that is not considered united being the Centenary Sports Hall building to the south, are proposed to serve proposed Levels 2 (L02) and Lower Ground (LG).

These horizontal exits necessitate the provision of C2.7(c) fire walls to separate fire compartments and to C2.7(b) fire wall separate the Wilkinson House from the Centenary Sports Hall buildings.



3.10. BCA Clauses C3.2 and C3.4 – Protection of Openings in External Walls & Protection of Openings in External Walls & Clause 2.5(d) of Specification C1.1 – Curtain or Panel Walls

Subject to the new glass wall 'lift lobby box' of the upper levels of the southern elevation being protected by external wall wetting sprinklers (refer to screenshot overleaf), Clause 2.5(d) of BCA Specification C1.1 does not require a fire resistance level for these new glass walls situated less than 3m from the Centenary Sports Hall building. However, note that this precludes the ability to have any openable windows or 'ventilators' within 3m of the Sports Hall building. This includes any openings to the eastern or western return walls of the glass box that are within 3m of the Sports Hall.

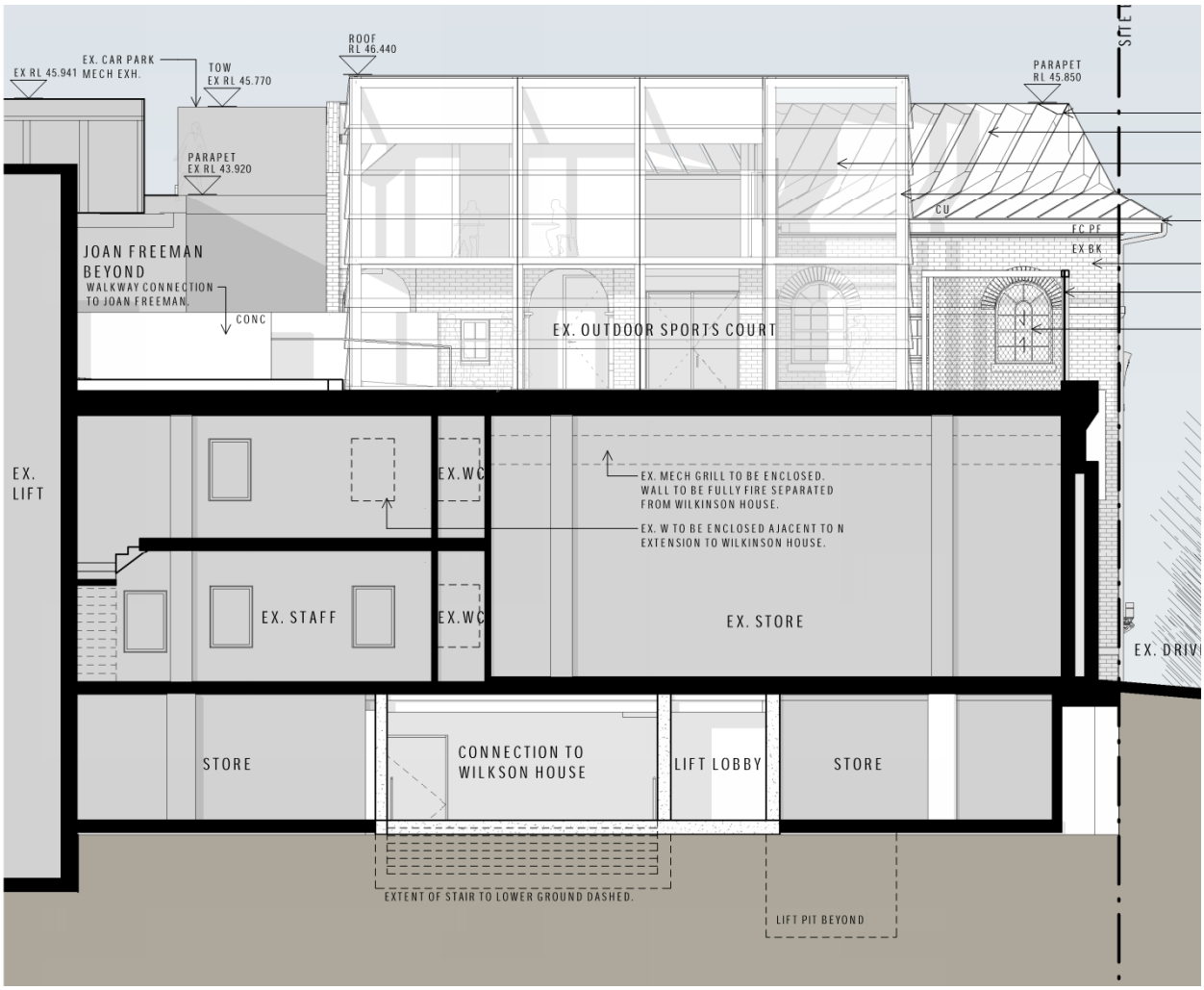
Furthermore, for the existing windows of the existing heritage southern elevation, scaled at ~2.7m from the Centenary Sports Hall building, BCA Clause C3.2 requires the existing windows to be protected from the 'fire source' (other building) in accordance with BCA Clause C3.4, being:

(a) external wall wetting sprinklers to permanently fixed shut windows/ or automatically closing windows; or

(b) -/60/- FRL fire windows, permanently fixed shut or automatically closing; or

(c) -/60/- FRL fire shutters; or

(d) or a fire engineered performance based solution.



3.11. BCA Clauses C3.3 & C3.4 – Separation of External Walls and Associated Openings in Different Fire Compartments & Protection of Openings in External Walls & Clause 2.5(d) of Specification C1.1 – Curtain or Panel Walls

The uniting of the re-built Wilkinson House building with the Joan Freeman building will require the western elevation with existing windows and new glass wall of the central stairway (refer to screenshot overleaf) to be considered an external wall exposed to an opposing external wall of other Joan Freeman compartment, less than 6m distant. Scaled at a separation distance of 3m, the subject Wilkinson House existing brick western wall is required to have a one hour' 60/60/60 FRL fire rating and the existing windows to be protected in accordance with BCA Clause C3.4, being:

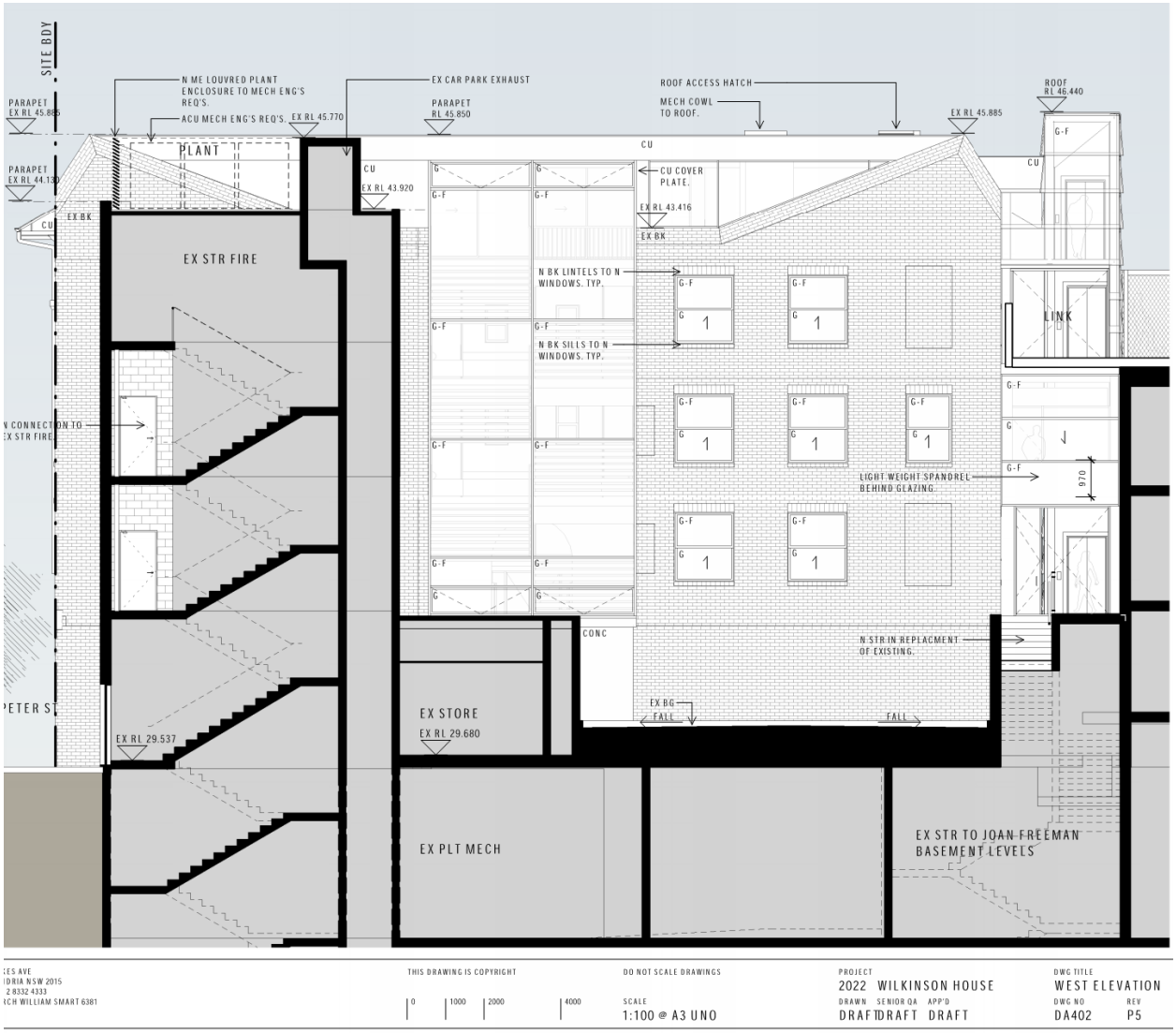
(a) external wall wetting sprinklers to permanently fixed shut windows/ or automatically closing windows; or

(b) -/60/- FRL fire windows, permanently fixed shut or automatically closing; or

(c) -/60/- FRL fire shutters; or

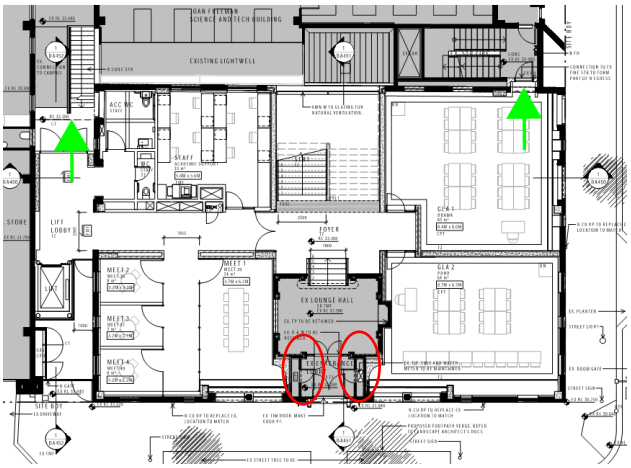
(d) or a fire engineered performance based solution.

Subject to the new glass wall of the central stairway being protected by external wall wetting sprinklers, Clause 2.5(d) of BCA Specification C1.1 permits the wall to not have a fire resistance level (a one hour fire resistance would otherwise be required by BCA C3.3 above). However, note that this precludes the ability to have any openable windows or 'ventilators', unless they were to be fitted with automatic closing upon fire trip actuators.



3.12. BCA Clause D2.7 – Installations in Exits and Paths of Travel

The ground floor (L00) heritage entry lobby has a Comms and DB cupboard that will need to strictly comply with BCA Clause D2.7 which requires any electricity meters, distribution boards or ducts, or telecommunications distribution boards installed in corridors/hallways/lobbies or the like to be enclosed with *non-combustible* construction or a fire protective covering (including ceiling void separation) with doorways suitably sealed against smoke spread.



3.13. BCA Clauses D1.13 & D2.9 – Number of Persons Accommodated and Width of Stairways

The proposed central open grand stairway is to have 2.5m wide flights which will only be counted as a 2m egress width.

Notwithstanding, such loss of egress width is of no consequence as per BCA Clause/ Table D1.13, the building is deemed to accommodate a maximum of:

Level 3 L03	-	80;
Level 2 L02	-	110;
Level 1 L01	-	120;
Ground L00	-	90;
Lower Ground LG	-	94;
Total:		**494**

Accordingly, no more than 80 occupants would be using the central stairway to egress from the topmost Level 03, whereas the stairway with a deemed width of 2m, can readily account for 200 egressing occupants. For all other levels except Lower Ground, two exits are available, i.e. 2m wide central stairway and another exit of at least 1m in width, therefore, up to 300 egressing occupants per floor. Finally, the Lower Ground floor will have a 1m wide exit to St Peter's Street and up to 4.5m of 'horizontal' egress width to the Centenary Sports Hall via 3 sets of doorways, to account for the assumed maximum population of 94.

3.14. BCA Clause E3.6/ Table E3.6 – Passenger Lifts

A 1200mm wide lift car, in lieu of 1400mm as required for an accessible lift traveling more than 12m (12.94m proposed), will require a performance based solution addressing BCA Performance Requirement EP3.4.

3.15. BCA Specification E3.1 – Lift Installations

With regard to a glass lift shaft, note that Clauses 2 and 4 of BCA Specification E3.1 'Lift Installations' will require:

Clause 2 – Lift car

- to have mechanical ventilation at the rate of one air change per minute; or
- mechanical cooling;

and

- 2 hours of alternative power source in the event of normal power loss;

Clause 4 – The Lift Shaft

- to have cooling to ensure a dry bulb temperature in the shaft not exceeding 40°C; and
- If cooling is by ventilation system, be provided at an air change rate using a temperature rise of no more than 5 K.

3.16. BCA Clause / Table F2.3 - Sanitary Facilities

SCEGGS Darlinghurst is a female only secondary school and hence all student sanitary facilities proposed are primarily for the female students.

Male and female staff have designated facilities proposed at Levels Ground (L00) and Level 3 (L03) being an accessible unisex (wheelchair) room and an ambulant toilet room at each of these levels. Based on a 50/ 50 male/ female staff split, these staff facilities will accommodate up to 20 male and 20 female staff.

These staff facilities being separate rooms enable not more than 2 staff employees of the other sex may share toilet facilities. In addition, if not more than 10 staff are employed (or accommodated in the building), a unisex facility may be provided instead of separate facilities for each sex.

The student facilities are proposed on level 2 (L02) and comprise an accessible unisex (wheelchair) room, an ambulant toilet cubicle and two able bodied toilet cubicles. These facilities will accommodate up to 75 female students.

Notwithstanding, additional student facilities exist within the adjoining Joan Freeman Building.

4 STATEMENT OF COMPLIANCE

The architectural design documentation as referred to in report has been assessed against the applicable provisions of the Building Code of Australia, (BCA) and it is considered that such documentation complies or is capable of complying (as outlined in Annexure D) with that Code.

ANNEXURE A DESIGN DOCUMENTATION

Annexure A – Design Documentation

This report has been based on the following design documentation as re printed from drawing sheet DA001 'Legend, Drawing List, Site Map' revision 'A – For SSDA Submission' dated 15.10.21 prepared by Smart Design Studio.

Table 3. Architectural Plans

DRAWING SCHEDULE

DA001	LEGEND, DRAWING LIST, SITE MAP
DA002	SCHOOL SITE ANALYSIS PLAN
DA003	SUBJECT SITE PLAN
DA005	TEMP DEMOUNTABLES SHEET 01
DA006	TEMP DEMOUNTABLES SHEET 02
DA050	L00 DEMOLITION PLAN
DA051	L01 DEMOLITION PLAN
DA052	L02 DEMOLITION PLAN
DA053	L03 DEMOLITION PLAN
DA055	LG DEMOLITION PLAN
DA060	DEMO EAST ELEVATION
DA061	DEMO NORTH ELEVATION
DA062	DEMO WEST ELEVATION
DA063	DEMO SOUTH ELEVATION
DA066	E-W DEMOLITION SEC
DA100	L00 PLAN
DA101	L01 PLAN
DA102	L02 PLAN
DA103	L03 PLAN
DA104	RF PLAN
DA105	LG PLAN
DA400	EAST ELEVATION
DA401	NORTH ELEVATION
DA402	WEST ELEVATION
DA403	SOUTH ELEVATION
DA107	MULTIPURPOSE
DA450	SECTION AA
DA451	SECTION BB
DA452	SECTION CC
DA551	STL WINDOWS
DA750	GFA PLANS
DA760	SHADOW DIAGRAM
DA765	HEIGHT PLANE DIAGRAM

ANNEXURE B ESSENTIAL SERVICES

Annexure B - Essential Services

The following fire safety measures are required to be installed in the building. The following table may be required to be updated as the design develops and options for compliance are confirmed.

