14 April 2016

Community Standards

Liverpool Council

Level 2, 33 Moore Street, Liverpool, NSW

BLOCKS B, C, and D, 5 & 15 RYNAN AVENUE, EDMONDSON PARK, NSW DEVELOPMENT APPLICATION

To whom it may concern,

This letter is to advise that Holmes Fire has been engaged by KMT Constructions Pty Ltd to provide fire engineering services for the proposed residential development to be located at 5 and 15 Rynan Avenue, Edmondson Park, NSW.

INTRODUCTION

Blocks B and C contain five residential storeys and are connected by a two storey basement carpark beneath, and Block D is a separate building containing four residential storeys and one basement carpark level.

A Building Code of Australia, 2015 (BCA)[1] assessment has been undertaken by Steve Watson & Partners (2015/2200 R1.2, dated 14 April 2016). This report identified a number of non-compliances with the Deemed-to-Satisfy Provisions of the BCA that will be addressed by Holmes Fire.

PROPOSED ALTERNATIVE SOLUTIONS

Holmes Fire will address the identified non-compliances using performance based fire engineering solutions. The performance based solutions will comply with the relevant Performance Requirements of the BCA. The design approach will be in line with the International Fire Engineering Guidelines[2] and other acceptable guideline documents.

[1] Australian Building Codes Board, National Construction Code Series 2015, Volume 1, Building Code of Australia, Class 2 to Class 9 Buildings. Australian Building Codes Board, CAN, Australia, 2015.

[2] National Research Council of Canada; International Code Council, United States of America; Department of Building and Housing, New Zealand; and Australian Building Codes Board, International Fire Engineering Guidelines, Edition 2005, Australian Building Codes Board, 2005.

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The Alternative Solution designs will be developed in line with BCA Clause A0.5, as applicable; i.e. complying with the relevant Performance Requirements or by equivalence comparison with the Deemed-to-Satisfy Provisions.

The identified non-compliances and proposed approach of the Alternative Solution for each issue is listed below. Holmes Fire understands that all other aspects of the building will comply with the Deemed-to-Satisfy Provisions of the BCA.

- Clause D1.3(a)(i) specifies that a required stair that is not fire-isolated must not connect or pass through more than three consecutive storeys in a residential building. The southern stairways in Blocks B and C, and all stairs in Block D connect more than three consecutive storeys and are not proposed to be fire-isolated, however will be treated akin to an external stair in lieu of a fire-isolated stair. An Alternative Solution using a comparative approach will be provided to address Performance Requirement DP5 to allow for the proposed stair design.
- Clause D1.4(a)(i)(A) specifies the maximum travel distance from an SOU entry door to reach a single exit or point of choice of exits to be no more than 6 m. Extended travel distances to a point of choice of exits occur in Block D (Apartments D11, D16, D21, D26, D31, and D36) which measure up to 8.5 m. An Alternative Solution using a comparative approach will be provided to address Performance Requirements DP4 and EP2.2 to permit the proposed travel distances.
- Clause D1.5(c)(i) requires that alternative exits in a Class 2 buildings be located no further than 45 m apart. Extended travel distances occur in Blocks B and C on Levels 1-4 between Fire Stair 01 and Fire Stair 02, measured up to 53 m. An Alternative Solution using a comparative approach will be provided to address Performance Requirements DP4 and EP2.2 to permit the proposed travel distances.
- Clause D1.7(b)(iii) requires a fire-isolated exit to discharge to a location in a covered area that is open for 1/3 of its perimeter, has an unobstructed clear height not less than 3 m, and has a 6 m path of travel to open space. Fire Stairs 01 and 02 from Blocks B and C discharge to a location that has a ceiling height less than 3 m and is open for less than 1/3 of the perimeter. An Alternative Solution using a comparative approach will be provided to address Performance Requirements DP4 and EP2.2 to permit the proposed stair discharge.
- Clause D1.7(c) specifies that where a path of travel from a discharge point of a fire-isolated exit necessitates travel past an unprotected opening within 6 m of the path of travel, that the opening be protected in accordance with Clause C3.4. The paths of travel from Fire Stairs 01 and 02 necessitate passing the glazed main entry doors which are not provided with protection. An Alternative Solution using a comparative approach will be provided to address Performance Requirement DP5 to permit the proposed stair discharge.
- Clause D1.9(a) requires a non-fire-isolated stairway to provide a continuous means of travel by its own flights and landings to a road or open space. The non-fire-isolated stairs in Block D do not provide a continuous means of travel to reach an open space on the ground floor. An Alternative Solution is using a comparative approach will be provided address Performance Requirement DP4 to permit the proposed stair design.
- Clause E1.3(b) and Clause 7.3(c) of AS 2419.1 requires a fire brigade hydrant booster connection either to be attached to the building to be provided with fire rated protection 3 m above and 2 m either side of the upper connection point or be more than 10 m from the building. The fire brigade hydrant booster connections serving Block B and C, and Block D will be provided with reduced sized shield walls, with the Block B and C booster located within 10 m of the building. An Alternative Solution using a comparative approach will be provided to address Performance Requirement EP1.3 to permit the proposed location and shield wall construction to the fire brigade hydrant booster connections.

SUMMARY

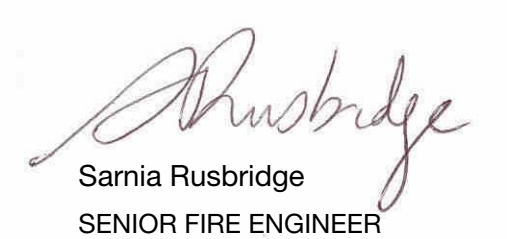
Based on Holmes Fire's review of the project documentation, it is considered that performance based fire engineering can be utilised to demonstrate compliance with the Performance Requirements of the BCA without major changes to the current design. Additional non-compliances may be identified as the design is further developed, however it is considered that there are no significant issues that would affect the building layout.

The information contained within this letter is based on the architectural drawings prepared by Joshua Farkash & Associates, as listed below.

Dwg no.	Title	Date Plotted	Issue
A-2101	Basement Floor Plans Bldg B, C & D	10/02/16	-
A-2102	Ground Floor Plan Bldg B, C & D	10/02/16	-
A-2103	Level 1 & 2 Floor Plans Bldg B, C & D	10/02/16	-
A-2104	Level 3 & 4 Floor Plans Bldg B, C & D	15/02/16	-
A-2110	Ground Floor Typical – Building B & C	04/03/16	-
A-2111	Typical Level 1, 2 & 3 – Building B & C	04/03/16	-
A-2112	Typical Level 4 – Building B & C	06/04/16	-
A-2113	Ground Floor Typical – Building D	22/10/15	-
A-2114	Typical Levels – Building D	22/03/16	-
A-3101	Elevations – North & South Building B & C	10/07/14	A
A-3102	Elevations – East & West Building B & C	10/07/14	A
A-3103	Elevations – North & South Building D	09/04/15	A
A-3104	Elevations – East & West Building D	10/0715	A

Please do not hesitate to contact Holmes Fire, should there be any queries about the above.

Regards,



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SENIOR FIRE ENGINEER

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