Fire Safety Engineering Design Review for DA Submission

Gran Central Residential Development, Granville NSW

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creating intelligent fire safety solutions

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1. General

Scientific Fire Services Pty Ltd has undertaken a preliminary review and assessment of the architectural drawings and design concepts proposed for the development located at 134-142 Parramatta Road, Granville NSW. The following provides a summary of the fire safety risk engineering aspects and 'in-principle' support for the proposed design.

2. The Project

The proposed Mixed-Use Development at Granville NSW is to be situated at 134-142 Parramatta Road. The subject site is bound by Parramatta Road along the northern boundary, Cowper Street along the Southern boundary and Good Street along the Eastern boundary. The principle residential street access/frontage for the subject building is provided by Cowper Street. It is also noted that the vehicular access for the site is provided directly from the frontage at Cowper Street.

Overall, the proposed development shall consist of two (2) high-rise towers which have been separated into a combination of Class 2, Class 6, Class 7a and Class 7b classifications. The mixed-use podium levels are noted to span from GF-to L4 which is situated above the basement carpark facility.

The two (2) towers, Tower A and B afford street frontage access for retail spaces, while internally lift service is provided for vertical travel to the residential portions of the building. Egress from the building is provided through a serious of fire stairs and passageways to road and open space. The mixed-use development shall broadly encompass the building characteristics detailed in Table 2.2.

Figure 2.1 to Figure 2.3 depict an overall rendering of the proposed development and illustrates the general building arrangement & configuration. Figure 2.4 illustrates the general building arrangement & configuration.

A BCA description of the proposed Mixed-Use Development is detailed in Table 2.1.

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Figure 2.1: Architectural rendering from Parramatta Road

