

BUILDING CODE OF AUSTRALIA ASSESSMENT REPORT

Project: Blocks 6 & 7, Central Park:
Commercial & Retail Adaptive Reuse



Client: Frasers Broadway Pty Ltd
Report: 111787.3
Date: 13 November 2012

TABLE OF CONTENTS

1.0	INTRODUCTION	4
1.1	GENERAL	4
1.2	PURPOSE OF THE REPORT	4
1.3	REPORT BASIS	4
1.4	FIRE & LIFE SAFETY ENGINEERING	4
1.5	EXCLUSIONS & LIMITATIONS	5
2.0	BUILDING CODE OF AUSTRALIA ASSESSMENT	6
2.1	CLASSIFICATION (A3.2)	6
2.2	EFFECTIVE HEIGHT (A1.1)	6
2.3	RISE IN STOREYS (C1.2)	6
2.4	TYPE OF CONSTRUCTION (C1.1)	6
3.0	BUILDING CODE OF AUSTRALIA ASSESSMENT	7
3.1	STRUCTURE (BCA SECTION B)	7
3.2	FIRE RESISTANCE (BCA SECTION C)	8
3.3	FIRE-RESISTING CONSTRUCTION (SPECIFICATION C1.1)	13
3.4	ACCESS & EGRESS (BCA SECTION D)	14
3.5	SERVICES & EQUIPMENT (BCA SECTION E)	22
3.5	HEALTH & AMENITY (BCA SECTION F)	24
3.6	ANCILLARY PROVISIONS (SECTION G)	26
3.7	ENERGY EFFICIENCY – (SECTION J – CLASS 3 AND 5 TO 9 BUILDINGS)	27
3.7.1	<i>External fabric (Part J1)</i>	27
3.7.2	<i>External Glazing (Part J2)</i>	28
3.7.3	<i>Building Sealing (Part J3)</i>	28
3.7.4	<i>Air Conditioning and Ventilation Systems (Part J5)</i>	29
3.7.5	<i>Artificial Lighting and Power (Part J6)</i>	30
3.7.6	<i>Hot Water Supply and Swimming Pool and Spa Pool Plant (Part J7)</i>	31
3.7.7	<i>Access for Maintenance and Facilities Monitoring (Part J8)</i>	31
4.0	SUMMARY OF NON-COMPLIANCE ISSUES	33
5.0	CONCLUSION	35
	APPENDIX 1	36

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1	13.11.12	Updated for PA submission	Darren Bugg 	Brendan Bennett 

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1.0 INTRODUCTION

1.1 General

This report serves as an assessment for compliance with the Building Code of Australia for the commercial and retail adaptive reuse of Blocks 6 & 7 in the Kensington Street Precinct of the Central Park development. Block 6 & 7 comprises existing properties located from No. 2 to No. 48 Kensington Lane. The development involves converting an existing warehouse to 5 levels of retail space, the construction of new 1 & 2 storey retail buildings and the adaptive reuse of 16 existing heritage listed terrace houses. The total Gross Floor Area proposed by Block 6 & 7 is 2,997.2m².

1.2 Purpose of the Report

This report has been prepared, on behalf of Frasers Broadway Pty. Limited, to establish compliance with the Building Code of Australia and relevant Acts and Regulations of the development application documentation for the proposed works.

1.3 Report Basis

This report is based on:

- i. Architectural plans prepared by Tonkin Zulaikha Greer Architects, as identified in the attached Appendix 1.
- ii. The Building Code of Australia 2012, inclusive of NSW variations (See Note 1).
- iii. Environmental Planning and Assessment Act 1979.
- iv. Environmental Planning and Assessment Regulation 2000.

Notes (1) - Building Code of Australia (BCA) 2012 was adopted in NSW on 1 May 2012. The amendment of the BCA in force at the date of lodgement of a Construction Certificate is the version called up by Clause 98 of the Environmental Planning & Assessment Regulation 2000 for the purpose of the building design. Therefore comments may be subject to changes to comply with updated versions of the Building Code of Australia.

1.4 Fire & Life Safety Engineering

This report details that the design as proposed is capable of complying with the prescriptive *Deemed-to-Satisfy* provisions; except where an *Alternative Solution* will demonstrate compliance with the *Performance Requirements* of the BCA.