Table 4. Essential Fire Safety Measures

Item	Essential Fire and Other Safety Measures	Standard of Performance
Fire Resistance (Floors – Walls – Doors – Shafts)		
1.	Access Panels & doors/hoppers (fire rated)	**BCA2019 C3.13** (Openings in Shafts) **BCA2019 Spec C3.4** AS 1905.1:2015 (Fire Resistant Doorsets) AS 1905.2:2005 (Fire Resistant roller shutters)
2.	Construction Joints	**BCA2019 C1.1, Spec C1.1** **BCA2019 C3.16** AS 1530.4:2014 & AS 4072.1:2005
3.	Fire doors	**BCA2019 C2.12** (Separation of Equipment) **BCA2019 C2.13** (Electricity Supply Systems) **BCA2019 C3.4** (Acceptable methods of Protection) **BCA2019 C3.5** (Doors in Fire Walls) **BCA2019 C3.**7 and D1.11 (Horizontal Exits) **BCA2019 C3.8** (Openings in Fire Isolated Exits) **BCA2019 C3.10** (Opening in Fire Isolated Lift Shafts) AS1735.11- 1986 **BCA2019 C3.13** (Opening in Shafts) **BCA2019 D2.8** (Enclosure of Space under Stairs) Spec C3.4 AS1905.1: 2015
4.	Fire seals protecting openings in fire resisting components of the building	**BCA2019 C3.15** (Openings for service installations) **BCA2019 C3.16** (Construction joints) **BCA2019 Spec C3.15** AS1530.4:2014 & AS4072.1-2005
5.	Fire shutters	**BCA2019 C3.4** (Acceptable methods of protection)

Item	Essential Fire and Other Safety Measures	Standard of Performance
		BCA2019 Spec. C3.4 AS1905.2-2005
6.	Fire windows > Fixed Internal wall-wetting sprinklers > Fixed External wall-wetting sprinklers > -/60/- Fire Windows automatic closing > -/60/- Fire Windows fixed closed > -/60/- automatic closing Fire Shutters > FRL required for windows	**BCA2019 C3.2** (Protection of Openings) **BCA2019 C3.3** (Separation of external walls and associated openings in different fire compartments) **BCA2019 C3.4** (Acceptable Methods of Protection)
7.	Lightweight construction	**BCA2019 C1.1, Spec. C1.1** **BCA2019 C1.8, Spec C1.8** **BCA2019 C2.7** (Fire Walls) **BCA2019 C2.12** (Separation of Equipment) **BCA2019 D2.8** (Enclosure of Space under Stairs and ramps)
General		
8.	Portable fire extinguishers	**BCA2019 E1.6** AS 2444–2001
9.	Fire blankets	AS 2444–2001
General Egress		
10.	Automatic fail safe devices	**BCA2019 D2.21** (Operation of Latches)
11.	Warning & operational signs	**BCA2019 D2.23 (**Signs on Fire Doors) **BCA2019 D3.6** (Braille Exit Signs) (Note: E4.5 (Exit Signs)) **BCA2019 E3.3** (Lift Signs)
Lifts		
12.	Access to Lift Pits > Located at lowest level or if >3m provided through an access door	**BCA2019 D1.17** (Access to Lift Pits) 'DANGER LIFT WELL – ENTRY OF UNAUTHORISED PERSONS PROHIBITED – KEEP CLEAR AT ALL TIMES'
13.	Stretcher Lifts including > Fire Service Controls > Recall Operation > Drive control switch	**BCA2019 E3.2** **BCA2019 E3.7** (Fire Service Controls) **BCA2019 E3.9** (Fire Service Recall Operation Switch)

Item	Essential Fire and Other Safety Measures	Standard of Performance
		BCA2019 E3.10 (Lift Car Fire Service drive control switch) **BCA2019 Spec E3.1** AS 1735.11:1986 (Fire rated landing doors)
Electrical Services		
14.	Automatic fail-safe devices	**BCA2019 D2.21** (Operation of Latches)
15.	Emergency lighting	**BCA2019 E4.2, E4.4** AS/NZS 2293.1:2018
16.	Exit signs	**BCA2019 E4.5** (Exit Signs) **BCA2019 E4.6** (Direction Signs) **BCA2019 E4.8** (Design and Operation - Exits) AS/NZS 2293.1:2018
17.	Emergency warning and intercom systems (EWIS) > Class 9b (School RIS >3)	**BCA2019 E4.9** AS 1670.4:2018 (EWIS)
18.	System Monitoring	**BCA2019 E2.2 , Table E2.2a,Spec E2.2a** AS 1670.3:2018 Monitoring Required for any: > sprinkler system
Hydraulic Services		
19.	Automatic fire suppression systems > General Sprinklers	**BCA2019 E1.5** AS 2118.1:2017 (Sprinklers)
20.	Fire hydrant systems > NSW Storz Couplings	**BCA2019 E1.3** AS 2419.1:2005 FRNSW Technical Sheet D15/45534.V9 issued 10.01.19, 'Compatible Hose Connections'
21.	Wall-wetting sprinkler / drenchers	**BCA2019 C3.4,** AS 2118.2: Wall-wetting sprinkler / drenchers
Mechanical Services		
22.	Fire dampers	**BCA2019 E2.2, Spec E2.2a, Spec E2.2b** **BCA2019 C3.15** AS 1668.1:2015 (Amdt 1) AS 1682.1:2015 & AS 1682.2:2015

Item	Essential Fire and Other Safety Measures	Standard of Performance
23.	1. Mechanical air handling systems 2. Auto-shutdown of Air-handling System. > (Clause E2.2(b)) - Any system that recycles air from one fire compartment to another, or operates in a manner that may spread smoke and does not operate as a smoke control system as per AS 1668.1:2015; > miscellaneous exhaust are systems installed as per Section 5 and 6 of AS 1668.1:2015; > (NSW Table E2.2b) - Any system in a Class 9b assembly building which does not form part of a smoke hazard management system, other than: > non-ducted individual room units with a capacity of not more than 1000 L/s; or > miscellaneous exhaust are systems installed as per Section 5 and 6 of AS 1668.1:2015.	**BCA2019 E2.2, Table E2.2a, Table E2.2b** **Spec E2.2a, Spec E2.2b** AS 1668.1:2015 (Amdt 1) **Note: 5.5.3 Override control** To enable manual control by attending emergency services personnel, fans that are not required to shut down on initiation of fire mode in the car park shall be provided with a control switch at the designated building entry point. **Note:** Signage should be located at the car park entry indicating the location of the control switches.
Notes: (An air-handling system which does not form part of a smoke hazard management system in accordance with Table E2.2a or Table E2.2b and which recycles air from one *fire compartment* to another *fire compartment* or operates in a manner that may unduly contribute to the spread of smoke from one *fire compartment* to another *fire compartment* must— (i) ((be designed and installed to operate as a smoke control system in accordance with AS 1668.1:2015; or (ii) (A) incorporate smoke dampers where the air-handling ducts penetrate any elements separating the fire compartments served; and (B) be arranged such that the air-handling system is shut down and the smoke dampers are activated to close automatically by smoke detectors complying with clause 7.5 of AS 1670.1:2018; and for the purposes of this provision, each *sole-occupancy unit* in a Class 2 or 3 building is treated as a separate *fire compartment*. Miscellaneous air-handling systems covered by Sections 5 and 6 of AS 1668.1:2015 serving more than one *fire compartment* (other than a carpark ventilation system) and not forming part of a smoke hazard management system must comply with that Section of the Standard.		
24.	**Alternative Solution** Fire Engineering Report (FER) prepared by Holmes Fire and Safety.	

ANNEXURE C FIRE RESISTANCE LEVELS

Annexure C - Fire Resistance Levels

The following fire resistance levels (FRL's) are required for the various building elements, with a fire source feature being the far boundary of a road adjoining the allotment, a side or rear boundary or an external wall of another building on the allotment except a Class 10 structure.

Type A Construction

Table 5. Type A Construction

Item	Class 9b
Loadbearing External Walls (including columns and other building elements incorporated therein) - Less than 1.5m to a *fire- source feature* - 1.5 – less than 3m from a *fire-source feature* - 3m or more from a *fire source feature*	120/120/120 120/90/90 120/60/30
Non-Loadbearing External Walls - Less than 1.5m to a *fire-source feature* - 1.5 – less than 3m from a *fire-source feature* - 3m or more from a *fire-source feature*	-/120/120 -/90/90 -/-/-
External Columns - Loadbearing - Non-loadbearing	120/-/- -/-/-
Common Walls & Fire Walls	120/120/120
Stair and Lift Shafts required to be fire-resisting - Loadbearing - Non-loadbearing	120/120/120 -/120/120
Internal walls bounding sole occupancy units - Loadbearing - Non-loadbearing	120/-/- -/-/-
Internal walls bounding public corridors, public lobbies and the like: - Loadbearing - Non-loadbearing	120/-/- -/-/-
Ventilating, pipe, garbage and like shafts: - Loadbearing - Non-loadbearing	120/90/90 -/90/90
Other loadbearing internal walls, beams trusses and columns	120/-/-
Floors	120/120/120
Roofs[1]	120/60/30

Note 1 The roof need not comply with any FRL's due to the sprinkler protection of the entire building.

ANNEXURE D DETAILED BCA 2019 ASSESSMENT

Annexure D – Detailed BCA 2019 Assessment

Outlined below is a detailed assessment of the design under the Deemed-to-Satisfy Provisions of the Building Code of Australia (BCA) including the State variations where applicable.

All Deemed-to-Satisfy clauses that are applicable to the subject building have been referred to below, including a comment adjacent to each clause of the proposal's ability to satisfy each respective clause.

The abbreviations outlined below have been used in the following table.

N/A	Not Applicable. The Deemed-to-Satisfy clause is not applicable to the proposed design.
Complies	The relevant provisions of the Deemed-to-Satisfy clause have been satisfied by the proposed design.
CRA – Refer Annexure F	'COMPLIANCE READILY ACHIEVABLE'. It is considered that there is not enough information included in the documentation to accurately determine strict compliance with the individual clause requirements. However, with further design development, compliance can readily be achievable. This item is to be read in conjunction with the BCA Specification included within Annexure F of this report.
FI	Further Information is necessary to determine the compliance potential of the building design.
PS	Performance Solution with respect to this Deemed-to-Satisfy Provision is necessary to satisfy the relevant Performance Requirements.
DNC	Does Not Comply.
Noted	BCA Clause simply provides a statement not requiring specific design comment or confirmation.

Deemed to Satisfy Clause Assessment

Table 6. Deemed to Satisfy Clause Assessment

Clause	Clause Requirements	Comment	Status
Section B: Structure			
Part B1 – Structural Provisions			
B1.0: Deemed-to-Satisfy Provisions	Informational	Noted	Noted
B1.1: Resistance to actions	The resistance of the building must be greater than the most critical action effect resulting from different combinations of actions, where the most critical action has been determined in accordance with this Part	Structural Engineer to certify at CC stage.	CRA – Refer Annexure F
B1.2: Determination of individual actions	The magnitude of actions must be determined in accordance with this Clause.	Structural Engineer to certify at CC stage.	CRA – Refer Annexure F
B1.4: Determination of structural resistance of materials and forms of construction	The structural resistance of materials and forms of construction must be determined in accordance with this Clause.	Structural Engineer to certify at CC stage.	CRA – Refer Annexure F
B1.5: Structural software	Structural software used in computer aided design of a building or structure within the geometrical limits of (b) of this Clause must comply with the ABCB Protocol for Structural Software.	Structural Engineer to certify at CC stage.	CRA – Refer Annexure F
B1.6 Construction of buildings in flood hazard areas		Not applicable to Wilkinson House	N/A

Section C: Fire Resistance				
Part C1 – Fire Resistance and Stability				
C1.0:	Deemed-to-Satisfy Provisions	Informational	Noted	Noted
C1.1:	Type of construction required	The building is required to be of Type A Construction. Refer to Specification C1.1 requirements at the end of this Section.	Type A construction, the most fire resistant is required	CRA – Refer Annexure F
C1.2:	Calculation of rise in storeys	The building has a rise in storeys of five (5) being Lower Ground (LG) up to Level 3 (L03)	The building has a rise in storeys of five (5) being Lower Ground (LG) up to Level 3 (L03)	Noted
C1.3:	Buildings of multiple classification	Informational	Noted	Noted
C1.4:	Mixed Types of construction		Not applicable to Wilkinson House	N/A
C1.5:	Two Storey Class 2, 3 or 9c buildings		Not applicable to Wilkinson House	N/A
C1.6:	Class 4 Parts of building		Not applicable to Wilkinson House	N/A
C1.7:	Open spectator stands and indoor sports stadium		Not applicable to Wilkinson House	N/A
C1.8:	Lightweight construction	Lightweight construction used in a fire-rated application is to comply with Specification C1.8.	Noted	CRA – Refer Annexure F
C1.9:	Non-combustible building elements	(a) In a building required to be of Type A or B construction, the following building elements and their components must be *non-combustible*:	Noted	**CRA – Refer Annexure F & Report Section 3**

Section C: Fire Resistance			
	(i) External walls and common walls, including all components incorporated in them including the facade covering, framing and insulation. (ii) The flooring and floor framing of lift pits. (iii) Non-loadbearing internal walls where they are required to be fire-resisting. (b) A shaft, being a lift, ventilating, pipe, garbage, or similar shaft that is not for the discharge of hot products of combustion, that is non-loadbearing, must be of *non-combustible* construction in— (i) a building required to be of Type A construction; and (ii) a building required to be of Type B construction, subject to C2.10, in— (A) a Class 2, 3 or 9 building; and (B) Class 5, 6, 7 or 8 building if the shaft connects more than 2 storeys. (c) A loadbearing internal wall and a loadbearing *fire wall*, including those that are part of a loadbearing shaft, must comply with Specification C1.1. (d) The requirements of (a) and (b) do not apply to gaskets, caulking, sealants, termite management systems, Glass including laminated glass, thermal breaks associated with glazing systems and damp-proof courses. (e) The following materials, may be used wherever a *non-combustible* material is required: (i) Plasterboard. (ii) Perforated gypsum lath with a normal paper finish. (iii) Fibrous-plaster sheet.		

Section C: Fire Resistance			
	(iv) Fibre-reinforced cement sheeting. (v) Pre-finished metal sheeting having a combustible surface finish not exceeding 1 mm thickness and where the Spread-of-Flame Index of the product is not greater than 0. (vi) *Sarking-type materials* that do not exceed 1 mm in thickness and have a *Flammability Index* not greater than 5. (vii) Bonded laminated materials where— (A) each lamina, including any core, is *non-combustible*; and (B) each adhesive layer does not exceed 1 mm in thickness and the total thickness of the adhesive layers does not exceed 2 mm; and (C) the Spread-of-Flame Index and the Smoke-Developed Index of the bonded laminated material as a whole do not exceed 0 and 3 respectively.		
C1.10: Fire hazard properties	Fire hazard properties of internal linings, materials and assemblies must comply with C1.10 of the BCA and Specification C1.10, including floor, wall and ceiling linings, air-handling ductwork, lift cars, insulation, *sarking-type materials* and attachments, or be considered *non-combustible*.	Noted	CRA – Refer Annexure F
C1.11: Performance of external walls in fire		Not applicable to Wilkinson House	N/A
C1.12: Non-combustible materials	Clause now deleted and relocated to C1.9.	Noted	Noted

Section C: Fire Resistance			
C1.13: Fire-protected timber: Concession		Not applicable to Wilkinson House	N/A
C1.14: Ancillary elements	An ancillary element must not be fixed, installed or attached to the internal parts or external face of an external wall that is required to be *non-combustible* unless it is one of the following: (a) An ancillary element that is *non-combustible*. (b) A gutter, downpipe or other plumbing fixture or fitting. (c) A flashing. (d) A grate or grille not more than 2 m² in area associated with a building service. (e) An electrical switch, socket-outlet, cover plate or the like. (f) A light fitting. (g) A required sign. (h) A sign other than one provided under (a) or (g) that— (i) achieves a group number of 1 or 2; and (ii) does not extend beyond one storey; and (iii) does not extend beyond one fire compartment; and (iv) is separated vertically from other signs permitted under (h) by at least 2 storeys. (i) An awning, sunshade, canopy, blind or shading hood other than one provided under (a) that— (i) meets the relevant requirements of Table 4 of Specification C1.10 as for an internal element; and	Noted	CRA – Refer Annexure F

Section C: Fire Resistance			
	(ii) serves a storey— (A) at ground level; or (B) immediately above a storey at ground level; and (iii) does not serve an *exit*, where it would render the *exit* unusable in a fire. (j) A part of a security, intercom or announcement system. (k) Wiring. (l) A paint, lacquer or a similar finish. (m) A gasket, caulking, sealant or adhesive directly associated with (a) to (k).		
Part C2 – Compartment and Separation			
C2.0: Deemed-to-Satisfy Provisions	Informational	Noted	Noted
C2.1: Application of Part	Informational - C2.2, C2.3 and C2.4 do not apply to a carpark provided with a sprinkler system complying with Specification E1.5 (other than an FPAA101D or FPAA101H system), an open-deck carpark or an open spectator stand.	Noted	Noted
C2.2: General floor area and volume limitations	The size of *fire compartments* in the building must not exceed that specified in Table C2.2.	Complies	Complies
C2.3: Large isolated buildings		Not applicable to Wilkinson House	N/A
C2.4: Requirements for open spaces and vehicular access		Not applicable to Wilkinson House	N/A

Section C: Fire Resistance			
C2.5: Class 9a and 9c Buildings		Not applicable to Wilkinson House	N/A
C2.6: Vertical separation of openings in external walls		Not applicable to Wilkinson House A sprinkler system throughout the Wilkinson House building is proposed as the smoke hazard management system required of a School building having a rise in storeys of more than 3.	N/A
C2.7: Separation by fire walls	**Construction** - A *fire wall* must be constructed in accordance with the following: > Any openings in a *fire wall* must not reduce the *FRL* required by Specification C1.1 for the *fire wall*, except where permitted by the Deemed-to-Satisfy Provisions of Part C3. > Building elements, other than roof battens with dimensions of 75 mm x 50 mm or less or *sarking-type material*, must not pass through or cross the *fire wall* unless the required fire resisting performance of the *fire wall* is maintained. **Separation of buildings** – A part of a building separated from the remainder of the building by a *fire wall* may be treated as a separate building for the purposes of the Deemed-to-Satisfy provisions of Sections C, D and E if it is constructed in accordance with (a) and the following: (i) the *fire wall* extends through all storeys and spaces in the nature of storeys that are common to that part and any adjoining part of the building. (ii) The *fire wall* is carried through to the underside of the roof covering.	With the uniting of the Wilkinson House and Joan Freeman buildings, a horizontal exit to the Joan Freeman building at the south western corner of proposed Level 1 (L01) is proposed. In addition, 'horizontal exits' albeit to another building that is not considered united being the Centenary Sports Hall building to the south, are proposed to serve proposed Levels 2 (L02) and Lower Ground (LG). These horizontal exits necessitate the provision of C2.7(c) fire walls to separate fire compartments and to C2.7(b) fire wall separate the Wilkinson House from the Centenary Sports Hall buildings.	**CRA – Refer Annexure F & Report Item 3**