Figure 2.2: Architectural rendering from Cowper Street and Good Street

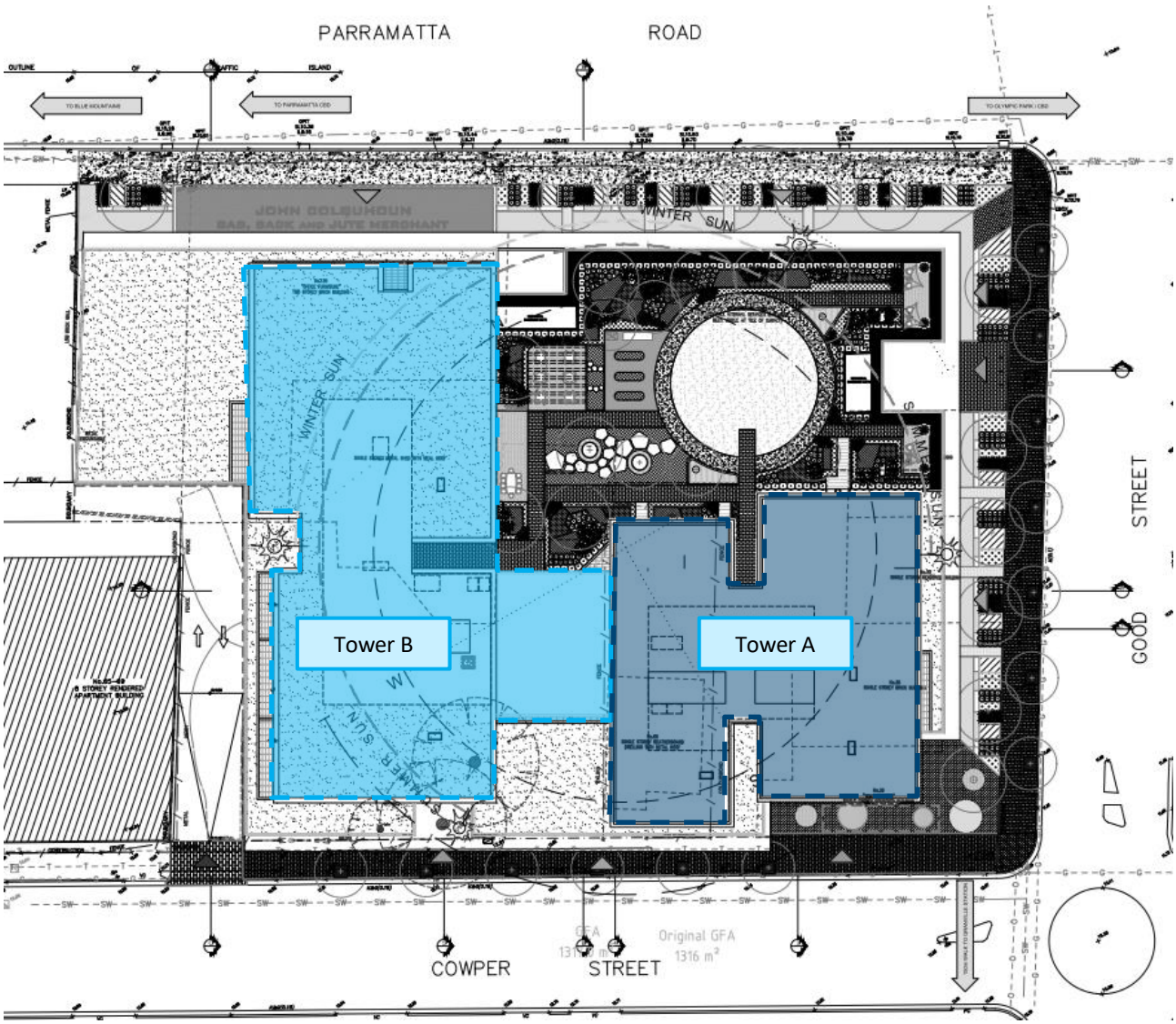

Figure 2.3: Site plan

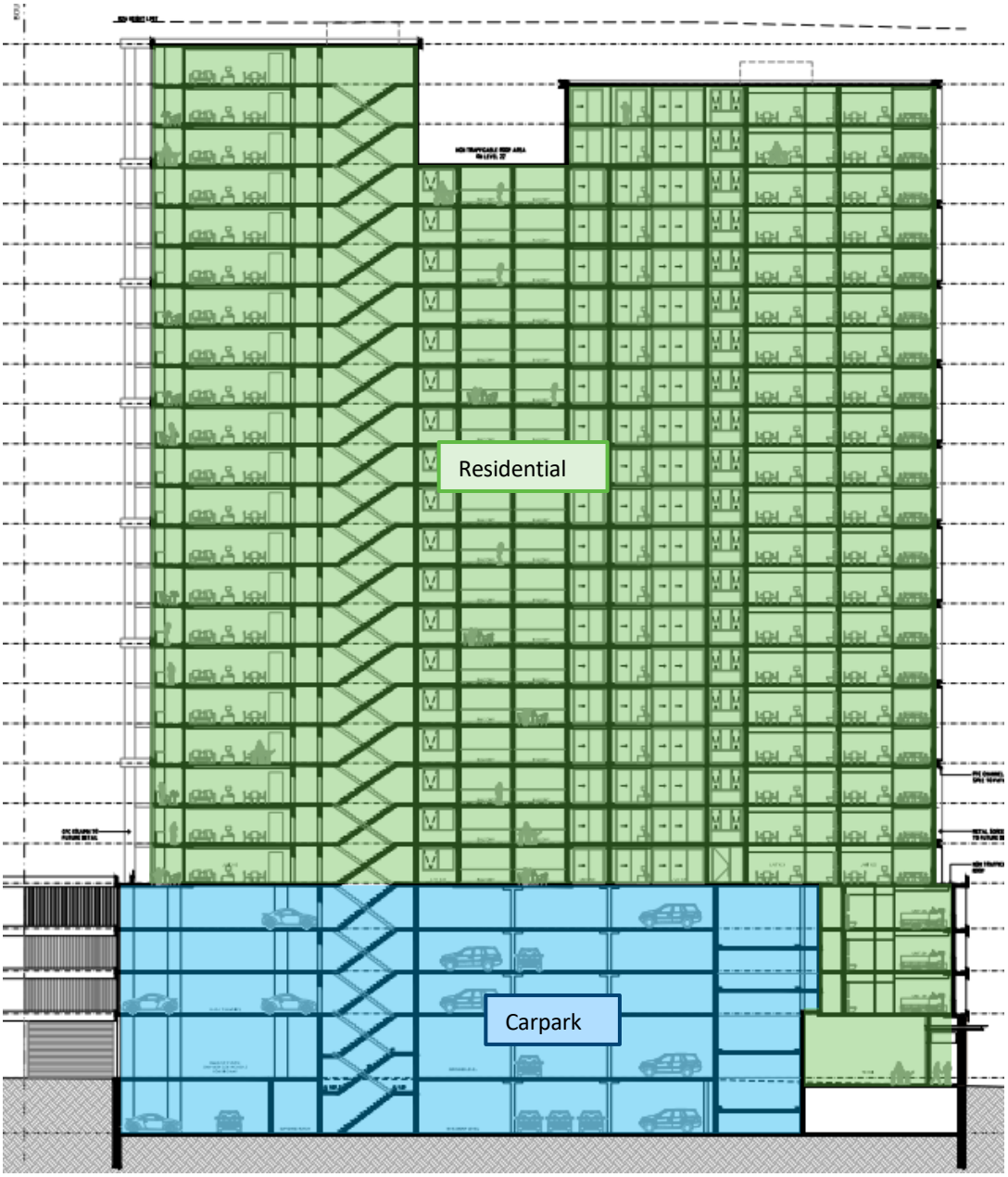

Figure 2.4: Sectional View

Table 2.1: Overview of building characteristics

Occupancy Use / Levels	Characteristics
Basement & Above Ground carpark facilities / Basement -Upper Ground Floor	The basement level and above ground levels (Basment-L3) shall accommodate traditional car parking bays with associated ancillary/storage enclosures.
Entry & Public Domain / GF	Retail and Commercial entrance lobbies café premises. Access to apartments, access to basement and above ground carparking
Podium / GF-L4	Mixed use podium including Apartment portions, cafe premises/retail areas,

Occupancy Use / Levels	Characteristics
Apartments /L1-L24 (Tower A and B– Building D)	The Apartment portions shall generally be configured as follows: • Combination of one (1) to three (3) bedroom apartment SOU's. • Each tower floor plate is separated into two (2) independent cores (i.e. one core per building) with approximately six (6) to ten (10) SOU's per core. Single fire isolated stair for Tower A and two (2) fire isolated stairs for tower B. Each tower will have lift service.

Table 2.2: BCA building description

Building Summary	
Building Classification	Class 2 (Residential), Class 6 (Retail/Food & Drink Premises) & Class 7a (Carpark)
Type of Construction	Type A fire-resisting construction
Storeys Contained	Nine (9)
Rise in Storeys	Eight (8)
Effective Height	31.55m (Overall development) & 22.4m (Building G in isolation)

3. Purpose

The preliminary fire safety engineering review was undertaken to determine 'in-principle' whether the design will achieve compliance with the Performance Requirements of the Building Code of Australia (BCA) (ABCB, 2019). The design review relates to the fire-resisting construction, egress provisions and fire protection services for the proposed development.