Where alterations to an existing building occur the consent authority is required pursuant to Clause 94 of the Environmental Planning & Assessment Regulation 2000 to determine if the building is to be brought into full or partial compliance with the current version of the Building Code of Australia. In instances where less than 50% of the volume of the building is being modified the consent authority would typically limit its consideration to whether or not the building has suitable means to facilitate egress in the event of a fire and to prevent spread from one building to another.

A site specific Fire Engineering Report (FER) is currently being developed as part of a Fire and Life Safety Strategy, which is unique to the proposed buildings. The FER is being developed in accordance with the International Fire Engineering Guidelines 2005 and is to be cognisant of international best practice. The FER will require the buildings to be provided with a number of active and passive fire safety features in response to the fire engineering assessment.

The Fire and Life Safety Strategy will also respond to heritage considerations where surviving original building fabric should be conserved and retained; whilst at the same time providing safety in the event of a fire. As such, compliance with the deemed-to-satisfy provisions of the BCA may not be an appropriate approach for the buildings. Compliance achieved via compliance with the performance requirements of the BCA is likely to be more flexible and accommodating of the significant building fabrics.

The Fire and Life Safety Strategy will 'holistically' consider matters such as;

- Building characteristics
- Proximity to fire source features and restricting spread of fire between buildings
- The populations of the buildings and type of occupants
- Any specific risks and / or considerations associated with the subject design and use
- Safe evacuation and preservation of life

The outcomes of the Fire and Life Safety Strategy will be documented as part of the Construction Certificate application and implemented prior to occupation of the development.

1.5 Exclusions & Limitations

This report does not consider the following except where specifically mentioned;

- i. Structural design.
- ii. The Disability Discrimination Act 1992 (access for people with disabilities has been assessed in accordance with Part D3 of the BCA, however additional measures may be required to be provided subject to the Disability Discrimination Act 1992)
- iii. Disability (Access to Premises – Building) Standards 2010.
- iv. Performance of any existing fire safety measures.
- v. The fire resistance level of any existing structural elements.

2.0 BUILDING CODE OF AUSTRALIA ASSESSMENT

2.1 Classification (A3.2)

The proposed buildings consist of;

2-12 Kensington Lane:	Class 5 - Office Class 6 - Retail Class 9b - Assembly Building (Bar)
14-20 Kensington Lane:	Class 5 - Office Class 6 - Retail
22-38 Kensington Lane:	Class 5 - Office Class 6 - Retail Class 7b - Storage
40-48 Kensington Lane:	Class 5 - Office Class 6 - Retail & Bar

2.2 Effective Height (A1.1)

The proposed / existing buildings will have an effective height of less than 25m.

2.3 Rise in Storeys (C1.2)

The proposed / existing buildings will consist of a rise in storeys of:

2-12 Kensington Lane:	Five (5)
14-20 Kensington Lane:	Two (2)
22-38 Kensington Lane:	Two (2) & Three (3)
22-36 Kensington Lane:	Two (2)
38 Kensington Lane:	Three (3)
40-48 Kensington Lane:	Two (2)

2.4 Type of Construction (C1.1)

The type of construction applicable in accordance with Specification C1.1 of the BCA is:

2-12 Kensington Lane:	Type A
14-20 Kensington Lane:	Type C
22-38 Kensington Lane:	Type C & Type B
22-36 Kensington Lane:	Type C
38 Kensington Lane:	Type B
40-48 Kensington Lane:	Type C

3.0 BUILDING CODE OF AUSTRALIA ASSESSMENT

3.1 Structure (BCA Section B)

BCA Clause	Title	Assessment and Comment	Status
B1.1	Resistance to actions	The resistance of the building must be greater than the most critical action effects resulting from different combinations of actions.	Note
B1.2	Determination of individual actions	The building is to be designed and constructed to accommodate the magnitude of individual actions generally covering; (a) Permanent actions (b) Imposed actions (c) Wind, snow and ice and earthquake actions (d) Other specified actions A structural engineer is to provide design certification at the Construction Certificate stage that the building has been designed to the relevant structural standards and maintain appropriate supervision during construction to certify that the structure has been constructed in accordance with the design. The structural adequacy of the existing building is subject to separate structural engineer report to confirm the proposed modifications will not affect the structural adequacy of the existing buildings.	The proposed buildings are capable of complying
B1.4	Determination of structural resistance of materials & forms of construction	The structural resistance of the following materials and forms of construction must be determined; (a) Masonry (b) Concrete construction (c) Steel construction (d) Composite steel and concrete (e) Aluminium construction (f) Timber construction (g) Piling (h) Glazing assemblies (i) Termite risk management (j) Roof construction (k) Particleboard structural flooring (l) Lift shafts not required to have an FRL A structural engineer is to provide design certification at the Construction Certificate stage that the building has been designed to the relevant structural standards and maintain appropriate supervision during construction to certify that the structure has been constructed in accordance with the design.	The proposed buildings are capable of complying