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		(iii) Where the roof of one of the adjoining parts is lower than the roof of the other part, the *fire wall* extends to the underside of— (A) the covering of the higher roof, or not less than 6 m above the covering of the lower roof; or (B) the lower roof if it has an *FRL* not less than that of the *fire wall* and no openings closer than 3 m to any wall above the lower roof; or (C) the lower roof if its covering is *non-combustible* and the lower part has a sprinkler system complying with Specification E1.5. **Separation of *fire compartments*** – A part of a building separated from the remainder of the building by a *fire wall* may be treated as a separate *fire compartment* if it is constructed in accordance with this clause and the *fire wall* extends to the underside of – > a floor having an *FRL* required for a *fire wall*; or > the roof covering.		
C2.8:	Separation of classifications in the same storey	Where a storey has different classifications located alongside one another: > each building element in that storey must have the higher *FRL* prescribed in Specification C1.1 for that element for the classifications concerned; or > the parts must be separated in that storey by a *fire wall* having the higher *FRL* prescribed in Table 3; or > where one part is a carpark complying with Table 3.9, 4.2 or 5.2 of Specification C1.1, the parts may be separated by a *fire wall* complying with the appropriate Table.	Noted	Complies

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C2.9: Separation of classifications in different storeys		Not applicable to Wilkinson House	N/A
C2.10: Separation of lift shafts	Applies to Lift connecting more than 2 storeys, or more than 3 if building is sprinklered, (other than lifts wholly in atrium). Type A Passenger lifts must be separated from the remainder of the building by enclosure in a fire rated shaft achieving an *FRL* prescribed by Table 3 of Specification C1.1.	Noted	CRA – Refer Annexure F
C2.11: Stairways and lifts in one shaft		Not applicable to Wilkinson House	N/A
C2.12: Separation of equipment	Any of the following equipment located in the building must be separated from the remainder of the building: > lift motors and lift control panels; or > emergency generators used to sustain emergency equipment operating in the emergency mode; or > central smoke control plant; or > boilers; or > a battery system installed in the building that has a total voltage of 12 volts or more and a storage capacity of 200 kWh or more. Equipment need not be separated in if the equipment comprises: > smoke control exhaust fans located in the air stream which are constructed for high temperature operation in accordance with Specification E2.2b; or	Noted	CRA – Refer Annexure F

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	> stair pressurizing equipment installed in compliance with the relevant provisions of AS 1668.1:2015; or > a lift installation without a machine room; or > equipment otherwise adequately separated from the remainder of the building. Separation must be by construction having an *FRL* as required by Specification C1.1, but not less than *FRL* 120/120/120 with openings protected by self-closing fire doors having an *FRL* of not less than –/120/30. Separation of on-site fire pumps must comply with the requirements of AS 2419.1:2005.		
C2.13: Electricity supply system	> Any electrical substation located within the building must be separated from the remainder of the building by construction having an *FRL* of not less than 120/120/120, and doorways protected with self-closing fire doors having an *FRL* of not less than –/120/30. > A main switchboard which sustains emergency equipment operating in the emergency mode must be fire separated from any other part of the building by construction having an *FRL* of not less than 120/120/120 and have the doorway fitted with self-closing fire door having an *FRL* of not less than –/120/30. > Any electrical conductors located within the building that supply a substation or main switchboard for emergency equipment must comply with BCA clause C2.13. > Emergency equipment switchgear must be separated from non-emergency equipment switchgear by metal partitions designed to minimize the spread of a fault from the non-emergency equipment switchgear.	Noted	CRA – Refer Annexure F

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	> Emergency equipment includes but is not limited to the following: o fire hydrant booster pumps; o sprinkler pumps; o hose reel pumps; o air-handling systems designed to exhaust and control the spread of smoke; o emergency lifts; o control and indicating equipment; and o sound systems and intercom systems for emergency purposes. Note: Consideration should be given to the location of Electrical Substations on adjoining sites in regards to proximity to Fire Hydrant Boosters being within 10.0m		
C2.14: Public corridors in Class 2 and 3 Buildings		Not applicable to Wilkinson House	N/A
Part C3 – Protection of Openings			
C3.0: Deemed-to-Satisfy Provisions	Informational	Noted	Noted
C3.1: Application of Part	(a) The Deemed-to-Satisfy Provisions of this Part do not apply to– (i) Control joints, weep holes and the like in external walls of masonry construction and joints between panels in external walls of pre-cast concrete panel construction if, in all cases they are not larger than necessary for the purpose; and	Noted	Noted

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	(ii) Non-combustible ventilators for subfloor or cavity ventilation, if each does not exceed 45 000 mm2 in face area and is spaced not less than 2 m from any other ventilator in the same wall; and (iii) Openings in the vertical plane formed between building elements at the construction edge or perimeter of a balcony or verandah, colonnade, terrace, or the like; and (iv) In a carpark– (A) Service penetrations through; and (B) Openings formed by a vehicle ramp in, (aa) A floor other than a floor that separates a part not used as a carpark, providing the connected floors comply as a single fire compartment for the purposes of all other requirements of the Deemed-to-Satisfy Provisions of Sections C, D and E. (b) For the purposes of the Deemed-to-Satisfy Provisions of this Part, openings in building elements required to be fire-resisting include doorways, windows (including any associated fanlight), infill panels and fixed or openable glazed areas that do not have the required FRL. (c) For the purposes of the Deemed-to-Satisfy Provisions of this Part, openings, other than those covered under (a)(iii), between building elements such as columns, beams and the like, in the plane formed at the construction edge or perimeter of the building, are deemed to be openings in an external wall.		

Section C: Fire Resistance				
C3.2:	Protection of openings in external walls	Openings in an external wall that is required to have an *FRL* must be protected in accordance with C3.4 if the distance between the opening and the *fire-source feature* is: > less than 3 m from a side or rear boundary; or > less than 6 m from the far boundary of a road, river, lake or the like adjoining the allotment, if not located in a storey at or near ground level; or > less than 6 m from another building on the allotment that is not Class 10; and if required to be protected under (a), not occupy more than 1/3 of the area of the external wall of the storey in which it is located unless they are in a Class 9b building used as an open spectator stand. Where wall-wetting sprinklers are used, they must be located externally.	Subject to the new glass wall 'lift lobby box' of the upper levels of the southern elevation being protected by external wall wetting sprinklers (refer to screenshot overleaf), Clause 2.5(d) of BCA Specification C1.1 does not require a fire resistance level for these new glass walls situated less than 3m from the Centenary Sports Hall building. However, note that this precludes the ability to have any openable windows or 'ventilators' within 3m of the Sports Hall building. This includes any openings to the eastern or western return walls of the glass box that are within 3m of the Sports Hall. Furthermore, for the existing windows of the existing heritage southern elevation, scaled at ~2.7m from the Centenary Sports Hall building, BCA Clause C3.2 requires the existing windows to be protected from the 'fire source' (other building) in accordance with BCA Clause C3.4, being: (a) external wall wetting sprinklers to permanently fixed shut windows/ or automatically closing windows; or (b) -/60/- FRL fire windows, permanently fixed shut or automatically closing; or (c) -/60/- FRL fire shutters; or (d) or a fire engineered performance based solution.	**CRA – Refer Annexure F & Report Item 3**
C3.3:	Separation of external walls and associated openings in different fire compartments	The distance between parts of external walls and any openings within them in different *fire compartments* separated by a *fire wall* must not be less than that set out in Table C3.3, unless— (a) those parts of each wall have an *FRL* not less than 60/60/60; and (b) any openings protected in accordance with C3.4. Table C3.3 DISTANCE BETWEEN EXTERNAL WALLS AND ASSOCIATED OPENINGS IN DIFFERENT FIRE COMPARTMENTS	The uniting of the re-built Wilkinson House building with the Joan Freeman building will require the western elevation with existing windows and new glass wall of the central stairway (refer to screenshot overleaf) to be considered an external wall exposed to an opposing external wall of other Joan Freeman compartment, less than 6m distant. Scaled at a separation distance of 3m, the subject Wilkinson House existing brick western wall is required to have a one hour' 60/60/60 FRL fire rating and the existing windows to be protected in accordance with BCA Clause C3.4, being:	**CRA – Refer Annexure F & Report Item 3**

Section C: Fire Resistance				
		<table><tr><th>Angle between walls</th><th>Min. Distance</th></tr><tr><td>0° (walls opposite)</td><td>6 m</td></tr><tr><td>more than 0° to 45°</td><td>5 m</td></tr><tr><td>more than 45° to 90°</td><td>4 m</td></tr><tr><td>more than 90° to 135°</td><td>3 m</td></tr><tr><td>more than 135° to less than 180°</td><td>2 m</td></tr><tr><td>180° or more</td><td>Nil</td></tr></table>	(a) external wall wetting sprinklers to permanently fixed shut windows/ or automatically closing windows; or (b) -/60/- FRL fire windows, permanently fixed shut or automatically closing; or (c) -/60/- FRL fire shutters; or (d) or a fire engineered performance based solution. Subject to the new glass wall of the central stairway being protected by external wall wetting sprinklers, Clause 2.5(d) of BCA Specification C1.1 permits the wall to <u>not</u> have a fire resistance level (a one hour fire resistance would otherwise be required by BCA C3.3 above). <u>However, note that this precludes the ability to have any openable windows or 'ventilators'</u>.	
C3.4: Acceptable methods of protection		Where protection is required, openings must be protected as follows: <u>Doorways:</u> - Internal or external wall-wetting sprinklers as appropriate used with doors that are self-closing; or - –/60/30 fire doors that are self-closing. <u>Windows:</u> - Internal or external wall-wetting sprinklers as appropriate used with windows that are automatic closing or permanently fixed in the closed position; or - –60/– fire windows that are automatically closing or permanently fixed in the closed position; or - –/60/– automatic closing fire shutters. <u>Other openings:</u>	Noted	CRA – Refer Annexure F

Section C: Fire Resistance				
		- Excluding voids – internal or external wall-wetting sprinklers; or - Construction having an *FRL* not less than –/60/– Fire doors, fire windows and fire shutters must comply with BCA Specification C3.4.		
C3.5:	Doorways in fire walls	Doorways in the fire walls must be protected by a self-closing fire door that achieves an *FRL* of not less than that required by Specification C1.1 for the *fire wall* except that each door must have an insulation level of at least 30.	Noted	CRA – Refer Annexure F
C3.6:	Sliding fire doors		Not applicable to Wilkinson House	N/A
C3.7:	Protection of doorways in horizontal exits	A doorway that is part of a horizontal exit must be protected by a single fire door that has an FRL of not less than that required by Specification C1.1 for the fire wall except that the door must have an insulation level of at least 30, or by one of the other options in Clause C3.7.	Noted	CRA – Refer Annexure F
C3.8:	Openings in fire-isolated exits	Doorways that open to fire-isolated stairways, fire-isolated passageways or fire-isolated ramps, and are not doorways opening to a road or open space, must be protected by –/60/30 fire doors that are self-closing, or automatic-closing in accordance with (ii) and (iii) of Clause C3.8. A window in an external wall of a fire-isolated stairway, fire-isolated passageway or fire-isolated ramp must be protected in accordance with C3.4 if it is within 6 m of, and exposed to, a window or other opening in a wall of the same building, other than in the same fire-isolated enclosure.	Noted	CRA – Refer Annexure F
C3.9:	Service penetrations in fire-isolated exits	The fire isolated *exits* are not to be penetrated by any services **other** than:	Noted	CRA – Refer Annexure F

Section C: Fire Resistance			
	> electrical wiring associated with: ○ a lighting, detection, or pressurization system serving the exit; or ○ a security, surveillance or management system serving the exit; or ○ an intercommunication system or an audible or visual alarm system in accordance with D2.22; or ○ the monitoring of hydrant or sprinkler isolating valves. > ducting associated with a pressurisation system if it; - is constructed of material having an *FRL* of not less than –/120/60 where it passes through any other part of the building; and - does not open into any other part of the building; or > water supply pipes for fire services.		
C3.10: Openings in fire-isolated lift shafts	> Lift landing doors are required to be fire doors with an *FRL* of -/60/- that comply with AS 1735.11:1986, and be set to remain closed except when discharging or receiving, passengers, goods or vehicles. > Panels in the wall of the lift shaft must be backed by construction having an *FRL* of not less than –/60/60 if it exceeds 35 000 mm2 in area.	Noted	CRA – Refer Annexure F
C3.11: Bounding Construction: Class 2, 3 and 4 Buildings		Not applicable to Wilkinson House	N/A

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C3.12: Openings in floors and ceilings for services	Where services pass through a floor which is required to achieve an *FRL* or a ceiling required to have a *resistance to the incipient spread of fire*, the service must be enclosed within a fire resisting shaft or fire protected in accordance with Clause C3.15. Where a service passes through a floor which is required to be protected by a *fire-protective* covering, the penetration must not reduce the fire performance of the covering.	Noted	CRA – Refer Annexure F
C3.13: Openings in shafts	Openings in shafts must be protected by: (a) if it is in a sanitary compartment – a door or panel which together with its frame, is *non-combustible* or has an *FRL* of not less than –/30/30; or (b) a self-closing –/60/30 fire door or hopper; or (c) an access panel having an *FRL* of not less than –/60/30; or (d) if the shaft is a garbage shaft – a door or hopper of *non-combustible* construction.	Noted	CRA – Refer Annexure F
C3.15: Openings for service installations	Where services pass through an element which is required to achieve an *FRL* (other than an external wall or roof), the service must be fire protected in accordance with BCA Clause C3.15. **Note:** contractors should check with PCA to confirm compliance with their proposed fire stopping method.	Noted	CRA – Refer Annexure F
C3.16: Construction joints	Construction joints, spaces and the like in and between building elements required to be fire-resisting with respect to integrity and insulation must be protected in a manner identical with a prototype tested in accordance with AS 1530.4:2014 to achieve the required *FRL*.	Noted	CRA – Refer Annexure F

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C3.17:	Columns protected with lightweight construction to achieve an FRL	A column protected by lightweight construction to achieve an *FRL* which passes through a building element that is required to have an *FRL* or a resistance to the incipient spread of fire, must be installed using a method and materials identical with a prototype assembly of the construction which has achieved the required *FRL* or resistance to the incipient spread of fire.	Noted	CRA – Refer Annexure F
Specification C1.1 – Fire-Resisting Construction				
2.0:	General Requirements	Informational	Noted	Noted
2.1:	Exposure to fire-source features	A building element is exposed to a *fire-source feature* if any of the horizontal straight lines between that part and the *fire-source feature*, or vertical projection of the feature, is not obstructed by another part of the building that– - has an *FRL* of not less than 30/–/–; and - is neither transparent nor translucent.	Noted	Noted
2.2:	Fire protection for a support of another part	Where a part of a building required to have an *FRL* depends upon direct vertical or lateral support from another part to maintain its *FRL*, that supporting part must have an *FRL* not less than that required by other provisions of this Specification; and if located within the same *fire compartment* as the part it supports have an FRL in respect of structural adequacy the greater of that required for the supporting part itself and for the part it supports.	Noted	CRA – Refer Annexure F
2.3:	Lintels	A lintel must have the FRL required for the part of the building in which it is situated unless it does not contribute to the support of a fire door, fire window or fire shutter and meets the requirements of Spec C1.1 clause 2.3 (a) & (b).	Noted	CRA – Refer Annexure F

Section C: Fire Resistance				
2.4:	Attachments not to impair fire-resistance	The method of attaching or installing a finish, lining, ancillary element or service installation to a building element must not reduce the fire-resistance of that element to below that required.	Noted	CRA – Refer Annexure F
2.5:	General concessions	Curtain walls and panel walls	Subject to the new glass wall of the central stairway being protected by external wall wetting sprinklers, Clause 2.5(d) of BCA Specification C1.1 permits the wall to not have a fire resistance level (a one hour fire resistance would otherwise be required by BCA C3.3 above). However, note that this precludes the ability to have any openable windows or 'ventilators'.	**CRA – Refer Annexure F & Report Item 3**
2.6:	Mezzanine floors: Concession		Not applicable to Wilkinson House	N/A
2.7:	Enclosure of shafts	Fire-isolated shafts are required to be enclosed at the top and bottom of the shaft with fire rated construction having an *FRL* required for the walls of a non-load-bearing shaft in the same building, as per specification C1.1. This fire rating is required in two directions. The above does not apply to shafts extending beyond the roof covering, other than fire isolated stair and lift shafts and the bottom of *non-combustible* shafts laid directly on the ground.	Noted	CRA – Refer Annexure F
2.8:	Carparks in Class 2 and 3 Buildings		Not applicable to Wilkinson House	N/A
2.9:	Residential Aged Care building: Concession		Not applicable to Wilkinson House	N/A
3.0:	Type A fire-resisting construction	Type A fire-resisting construction is applicable to the development.	Refer to Part 3 clauses below for the relevant Type A Construction requirements appliable to the project.	-

Section C: Fire Resistance				
3.1:	Fire-resistance of building elements	> The FRL's of all elements are to be in accordance with the FRL's detailed in the Table contained within Part 4.0 of this report. > External walls, common walls and the flooring and floor framing of lift pits must be *non-combustible*. (Note: insulation and sarking used must be *non-combustible*) > Internal walls required to be fire rated must extend to– - to the underside of the floor next above; or - the underside of a roof complying with Table 3; or - if under Clause 3.5 the roof is not required to comply with Table 3, the underside of the *non-combustible* roof covering and, except for roof battens with dimensions of 75 mm x 50 mm or less or *sarking-type material*, must not be crossed by timber or other combustible building elements; or - a ceiling that is immediately below the roof and has a resistance to the incipient spread of fire to the roof space above itself of not less than 60 minutes. > Load bearing internal walls (including those part of a loadbearing shaft) and fire walls must be of concrete or masonry. > Non-loadbearing internal walls required to be fire rated, as well as non-load bearing lift, ventilating, pipe, garbage or similar shaft wall must be of non-combustible construction. **Note:** This includes *non-combustible* insulation. When an insulation material is not certified as *non-*	Noted	CRA – Refer Annexure F