The design issues as identified by the BCA consultant (refer to the items within Appendix A) specific to the subject building will be formally assessed through the application of fire safety risk engineering process in accordance with the International Fire Engineering Guidelines (IFEG) (ABCB, 2005). It is the expectation that a suitable Performance Solution will be developed and supported through robust fire engineering methodologies of the current design proposal.

With consideration of fire resistance, the non-compliances that have been identified shall include the rationalisation of the separation between the façade, fire rated slab and fire rated wall junctions/details and the adoption of 120 minute FRL for the Class 6 portions (on the same storey and between levels) of the building as outlined in Section 3.1 of this statement.

In the context of occupant egress, the non-compliances that have been identified include exit travel distances to a point of choice, travel distance to an exit and between exits, convergence of fire isolated stairs/passageway, 2/3 opening provision and direction of door swing are noted to occur throughout the subject development. These shall be reviewed and evaluated in further detail in Section 3.2 of this statement.

With respect to fire services & equipment, the non-compliances that have been identified include the hydrants at mid-landing at Ground Floor location of the fire pump room at the basement level, rationalization of the fire hydrant booster assembly protection and location, the rationalisation of the combined hydrant and sprinkler ring main within the scissor stair shaft and the rationalisation of the adoption of AS2118.1-2017 in lieu of AS2118.1-1999 as referenced in AS2118.6-2012. This has been further reviewed and evaluated in Section 3.3 of this statement.