3.2 Fire Resistance (BCA Section C)

BCA Clause	Title	Assessment and Comment	Status
C1.1	Type of construction required	The type of fire resisting construction applicable is: 2-12 Kensington Lane: Type A 14-20 Kensington Lane: Type C 22-38 Kensington Lane: Type C & Type B 22-36 Kensington Lane: Type C 38 Kensington Lane: Type B 40-48 Kensington Lane: Type C The minimum FRL's are to be achieved.	The proposed building is capable of complying Existing buildings to be assessed by engineer.
C1.2	Calculation in rise in storeys	The rise in storeys is the sum of the greatest number of storeys at any part of the external wall of the building. The proposed / existing buildings will consist of a rise in storeys of: 2-12 Kensington Lane: Five (5) 14-20 Kensington Lane: Two (2) 22-38 Kensington Lane: Two (2) & Three (3) 22-36 Kensington Lane: Two (2) 38 Kensington Lane: Three (3) 40-48 Kensington Lane: Two (2)	Note
C1.8	Lightweight construction	Any proposed lightweight construction shall be designed and installed to comply with the provisions of Specification C1.8 and satisfy the relevant tests.	The proposed building is capable of complying
C1.10	Fire hazard properties	Proposed floor materials, floor coverings, wall and ceiling lining materials are to be selected to comply with the required fire hazard properties of Specification C1.10 & C1.10a. Evidence of compliance (test certificates) shall be obtained from the supplier or manufacturer. It is unknown if the existing materials and assemblies comply with this provision. Generally, most products widely available in Australia would have an inherent resistance to fire spread.	The proposed building is capable of complying Compliance with existing materials is unknown.
C1.11	Performance of external wall in fire	The requirements of this provision do not apply.	N/A
C2.2	General floor area and volume limitations	The buildings comply with the general floor area and volume limitations identified by this clause.	The proposed / existing buildings comply
C2.6	Vertical separation of openings in external walls	Spandrel separation is required to be achieved on Buildings of Type A construction that are not served by a sprinkler system. This clause applies to <u>No. 2-12 Kensington Lane</u> (only). Construction documentation is to demonstrate compliance. An alternative solution may be required in order to preserve existing building fabric.	The proposed building is capable of complying Possible Alternative Solution

BCA Clause	Title	Assessment and Comment	Status
C2.7	Separation by fire walls	The adequacy of existing fire separation between No. 36 Kensington Lane (Type C - Retail) and No. 38 Kensington Lane (Type B - Office) is to be assessed. An FRL of 2 hours is required by the deemed to satisfy provisions of this clause. Compliance with the construction requirements of this clause will also need to be assessed. Construction documentation should demonstrate compliance. An alternative solution may be required in order to preserve existing building fabric.	The buildings are capable of complying Note Possible Alternative Solution
C2.8	Separation of classifications in the same storey	The adequacy of existing fire separation between No. 36 Kensington Lane (Type C - Retail) and No. 38 Kensington Lane (Type B - Office) is to be assessed. An FRL of 2 hours is required by the deemed to satisfy provisions of this clause. Compliance with the construction requirements of this clause will also need to be assessed. Construction documentation should demonstrate compliance. An alternative solution may be required in order to preserve existing building fabric.	The proposed building is capable of complying Note Possible Alternative Solution
C2.9	Separation of classifications in different stories	The floors between parts of different classifications must have an FRL of not less than that prescribed in Specification C1.1 for the classification of the lower storey. New floors are proposed to be provided to No. 2-12 Kensington Lane in order to comply with the required FRL. This clause is not applicable to other parts of the development. Construction documentation should demonstrate compliance.	The proposed building is capable of complying Note
C2.10	Separation of lift shafts	The lift shaft in No 2-12 Kensington Lane is required to be separated from the rest of the building with walls having an FRL of not less than that required by Table 3 of Specification C1.1. The lift shaft in No 14-20 Kensington Lane is not required to be separated.	The proposed building is capable of complying
C2.11	Stairways and lifts in one shaft	The central void stair is treated as a non-fire isolated stair under the alternative solution strategy, therefore the building complies with the requirements of this provision.	The building complies
C2.12	Separation of equipment	The following rooms are required to be fire separated from the remainder of the building by 120/120/120 FRL construction: • Lift motor rooms and lift control panels. • Emergency Generators. • Central smoke control plant. • Hydrant pumps. • Boilers. • Battery rooms. The buildings do not contain any of the above rooms and the requirements of this provision do not apply.	N/A