Section C: Fire Resistance				
		combustible, this material will need to be the subject of a Fire Engineering Assessment at the CC stage. > The *FRL*s specified in Table 3 for an external column apply also to those parts of an internal column that face and are within 1.5m of a window and are exposed through that window to a *fire-source feature*. > It should also be noted that if Dincel material is to be used as an element where the BCA requires such element to be *non-combustible*, this material will need to be the subject of a Fire Engineering Assessment at the CC stage		
3.2:	Concessions for floors	(a)	Not applicable to Wilkinson House	N/A
3.3:	Floor Loading of Class 5 and 9b buildings: Concession	If a floor in a Class 5 or 9b building is designed for a live load not exceeding 3 kPa— (a) the floor next above (including floor beams) may have an *FRL* of 90/90/90; or (b) the roof, if that is next above (including roof beams) may have an *FRL* of 90/60/30.	Noted	Noted
3.4:	Roof superimposed on concrete slab: Concession		Not applicable to Wilkinson House	N/A
3.5:	Roof: Concession	A roof need not comply with Table 3 if its covering is *non-combustible* and the building— (a) has a sprinkler system (other than a FPAA101D or FPAA101H system) complying with Specification E1.5 installed throughout; or (b) has a rise in storeys of 3 or less; or (c) is of Class 2 or 3; or	A sprinkler system throughout the Wilkinson House building is proposed as the smoke hazard management system required of a School building having a rise in storeys of more than 3. Accordingly, the roof does not require a fire resistance level as long as the roof covering is non-combustible.	CRA – Refer Annexure F

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		(d) has an *effective height* of not more than 25 m and the ceiling immediately below the roof has a *resistance to the incipient spread of fire* to the roof space of not less than 60 minutes.		
3.6:	Roof lights	If a roof is required to have an *FRL* or its covering is required to be *non-combustible*, roof lights or the like installed in that roof must— (a) have an aggregate area of not more than 20% of the roof surface; and (b) be not less than 3 m from— - any boundary of the allotment other than the boundary with a road or public place; and - any part of the building which projects above the roof unless that part has the *FRL* required of a *fire wall* and any openings in that part of the wall for 6 m vertically above the rooflight or the like are protected in accordance with C3.4; and - any rooflight or the like in an adjoining *sole-occupancy unit* if the walls bounding the unit are required to have an *FRL*; and - any rooflight or the like in an adjoining fire-separated section of the building; and (c) if a ceiling with a resistance to the incipient spread of fire is required, be installed in a way that will maintain the level of protection provided by the ceiling to the roof space.	The 'oculus' circular void to the north western corner of the proposed roof represents a roof light that complies with BCA requirements on the basis that its ~1.5m separation from the Joan Freeman fire isolated stairway represents the same united building.	Complies
3.7:	Internal columns and walls: Concession	For a building with an *effective height* of not more than 25 m and having a roof without an FRL in accordance with Clause 3.5, in the storey immediately below that roof, internal columns other than those referred to in Clause 3.1(f) and internal walls other than *fire walls* and shaft walls may have—	Noted	**CRA – Refer Annexure F & Report Item 3**

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		(a) (b) in a Class 5, 6, 7, 8 or 9 building— - with rise in storeys exceeding 3: *FRL* 60/60/60 -		
3.8:	Open spectator stands and indoor sports stadiums concession		Not applicable to Wilkinson House	N/A
3.9:	Carparks		Not applicable to Wilkinson House	N/A
3.10:	Class 2 and 3 buildings Concession		Not applicable to Wilkinson House	N/A
4.0:	Type B fire-resisting construction		Not applicable to Wilkinson House	N/A
5.0:	Type C fire-resisting construction		Not applicable to Wilkinson House	N/A
Specification C1.10 – Fire Hazard Properties				
1.	Scope	Informational	Noted	-
2.	Application	Informational	Noted	Noted
3.	Floor linings and floor coverings	A floor lining or floor covering must have– (a) a *critical radiant flux* not less than that listed in Table 2; and (b) in a building not protected by a sprinkler system complying with Specification E1.5, a maximum	Noted	CRA – Refer Annexure F

Section C: Fire Resistance				
		smoke development rate of 750 percent-minutes; and (c) a *group number* complying with Clause 6(b), for any portion of the floor covering that is continued more than 150 mm up a wall.		
4.	Wall and ceiling linings	(a) A wall or ceiling lining system must comply with the *group number* specified in Table 3 and for buildings not fitted with a sprinkler system complying with Specification E1.5 have– - a *smoke growth rate index* not more than 100; or - an *average specific extinction area* less than 250 m^2/kg. (b) A *group number* of a wall or ceiling lining and the *smoke growth rate index* or *average specific extinction area* must be determined in accordance with AS 5637.1:2015.	Noted	CRA – Refer Annexure F
5.	Air-handling ductwork	Rigid and flexible ductwork must comply with the fire hazard properties set out in AS 4254 Parts 1 and 2.	Noted	CRA – Refer Annexure F
6.	Lift cars	Materials used as— (a) floor linings and floor coverings must have a *critical radiant flux* not less than 2.2; and (b) wall and ceiling linings must be a Group 1 material or a Group 2 material in accordance with AS 5637.1:2015.	Noted	CRA – Refer Annexure F
7.	Other materials	Materials and assemblies not included in Clauses 3, 4, 5 or 6 must not exceed the indices set out in Table 4.	Noted	CRA – Refer Annexure F

Section C: Fire Resistance				
Specification C1.11 – Performance of External Walls in Fire				
Specification C1.11 is not applicable to Wilkinson House				
Specification C2.5 – Smoke Proof Walls in Health Care and Aged Buildings				
Specification C2.5 is not applicable to Wilkinson House				
Specification C3.4 – Fire Doors, Smoke Doors, Fire Window and Shutters				
1.	Scope	Informational	Noted	Noted
2.	Fire doors	Fire doorsets must comply with AS 1905.1:2015 and not fail by radiation through any glazed part during the period specified for integrity in the required *FRL*.	Noted	CRA – Refer Annexure F
3.	Smoke doors	3.1 - Smoke doors must be constructed so that smoke will not pass from one side of the doorway to the other and, if they are glazed, there is minimal danger of a person being injured by accidentally walking into them. 3.2 – A smoke door of one or two leaves satisfies Clause 3.1 if it is constructed as follows: (a) The leaves area side-hung to swing– - in the direction of egress; or - in both directions. (b) - The leaves are capable of resisting smoke at 200 degrees Celsius for 30 minutes. - Solid-core leaves at least 35 mm thick satisfy (i). (c) The leaves are fitted with smoke seals. (d)	Noted	CRA – Refer Annexure F

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		- The leaves are normally in the closed position; or - (A) The leaves are closed automatically with the automatic closing operation initiated by smoke detectors, installed in accordance with the relevant provisions of AS 1670.1, located on each side of the doorway not more than 1.5m horizontal distance from the doorway; and (B) in the event of power failure to the door the leaves fail-safe in the closed position. (e) The leaves return to the fully closed position after each manual opening. (f) Any glazing incorporated in the door complies with AS 1288. (g) - If a glazed panel is capable of being mistaken for an unobstructed exit, the presence of the glass must be identified by opaque construction. - An opaque mid-height band, mid-rail or crash bar satisfied (i).		
4.	Fire shutters	Fire shutters must comply with Clause 4 of BCA Specification C3.4.	Noted	CRA – Refer Annexure F
5.	Fire windows	Fire window must be identical to the prototype which achieved the required *FRL* and be installed in the same manner and in an opening that is not larger than the tested prototype.	Noted	CRA – Refer Annexure F
Specification C3.15 – Penetration of Walls, Floors and Ceilings by Services				
1.	Scope	Informational	Noted	Noted

Section C: Fire Resistance				
2.	Application	(a) This Specification applies to installations permitted under the Deemed-to-Satisfy Provisions of the BCA as alternatives to systems that have been demonstrated by test to fulfil the requirements of C3.15(a). (b) This Specification does not apply to installations in ceilings required to have a resistance to the incipient spread of fire nor to the installation of piping that contains or is intended to contain a flammable liquid or gas.	Noted	CRA – Refer Annexure F
3.	Metal pipe system	(a) A pipe system comprised entirely of metal (excluding pipe seals or the like) that is not normally filled with liquid must not be located within 100 mm, for a distance of 2 m from the penetration, of any combustible building element or a position where combustible material may be located, and must be constructed of— - copper alloy or stainless steel with a wall thickness of at least 1 mm; or - cast iron or steel (other than stainless steel) with a wall thickness of at least 2 mm. (b) An opening for a pipe system comprised entirely of metal (excluding pipe seals or the like) must— - be neatly formed, cut or drilled; and - be no closer than 200 mm to any other service penetration; and - accommodate only one pipe. (c) A pipe system comprised entirely of metal (excluding pipe seals or the like) must be wrapped but must not be lagged or enclosed in thermal insulation over the length of its penetration of a wall, floor or ceiling unless the lagging or thermal insulation fulfils the requirements of Clause 7.	Noted	CRA – Refer Annexure F

Section C: Fire Resistance				
		(d) The gap between a metal pipe and the wall, floor or ceiling it penetrates must be fire-stopped in accordance with Clause 7.		
4.	Pipes penetrating sanitary compartments	If a pipe of metal or UPVC penetrates the floor of a sanitary compartment in accordance with C3.15(c)(ii)— (a) the opening must be neatly formed and no larger than is necessary to accommodate the pipe or fitting; and (b) the gap between pipe and floor must be fire-stopped in accordance with Clause 7.	Noted	CRA – Refer Annexure F
5.	Wires and cables	If a wire or cable or cluster of wires or cables penetrates a floor, wall or ceiling— (a) the opening must be neatly formed, cut or drilled and no closer than 50 mm to any other service; and (b) the opening must be no larger in cross-sectional area than— - 2000 mm2 if only a single cable is accommodated and the gap between cable and wall, floor or ceiling is no wider than 15 mm; or - 500 mm2 in any other case; and - the gap between the service and the wall, floor or ceiling must be fire-stopped in accordance with Clause 7.	Noted	CRA – Refer Annexure F
6.	Electrical switches and outlets	If an electrical switch, outlet, socket or the like is accommodated in an opening or recess in a wall, floor or ceiling— (a) the opening or recess must not—	Noted	CRA – Refer Annexure F

Section C: Fire Resistance			
	- be located opposite any point within 300 mm horizontally or 600 mm vertically of any opening or recess on the opposite side of the wall; or - extend beyond half the thickness of the wall; and (b) the gap between the service and the wall, floor or ceiling must be fire-stopped in accordance Clause 7.		
7. Fire-stopping	(a) Material: The material used for the fire-stopping of service penetrations must be concrete, high-temperature mineral fibre, high-temperature ceramic fibre or other material that does not flow at a temperature below 1120°C when tested in accordance with ISO 540, and must have— - demonstrated in a system tested in accordance with C3.15(a) that it does not impair the fire-resisting performance of the building element in which it is installed; or - demonstrated in a test in accordance with (e) that it does not impair the fire-resisting performance of the test slab. (b) Installation: Fire-stopping material must be packed into the gap between the service and wall, floor or ceiling in a manner, and compressed to the same degree, as adopted for testing under Clause 7(a)(i) or (ii). (c) Hollow construction: If a pipe penetrates a hollow wall (such as a stud wall, a cavity wall or a wall of hollow blockwork) or a hollow floor/ceiling system, the cavity must be so framed and packed with fire-stopping material that is— - installed in accordance with Clause 7(b) to a thickness of 25 mm all round the service for the full length of the penetration; and	Noted	CRA – Refer Annexure F

Section C: Fire Resistance			
	- restrained, independently of the service, from moving or parting from the surfaces of the service and of the wall, floor or ceiling. (d) Recesses: If an electrical switch, socket, outlet or the like is accommodated in a recess in a hollow wall or hollow floor/ceiling system— (e) the cavity immediately behind the service must be framed and packed with fire-stopping material in accordance with Clause 7(c); or (f) the back and sides of the service must be protected with refractory lining board identical with and to the same thickness as that in which the service is installed. (g) Test: The test to demonstrate compliance of a fire-stopping material with this Specification must be conducted as follows: (h) The test specimen must comprise a concrete slab not less than 1 m square and not more than 100 mm thick, and appropriately reinforced if necessary for structural adequacy during manufacture, transport and testing. (i) The slab must have a hole 50 mm in diameter through the centre and the hole must be packed with the fire-stopping material. (j) The slab must be conditioned in accordance with AS 1530.4. (k) Two thermocouples complying with AS 1530.4 must be attached to the upper surface of the packing each about 5 mm from its centre. (l) The slab must be tested on flat generally in accordance with Section 10 of AS 1530.4 and must achieve an FRL of 60/60/60 or as otherwise required.		

Section D: Access and Egress			
Part D1 – Provision for Escape			
D1.0: Deemed-to-Satisfy Provisions	Informational	Noted	Noted
D1.1: Application of Part	The Deemed-to-Satisfy Provisions of this Part do not apply to the internal parts of a *sole-occupancy unit* in a Class 2 or 3 building or a Class 4 part of a building.	Noted	Noted
D1.2: Number of exits required	Secondary assembly school buildings having a rise in storeys of 2 or more are required to be provided with two exits serving every storey.	The central open circulating stairway serving Levels 3, 2, and 1 and discharging and connecting to the Ground Floor represents the only exit serving the topmost Level 3 (L03), in lieu of being one of at least two exits as required by BCA Clause D1.2(d)(v) for secondary schools with a rise in storeys of 2 or more. This single exit serving Level 3 will require a performance based solution. The upper lift landing to the Lower Ground floor connects with one 'horizontal' exit only, being lift lobby doors to the Centenary Sports Hall to the south, in lieu of being one of at least two exits as required by BCA Clause D1.2(d)(v) for secondary schools with a rise in storeys of 2 or more. This single exit serving the Lower Ground upper lift landing will require a performance based solution.	**PS**
D1.3: When fire-isolated stairways and ramps are required	Every *exit* stairway must be fire-isolated, except for stairways that connect, pass through or pass by not more than 2 consecutive storeys and one extra storey may be connected if the building is sprinkler protected throughout.	The central open circulating stairway serving Levels 3, 2, and 1 and discharging and connecting to the Ground Floor connects four storeys, in lieu of being a fire isolated stairway separated from the whole building and discharging directly to outside the building.	**PS**
D1.4: Exit travel distances	<u>Class 9b School—</u> No point on a floor must be more than 20 m from an *exit*, or a point from which travel in different directions to 2	Complies	Complies

Section D: Access and Egress				
		exits is available, in which case the maximum distance to one of those *exits* must not exceed 40 m.		
D1.5:	Distance between alternative exits	*Exits* that are required as alternative means of egress must be– (a) distributed as uniformly as practicable within or around the storey served and in positions where unobstructed access to at least 2 *exits* is readily available from all points on the floor including lift lobby areas; and (b) not less than 9 m apart; and (c) not more than— - - - in all other cases — 60 m apart; and (d) located so that alternative paths of travel do not converge such that they become less than 6 m apart. Note: the distance between *exits* must be measured through the point at which travel two *exits* is available.	Complies	Complies
D1.6:	Dimensions of exits and paths of travel to exits	In a required *exit* or path of travel to an *exit*– > the unobstructed height throughout *exits* and paths of travel to *exits* must not be less than 2 m, except the unobstructed height of any doorway may be reduced to not less than 1980 mm; and > the unobstructed width of each *exit* or path of travel to an *exit*, except for doorways must be not less than 1m; > the unobstructed width of doorways must be not less than 750 mm, unless providing access for	Complies	Complies

Section D: Access and Egress			
	people with disabilities in which case the unobstructed width must be not less than 850 mm. > the required width of a stairway or ramp must be measured clear of all obstructions such as handrails. > the unobstructed width of a required *exit* must not diminish in the direction of travel to a road or open space.		
D1.7: Travel via fire-isolated exits	> A doorway from a room must not open directly into a stairway that is required to be fire-isolated unless it is from – - a public corridor, public lobby or the like; or - a *sole-occupancy unit* occupying all of a storey; or - a sanitary compartment, airlock or the like. > D1.7 (b) - Each fire-isolated stairway or fire-isolated ramp must provide independent egress from each storey served and discharge directly, or by way of its own fire-isolated passageway— - to a road or open space; or - to a point— (A) in a storey or space, within the confines of the building, that is used only for pedestrian movement, car parking or the like and is open for at least 2/3 of its perimeter; and (B) from which an unimpeded path of travel, not further than 20 m, is available to a road or open space; or - into a covered area that—	The central open circulating stairway serving Levels 3, 2, and 1 and discharging and connecting to the Ground Floor connects four storeys, in lieu of being a fire isolated stairway separated from the whole building and discharging directly to outside the building.	**PS**

Section D: Access and Egress			
	(A) adjoins a road or open space; (B) and is open for at least 1/3 of its perimeter; and (C) has an unobstructed clear height throughout, including the perimeter openings, of not less than 3 m; and (D) provides an unimpeded path of travel from the point of discharge to the road or open space of not more than 6 m. > D1.7 (c) - Where a path of travel from the point of discharge of a fire-isolated *exit* necessitates passing within 6 m of any part of an external wall of the same building, measured horizontally at right angles to the path of travel, that part of the wall must have— - an FRL of not less than 60/60/60; and - any openings protected internally in accordance with C3.4, - for a distance of 3 m above or below, as appropriate, the level of the path of travel, or for the height of the wall, whichever is the lesser. > D1.7 (d) If more than 2 access doorways, not from a sanitary compartment or the like open to a required fire-isolated *exit* in the same storey – o a smoke lobby in accordance with D2.6 must be provided; or o the *exit* must be pressurized in accordance with AS 1668.1:2015 > A ramp must be provided at any change in level less than 600 mm in a fire-isolated passageway in a Class 9 building.		