The identified design issues shall be addressed through a combination of qualitative and quantitative assessment methodologies. The methodologies will rely upon a combination of enhanced passive and/or active fire safety measures specific to each issue or be rationalised through a holistic approach.

3.1 Fire Resistance

3.1.1 Separation between Façade, Fire Rated Slab and Fire Rated Walls

The proposed fire separation configuration between the façade, fire rated slab and fire rated walls based on the likely construction detail/methodology may not be strictly a DtS compliant configuration. This shall be further detailed and outlined prior to the issuance of Construction Certification. The methodology that shall be adopted to address these construction details shall be based on a qualitative comparative assessment. The assessment will evaluate the localised nature of the respective details and the availability of the active fire safety measures to minimise the risk of fire developing to the extent that would affect the proposed junctions at the façade, fire rated slab and fire rated walls.

The preliminary assessment conducted by Scientific Fire Services suggests that the identified design issue relating to construction detail of the façade connection with the slab and the fire rated walls can satisfy the relevant BCA Performance Requirements, namely CP1 & CP2.

3.1.2 Rationalisation of Fire Resistance Level's (FRL's)

As part of the fire compartmentation strategy, the proposed GF comprise retail tenancies that shall adopt rationalised fire separation achieving a minimum fire resistance level (FRL) of 120 minutes in lieu of the prescribed 180 minutes (including the voids connecting the entry and lift lobbies at GF and L1 and different classifications between storeys on L1 and GF). The design shall be assessed by means of a quantitative 'deterministic' analysis utilising time equivalence fire severity (i.e. burnout) calculations. The calculations shall consider compartment geometry, fuel load and ventilation characteristics specific to a post-flashover fire scenario within each tenancy arrangement. The analysis shall rely on the outcomes of an evacuation analysis and Fire Brigade Intervention Model (FBIM) to demonstrate that the proposed compartmentation strategy satisfies appropriate safety factors.

The preliminary assessment conducted by Scientific Fire Services suggests that the identified design issue relating to rationalisation of fire resistance levels (FRL's) can satisfy the relevant BCA Performance Requirements, namely CP1 & CP2.

3.2 Occupant Egress

3.2.1 Exit Travel Distance & Distance between Exits

It has been identified that the distance of travel to a point of choice, exit and between alternative exits within a number of locations in the subject development exceeds the prescriptive provisions of the BCA. More specifically, the following distances are currently identified:

Carpark

- Basement – travel distance between exits through POC 97.9m (>60m) at basement carparking (worst case)
- Basement carparking greater than 40m to an exit (55m)
- Ground: Greater than 40m to an exit from the male toilets (42.5m)
- Level 1 - 3: Greater than 40m (52m) within the carpark
- Level 3: Greater than 20m to a point of choice from the vehicular ramp (20.6m)

Residential

- Level 4: Greater than 40m to an exit to the outdoor occupiable outdoor area (52m)
- Level 4: Up to 25m to a point of choice in lieu of 20m from the outdoor occupiable area
- Travel distances to the residential where the entrance doorway of any sole-occupancy unit is more than 6m from an exit or from a point of choice to alternative exits
- Throughout Residential Levels: Up to 11.5m to a point of choice in lieu of 6m from Unit Stack 14

Other

- Ground: travel distance between exits greater than 60m (64.2m) from Good St to Cowper St (ground)
- Level 1: Greater than 45m & 60m (93.1m) between exits (residential goes through carpark for secondary exit)
- Level 2: Greater than 45m & 60m (93.6m) between exits (residential goes through carpark for secondary exit)
- Level 3: Greater than 45m & 60m (93.9m) between exits (residential goes through carpark for secondary exit)
- Greater than 45 m (residential) or greater than 60m (carparking/retail) between exits

The identified design issues/travel distances shall be addressed through generally adopting the following fire engineering methodologies:

Class 2 – Residential Apartment Portions

Where the travel distances exceed the prescriptive maximums as denoted above, the methodology to be adopted for the distance of travel to a point of choice or to an exit shall be based upon a combined qualitative and quantitative 'comparative' evaluation. The assessment shall consider the building function and use, fire hazards and risk of fire

ignition. The evaluation shall also consider the impact & effectiveness of the enhanced fire safety measures that shall be adopted as part of the Performance Solution which would otherwise typically not be required under an equivalent DtS compliant building design. More specifically, measures like medium temperature smoke seals to SOU entry doors and ancillary enclosure opening onto the corridor, corridor detection to AS1670.1 and the provision of speakers within the SOU's shall be considered.