BCA Clause	Title	Assessment and Comment	Status
C2.13	Electricity supply system	A main switchboard located in a building which sustains emergency equipment operating in emergency mode, is required to be fire separated from the remainder of the building by 2 hr fire resisting construction. Construction should achieve an FRL of 120/120/120, doorways are required achieve an FRL of -/120/30 and to be self-closing and all penetrations in enclosures are to be appropriately fire stopped. All switchboards in the electrical distribution system, which sustain the electricity supply to the emergency equipment, must provide full segregation by way of enclosed metal partitions designed to prevent the spread of any fault from non-emergency equipment switchgear to the emergency equipment switchgear. Electrical conductors and switchboards are required to comply with this clause. Construction documentation should demonstrate compliance.	The proposed building is capable of complying
C2.14	Public corridors in Class 2 & 3 buildings	Clause not applicable.	N/A
C3.2	Protection of openings in external walls	Openings in external walls requiring an FRL which are located less than 3m from a side or rear boundary of an allotment, or less than 6m from another building on the allotment that is not a Class 10, require protection in accordance with Clause C3.4. Openings in the following buildings are exposed to a fire source feature and would require protection/justification; 1. North, east and west elevations of 2-12 Kensington Lane. 2. Openings within 14-20 Kensington Lane (separate buildings on same allotment exposed to each other). 3. South elevation of 20 Kensington Lane (exposed to property boundary). 4. West elevation of 18-20 Kensington Lane. 5. Openings within 22-38 Kensington Lane (separate buildings on same allotment exposed to each other). 6. North elevation of 30 Kensington Lane (exposed to 28 Kensington Lane). 7. West elevation of 38 Kensington Lane. 8. West elevation of 40 Kensington Lane. 9. Openings within 40-48 Kensington Lane (separate buildings on same allotment exposed to each other). 10. West elevation of 48 Kensington Lane. A concession applies to non-combustible curtain walls, where fully protected by automatic wall wetting sprinklers. Construction documentation is to demonstrate compliance. Where protection is not proposed, justification would be required under the performance requirements of the BCA via a fire engineered alternative solution.	The proposed building is capable of complying Note Possible Alternative Solution
C3.3	Separation of external walls and associated openings in different fire compartments	The design complies with this provision.	Design complies