Section D: Access and Egress			
D1.8: External stairways or ramps in lieu of fire-isolated exits		Not applicable to Wilkinson House	N/A
D1.9: Travel by non-fire-isolated stairways or ramps		Not applicable to Wilkinson House	N/A
D1.10: Discharge from exits	*Exits* must not be blocked at the point of discharge and where necessary, suitable barriers must be provided to prevent vehicles from blocking the *exit*. If a required *exit* leads to open space, the path of travel to the road must have an unobstructed width of not less than 1m. min width of required *exit* if greater. If an *exit* discharges to open space that is at a different level that the public road to which it is connected, the path of travel to the road must be by a ramp or other incline not steeper than 1:8, or a BCA compliant stairway. The discharge points of alternative *exits* must be as far apart as practical.	Complies	Complies
D1.11: Horizontal exits	*Horizontal exits* must not comprise more than half of the required *exits* from any part of a storey divided by a *fire wall*. Horizontal exits may only discharge to other fire compartments of the same building or another united building.	A horizontal exit to the Joan Freeman building at the south western corner of proposed Level 1 (L01) is proposed. In addition, 'horizontal exits' albeit to another building that is not considered united being the Centenary Sports Hall building to the south, are proposed to serve proposed Levels 2 (L02) and Lower Ground (LG). These 'horizontal' exits to another building that is not united, will require a performance based solution.	Complies **PS**
D1.12: Non-required stairways, ramps or escalators		Not applicable to Wilkinson House	N/A

Section D: Access and Egress			
D1.13: Number of persons accommodated	Informational– The number of persons accommodated in a storey, room or mezzanine must be determined within consideration to the purpose for which it is used and the layout of the floor area by– (a) calculating the sum of the numbers obtained by dividing the floor area of each part of the storey by the number of square metres per person listed in BCA Table D1.13 according to the use of that part, excluding spaces set aside for— - lifts, stairways, ramps and escalators, corridors, hallways, lobbies and the like; and - service ducts and the like, sanitary compartments or other ancillary uses; or (b) reference to the seating capacity in an assembly building or room; or (c) any other suitable means of assessing its capacity. Based on floor area and Table D1.13, the population numbers are as follows:	Noted, a maximum building population of 494 has been calculated.	**Noted – Refer Report Section 3**
D1.14: Measurement of distances	Informational – The nearest part of an *exit* means in the case of— (a) a fire-isolated stairway, fire-isolated passageway, or fire-isolated ramp, the nearest part of the doorway providing access to them; and (b) a non-fire-isolated stairway, the nearest part of the nearest riser; and (c) a non-fire-isolated ramp, the nearest part of the junction of the floor of the ramp and the floor of the storey; and	Noted	Noted

Section D: Access and Egress			
	(d) a doorway opening to a road or open space, the nearest part of the doorway; and (e) a *horizontal exit*, the nearest part of the doorway.		
D1.15: Method of Measurement	Informational	Noted	Noted
D1.16: Plant rooms, lift motor rooms and electricity network substations: concession	Informational – (a) A ladder may be used in lieu of a stairway to provide egress from— - a plant room with a floor area of not more than 100 m2; or - all but one point of egress from a plant room, a lift machine room or a Class 8 electricity network substation with a floor area of not more than 200 m2. (b) A ladder permitted under (a)— - may form part of an *exit* provided that in the case of a fire-isolated stairway it is contained within the shaft; or - may discharge within a storey in which case it must be considered as forming part of the path of travel; and - for a plant room or a Class 8 electricity network substation, must comply with AS 1657.	Noted	CRA – Refer Annexure F
D1.17: Access to lift pits	Access to the lift pit is assumed to be through the bottom landing doors as the pit is assumed to be less than 3m deep.		CRA – Refer Annexure F
D1.18: Egress from early childhood centres		Not applicable to Wilkinson House	N/A

Section D: Access and Egress			
Part D2 – Construction of Exits			
D2.0: Deemed-to-Satisfy Provisions	Informational	Noted	Noted
D2.1: Application of Part		Not applicable to Wilkinson House	N/A
D2.2: Fire-isolated stairways and ramps	The fire isolated stairways must be constructed of *non-combustible* materials and constructed so that if there is local failure it will not cause structural damage to, or impair the fire-resistance of the shaft.	Noted	CRA – Refer Annexure F
D2.3: Non-fire-isolated stairways and ramps	For buildings having a rise in storeys of more than 2, required stairs and ramps (including landings and any supporting building elements) must be constructed according to D2.2, or only of- (a) reinforced or prestressed concrete; or (b) steel in no part less than 6 mm thick; or (c) timber that— - has a finished thickness of not less than 44 mm; and - has an average density of not less than 800 kg/m3 at a moisture content of 12%; and - has not been joined by means of glue unless it has been laminated and glued with resorcinol formaldehyde or resorcinol phenol formaldehyde glue".	Noted	CRA – Refer Annexure F
D2.4: Separation of rising and descending stair flights		Not applicable to Wilkinson House	N/A
D2.5: Open access ramps and balconies		Not applicable to Wilkinson House	N/A

Section D: Access and Egress			
D2.6: Smoke lobbies		Not applicable to Wilkinson House	N/A
D2.7: Installations in exits and paths of travel	> Access to service shafts and services other than to fire-fighting or detection equipment must not be provided from a fire-isolated stairway or fire-isolated passageway. > Gas or other fuel services must not be installed in a required *exit*. > Any electricity meters, distribution boards or ducts, or telecommunications distribution boards or equipment installed in corridors/hallways/lobbies or the like must be enclosed with *non-combustible* construction or a fire protective covering with doorways suitably sealed against smoke spread. > Electrical wiring may be installed in a fire-isolated *exit* if the wiring is associated with: o a lighting, detection, or pressurization system serving the *exit*; or o a security, surveillance or management system serving the *exit*; or o an intercommunication system or an audible or visual alarm system in accordance with D2.22; or o the monitoring of hydrant or sprinkler isolating valves.	Noted. The ground floor (L00) heritage entry lobby has a Comms and DB cupboard that will need to strictly comply.	**CRA – Refer Annexure F & Report Section 3**
D2.8: Enclosure of space under stairs and ramps	The space under the fire-isolated stairways within the shaft must not be enclosed to form a cupboard or similar enclosed space. The space below a required non fire-isolated stairway (including an external stairway) or non-fire-isolated ramp must not be enclosed to form a cupboard or other enclosed space unless the enclosing walls and ceilings	Noted	CRA – Refer Annexure F

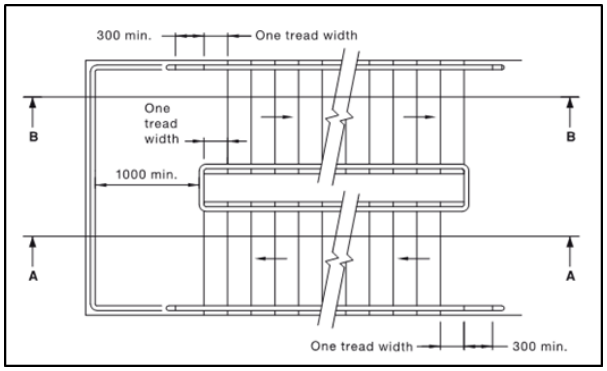
Section D: Access and Egress			
	have an FRL of not less than 60/60/60 and the doorway is fitted with a self-closing –/60/30 fire door.		
D2.9: Width of stairways and ramps	Informational– A required stairway or ramp that exceeds 2 m in width is counted as having a width of only 2 m unless it is divided by a handrail or barrier continuous between landings and each division has a width of not more than 2 m.	Noted. The proposed central open grand stairway is to have 2.5m wide flights which will only be counted as a 2m egress width.	**CRA – Refer Annexure F & Report Section 3**
D2.10: Pedestrian ramps	> A ramp serving as a required *exit* must— - where the ramp is also serving as an accessible ramp under Part D3, be in accordance with AS 1428.1:2009; or - in any other case, have a gradient not steeper than 1:8. > The floor surface of a ramp must have a slip-resistance classification complying with Table D2.14 when tested in accordance with AS 4586:2013.	Noted	CRA – Refer Annexure F
D2.11: Fire-isolatedpassageway		Not applicable to Wilkinson House	N/A
D2.12: Roof as open space		Not applicable to Wilkinson House	N/A
D2.13: Goings and risers	Stairways must comply with the following: > Stairways must have not more than 18 and not less than 2 risers in each flight; > Goings must be between 240 mm and 355 mm within the residential units; > Goings must be between 250 mm and 355 mm;	Noted	CRA – Refer Annexure F

Section D: Access and Egress			
	> Goings must be between 250 mm and 355 mm in other areas; > Risers must be between 115 mm high and 190 mm high; > The slope relationship (2 x riser dimension + going dimension) must be within the range of 550-700; > The goings and risers must be constant (uniform) throughout each flight and the dimensions of goings (G) and risers (R) are considered constant if the variation between– (A) adjacent risers, or between adjacent goings, is no greater than 5 mm; and (B) the largest and smallest riser within a flight, or the largest and smallest going within a flight, does not exceed 10 mm. > Risers must not contain any openings that would permit a 125 mm sphere to pass through. > Each tread must have a non-slip finish or an adequate non-skid strip near the edge of the nosings; > Treads must be of solid construction (not mesh or perforated) if the stairway is more than 10 m high or connects more than 3 storeys. > In a Class 9b building, not more than 36 risers in consecutive flights without a change in direction of at least 30° > In the case of a required stairway, no winders in lieu of a landing > Treads must have a surface or nosing strip with a slip-resistant classification not less than that listed in Table D2.14 when tested in accordance with AS 4586-2013 Slip resistance classification of new pedestrian surface materials.	Noted	Complies

<table>
<tr><th colspan="4">Section D: Access and Egress</th></tr>
<tr>
<td>D2.14: Landings</td>
<td>Landings must be not less than 750 mm long and have either a surface with a slip-resistance classification complying with Table D2.14 or a strip at the edge of the landing with a slip-resistance classification complying with Table D2.14 when tested in accordance with AS 4586:2013.
<table>
<tr><th rowspan="2">Application</th><th colspan="2">Surface Condition</th></tr>
<tr><th>Dry</th><th>Wet</th></tr>
<tr><td>Ramp steeper than 1:14</td><td>P4 or R11</td><td>P5 or R12</td></tr>
<tr><td>Ramp steeper than 1:20 but not steeper than 1:14</td><td>P3 or R10</td><td>P4 or R11</td></tr>
<tr><td>Tread or landing surface</td><td>P3 or R10</td><td>P4 or R11</td></tr>
<tr><td>Nosing or landing edge strip</td><td>P3</td><td>P4</td></tr>
</table>
</td>
<td>Noted</td>
<td>CRA – Refer Annexure F</td>
</tr>
<tr>
<td>D2.15: Thresholds</td>
<td>The threshold of a doorway must not incorporate a step or ramp at any point closer to the doorway than the width of the door leaf unless–
(a) in a building required to be accessible, the doorway–
- opens to a road or open space; and
- is provided with a threshold ramp or step ramp in accordance with AS 1428.1:2009; or
(b) in other cases–
- the doorway opens to a road or open space, external stair landing or external balcony; and</td>
<td>Noted</td>
<td>CRA – Refer Annexure F</td>
</tr>
</table>

Section D: Access and Egress			
	- the door sill is not more than 190 mm above the finished surface of the ground, balcony, or the like, to which the doorway opens.		
D2.16: Barriers to prevent falls	Balustrades must be provided to stairs and balconies, driveway ramps etc where there is a fall of more than 1m. Balustrades must comply with the following: <u>Balustrade minimum heights</u> > 865 mm above stair nosings; > 865 mm above landings to a stair where the barrier is provided along the inside edge of the landing and does not exceed 500 mm in length; and > 1 m in all other locations. <u>Balustrade openings – fire-isolated stairs</u> > maximum openings of 300 mm; or > where rails are used– o a 150 mm sphere must not be able to pass through the opening between the nosing line of the stair treads and the rail or between the rail and the floor of the landing, balcony or the like; and o the opening between rails must not be more than 460 mm <u>Balustrade openings – other than fire-isolated stairs</u> > A 125 mm sphere must not be able to pass through any opening and for stairways, the 125 mm is measured above the nosing line of the stair treads. <u>Climb-ability – other than fire-isolated stairs</u> For floors more than 4m above the surface beneath, the balustrade must not incorporate any horizontal or near	Noted	CRA – Refer Annexure F

Section D: Access and Egress			
	horizontal elements between 150 mm and 760 mm above the floor that could facilitate climbing.		
D2.17: Handrails	Handrails to stairways must: > be located along at least one side of the ramp or flight (a flight being 2 or more risers); and > located along each side if the total width of the stairway or ramp is 2m or more; and > be fixed at a height of not less than 865 mm above the nosings of the stair treads and the floor surface of the ramp, landing, or the like; and > be continuous between stair flight landings and have no obstruction that will break a hand-hold. > be constructed to comply with clause 12 of AS 1428.1:2009 (including handrails to the fire stairs). > Handrails in common areas (other than fire stairs) must also accord with D3.3. <u>Clause 12 of AS 1428.1:2009</u> A required *exit* (fire isolated or non-fire isolated) serving an area required to be accessible must be fitted with handrails in accordance with Clause 12 of AS 1428.1:2009. The handrail shall follow the angle of the nosings and be consistent height through the stair flight and any landings with no vertical sections at the landing. Compliance can be achieved via offset risers at the bottom of the flight in accordance with Figure 28 in AS 1428.1:2009 or with larger landings to accommodate required handrail extensions.	Noted	CRA – Refer Annexure F

Section D: Access and Egress			
	 Figure 28 in AS 1428.1:2009		
D2.18: Fixed platforms, walkways stairways and ladders	Plant areas may be accessed via stairs and ladders compliant with AS 1657:2018.	Noted	CRA – Refer Annexure F
D2.19: Doorways and doors	> Sliding doors serving as *exit* doors must be openable manually under a force of not more than 110N. > *Exit* doors that are power operated must be able to be opened manually under a force of not more than 110 N if there is a malfunction or failure of the power source and if leading to road or open space, open automatically if there is a power failure or on the activation of a fire or smoke alarm anywhere in the *fire compartment* served by the door. > A power operated door in a path of travel to a required *exit* must be able to be opened manually under a force of not more than 110 N if there is a malfunction of the power source.	Noted	CRA – Refer Annexure F

Section D: Access and Egress			
D2.20: Swinging doors	Swinging doors in a required *exit* must not encroach– - at any part of its swing by more than 500 mm on the required 1m width of the *exit* and - when fully open, by more than 100 mm on the required 1m *exit* width; and the measurement of encroachment in each case is to include door handles or other furniture or attachments to the door. A swinging door in a required *exit* must swing in the direction of egress unless– > it serves a building or part with a floor area not more than 200 m2, it is the only required *exit* from the building or part and it is fitted with a device for holding it in the open position; or > it serves a sanitary compartment or airlock (in which case it may swing in either direction).	Noted	CRA – Refer Annexure F
D2.21: Operation of latch	All doors in a required *exit* or forming part of a required *exit* AND doors in a path of travel to a required *exit* must be readily openable without a key from the side that faces a person seeking egress, by– - a single hand downward action or pushing action on a single device which is located between 900mm and 1.1 m from the floor and if serving an area required to be accessible by Part D3 – (A) be such that the hand of a person who cannot grip will not slip from the handle during the operation of the latch; and (B) have a clearance between the handle and the back plate or door face at the centre grip section of the handle of not less than 35mm and not more than 45mm; or	Noted	CRA – Refer Annexure F

Section D: Access and Egress			
	- a single hand pushing action on a single device which is located between 900mm and 1.2m from the floor. - where the latch operation device referred to in (ii) is not located on the door leaf itself— (A) manual controls to power-operated doors must be at least 25 mm wide, proud of the surrounding surface and located— (aa) not less than 500 mm from an internal corner; and (bb) for a hinged door, between 1 m and 2 m from the door leaf in any position; and (cc) for a sliding door, within 2 m of the doorway and clear of a surface mounted door in the open position. (B) braille and tactile signage complying with Clause 3 and 6 of Specification D3.6 must identify the latch operation device. The above requirements do not apply to a door that – - serves only or is within a *sole-occupancy unit* in a Class 2 building; or - serves a *sole-occupancy unit* in a Class 5, 6, 7 or 8 building with a floor area not more than 200m2; or - are fitted with a fail-safe device which automatically unlocks the door upon the activation of an AS 1670.1 detection system installed throughout the building and is readily openable when unlocked.		