Communal/External Areas:
The identified egress configuration of the Communal/external areas shall be qualitatively assessed with consideration of enhanced fire safety measures that would provide occupants with improved cues in the event of a fire emergency. More specifically, the introduction of strobes and sounders that will provide occupants visual enhancement to respond to a fire emergency. This shall be further demonstrated through the qualitative assessment of the communal areas function and use and the impact of a fire specific to the identified exits and egress paths.

Class 6 – Retail/Food & Drink Premises:
Where travel distances exceed prescribed limitations within the Retail/Food & Drink Premises, specific consideration shall be given to the presence of the smoke detection and alarm system required for smoke control (i.e. zone smoke control, stair pressurisation and/or shut down of air handling systems). Whereby, the reduced spacing within these portions of the Retail/Food & Drink Premises shall be in accordance with those in line with AS1670.1 or further reduced spacing to provide an earlier occupant notification time. By providing this improvement to the detection system, the subsequent response times are improved compensating the time associated with the identified travel distances.

Class 7a/7b – Carparking & Storage:
Where travel distances exceed prescribed limitations within the carparking and storage levels, specific consideration shall be given to the presence of the smoke detection and alarm system required within the circulation spaces and storage areas whereby the reduced spacing within this portions of the carpark areas can be expected to improve detector activation & warning times thus having an overall beneficial impact on the identified travel distances. Furthermore, the bounding walls serving the exits shall be painted to provide occupants with improved wayfinding denoting the exit location in combination with the reduced spacing of the exit signs to further assist occupants along the path of travel to the exit. Where carparking areas are afforded with the storage/enclosures areas and the like, enhancement to visual & audible cues (e.g. strobe & alarm horn sounders) shall afford occupants with notification to commence evacuation. Considering the specific nature/use of the areas, limited and restricted occupant loading & presence of automatic sprinkler protection preliminary analysis suggests that a sufficient number of exits are provided to facilitate the safe egress of occupants.

Summary:
The preliminary assessment undertaken by Scientific Fire Services suggests that the identified design issues relating to occupant egress provisions can satisfy the relevant BCA Performance Requirements DP4 & EP2.2.

3.2.2 Travel via Converging Fire Isolated Stairs

It has been identified that the path of travel from within fire stairs converge into a single fire-isolated passageway prior to providing egress which leads to road or open space. The proposed design is identified to form a deviation from Clause D1.7(b) of the BCA which requires each fire-isolated stair/passage to provide independent egress from each storey served by way of their own fire isolated path

With consideration to the converging nature of the path shall be evaluated using a combined quantitative & qualitative evaluation. The qualitative aspect of the evaluation shall consider the egress configurations, occupant numbers, occupant characteristics and the nature of the discharge locations which shall provide occupants with a place of safety/refuge prior to evacuation. The qualitative evaluation shall also consider the provision of fire safety measures in the discharge passageway to maintain the passageway as a sterile area and the provision of exit signage in the passageway to assist building occupants to locate final exit that discharges to road/open space. The analysis shall consider two (2) evacuation scenarios and the likely interaction between occupants as they converge into the fire-isolated passages.

The preliminary assessment conducted by Scientific Fire Services indicates that with the implementation of the additional fire safety measures the proposed design can satisfy the BCA Performance Requirements, namely DP4.

3.2.3 Travel via Fire Isolated Stairs

It has been identified that the path of travel from the point of discharge from the fire isolated stairs serving the subject building requires occupants to discharge within an environment that does not achieve the open area requirements as it is not open for at least 2/3 of its perimeter. This is noted to be a deviation from Clause D1.7(b) of the BCA.

With consideration to the discharge location of fire stair not achieving the required 2/3 open perimeter, this shall be reviewed and evaluated considering the ability for occupant to safely evacuate directly to road/open space. The qualitative assessment shall review the path of travel to the adjacent stair in combination with the passive/active fire safety measures which will be present to assist occupants.

The preliminary assessment conducted by Scientific Fire Services indicates that with the implementation of the additional fire safety measures the proposed design can satisfy the BCA Performance Requirements, namely DP4.

