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17 June 2015

Bob Smale
Crone Partners Pty Ltd
Level 2, 364 Kent St
Sydney NSW 2000

Dear Bob

Sydney One Project, 1 Alfred St, Sydney, Tower B: Letter of Support, Fire Safety Engineering

Please find below our fire engineering statement to accompany the Development Application (DA) for the proposed Sydney One Project, Tower B at 1 Alfred St, Sydney, NSW.

As part of our preliminary fire engineering review, we have considered the following documentation:

- BCA Assessment Report to accompany DA Submission, dated 12th June 2015, prepared by City Plan Services Pty Ltd.
- Architectural drawings set, Indicative Plans for Consultant Review, dated 16th June 2015, prepared by Crone Partners Pty Ltd.

The Alternative Solutions outlined in Table 2 are based on AECOM's review of the proposed development layout coupled with our experience with other similar developments. The proposed Alternative Solutions will be formulated to comply with the relevant BCA Performance Requirements for the application.

Based upon our preliminary review of the design, the proposed Alternative Solutions outlined in Table 1 could be supported by performance-based fire engineered alternative solutions. Note that the fire engineered solutions outlined relate to Tower B and the Basement level sections of the development only. It is understood that the fire engineering for Tower A will be separately addressed.

Should you require any additional information, please do not hesitate to contact me.

Yours faithfully

Will Marshall
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Accredited C10 Fire Engineer (BPB 1903)
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Table 1 Non-compliances with DtS Provisions requiring Alternative Solutions.

No.	DtS Non-Compliance *(Performance Requirements)*	Description	Alternative Solution
1.	C2.8 – Separation of classification in the same storey *(CP2)*	The storage and retail BOH areas will be provided with a fire resistance level (FRL) of 120/120/120 in lieu of BCA DtS FRL of 180/180/180.	The alternative solution will be assessed based on the expected fire loads in the spaces, the nature and use of the areas, and the provision of physical separation to compartment the spaces.
2.	C2.14 – Public corridors in Class 2 and 3 buildings *(CP2, EP2.2)*	Cross corridor smoke doors will not be provided for the hotel room corridors where the corridor length exceeds 40 m.	The qualitative and comparative assessment will be based on the provision of smoke seals to mitigate smoke spread, provision for fire protection systems and the distribution of building exits accessed by the affected corridors for occupant egress.
3.	D1.2 – Number of exits *(DP4, EP2.2)*	The Ground level retail areas with a floor area < 200 m² have only access to a single exit, where two is required by the BCA.	The alternative solution will be based on the size, location and use of the retail spaces, and the provision of fire safety systems.
4.	D1.4 – Exit travel distances to a Point-of-choice. *(DP4)*	There are extended travel distances to a point-of-choice (POC), nearest exit and distances between alternative exits exceeding the BCA DtS limits of 20 m, 40 m and 60 m respectively. The maximum extended travel distances in the Tower B and Basement level areas are: Basement Levels (including the car park, residential storage, retail BOH): • Level B6 car park – Up to 26 m to a POC from the East of the BOH lifts. • Level B6 Plant room areas – Up to 30 m to a POC, 54 m to the nearest exit, and 80 m distance between alternative exits. Level 4: • North of the pool deck – Up to 29 m to a POC. Level 5: • All day dining and bar – Up to 29 m to a POC. Levels 6-22 Hotel Rooms: • The hotel rooms i.e. sole occupancy units (SOUs) are located up to 8 m from an exit or POC in lieu of the BCA DtS limit	A qualitative assessment based on the provision of fire protection systems, and appropriate egress provisions including distribution of fire stairs and building exits.

No.	DtS Non-Compliance *(Performance Requirements)*	Description	Alternative Solution
		of 6 m.	
5.	D1.6 – Dimensions of exits and paths of travel to exits *(DP6, DP2.2)*	A shortfall of aggregate reduced exit widths is proposed on the each of the following levels due to increased proposed population numbers: - Level 5 (Dining and Bar): 1 m - Level 23 (Restaurant): 1 m - Level 24 m (Bar): 1m	The alternative solution will be based on the occupant characteristics, management provisions of occupant numbers, the function and use of the spaces, greater than typical ceiling heights, distribution of the exits and the provision of fire protection systems.
6.	D1.7 – Travel via fire-isolated exits *(DP4, DP5)*	The stairs discharging to the NW of Building B is only a private space that require occupants to pass within 6 m of the external walls of the same building, which are not fire-rated.	A qualitative assessment will be provided based on the open nature of the egress pathways and the alternate escape routes being available in alternative directions.
7.	E1.3 – Fire hydrant *(EP1.3)*	The fire hydrant booster assembly is not proposed to be within sight of the main entrance.	A qualitative assessment will be provided on the basis that the hydrant booster assembly can be accessed via a nominated road for fire brigade vehicular access. Additional directional signage will be provided.
8.	Spec E1.5 – Fire sprinkler systems *(EP1.4)*	The sprinkler valve room will be located below ground on Level B1, with no direct egress out to a road or open space.	The alternative solution is proposed based on the provision of fire stairs from the Ground level near the main entry of Tower A, to directly access the Level B1 sprinkler valve room. Additional directional signage will be provided.
9.	E1.8 and Spec 1.8 – Fire control centres *(EP1.6)*	The Fire Control Centre (FCC) is not located at the main entrance of the building.	The qualitative assessment will be based on the accessible location of the FCC on the ground level with direct access from the road (Rugby Place). Additional directional signage of the FCC location will be provided.
10.	Table E2.2a and AS/NZS 1668.1-1998 – Zone smoke control system *(EP2.2)*	Omission of zone smoke control system is proposed from the retail and commercial sections of the building in lieu of AS/NZS 1668.1 requirements.	The qualitative assessment will be based on the provision of fire protection systems in the building, fire and smoke compartmentation and occupant egress provisions.