BCA Clause	Title	Assessment and Comment	Status
C3.4	Acceptable method of protection	Windows requiring protection must be protected by one of the means; • External wall-wetting sprinklers with windows that are automatically or permanently fixed in the closed position. • -/60/- fire windows (Automatic or permanently fixed in the closed position) • -/60/- automatic fire shutters • Doorways which require protection can be protected externally with wall wetting sprinklers with doors that are self closing or automatic closing, or • -/60/30 fire doors which are self closing or automatic closing. Fire doors, fire windows and fire shutters are required to comply with Specification C3.4. Alternatively protection of openings could be justified against the performance provisions of the BCA, via a fire engineered alternative solution.	The proposed building is capable of complying with the performance requirements of the BCA. Possible Alternative Solution
C3.5	Doorways in fire walls	No doorways in fire walls are proposed by the design.	Buildings are capable of complying
C3.6	Sliding fire doors	No sliding fire doors are proposed by the design.	Buildings are capable of complying
C3.8	Openings in fire isolated exits	Fire isolated exits are required in 2-12 Kensington Lane (only). The fire-isolated exits in 2-12 Kensington Lane are required to be protected by -/60/30 self closing fire doors. Construction documentation should demonstrate compliance.	The proposed building is capable of complying
C3.9	Service penetrations in fire isolated exits	Service are not to penetrate through fire isolated exits unless permitted by this clause. Construction documentation should demonstrate compliance.	The proposed building is capable of complying
C3.10	Fire isolated lift shafts	The lift doors in 2-12 Kensington Lane are required to be -/60/- fire doors and comply with this provision. A lift call panel, indicator panel or other panel in the wall of a fire-isolated lift shaft must be backed by construction having an FRL of not less than -/60/60 if it exceeds 35 000 mm² in area. Construction documentation should demonstrate compliance	The proposed building is capable of complying
NSW C3.11	Bounding construction	Clause not applicable.	N/A
C3.12	Openings in floors and ceilings for services.	Fire separation between floors is required to be maintained where services penetrate through floors unless the services are located in fire rated shafts. Construction documentation to demonstrate compliance.	The proposed building is capable of complying
C3.15	Openings for service installations	Services that penetrate a building element must be protected utilising one of the options listed under this clause. Construction documentation to demonstrate compliance.	The proposed building is capable of complying
C3.15	Openings for service installations	Services that penetrate a building element that is required to have an FRL must be protected utilising one of the options listed under this clause. Construction documentation to demonstrate compliance.	The proposed building is capable of complying
C3.16	Construction joints	Construction joints in building elements required to be fire resistant are required to be protected in accordance with this clause.	The proposed building is capable of complying

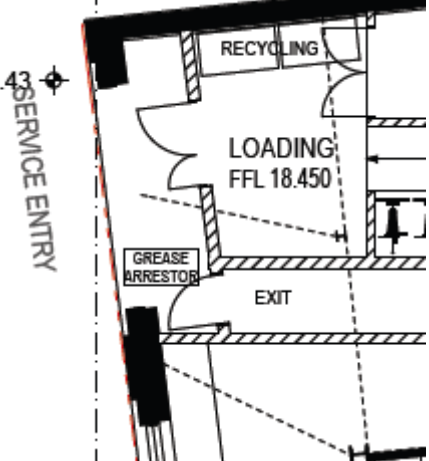
BCA Clause	Title	Assessment and Comment	Status
C3.17	Columns protected with lightweight construction to achieve an FRL	A column protected by lightweight construction to achieve an FRL which passes through a building element that is required to have an FRL or a resistance to the incipient spread of fire, 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. Details are to be provided with the construction documentation.	The proposed building is capable of complying

BCA Clause	Title	Assessment and Comment	Status
2.1	Exposure to fire source features	The requirements of this provision apply to the subject buildings.	Note
2.2	Fire protection for support of another part	When determining FRL's applicable to a particular building element, the requirements of this clause are required to be complied with.	The proposed building is capable of complying
2.3	Lintels	Lintels are to be protected as required by the requirements of this clause.	The proposed building is capable of complying
2.4	Attachment not to impair fire resistance	Any attachments such as louvers over windows, external wall cladding to the façade or any type of combustible material must comply with this requirement and not be installed directly above or near an exit, will not constitute a risk of fire spread via the façade and must comply with C1.10 above. Details are to be provided with the construction documentation.	The proposed building is capable of complying
2.5	General concessions	Note various concessions are available. A concession applies to non-combustible curtain walls, where fully protected by automatic wall wetting sprinklers.	Note
2.6	Mezzanine floors: concession	The building does not contain mezzanine's that are subject to this provision. The mezzanine in 40-42 Kensington Lane exceeds 1/3 the floor area of the retail space below.	Concession not available
2.7	Enclosure of shafts	Shafts are to be enclosed at the top and bottom in accordance with the requirements of this clause.	The proposed building is capable of complying
3.1, 4.1 & 5.1	Fire resistance of building elements	The following fire resistance levels are required: 2-12 Kensington Lane: (Type A) 14-20 Kensington Lane: (Type C) 22-36 Kensington Lane: (Type C) 38 Kensington Lane: (Type B) 40-48 Kensington Lane: (Type C) The minimum FRL's are to be achieved. The fire resistance levels of the proposed development are proposed to be performance justified via an alternative solution. New works are to comply and construction documentation is to demonstrate compliance. Class 5 Office - 2 hours Class 9b Bar - 2 hours Class 6 Retail - 3 hours Class 5 Office - 1.5 hours Class 6 Retail - 1.5 hours Class 5 Office - 1.5 hours Class 6 Retail - 1.5 hours Class 7b Storage - 1.5 hours Class 5 Office - 2 hours Class 5 Office - 1.5 hours Class 6 Retail / Bar - 1.5 hours	Alternative solution
3.5	Roof: Concession	Clause not applicable.	N/A
3.6	Roof lights	Clause not applicable.	N/A