3.2.4 Direction of Door Swing

Preliminary review of the project information highlights that there are a number of doorways which swing against the direction of egress. More specifically, doorways associated with travel between carpark and residential compartments shall swing in an inward direction in lieu of outward direction. The fire engineered strategy shall rely on the provision of signage to notify approaching occupants of the door swing direction thus mitigating the potential for occupants to become unduly delayed/impeded. The design shall be supported by qualitative 'deterministic' analysis considering the specific function/use and occupant characteristics associated with the respective locations.

The preliminary assessment undertaken by Scientific Fire Services suggests that the identified design issue can satisfy the relevant BCA Performance Requirements, namely DP2 & DP4.

3.3 Fire Services & Equipment

3.3.1 Hydrants at Mid-landings

It has been identified that a number of hydrants are located at intermittent/mid landings on Ground Floor in lieu of the specific finished floor level which they are required to serve. The design represents a technical deviation from the prescriptive provisions as a hydrant outlet shall still provide coverage to a single (1) level though not directly situated on that RL/FFL. The fire engineering strategy shall rely upon additional signage at the specific hydrant outlets and at the fire door serving the level. This shall assist attending fire brigade with the ability to undertake operations accordingly without confusion. The design shall be supported through a qualitative evaluation on the potential risk associated with the respective outlets on attending fire brigade operations with direction consultation and input from FRNSW.

The preliminary assessment undertaken by Scientific Fire Services suggests that the identified design issue can satisfy the relevant BCA Performance Requirements, namely EP1.3.

3.3.2 Pump Room Location

It has been identified that the fire sprinkler/hydrant pump room is situated at the basement level and is not 'strictly' accessible from road or open space or a fire stair. In this instance, the pump room shall be accessed from an airlock which is connected to a fire passage type arrangement leading to the rising fire stair. The design represents a technical deviation from the prescriptive provisions. The fire engineered strategy shall rely on providing attending fire crews with additional block plans and signage to denote clear paths of travel and assist in wayfinding. The design shall be supported by 'qualitative' deterministic evaluation considering the specific paths of travel and benefit of additional signage to assist in facilitating fire-fighter operation & intervention activities.

The preliminary assessment undertaken by Scientific Fire Services suggests that the identified design issue can satisfy the relevant BCA Performance Requirements, namely EP1.3.

3.3.3 Fire Hydrant Booster Assembly Protection and Location

As part of the fire services design the entire development shall be served by a combined fire hydrant and sprinkler system in accordance with AS2118.1:2017, AS2118.6:2012 and AS2419.1:2005. As part of the system design, the combined hydrant/booster assembly shall be recessed within the commercial tenancy façade, i.e. parallel to the Parramatta Street public road. In this instance the protective requirements (i.e. 90/90/90 radiant heat shield extending 2m either side and 3m above the upper hose connections) shall not 'strictly' be provided due to the GF retail tenancy glazing. Furthermore, as the principle entrance and location of the Fire Control Centre is Cowper Street, the booster is not strictly in site of the principle entrance. The fire engineered strategy shall rely on the presence of automatic sprinkler protection which shall control or suppress a potential fire event and thus maintaining suitable conditions for fire-fighters at the combined booster assembly. Whilst the proposed location shall be enhanced through the introduction of a red strobe light at the façade of the building where the booster is located and block plans at the FIP/SUB FIPs to further denote/highlight the location booster assembly. The design shall be supported by qualitative 'deterministic' analysis considering the new Australian Standard AS2419.1:2017 which provides concession for sprinkler protected buildings for protection of booster assemblies and with direct consultation with FRNSW on the proposed location of the booster assembly location operationally.

The preliminary assessment undertaken by Scientific Fire Services suggests that the identified design issue can satisfy the relevant BCA Performance Requirements, namely EP1.3.

3.3.4 Combined Hydrant and Sprinkler System in Scissor Stairs

Given the proposal to adopt scissor stairs to serve the subject building, the proposed combined sprinkler and hydrant system are noted to be located within a single stair compartment and pass through multiple compartments. This is noted

to be a technical deviation from Section 2.6 of AS2118.6 which states that “vertical piping of ring main(s) shall be located within fire isolated exits or shafts”. The design shall be supported through a qualitative risk-based assessment. The assessment shall consider the sterile nature and fire compartmentalised nature of the fire isolated exit to demonstrate that the risk of the riser being compromised in the event of a fire is suitably mitigated.