Section D: Access and Egress			
D2.22: Re-entry from fire-isolated exits		Not applicable to Wilkinson House	N/A
D2.23: Signs on doors	Signage in accordance with this clause is to be located on all fire and smoke doors stating “Fire Safety Door, Do Not Obstruct, Do Not Keep Open” and the discharge door from the fire isolated stairways are to state “Fire Safety Door – Do Not Obstruct” in capital letters not less than 20mm in height. Note: Fire signage in accordance with clause 183 of the Environmental Planning and Assessment Regulation 2000 is also required.	Noted	CRA – Refer Annexure F
D2.24: Protection of openable windows		Not applicable to Wilkinson House	N/A
D2.25: Timber stairways: concession		Not applicable to Wilkinson House	N/A
Part D3 – Access for People with a Disability			
Part D3 is not assessed by this BCA Logic BCA report			
Specification D1.12 – Non-Required Stairways, Ramps and Escalators			
Specification D1.12 is not applicable to Wilkinson House			
Specification D3.6 – Braille and Tactile Signs			
Specification D3.6 is not assessed by this BCA Logic BCA report			
Specification D3.10 – Accessible Water Entry/Exit for Swimming Pools			
Specification D3.10 is not applicable to Wilkinson House			

Section E: Services and Equipment				
Part E1 – Fire Fighting Equipment				
E1.0:	Deemed-to-Satisfy Provisions	Informational	Noted	Noted
E1.3:	Fire hydrants	As the building has a floor area greater than 500 m2, a fire hydrant system complying with AS 2419.1:2005 must be provided to serve the building. Details should be provided showing: > Hydrant booster assembly location. The booster location must comply with the following: o be within 8m of a hardstand for fire brigade appliance; o be within sight of the main entry; > Assuming it is attached to the building, be separated from the building by construction achieving FRL 90/90/90 for 2m either side of and 3m above the upper hose connections > Hydrant pump room location (if a pumpset is required). An internal pump room must have a door opening to a road or open space or egress to open space via a fire-isolated *exit*; > Internal hydrants in each fire-isolated *exit* at each storey providing coverage to all parts of the building. For internal fire hydrant coverage, all points on the floor must be covered by a 10m hose stream, issuing from 30 m hose length, extending not less than 1m into the room. Note: Consideration should be given to the location of Electrical Substations on adjoining sites in regards to proximity to Fire Hydrant Boosters being within 10.0m	Noted	CRA – Refer Annexure F

Section E: Services and Equipment			
E1.4: Fire hose reels		The Wilkinson House building that will comprise secondary school classrooms, corridors and associated uses only is not required to be provided with fire hose reels	N/A
E1.5: Sprinklers	The building must be provided with a sprinkler system complying with Table E1.5 and Specification E1.5 installed throughout.	A sprinkler system throughout the Wilkinson House building is proposed as the smoke hazard management system required of a School building having a rise in storeys of more than 3. The sprinkler valve room is proposed to have direct egress to a road.	CRA – Refer Annexure F
E1.6: Portable fire extinguishers	Portable fire extinguishers must be provided in accordance with clause E1.6 & Table E1.6 of the BCA and must be selected, located and distributed in accordance with Sections 1, 2, 3 and 4 of AS 2444:2001.	Noted	CRA – Refer Annexure F
E1.8: Fire control centres		Not applicable to Wilkinson House	N/A
E1.9: Fire precautions during construction	Informational– > During construction, not less than one portable fire extinguisher to suit Class A, B and C fires and electrical fires must be provided at all times on each storey adjacent to each required / temporary *exit*; and > After the building has reach an *effective height* of 12m, the required fire hydrants and fire hose reels must be operational on all floor / roof covered storeys, except for the 2 uppermost storeys; and all required booster connections must be installed.	Noted	CRA – Refer Annexure F
E1.10: Provision for special hazards		Not applicable to Wilkinson House	N/A

Section E: Services and Equipment				
Specification E1.5 – Fire Sprinkler Systems				
1.	Scope	Informational	Noted	Noted
2.	Application of automatic fire sprinkler standards	An automatic fire sprinkler system shall comply with AS2118 as relevant to the building classification and the design of the hydraulic consultant. Where the building is residential class 2 or 3 then refer to Specification E1.5a for specific design requirements and concessions.	Noted	CRA – Refer Annexure F
3.	Separation of sprinklered and non-sprinklered areas	Where a part of a building is not protected with sprinklers, the sprinklered and non-sprinklered parts must be fire-separated with a wall or floor which must – (a) comply with any specific requirement of the Deemed-to-Satisfy Provisions of the BCA; or (b) where there is no specific requirement, comply with the relevant part of AS 2118, FPAA101D or FPAA101H.	Noted	CRA – Refer Annexure F
4.	Protection of openings	Any openings, including those for service penetrations, in construction separating sprinklered and non-sprinklered parts of a building, including the construction separating the areas nominated for omitted protection in AS 2118.1:2017, must be protected in accordance with the Deemed-to-Satisfy Provisions of Part C3.	Noted	CRA – Refer Annexure F
5.	Fast response sprinklers	Fast response sprinklers may be installed only if they are suitable for the type of application proposed and it is demonstrated that the sprinkler system is designed to accommodate their use. Note Table E2.2a – Class 9a and 9c buildings – residential sprinkler heads in patient care areas, and Class 9b buildings – fast response sprinkler heads. Spec	Noted	CRA – Refer Annexure F

Section E: Services and Equipment				
		G3.8 – fast response sprinkler heads for atrium floor protection.		
6.	Sprinkler valve enclosures	(a) Sprinkler alarm valves must be located in a secure room or enclosure which has direct egress to a road or open space. (b) All sprinkler valve rooms and enclosures must be secured with a system suitable for use by the fire brigade.	Noted	CRA – Refer Annexure F
7.	Water supply	(a) A required sprinkler system must be provided with at least one water supply. (b) A required sprinkler system in a building greater than 25 m in effective height must be provided with dual water supply except that a secondary water supply storage capacity of 25,000 litres may be used if – - the storage tank is located at the topmost storey of the building; and - the building occupancy is classified as no more hazardous than Ordinary Hazard 2 (OH2) under AS 2118.1:2017; and - an operational fire brigade service is available to attend a building fire.	The Wilkinson House sprinkler system must be provided with at least one water supply	CRA – Refer Annexure F
8.	Building occupant warning system	A required sprinkler system, except a FPAA101D sprinkler system, must be connected to and activate a building occupant warning system complying with Clause 7 of Specification E2.2a.	Noted	CRA – Refer Annexure F
9.	Connection to Other Systems		Not applicable to Wilkinson House	N/A

Section E: Services and Equipment				
10.	Anti-tamper Devices	(a) Where a sprinkler system is installed – - over any stage area in a theatre, public hall or the like, visual and audible status indication of sprinkler valves must be provided at the location normally used by the stage manager; or - in a space housing lift electrical and control equipment (including machine rooms, secondary floors and sheave rooms), any valves provided to control sprinklers in these spaces must be located adjacent to the space. (b) Any valves provided to control sprinklers required by (a) must be fitted with anti-tamper monitoring devices connected to a monitoring panel.	Noted	CRA – Refer Annexure F
11.	Sprinkler Systems in Carparks		Not applicable to Wilkinson House	N/A
12.	Residential Care Buildings		Not applicable to Wilkinson House	N/A
13.	Sprinkler systems in lift installations	(a) Where sprinklers are installed in a space housing lift electrical and control equipment, including machine rooms, secondary floors and sheave rooms, sprinklers in these spaces must – - have heads protected from accidental damage by way of a guard that will not impair the performance of the head; and - be capable of being isolated and drained, either separately or collectively, without isolating any other sprinklers within the building. (b) Valves provided to control sprinklers referred to in (a) must be installed in accordance with Clause 10(b).	Noted	CRA – Refer Annexure F

Section E: Services and Equipment			
Specification E1.5a – Class 2 and 3 Buildings Not More Than 25m In Effective Height			
Specification E1.5a is not applicable to Wilkinson House			
Specification E1.8 – Fire Control Centres			
Specification E1.8 is not applicable to Wilkinson House			
Part E2 – Smoke Hazard Management			
E2.0: Deemed-to-Satisfy Provisions	Informational	Noted	Noted
E2.1: Application of Part	Informational	Noted	Noted
E2.2: General requirements (including Tables E2.2a and E2.2b)	**General smoke hazard management requirements** An air-handling system which does not form part of a smoke hazard management system in accordance with Table E2.2a or Table E2.2b and which recycles air from one *fire compartment* to another *fire compartment* or operates in a manner that may unduly contribute to the spread of smoke from one *fire compartment* to another *fire compartment* (such as lobby air supply) must— - be designed and installed to operate as a smoke control system in accordance with AS 1668.1:2015; or - (A) incorporate smoke dampers where the air-handling ducts penetrate any elements separating the *fire compartments* served; and (B) be arranged such that the air-handling system is shut down and the smoke dampers are activated to close	A sprinkler system throughout the Wilkinson House building is proposed as the smoke hazard management system required of a School building having a rise in storeys of more than 3. Noted	CRA – Refer Annexure F

Section E: Services and Equipment			
	automatically by smoke detectors complying with clause 7.5 of AS 1668.1:2015; and for the purposes of this provision, each *sole-occupancy unit* in a Class 2 or 3 building is treated as a separate *fire compartment*. Miscellaneous air-handling systems covered by Sections 5 and 6 of AS 1668.1:2015 serving more than one *fire compartment* (other than a carpark ventilation system) and not forming part of a smoke hazard management system must comply with that Section of the Standard. A smoke detection system must be installed in accordance with Clause 6 of Specification E2.2a to operate AS1668.1:2015 systems that are provided for zone pressurisation and automatic air pressurisation for fire-isolated *exits*. **Class 2 parts** **Fire-isolated exits** All fire-isolated *exits* serving a storey above an *effective height* of 25 m must be provided with an automatic air pressurisation system for fire-isolated *exits* in accordance with AS 1668.1:2015. The automatic air pressurisation system applies to the entire *exit*. **Auto shutdown for Class 9b** > (NSW Table E2.2b) - Any system in a Class 9b assembly building which does not form part of a smoke hazard management system, other than: o non-ducted individual room units with a capacity of not more than 1000 L/s; or o miscellaneous exhaust are systems installed as per Section 5 and 6 of AS 1668.1:2015. Must shutdown upon activation of fire trip.	Noted Not applicable Not applicable Not applicable Noted	CRA – Refer Annexure F N/A N/A N/A

Section E: Services and Equipment			
E2.3: Provisions for special hazards		Not applicable to Wilkinson House	N/A
Specification E2.2a – Smoke Detection and Alarm System			
Specification E2.2a is not applicable to Wilkinson House as a sprinkler system throughout the building is proposed			
Specification E2.2b – Smoke Exhaust System			
Specification E2.2b is not applicable to Wilkinson House			
Specification E2.2c – Smoke and Heat Vents			
Specification E2.2c is not applicable to Wilkinson House			
Specification E2.2d – Residential Fire Safety Systems			
Specification E2.2d is not applicable to Wilkinson House			
Part E3 – Lift Installations			
E3.0: Deemed-to-Satisfy Provisions	Informational	Noted	Noted
E3.1: Lift installations	An electric passenger lift installation and an electrohydraulic passenger lift installation must comply with Specification E3.1	Noted	CRA – Refer Annexure F
E3.2: Stretcher facility in lifts	A stretcher facility must be provided to an emergency lift required by E3.4. A stretcher facility must be provided to passenger lifts installed to serve any storey above an *effective height* of 12 m. A stretcher facility must accommodate a raised stretcher with a patient lying on it horizontally by providing a clear	Having an effective height of 12.94m, the Wilkinson House lift is required to be a stretcher lift	CRA – Refer Annexure F

Section E: Services and Equipment			
	space not less than 600mm wide x 2000mm long x 1400mm high above floor level.		
E3.3: Warning against use of lifts in fire	Warning signs indicating “DO NOT USE LIFTS IF THERE IS A FIRE” shall be displayed near every call button for a passenger lift or group of lifts throughout a building as per E3.3.	Noted	CRA – Refer Annexure F
E3.4: Emergency lifts		Not applicable to Wilkinson House	N/A
E3.5: Landings	Access and egress to and from lift-well landings must comply with the Deemed-to-Satisfy Provisions of Section D.	Noted	CRA – Refer Annexure F
E3.6: Passenger lifts	In an accessible building, every passenger lift must be one of the types specified in Table E3.6a, have accessible features in accordance with Table E3.6b, and not rely on a constant pressure device for its operation if the lift car is fully enclosed.	A 1200mm wide lift car, in lieu of 1400mm as required for an accessible lift traveling more than 12m (12.94m proposed), will require a performance based solution addressing BCA Performance Requirement EP3.4.	**PS Required**
E3.7: Fire service controls	The lifts serving any storey above an *effective height* of 12 m must be provided with: (a) A fire service recall control switch complying with E3.9 for— - a group of lifts; or - a single lift not in a group that serves the storey. (b) A lift car fire service drive control switch complying with E3.10 for every lift.	Having an effective height of 12.94m, the Wilkinson House lift is required to have fire service controls	CRA – Refer Annexure F
E3.8: Aged care buildings		Not applicable to Wilkinson House	N/A

Section E: Services and Equipment				
E3.9:	Fire service recall switch	The fire service control switch required by E3.7, is to comply with this clause. Lift services design to confirm compliance at CC stage.	Having an effective height of 12.94m, the Wilkinson House lift is required to have fire service controls	CRA – Refer Annexure F
E3.10:	Lift car service drive control switch	The lift car service drive control switch required by E3.7, is to comply with this clause. Lift services design to confirm compliance at CC stage.	Having an effective height of 12.94m, the Wilkinson House lift is required to have fire service controls	CRA – Refer Annexure F
Specification E3.1 – Lift Installations				
1.	Scope	Informational	Noted	Noted
2.	Lift cars exposed	(a) A lift car exposed to solar radiation directly, or indirectly by re-radiations, must have – - mechanical ventilation at a rate of one air change per minute; or - mechanical cooling. (b) A 2-hour alternative power source for ventilation or mechanical cooling at (a) must be provided in the event of normal power loss.	The proposed external glass lift shaft must comply.	**CRA – Refer Annexure F & Report Section 3**
3.	Lift car emergency lighting	A lift car must have an emergency lighting system designed – (a) to come on automatically upon failure of the normal light supply; and (b) to provide at least 20 lux of lighting for 2 hours on the alarm initiation button.	Noted	CRA – Refer Annexure F
4.	Cooling of lift shaft	While a lift in a lift shaft is in service, the cooling of the lift shaft must – (a) ensure that the dry bulb air temperature in the lift shaft does not exceed 40°C; and	The proposed external glass lift shaft must comply	**CRA – Refer Annexure F & Report Section 3**

Section E: Services and Equipment				
		(b) if the cooling is by a ventilation system, be provided with an air changed rate determined using a temperature rise of no more than 5 K.		
5.	Lift foyer access	Where there is a security foyer in a building, access may be via locked security doors provided – (a) security doors revert to the unlocked state in the event of – - power failure; or - fire alarm; and (b) locked foyer areas are monitored by closed circuit television and intercom system to a 24-hour staffed location.	Noted	CRA – Refer Annexure F
6.	Emergency access doors in a single enclosed lift shaft	(a) Where a lift is installed in a single enclosed lift shaft **having a distance between normal landing entrances greater than 12.2m**, emergency access doors must be provided and constructed as follows: - The clear opening size of emergency doors must be not less than 600 mm wide x 980 mm high. - Hinged doors must not open towards the interior of the lift shaft. - Doors must be self-closing and self-locking. - Doors must be marked on the landing side with the letters not less than 35 mm high: (A) "DANGER LIFTWELL ACCESS" (B) "KEEP FURNITURE AND FIXTURES CLEAR". - Doors from the landing side must only be openable by a tool. - Each emergency door must be provided with a positive breaking electrical contact, wired into the	Not applicable to Wilkinson House lift shaft	N/A

Section E: Services and Equipment			
	control circuit to prevent movement of the lift until the emergency door is both closed and locked. (b) In single enclosed lift shafts where – - ropes are installed; and - the vertical distance between the lift car sill and the landing door head is less than 600 mm; and - the counterweight is resting on its fully compressed buffer, - emergency egress from the lift car must be provided in the form of an interlocked door with clear opening dimensions not less than 600 mm x 600 mm, accessible from the lift car entrance or the lift car rook (where the door is located in the wall of the lift shaft).		
Part E4 – Visibility In An Emergency, Exit Signs And Warning Systems			
E4.0: Deemed-to-Satisfy Provisions	Informational	Noted	Noted
E4.2: Emergency lighting requirements	An emergency lighting system must be installed throughout the building in accordance with Clause E4.2 of the BCA and AS/NZS 2293.1:2018.	Noted	CRA – Refer Annexure F
E4.3: Measurement of distance	Informational	Noted	Noted
E4.4: Design and operation of emergency lighting	The emergency lighting system must comply with AS/NZS 2293.1:2018.	Noted	CRA – Refer Annexure F
E4.5: Exit signs	*Exits* signs are to be provided above or adjacent to a door providing egress as well as directional signage throughout the entire development where necessary.	Noted	CRA – Refer Annexure F

Section E: Services and Equipment			
E4.6: Direction signs	Where an *exit* is not readily apparent, directional signage is to be installed indicating the direction of egress.	Noted	CRA – Refer Annexure F
E4.7: Class 2 and 3 buildings and Class 4 Parts: Exemptions		Not applicable to Wilkinson House	N/A
E4.8: Design and operation of exit signs	Exit signs must comply with AS/NZS 2293.1:2018 and be clearly visible at all times when the building is occupied.	Noted	CRA – Refer Annexure F
E4.9: Emergency warning and intercom systems	An Emergency warning and intercom system complying where applicable with AS 1670.4:2018 must be installed within the building.	Having a rise in storeys of more than 3, an EWIS system is required	CRA – Refer Annexure F

Section F: Health and Amenity			
Part F1 – Damp and Weatherproofing			
F1.0: Deemed-to-Satisfy Provisions	*Performance Requirement* FP1.4, for the prevention of the penetration of water through external walls, must be complied with. There are no Deemed-to-Satisfy Provisions for this *Performance Requirement* in respect of external walls. The assessment contained within this report does not include an assessment against Performance Provision FP1.4.	Noted	**PS Required**
F1.1: Stormwater drainage	Stormwater drainage to comply with AS/NZS 3500.3:2018.	Noted	CRA – Refer Annexure F
F1.4: External above ground membranes	Waterproofing membranes for external above ground use to comply with AS 4654 Parts 1 and 2:2012.	Noted	CRA – Refer Annexure F
F1.5: Roof coverings	Roof coverings are to comply with BCA Clause F1.5.	Noted	CRA – Refer Annexure F

Section F: Health and Amenity				
F1.6:	Sarking	*Sarking-type materials* used for weatherproofing must comply with AS/NZS 4200 Part 1 and 2:2017.	Noted	CRA – Refer Annexure F
F1.7:	Water proofing of wet areas in buildings	Wet areas must be constructed in accordance with AS 3740:2010 and F1.7 of the BCA.	Noted	CRA – Refer Annexure F
F1.9:	Damp-proofing	Moisture is to be prevented from reaching the walls above a damp-proof course, and the underside of the suspended floors.	Noted	CRA – Refer Annexure F
F1.10:	Damp-proofing of floors on the ground	If a floor of a room is laid on the ground or on fill, moisture from the ground must be prevented from reaching the upper surface of the floor and adjacent walls by the insertion of a vapour barrier in accordance with AS 2870:2011 (N/A to areas that do not require weatherproofing – refer specific clause exemptions).	Noted	CRA – Refer Annexure F
F1.11:	Provision of floor wastes		Not applicable to Wilkinson House	N/A
F1.12:	Sub-floor ventilation		Noted	CRA – Refer Annexure F
F1.13:	Glazed Assemblies	Glazed assemblies are to comply with AS 2047:2014 and AS 1288:2006.	Noted	CRA – Refer Annexure F
Part F2 – Sanitary and Other Facilities				
F2.0:	Deemed-to-Satisfy Provisions	Informational	Noted	Noted
F2.1:	Facilities in residential buildings (including Table F2.1)		Not applicable to Wilkinson House	N/A