BCA Clause	Title	Assessment and Comment	Status
3.7	Internal wall and column concession	Internal columns immediately below the roof in 2-12 Kensington Lane are permitted to achieve an FRL of 60/60/60. This concession does not apply to internal columns within 1.5m from the external windows.	Concession available

3.4 Access & Egress (BCA Section D)

BCA Clause	Title	Assessment and Comment	Status
D1.2	Number of exits required	The buildings are to be provided with the minimum required exits under the requirements of this provision.	The buildings comply.
D1.3	When fire isolated exits are required	Every required exit serving a building must be fire isolated if the exit stair connects and/or passes through more than 2 consecutive storeys. The following stairs are required to be fire isolated: - Stair 1 & 2 in 2-12 Kensington Lane - Existing stair in 38 Kensington Lane The open stair in 2-12 Kensington Lane connects 4 levels and is not proposed to be fire isolated and will be justified against the performance requirements of the BCA via an alternative solution. The existing open stair in 38 Kensington Lane connects 3 levels and is not proposed to be fire isolated as part of the adaptive reuse. To ensure fire and life safety considerations are appropriately addressed, justification against the performance requirements of the BCA via an alternative solution is required.	Alternative solution Alternative solution
D1.4	Exit travel distances	Class 5, 6, 7b and 9b parts - No point on a floor must be more than 20m from an exit, or a point from which travel in different directions to 2 exits is available, in which case the maximum distance to one of those exits must not exceed 40m. The following non-compliances require justification against the performance requirements of the BCA: <u>2-12 Kensington Lane:</u> - Level 2 Bar - 23m to an exit or point of choice. - Level 3 Roof Terrace - 26.5m to an exit or point of choice.	Alternative solution
D1.5	Distance between alternative exits	Exits that are required to serve as alternative means of egress must not be more than 60m apart. The design complies in this regard. Exits required as alternative means of egress must be located not less than 9m apart and located so that the alternative paths of travel do not converge such that they become less than 6m apart. The exit stairs within 2-12 Kensington Lane are located less than 9m apart (5.4m) and require justification against the performance requirements of the BCA.	Alternative solution

BCA Clause	Title	Assessment and Comment	Status
NSW D1.6	Dimensions of exits and paths of travel to exits	A required exit or path of travel to an exit are required to be a minimum unobstructed height of not less than 2m and minimum width of 1m. The new building work is capable of complying. The existing terrace houses are unlikely to comply in this regard and may require justification against the performance requirements of the BCA via an alternative solution to ensure fire and life safety considerations are appropriately addressed.	The proposed building is capable of complying Possible alternative solution
D1.7	Travel via fire isolated exits	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. <u>2-12 Kensington Lane</u> 1. The final exit door of the fire isolated stair discharges into a covered area that is less than 3m in height as required by this clause. 2. The path of travel after discharging from the final exit door of the fire isolated stair necessitates travelling within 6m of the wall and door serving the Loading / Recycling Room. The external wall requires a minimum FRL of 60/60/60 (for 3m above) and -/60/30 self closing fire doors are required to the Loading / Recycling Room.  Construction documentation is to demonstrate compliance.	The proposed building is capable of complying Alternative solution Possible alternative solution
D1.8	External Stairs or ramps in lieu of Fire-isolated exits	External stairs are not provided in lieu of fire isolated exits.	N/A
D1.9	Travel via non-fire-isolated stairways or ramps	A non fire-isolated stair serving as a required exit must provide a continuous means of travel by its own flights and landings to a level at which egress to a road or open space is available.	The proposed buildings comply
D1.10	Discharge from exits	Required exits are to be connected to the road by a minimum 1m wide path, that is open to the sky for its length. Where there is a change of level, the path must contain a complying stair or ramp. The path of travel to the road within 22-38 Kensington Lane contains parts less than 1m wide, which are also covered by glazed awnings. Justification against the performance requirements of the BCA is required.	Alternative solution
D1.11	Horizontal exits	Horizontal exits are not proposed.	N/A