The preliminary assessment undertaken by Scientific Fire Services suggests that the identified design issue can satisfy the relevant BCA Performance Requirements, namely EP1.3 & EP1.5.

3.3.5 Combined System Using AS2118.1-2017 in lieu of AS218.1-1999

It has been identified that the proposed design shall implement the latest sprinkler system standard denoted as AS2118.1-2017. However, this proposal represents a technical deviation from the prescriptive provisions as the combined hydrant and sprinkler standard AS2118.6-2012 makes reference only to AS2118.1-1999. The design shall be supported by ‘qualitative’ comparative assessment which shall evaluate and review the design considerations of both the standards to ensure that the proposed design maintains a suitable level of functionality & efficacy that is at least equivalent to a DtS building solution.

The preliminary assessment undertaken by Scientific Fire Services suggests that the identified design issue can satisfy the relevant BCA Performance Requirements, namely EP1.5.

4. Statement of Endorsement

The fire and life safety related design issue(s) will be addressed through the performance-based path of compliance. Scientific Fire Services can confirm that the proposed design will achieve fire safety design compliance to the relevant Performance Requirements of the Building Code of Australia (BCA) (ABCB, 2019).

The formulation of the Fire Engineering Brief (FEB) represents the next step in the approvals process. Scientific Fire Services shall commence the process of developing this document and will provide a formal comprehensive FEB submission. As part of the process, a Fire Engineering Brief Questionnaire (FEBQ) document shall be prepared in accordance with the Fire and Rescue NSW pro forma and formally submitted as part of the referrals process.

Finally, and in order to ensure that the client can obtain a Construction Certificate for the proposed building works, Scientific Fire Services will prepare a Fire Safety Engineering Report (FSER) incorporating stakeholder conditions, comments and advice to the satisfaction of the Principle Certifying Authority (PCA).

On the basis of the review of the proposed design issues identified herein, Scientific Fire Services can confirm that the documentation in relation to the subject development will achieve fire safety design compliance with the relevant Performance Requirements of the National Construction Code Series – Volume 1, Building Code of Australia (BCA 2019).

I trust the above is satisfactory for your current purposes. Should you have any queries, please do not hesitate to contact me on (02) 9221-3658 or email to derya.horasan@scifire.com.au

Derya Horasan
Engineering Manager – NSW

Scientific Fire Services

BPB 2272 – C10 – Accredited Certifier – Fire Safety Engineering Compliance

Appendix A. Relevant BCA/Regulatory Information

No.	Identified Design Issue	BCA-DtS Clause	Performance Requirement
1.	Separation between façade, fire rated slab and fire rated walls	C1.1, Spec C1.1	CP1, CP2
2.	It is proposed to rationalise the FRL's under a fire engineered solution in the following instances: • The required FRL's for the retail element of the building are proposed to be rationalised and reduced to under the 180 minutes required to 120 minutes. This includes the void connection entry and lift lobbies at ground and Level 1 and different classifications between storeys at Level 1/Ground • Different classifications situated one above the other in adjoining storeys at Level 1 and Ground can be reduced to under the 180 minutes required to 120 minutes.	C1.1, C2.8, C2.9	EP2.2
3.	The locations of the proposed exits indicate that the deemed to satisfy requirements in terms of travel distances would not be satisfied in the following areas: <u>Carpark</u> • Basement – travel distance between exits through POC 97.9m (>60m) at basement carparking (worst case) • Basement carparking greater than 40m to an exit (55m) • Ground: Greater than 40m to an exit from the male toilets(42.5m) • Level 1 - 3: Greater than 40m (52m) within the carpark • Level 3: Greater than 20m to a point of choice from the vehicular ramp (20.6m) <u>Residential</u> • Level 4: Greater than 40m to an exit to the outdoor occupiable outdoor area (52m) • Level 4: Up to 25m to a point of choice in lieu of 20m from the outdoor occupiable area • Travel distances to the residential where the entrance doorway of any sole-occupancy unit is more than 6m from an exit or from a point of choice to alternative exits • Throughout Residential Levels: Up to 11.5m to a point of choice in lieu of 6m from Unit Stack 14 <u>Other</u> • Ground: travel distance between exits greater than 60m (64.2m) from Good St to Cowper St (ground) • Level 1: Greater than 45m & 60m (93.1m) between exits (residential goes through carpark for secondary exit) • Level 2: Greater than 45m & 60m (93.6m) between exits (residential goes through carpark for secondary exit) • Level 3: Greater than 45m & 60m (93.9m) between exits (residential goes through carpark for secondary exit) • Greater than 45 m (residential) or greater than 60m (carparking/retail) between exits	D1.4, D1.5	DP4, DP5, EP2.2
4.	Multiple exits are noted to discharge into a common fire isolated passageway, in lieu of their own fire isolated passageways.	D1.7	DP4
5.	The fire isolated exits and passageways discharge to a point with a building which is not open for at least 2/3 of the perimeter	D1.7	DP4