Section F: Health and Amenity				
F2.2:	Calculation of number of occupants and facilities	Informational – (a) The number of persons accommodated must be calculated according to D1.13 if it cannot be more accurately determined by other means (b) Unless the premises are used predominantly by one sex, sanitary facilities must be provided on the basis of equal numbers of males and females (c) In calculating the number of sanitary facilities to be provided under F2.1 and F2.3, a unisex facility required for people with a disability may be counted once for each sex (d) For the purpose of this Part, a unisex facility comprises one closet pan, one washbasin and means for the disposal of sanitary towels	Noted	CRA – Refer Annexure F
F2.3:	Facilities in Class 3 to 9 buildings (including Table F2.3)	(a) Except where permitted by (b), (c), (f), F2.4(a) and F2.4(b), separate sanitary facilities for males and females must be provided for Class 3, 5, 6, 7, 8 or 9 buildings in accordance with Table F2.3. (b) If not more than 10 people are employed, a unisex facility may be provided instead of separate facilities for each sex. (c) If the majority of employees are one sex, not more than 2 employees of the other sex may share toilet facilities if the facilities are separated by means of walls, partitions and doors to afford privacy. (d) Employees and the public may share the same facilities in a Class 6 and 9b building (other than a school or early childhood centre) provided the number of facilities provided is not less than the total number of facilities required for employees plus those required for the public. (e) Adequate means of disposal of sanitary towels must be provided in sanitary facilities for use by females.	SCEGGS Darlinghurst is a female only secondary school and hence all sanitary facilities proposed are primarily for the female students. Male and female staff have designated facilities proposed at levels Ground (L00) and Level 3 (L03) being an accessible unisex (wheelchair) room and an ambulant toilet room at each of these levels. These staff facilities being separate rooms enable not more than 2 employees of the other sex may share toilet facilities. In addition, if not more than 10 people are employed, a unisex facility may be provided instead of separate facilities for each sex. The student facilities are proposed o level 2 (L02) and comprise an accessible unisex (wheelchair) room, an ambulant toilet cubicle and two able bodied toilet cubicles.	**CRA – Refer Annexure F & Report Section 3**

Section F: Health and Amenity				
		(f) (g) (h) (i) (j) Not less than one washbasin must be provided where closet pans or urinals are provided.		
F2.4:	Accessible sanitary facilities (including Table F2.4)	Employee sanitary facility required by Clause F2.1 is to be an accessible unisex compartment compliant with AS 1428.1:2009.	Accessible sanitary unisex (wheelchair) facilities are proposed on levels Ground (L00), Level 2 (L02) and Level 3 (L03) and accessible ambulant toilet rooms or cubicles for females are also provided on these levels	Complies
F2.5:	Construction of sanitary compartments	(a) Other than in an early childhood centre, sanitary compartments must have doors and partitions that separate adjacent compartments and extend— - from floor level to the ceiling in the case of a unisex facility; or - to a height of not less than 1.5 m above the floor if primary school children are the principal users; or - 1.8 m above the floor in all other cases. (b) The door to a fully enclosed sanitary compartment must— - open outwards; or - slide; or - be readily removable from the outside of the sanitary compartment, unless there is a clear space of at least 1.2 m, measured in accordance with Figure F2.5, between the closet pan within the sanitary compartment and the doorway.	All toilet rooms comply	Complies

Section F: Health and Amenity			
F2.6: Interpretation: urinals and washbasins	Informational– (a) A urinal may be— - an individual stall or wall-hung urinal; or - each 600 mm length of a continuous urinal trough; or (iii) a closet pan used in place of a urinal. (b) A washbasin may be— - an individual basin; or - a part of a hand washing trough served by a single water tap.	Noted	Noted
F2.8: Waste Management		Not applicable to Wilkinson House	N/A
F2.9: Accessible adult change facilities		Not applicable to Wilkinson House	N/A
Specification – F2.9 Accessible Adult Change Facilities			
Specification F2.9 is not applicable to Wilkinson House			
Part F3 – Room Heights			
F3.0: Deemed-to-Satisfy Provisions	Informational	Noted	Noted
F3.1: Height of rooms and other spaces	(a) The height of rooms and other spaces must be not less than— (b) (c) (d) (e) in a Class 9b building—	Noted. All rooms and corridors to comply. No storey will accommodate more than 100 people therefore 2.4m ceiling heights are permitted.	Complies

Section F: Health and Amenity			
	- a school classroom or other assembly building or part that accommodates not more than 100 persons — 2.4 m; and - a theatre, public hall or other assembly building or part that accommodates more than 100 persons — 2.7 m; and - a corridor— (A) that serves an assembly building or part that accommodates not more than 100 persons — 2.4 m; or (B) that serves an assembly building or part that accommodates more than 100 persons — 2.7 m; and - the number of persons accommodated must be calculated according to D1.13; and (f) (g) in any building— - a bathroom, shower room, sanitary compartment, airlock, tea preparation room, pantry, store room, garage, car parking area, or the like — 2.1 m; and - a commercial kitchen — 2.4 m; and - above a stairway, ramp, landing or the like — 2 m measured vertically above the nosing line of stairway treads or the floor surface of the ramp, landing or the like. - A required accessible adult change facility – 2.4m.		

Section F: Health and Amenity				
Part F4 – Light and Ventilation				
F4.0:	Deemed-to-Satisfy Provisions	Informational	Noted	Noted
F4.1:	Provision of natural light	Natural light must be provided to all general purpose classrooms in primary or secondary schools	Noted	CRA – Refer Annexure F
F4.2:	Methods and extent of natural lighting	(a) Natural light must be provided by: - Windows: (A) with an aggregate light transmitting area of not less than 10% the floor area of the room; and (B) that are open to the sky or face a court or other space open to the sky or an open verandah, carport or the like; or - Rooflights, that: (A) have an aggregate light transmitting area of not less than 3% the floor area of the room; or - a proportional combination of windows and roof lights required by (i) and (ii). (b) (c) A required window that faces a boundary of an adjoining allotment or a wall of the same building or another building on the allotment must be not less than a horizontal distance from that boundary or wall that is the greater of – (d) 1m; and (e) 50% of the square root of the exterior height of the wall in which the window is located, measured from its sill.	Noted.	CRA – Refer Annexure F

Section F: Health and Amenity				
F4.3:	Natural light borrowed from adjoining room	(a) Natural light to a room in a Class 2 building or Class 4 part of a building or in a sole-occupancy unit of a Class 3 building, may come through one or more glazed panels or openings from an adjoining room (including an enclosed verandah) if— - both rooms are within the same sole-occupancy unit or the enclosed verandah is on common property; and - the glazed panels or openings have an aggregate light transmitting area of not less than 10% of the floor area of the room to which it provides light; and - the adjoining room has— (A) windows , excluding roof lights, that— (aa) have an aggregate light transmitting area of not less than 10% of the combined floor areas of both rooms; and (bb) are open to the sky or face a court or other space open to the sky or an open verandah, carport or the like; or (B) roof lights , that— (aa) have an aggregate light transmitting area of not less than 3% of the combined floor areas of both rooms; and (bb) are open to the sky; or (C) a proportional combination of windows and roof lights required by (A) and (B).	Not applicable to Wilkinson House	CRA – Refer Annexure F

Section F: Health and Amenity			
	(b) The areas specified in (a)(ii) and (a)(iii) may be reduced as appropriate if direct natural light is provided from another source.		
F4.4: Artificial Lighting	Lighting to all areas is to comply with AS/NZS 1680.0:2009.	Noted. All new lighting will be proposed.	CRA – Refer Annexure F
F4.5: Ventilation of rooms	All rooms to be provided with Clause F4.6 compliant natural ventilation **OR** a mechanical ventilation or air-conditioning system complying with AS 1668.2:2012.	A combination of natural and mechanical ventilation is proposed.	CRA – Refer Annexure F
F4.6: Natural ventilation	(a) Natural ventilation provided in accordance with F4.5(a) must consist of permanent openings, windows, doors or other devices which can be opened— - with an aggregate opening or openable size not less than 5% of the floor area of the room required to be ventilated; and - open to— (A) a suitably sized court, or space open to the sky; or (B) an open verandah, carport, or the like; or (C) an adjoining room in accordance with F4.7.	Existing single hung casement windows of the existing façade to remain are to be converted to double hung casement windows in order to maximise the opportunity for natural ventilation.	CRA – Refer Annexure F
F4.7: Ventilation borrowed from adjoining room	Ventilation may be 'borrowed' from adjoining rooms in some instances in accordance with this clause.	Not applicable to Wilkinson House	CRA – Refer Annexure F
F4.8: Restriction on position of water closets and urinals	Sanitary compartments must not open directly into a – > kitchen or pantry > public dining room or restaurant > dormitory in a Class 3 building	Not applicable to Wilkinson House	CRA – Refer Annexure F

Section F: Health and Amenity			
	> room used for public assembly (which is not an early childhood centre, primary school or open spectator stand) > workplace normally occupied by more than one person.		
F4.9: Airlocks	If sanitary compartments are prohibited from opening directly to another room: > access must be by an airlock, hallway or other room with a floor area of not less than 1.1m^2 and fitted with self-closing doors at all access doorways; or > the sanitary compartments must be provided with mechanical exhaust ventilation and the doorway to the room adequately screened from view.	Not applicable to Wilkinson House	N/A
F4.11: Carparks	Every storey of a carpark (except an open deck carpark) must have: > a system of mechanical ventilation complying with AS 1668.2:2012; or > a system of natural ventilation complying with Section 4 of AS 1668.4:2012.	No carparking proposed	N/A
F4.12: Kitchen local exhaust ventilation	Any commercial kitchen must be provided with a kitchen exhaust hood complying with AS 1668.1:2015 and AS 1668.2:2012 where: > any cooking apparatus has: o a total maximum electrical power input exceeding 8 kW; or o a total gas power input exceeding 29 MJ/h; or > the total maximum power input to more than one apparatus exceeds:	No commercial kitchen proposed.	N/A

Section F: Health and Amenity			
	○ 0.5 kW electrical power; or ○ 1.8 MJ gas, Per m2 of floor area of the room or enclosure.		
Part F5 – Sound Transmission and Insulation			
Part F5 is not applicable to Wilkinson House			
Specification F5.2 – Sound Insulation for Building Elements			
Specification F5.2 is not applicable to Wilkinson House			
Specification F5.5 – Impact Sound – Test of Equivalence			
Specification F5.5 is not applicable to Wilkinson House			
Part F6 – Condensation Management			
Part F6 is not applicable to Wilkinson House			

Section G: Ancillary Provisions			
Part G1 – Minor Structures and Components			
NSW G1.101: Provision for cleaning windows	A safe manner for cleaning of windows located 3 or more storeys above ground level must be provided, and compliance is achieved where: > the windows can be cleaned wholly from within the building; or > via a method complying with the Work Health and Safety Act 2011 and regulations made under that Act.	With a rise in storeys of five (5), NSW G1.101 is applicable.	CRA – Refer Annexure F

Section G: Ancillary Provisions			
Part G2 – Boilers, Pressure Vessels, Heating Appliances, Fireplaces, Chimneys and Flues			
Part G2 is not applicable to Wilkinson House			
Part G3 – Atrium Construction			
Part G3 is not applicable to Wilkinson House			
Specification G3.8 – Fire and Smoke Control in Buildings Containing Atriums			
Specification G3.8 is not applicable to Wilkinson House			
Part G4 – Construction in Alpine Areas			
Part G4 is not applicable to Wilkinson House			
Part G5 – Construction in Bushfire Prone Areas			
Part G5 is not applicable to Wilkinson House			
Part G6 – Occupiable Outdoor Areas			
G6.1: Application of part	(a) The Deemed-to-Satisfy Provisions of this Part apply to buildings containing an occupiable outdoor area in addition to the other Deemed-to-Satisfy Provisions of the BCA. (b) The Deemed-to-Satisfy Provisions of this Part take precedence where there is a difference to the Deemed-to-Satisfy Provisions of Sections C, D, E, F and G. (c) Except for G6.2, the Deemed-to-Satisfy Provisions of this Part do not apply to – - an occupiable outdoor area of a *sole-occupancy unit* in a Class 2 or 3 building, Class 9c building or Class 4 part of a building; or	The topmost Level 03 (L03) is comprised in part of a 71m^2 occupiable outdoor area	Noted

Section G: Ancillary Provisions			
	- an occupiable outdoor area with an area less than $10m^2$.		
G6.2: Fire hazard properties	(a) Subject to (b), a lining material or assembly in an occupiable outdoor area must comply with C1.10 as for an internal element. (b) The following fire hazard properties of a lining, material or assembly in an occupiable outdoor area are not required to comply with C1.10: - *Average specific extinction area.* - Smoke-Developed Index. - Smoke development rate. - *Smoke growth rate index* ($SMOGRA_{RC}$).	The topmost Level 03 (L03) is comprised in part of a $71m^2$ occupiable outdoor area	CRA – Refer Annexure F
G6.3: Fire Separation	For the purposes of the Deemed-to-Satisfy Provisions of C2.7, C2.8 and C2.9, a reference to a storey includes an occupiable outdoor area, however a *fire wall* cannot be used to separate an occupiable outdoor area into different *fire compartments*.	The topmost Level 03 (L03) is comprised in part of a $71m^2$ occupiable outdoor area	Noted
G6.4: Provision for escape	For the purposes of the Deemed-to-Satisfy Provisions of Part D1, a reference to a storey or room includes an occupiable outdoor area.	The topmost Level 03 (L03) is comprised in part of a $71m^2$ occupiable outdoor area	CRA – Refer Annexure F
G6.5: Construction of exits	For the purposes of the Deemed-to-Satisfy Provisions of Part D2, a reference to a storey or room includes an occupiable outdoor area.	The topmost Level 03 (L03) is comprised in part of a $71m^2$ occupiable outdoor area	CRA – Refer Annexure F
G6.6: Fire fighting equipment	Except for Clause 7(b)(i) of Specification E1.5, for the purposes of the Deemed-to-Satisfy Provisions of Part E1, a reference to a storey includes an occupiable outdoor area.	The topmost Level 03 (L03) is comprised in part of a $71m^2$ occupiable outdoor area	CRA – Refer Annexure F

Section G: Ancillary Provisions			
G6.7: Lift installations	For the purposes of the Deemed-to-Satisfy Provisions of Part E3, a reference to a storey includes an occupiable outdoor area.	The topmost Level 03 (L03) is comprised in part of a 71m^2 occupiable outdoor area	CRA – Refer Annexure F
G6.8: Visibility in an emergency, exit signs and warning systems	For the purposes of the Deemed-to-Satisfy Provisions of Part E4, a reference to a storey includes an occupiable outdoor area.	The topmost Level 03 (L03) is comprised in part of a 71m^2 occupiable outdoor area	CRA – Refer Annexure F
G6.9: Light and ventilation	For the purposes of the Deemed-to-Satisfy Provisions of F4.4, F4.8 and F4.9, a reference to a room includes an occupiable outdoor area.	The topmost Level 03 (L03) is comprised in part of a 71m^2 occupiable outdoor area	CRA – Refer Annexure F
G6.10: Fire orders	For the purposes of the Deemed-to-Satisfy Provisions of G4.9, a reference to a storey includes an occupiable outdoor area.	The topmost Level 03 (L03) is comprised in part of a 71m^2 occupiable outdoor area	Not applicable

Section H: Special Use Buildings
Part H1 – Class 9b Buildings
Part H1 is not applicable to Wilkinson House
Specification H1.3 – Construction of Theatres with Proscenium Walls
Specification H1.3 is not applicable to Wilkinson House
NSW Part H101 – Entertainment Venues Other Than Temporary Structures and Drive In Theatres
NSW Part H101 is not applicable to Wilkinson House
NSW Part H102 – Temporary Structures
NSW Part H102 is not applicable to Wilkinson House

Section H: Special Use Buildings
NSW Part H103 – Drive In Theatres
NSW Part H103 is not applicable to Wilkinson House
Part H2 – Public Transport Buildings
Part H2 is not applicable to Wilkinson House
Part H3 – Farm Building and Farm Sheds
Part H3 is not applicable to Wilkinson House

Section I: Maintenance
Part I1 – Equipment and Safety Installations
This Part has been deleted in BCA2019.

Section J: Energy Efficiency (Class 3, 5, 6, 7b, 8, 9)
Section J not assessed by this BCA Logic BCA report

ANNEXURE E DEFINITIONS

Annexure E - Definitions

Average specific extinction area

Average specific extinction area means the average specific extinction area for smoke as determined by AS 5637.1:2015.

Critical radiant flux

Critical radiant flux (CRF) means the critical heat flux at extinguishment (CHF in kW/m2) as determined by AS ISO 9239.1:2003.

Effective height

Effective height means the vertical distance between the floor of the lowest storey included in a determination of rise in storeys and the floor of the topmost storey (excluding the topmost storey if it contains only heating, ventilating, lift or other equipment, water tanks or similar service units).

Exit

Exit means –

(a) Any, or any combination of the following if they provide egress to a road or open space—

(i) An internal or external stairway.

(ii) A ramp.

(iii) A fire-isolated passageway.

(iv) A doorway opening to a road or open space.

(v) A horizontal exit or a fire-isolated passageway leading to a horizontal exit.

Fire compartment

Fire compartment means –

(a) the total space of a building; or

(b) when referred to in—

(i) the Performance Requirements — any part of a building separated from the remainder by barriers to fire such as walls and/or floors having an appropriate resistance to the spread of fire with any openings adequately protected; or

(ii) the Deemed-to-Satisfy Provisions — any part of a building separated from the remainder by walls and/or floors each having an FRL not less than that required for a fire wall for that type of construction and where all openings in the separating construction are protected in accordance with the Deemed-to Satisfy Provisions of the relevant Part.

Fire-resistance level (FRL)

Fire-resistance level (FRL) means the grading periods in minutes determined in accordance with Specification A2.3, for the following criteria—

(a) structural adequacy; and

(b) integrity; and

(c) insulation,

and expressed in that order.

Note: A dash means that there is no requirement for that criterion. For example, 90/–/– means there is no requirement for an FRL for integrity and insulation, and –/–/– means there is no requirement for an FRL.

Fire-source feature

(a) the far boundary of a road, river, lake or the like adjoining the allotment; or

(b) a side or rear boundary of the allotment; or

(c) an external wall of another building on the allotment which is not a Class 10 building

Fire wall

Fire wall means a wall with an appropriate resistance to the spread of fire that divides a storey or building into fire compartments.

Flammability index

Flammability Index means the index number as determined by AS 1530.2:1993.

Group number

Group number means the number of one of 4 groups of materials used in the regulation of fire hazard properties and applied to materials used as a finish, surface, lining, or attachment to a wall or ceiling.

Horizontal exit

Horizontal exit means a required doorway between 2 parts of a building separated from each other by a fire wall.

Loadbearing

Intended to resist vertical forces additional to those due to its own weight.

Non-combustible

Non-combustible means—

(a) applied to a material — not deemed combustible as determined by AS 1530.1:1994 — Combustibility Tests for Materials; and

(b) applied to construction or part of a building — constructed wholly of materials that are not deemed combustible

Occupiable outdoor area

Occupiable outdoor area means a space on a roof, balcony or similar part of a building–

(a) that is open to the sky; and

(b) to which access is provided, other than access only for maintenance; and

(c) that is not open space or directly connected with open space.

Open space

Open space means a space on the allotment, or a roof or similar part of a building adequately protected from fire, open to the sky and connected directly with a public road.

Performance Requirement

Performance Requirement means a requirement which states the level of performance which a Performance Solution or Deemed-to-Satisfy Solution must meet.

Performance Solution

Performance Solution means a method of complying with the Performance Requirements other than by a Deemed-to-Satisfy Solution.

Sarking-type material

Sarking-type material means a material such as a reflective insulation or other flexible membrane of a type normally used for a purpose such as waterproofing, vapour management or thermal reflectance.

Smoke developed index

Smoke developed index means the index number for smoke as determined by AS/NZS 1530.3.

Smoke development rate

Smoke development rate means the development rate for smoke as determined by testing flooring materials in accordance with AS ISO 9239.1.

Smoke growth rate index

Smoke growth rate index (SMOGRA RC) means the index number for smoke used in the regulation of fire hazard properties and applied to materials used as a finish, surface, lining or attachment to a wall or ceiling.

Sole-occupancy unit

Sole-occupancy unit means a room or other part of a building for occupation by one or joint owner, lessee, tenant, or other occupier to the exclusion of any other owner, lessee, tenant, or other occupier and includes—

(a) a dwelling; or

(b) a room or suite of rooms in a Class 3 building which includes sleeping facilities; or

(c) a room or suite of associated rooms in a Class 5, 6, 7, 8 or 9 building; or

(d) a room or suite of associated rooms in a Class 9c building, which includes sleeping facilities and any area for the exclusive use of a resident.

ANNEXURE F BCA COMPLIANCE SPECIFICATION

Annexure F – BCA Compliance Specification

The following BCA matters are to be addressed by specific BCA Design Certificate to be issued by the relevant architectural, services and engineering consultants at the Construction Certificate Stage. This schedule should be forwarded to all consultants to obtain verification that these items have and will be included in the design documentation / specifications:

Architectural Design Certification

1. The FRL's of building elements for the proposed works have been designed in accordance with Table 3 of Specification C1.1 of BCA2019 for a building of Type A Construction.
2. Lightweight construction used to achieve required fire resistance levels will comply with Specification C1.8 of BCA2019.
3. Building elements must be non-combustible in accordance with C1.9 of BCA2019.
4. Materials, floor and wall linings/coverings, surface finishes and air-handling ductwork used in the works will comply with the fire hazard properties of Clause C1.10 and Specification C1.10 of BCA2019.
5. Any ancillary elements fixed, installed or attached to the internal parts or external face of an external wall that is required to be non-combustible will comply with Clause C1.14 of BCA2019.
6. The external walls and openings of separate fire compartments will be protected in accordance with Clause C3.3.
7. The parts of different classifications located alongside one another in the same storey will be separated in accordance with Clause C2.8 and Specification C1.1 of BCA2019.
8. Floors separating storeys of different classifications will comply with BCA Clause C2.9 of BCA2019.
9. Equipment will be separated in accordance with Clause C2.12 of BCA2019.
10. Any electricity substation, any main switch room sustaining emergency equipment required to operate in emergency mode, will be separated from the remaining building with construction having an FRL 120/120/120 and provided with self-closing -/120/130 fire doors in accordance with Clause C2.13 of BCA2019.
11. Openings in the external walls that are required to have an FRL will be in located in accordance with Clause C3.2 and C3.3 of BCA2019 or protected in accordance with Clause C3.4 of BCA2019.
12. The external walls and openings of separate fire compartments will be protected in accordance with Clause C3.3.
13. Doorways in any fire walls separating fire compartments will be protected in accordance with Clause C3.5 of BCA2019.
14. Any sliding fire doors in a fire wall which is open when the building is use will be installed in accordance with Clause C3.6 of BCA2019.
15. Doorways in horizontal exits will be protected in accordance with Clause C3.7 of BCA2019.
16. Doors in a fire-isolated exit will be self-closing or automatic closing fire doors with an FRL of not less than -/60/30 in accordance with Clause C3.8 of BCA2019.
17. Fire-isolated stairways will not be penetrated by services other than those permitted by Clause C3.9 of BCA2019.
18. Services penetrating elements required to possess an FRL including the floor slabs, walls, shafts, etc. will be protected in accordance with Clause C3.12, C3.13 and C3.15 and Specification C3.15 of BCA2019.

19. Construction joints, spaces and the like in and between building elements required to be fire-resisting with respect to integrity and insulation will be protected in accordance with BCA Clause C3.16.
20. The lift doors will be --/60/- fire doors complying with AS 1735.11:1986 in accordance Clause C3.10 of BCA2019.
21. Columns protected by light weight construction will achieve an FRL not less than the FRL for the element it is penetrating, in accordance with Clause C3.17 of BCA2019.
22. A lintel will have the FRL required for the part of the building in which it is situated, unless it does not contribute to the support of a fire door, fire window or fire shutter, and it spans an opening in masonry which is not more than 150 mm thick and is not more than 3m wide if the masonry is non-loadbearing; or not more than 1.8m wide if the masonry is loadbearing and part of a solid wall or one of the leaves of a cavity wall, or it spans an opening in a non-loadbearing wall of the Class 2 or 3 building, in accordance with Specification C1.1 Clause 2.3 BCA2019.
23. All attachments to the external façade of the building will be fixed in a way that does not affect the fire resistance of that element in accordance with Clause 2.4 of Specification C1.1 of BCA2019.
24. The top and bottom of the riser shafts will achieve an FRL not less than the FRL required for the walls of the shaft in accordance with Clause 2.7 of Specification C1.1 of BCA2019.
25. Fire doors will comply with AS 1905.1:2015 and Specification C3.4 of BCA2019.
26. Fire shutters and fire windows will be in accordance with Specification C3.4 of BCA2019.
27. The number of exits provided to the building will be in accordance with Clause D1.2 of BCA2019.
28. The required exits will be fire-isolated in accordance with Clause D1.3 of BCA2019.
29. Travel distances to exits will be in accordance with Clause D1.4 of BCA2019.
30. The alternative exits will be distributed uniformly around the storey and will not be less than 9m apart and not more than 60m, in accordance with Clause D1.5 of BCA2019.
31. The dimensions of exits and paths of travel to exits will be provided in accordance with Clause D1.6 of BCA2019.
32. The fire-isolated exits will be in accordance with Clause D1.7 of BCA2019.
33. Discharge from exits will be in accordance with Clause D1.10 of BCA2019.
34. Horizontal exits will be in accordance with Clause D1.11 of BCA2019.
35. The ladder from the plant, lift machine rooms, and electricity network substation in lieu of a stairway will be in accordance with Clause D1.16 of BCA2019.
36. Access to the lift pit will be in accordance with Clause D1.17 of BCA2019.
37. The stairway or ramp within the fire-isolated shaft is to be non-combustible, and if there is a local failure not cause structural damage or impair the fire resistance of the shaft, in accordance with Clause D2.2 of BCA2019.
38. Any non-fire isolated stairway will be constructed in accordance with Clause D2.3 of BCA2019.
39. The construction of EDB's and telecommunications distribution boards will be in accordance with Clause D2.7 of BCA2019 with the enclosure bounded by non-combustible construction or fire protective covering and smoke seals provided around the perimeter of the non-combustible doors and any openings sealed with non-combustible mastic to prevent smoke spreading from the enclosure.
40. The enclosing walls and ceiling under any non-fire-isolated stairway will achieve an FRL of 60/60/60, and have a self-closing -/60/30 fire door, in accordance with Clause D2.8 of BCA2019.

41. New pedestrian ramps will comply with AS 1428.1:2009, Clause D2.10 and Part D3 of BCA2019. The floor surface of a ramp must have a slip-resistance classification complying with Table D2.14 when tested in accordance with AS 4586:2013.
42. Stair geometry to the new stairways will be in accordance with Clause D2.13 of BCA2019. Stair treads are to have a surface with a slip-resistance classification complying with Table D2.14 when tested in accordance with AS 4586:2013.
43. Landings and door thresholds throughout the development will be provided in accordance with Clause D2.14 and D2.15 of BCA2019. Landings to have either a surface with a slip-resistance classification complying with Table D2.14 when tested in accordance with AS 4586:2013 or a strip at the edge of the landing with a slip-resistance classification complying with Table D2.14 when tested in accordance with AS 4586:2013 where the edge ledge to a flight below.
44. The handrails and balustrades to all stairs and throughout the building will be in accordance with Clause D2.16, and D2.17 of BCA2019.
45. The fixed platform, walkway, stairway and ladder and any associated going and riser, landing handrail, balustrade, located within the machinery room, boiler house, lift-machine room, plant-room, or non-habitable attic/storeroom within the sole occupancy unit will comply with AS 1657:2013 or Part D2 of BCA2019.
46. The doorways and doors will be in accordance with Clause D2.19 and D2.20 of BCA2019.
47. Door latching mechanisms will be in accordance with Clause D2.21 of BCA2019
48. The new works will be accessible in accordance with Clause D3.1 and table D3.1, D3.2, D3.3 of BCA2019, and with AS 1428.1:2009, with particular note to door circulation spaces, accessway widths, turning spaces and floor coverings, in accordance with Part D3 of BCA2019.
49. Braille and tactile signage will in accordance with Clause D3.6, and Specification D3.6 of BCA2019.
50. Hearing augmentation system will be provided in accordance with Clause D3.7 of BCA2019.
51. Tactile ground surface indicators will be provided in accordance with Clause D3.8 of BCA2019 and AS/NZS 1428.4.1:2009.
52. The ramps associated with the accessway will not have a combined vertical rise of more than 3.6m and a landing for a step ramp will not overlap a landing for another step ramp of ramp in accordance with Clause D3.11 of BCA2019.
53. On an accessway, where there is no chair rail, handrail or transom, all frameless or fully glazed doors, sidelights and any glazing capable of being mistaken for a doorway or opening, will be clearly marked in accordance with AS 1428.1:2009 and Clause D3.12 of BCA2019.
54. Fire precautions whilst the building is under construction fire precautions will be in accordance with Clause E1.9 of BCA2019.
55. Any external above ground waterproofing membranes will comply with Clause F1.4 of BCA2019 and AS 4654 Parts 1 & 2:2012.
56. The new roof covering will be in accordance with Clause F1.5 of BCA2019.
57. Any sarking proposed will be installed in accordance with Clause F1.6 of BCA2019.
58. Waterproofing of all wet areas to the building will be carried out in accordance with Clause F1.7 of BCA2019 and AS 3740:2010.
59. Damp proofing of the proposed structure will be carried out in accordance with Clause F1.9 and F1.10 of BCA2019.
60. Any sub-floor is to be ventilated in accordance with Clause F1.12 of BCA2019.

61. All new glazing to be installed throughout the development will be in accordance with Clause F1.13 of BCA2019 and AS 1288:2006 / AS 2047:2014.
62. Sanitary facilities will be provided in the building in accordance with Clause F2.3 and Table F2.3 of BCA2019.
63. Accessible sanitary facilities will be provided in the building in accordance with Clause F2.4, Table F2.4 (a) of BCA2019 and AS1428.1:2009.
64. The construction of the sanitary facilities will be in accordance with Clause F2.5 of BCA2019.
65. Ceiling heights to the new areas will be in accordance with Clause F3.1 of BCA2019.
66. Natural light will be provided in accordance with Clause F4.1, F4.2, and F4.3 of BCA2019.
67. Natural ventilation will be provided in accordance with Clause F4.5, F4.6 and F4.7 of BCA2019.
68. Water closets and urinals will be located in accordance with Clause F4.8 of BCA2019.
69. The sanitary compartments will be either be provided with mechanical exhaust ventilation or an airlock in accordance with Clause F4.9 of BCA2019.
70. A safe manner for cleaning of windows located 3 or more storeys above ground level will be provided in accordance with the Work Health & Safety Act 2011 and regulations made under that Act in accordance with NSW G1.101 of BCA2019.
71. Essential fire or other safety measures must be maintained and certified on an ongoing basis, in accordance with the provisions of the Environmental Planning and Assessment Regulation, 2000.
72. Building Fabric and Thermal Construction will be in accordance with Part J1 of BCA2019.
73. Glazing will be in accordance with Part J1 of BCA2019.
74. Building sealing will be in accordance with Part J3 of BCA2019.
75. Facilities for Energy Monitoring will be provided in accordance with Clause J8.3 of BCA2019.

Electrical Services Design Certification:

76. Emergency lighting will be installed throughout the development in accordance with Clause E4.2, E4.4 of BCA2019 and AS/NZS 2293.1:2018.
77. Exit signage will be installed in accordance with Clause E4.5 and E4.8 of BCA2019 and AS/NZS 2293.1:2018.
78. An emergency warning and intercom system (EWIS) will be provided to the building in accordance with Clause E4.9 of BCA2019.
79. Artificial lighting will be installed throughout the development in accordance Clause F4.4 of BCA2019 and AS/NZS 1680.0:2009.
80. Lighting power and controls will be installed in accordance with Part J6 of BCA2019.
81. Electrical conductors located within the building that supply a main switchboard that sustains emergency equipment will comply with Clause C2.13 of BCA2019.

Hydraulic Services Design Certification:

82. Storm water drainage will be provided in accordance with Clause F1.1 of BCA2019 and AS/NZS 3500.3:2018
83. Fire hydrant system will be installed in accordance with Clause E1.3 of BCA2019 and AS 2419.1:2005 as required.
84. Fire hose reels will be installed in accordance with Clause E1.4 of BCA2019 and AS 2441:2005.

85. A sprinkler system will be installed in accordance with Clause E1.5 of BCA2019, Specification E1.5 and appropriate part(s) of AS 2118.
86. Portable fire extinguishers will be installed in accordance with Clause E1.6 of BCA2019 and AS 2444:2001.
87. The heated water supply systems will be designed and installed to NCC Volume 3 – Plumbing code and Clause J7.2 of BCA2019.

Mechanical Services Design Certification:

88. An air-handling system which does not form part of a smoke hazard management system will be installed in accordance with Clause E2.2 of BCA2019, and AS 1668.1:2015.
89. Where not naturally ventilated the building will be mechanically ventilated in accordance with Clause F4.5 of BCA2019 and AS 1668.2:2012.
90. The air-conditioning and ventilations systems will be designed and installed in accordance with Part J5 of BCA2019
91. Rigid and flexible ductwork will comply with the fire hazard properties set out in AS 4254 Parts 1 and 2.

Structural Engineers Design Certification:

92. The material and forms of construction for the proposed works will be in accordance with Clause B1.2, B1.4 and B1.6 of BCA2019 as follows:
    a. Dead and Live Loads – AS/NZS 1170.1:2002
    b. Wind Loads – AS/NZS 1170.2:2011
93. Earthquake actions – AS 1170.4:2007
94. Masonry – AS 3700:2018
95. Concrete Construction – AS 3600:2018
96. Steel Construction AS 4100:1998
97. Aluminium Construction – AS/NZS 1664.1 or 2:1997
98. Timber Construction – AS 1720.1:2010
99. The FRL's of the structural elements for the proposed works have been designed in accordance with Specification C1.1 of BCA2019, including Table 3 for a building of Type A Construction.
100. The lift shaft will have an FRL in accordance with Clause C2.10 and Specification C1.1 of BCA2019.
101. Lightweight construction used to achieve required fire resistance levels will comply with Specification C1.8 of BCA2019.
102. Any construction joints to the structure will be in accordance with Clause C3.16 of BCA2019 to reinstate the FRL of the element concerned.
103. Upon completion of the works, a structural engineer will be able to certify that local failure will be in accordance with Clause D2.2 of BCA2019 for the fire isolated stairs.

Lift Services Design Certification:

104. The lifts throughout the development will be provided with stretcher facilities in accordance with Clause E3.2 of BCA2019 and will be capable of accommodating a stretcher with a patient lying horizontally by providing a clear space not less than 600mm wide x 2000mm long x 1400mm high above the floor level.

105. Warning signage in accordance with Clause E3.3 of BCA2019 will be provided to the lifts to advise not to use the lifts in a fire.
106. A fire service recall control switch is to be installed on a landing at a location nominated by the appropriate authority in accordance with Clause E3.9.
107. A lift car fire service drive control switch is to be installed within the lift car in accordance with Clause E3.10.
108. Access and egress to the lift well landings will comply with the Deemed-to-Satisfy Provisions of D3 of the BCA2019 and will be suitable to accommodate disabled persons.
109. The type of lifts will also be suitable to accommodate persons with a disability in accordance with Clause E3.6, Table E3.6a, and will have accessible features in accordance with Table E3.6b of BCA2019.
110. The lifts will comply with AS 1735.12:1999 in accordance with Clause E3.6 of BCA2019.
111. All electric passenger lifts and electrohydraulic passenger lifts shall comply with Specification E3.1 of BCA2019.

NSW Specification Design Certificate:

112. Materials, floor and wall linings/coverings, surface finished and air-handling ductwork used in the works will comply with the fire hazard properties in accordance with Clause C1.10, NSW Clause C1.10, Specification C1.10 and NSW Specification C1.10 of BCA2019.
113. Exit signage will be installed in accordance with Clause E4.5, NSW Clause E4.6 and E4.8 of BCA2019 and AS/NZS 2293.1:2018.
114. The building will be mechanically ventilated in accordance with Clause F4.5, NSW F4.5(b) of BCA2019 and AS 1668.2:2012.