No.	Identified Design Issue	BCA-DtS Clause	Performance Requirement
6.	The following technical non-compliances with E1.3 of the BCA and AS2419.1 to be assessed: • Ground level fire hydrants are located at intermediate levels in the stairs (and not therefore on the same storey they are serving in accordance with AS241.91) to stairs facing Cowper St. • Fire hydrant pump room is located at the basement; • The booster is located to the Parramatta Rd frontage which would not be considered the main entrance to the building.	E1.3	EP1.5
7.	The following technical departures are to be addressed by the fire engineer in a performance-based solution • It is noted that a combined hydrant and sprinkler system is proposed to be installed. The nature of the scissor stairways does not permit the hydrant riser to be located within a single stairway compartment and passes through multiple compartments. • It is proposed to design the combined system using AS2118.1-2017 in lieu of AS2118.1-1999 as required by AS2118.6-2012	E1.3	EP1.5
8.	Throughout residential floors, fire rated doors between the carpark and residential compartments are relied upon as horizontal exits in both direction but only swings in a single direction. • Ground level Retail door do not open in direction of egress to both Parramatta Rd and Cowper St. • Ground level Retail units facing Cowper St • Ground level Building Managers Office	D2.20	DP4 & EP2.2

Appendix B. Architectural Drawings

B.1 List of Drawings

Table B.1: Architectural drawings relied upon (DA Documentation)

Drawing ID	Title	Date	Revision
DA 000	COVER PAGE	28/10/2019	A
DA 001	AREA SCHEDULE	28/10/2019	A
DA 002	PROJECT SUMMARY	28/10/2019	A
DA 004	DEMOLITION PLAN	28/10/2019	A
DA 100	SITE PLAN	28/10/2019	A
DA 101	BASEMENT PLAN	28/10/2019	A
DA 102	GROUND FLOOR PLAN	28/10/2019	A
DA 103	LEVEL 1 PLAN	28/10/2019	A
DA 104	LEVEL 2 PLAN	28/10/2019	A
DA 105	LEVEL 3 PLAN	28/10/2019	A
DA 106	LEVEL 4 PLAN	28/10/2019	A
DA 107	LEVEL 5 PLAN	28/10/2019	A
DA 108	LEVEL 6 - 21 PLAN	28/10/2019	A
DA 109	LEVEL 22 - 23 PLAN	28/10/2019	A
DA 110	LEVEL 24 PLAN	28/10/2019	A
DA 111	ROOF PLAN	28/10/2019	A
DA 201	NORTH ELEVATION	28/10/2019	A
DA 202	EAST ELEVATION	28/10/2019	A
DA 203	SOUTH ELEVATION	28/10/2019	A
DA 204	WEST ELEVATION	28/10/2019	A
DA 301	SECTION A	28/10/2019	A
DA 302	SECTION B	28/10/2019	A
DA 303	DRIVEWAY SECTION	28/10/2019	A
DA 402	PHOTOMONTAGE	28/10/2019	A
DA 403	PHOTOMONTAGE	28/10/2019	A
DA 404	PHOTOMONTAGE	28/10/2019	A
DA 405	PHOTOMONTAGE	28/10/2019	A
DA 406	PHOTOMONTAGE	28/10/2019	A
DA 407	PHOTOMONTAGE	28/10/2019	A