BCA Clause	Title	Assessment and Comment	Status
D1.12	Non-required stairways, ramps or escalators	Non-required stairs are not proposed.	N/A
D1.13	Number of persons accommodated	Populations have been assessed in accordance with Table D1.13 and seating layouts provided by the design team.	Note
D1.16	Plant rooms and lift rooms: concession	A ladder may be used in lieu of a stairway to provide egress from - (i) a plant room with a floor area of not more than 100 m²; or (ii) all but one point of egress from a plant room or a lift machine room with a floor area of not more than 200 m². A ladder permitted in accordance with the above - (i) may form part of an exit provided that in the case of a fire-isolated stairway it is contained within the shaft; or (ii) may discharge within a storey in which case it must be considered as forming part of the path of travel; and (iii) must comply with AS1657 for a plant room; and AS1735.2 for a lift machine room. Details are to be provided with the construction documentation.	The proposed building is capable of complying
D1.17	Access to lift pits	Access to lift pits must, where the pit depth is not more than 3m, may be through the lowest landing doors; or where the pit depth is more than 3 m, be provided through an access doorway complying with the following: (i) In lieu of D1.6, the doorway must be level with the pit floor and not be less than 600 mm wide by 1980 mm high clear opening, which may be reduced to 1500 mm where it is necessary to comply with (ii). (ii) No part of the lift car or platform must encroach on the pit doorway entrance when the car is on a fully compressed buffer. (iii) Access to the doorway must be by a stairway complying with A1657. (iv) In lieu of D2.21, doors fitted to the doorway must be— (a) of the horizontal sliding or outwards opening hinged type; and (b) self-closing and self-locking from the outside; and (c) marked on the landing side with the letters not less than 35 mm high: “DANGER LIFTWELL – ENTRY OF UNAUTHORIZED PERSONS PROHIBITED – KEEP CLEAR AT ALL TIMES” Details are to be provided with the construction documentation.	The proposed building is capable of complying
D2.2	Fire-isolated stairways and ramps	A stairway or ramp (including any landings) that is required to be within a fire-resisting shaft must be constructed of non-combustible materials and so that if there is local failure it will not cause structural damage to, or impair the fire-resistance of, the shaft. Details are to be provided with the construction documentation.	The proposed building is capable of complying
D2.3	Non-fire isolated stairs and ramps	Clause not applicable.	N/A
D2.4	Separation of rising and descending stair flights	Clause not applicable.	N/A

BCA Clause	Title	Assessment and Comment	Status
D2.7	Installation in exits and paths of travel	Existing and/or proposed services or equipment comprising electricity meters, distribution boards, central telecommunication distribution boards / equipment, electrical motors or other motors serving equipment in the building, can be installed in the existing corridors or the like leading to required exits if the services or equipment are enclosed with non-combustible construction or appropriate fire-protective covering and doorways suitably sealed against smoke spread from the enclosure. Gas or other fuel services are not permitted in a required exit. Details are to be provided with the construction documentation.	The proposed building is capable of complying
D2.8	Enclosure of space under stairs and ramps	The space below the required fire-isolated stairways must not be enclosed to form a cupboard or similar enclosed space. The space below the required non fire-isolated stairways if enclosed to form a cupboard or similar enclosed space must be enclosed with construction having an FRL of not less than 60/60/60 and be fitted with a -/60/30 self closing fire door. Details are to be provided with the construction documentation.	The proposed building is capable of complying
D2.9	Width of stairways	The required width of a stairway must be measured clear of all obstructions such as handrails, projecting parts of balustrades or other barriers and the like and extend without interruption, except for ceiling cornices, to a height not less than 2 m vertically above a line along the nosings of the treads or the floor of the landing.	Note
D2.11	Fire-isolated passageways	The enclosing construction of the fire-isolated passageway on the ground floor of 2-12 Kensington Lane must have an FRL when tested for a fire outside the passageway in another part of the building of not less than that required for the stairway shaft.	The proposed building is capable of complying
NSW D2.13	Goings & risers	Goings and risers are to be designed to comply with this clause, including opening sizes, going and riser dimensions and non-slip finish or non-skid nosings. Winders are not permitted in required stairs. Construction documentation should demonstrate compliance for new works. Existing stairs within heritage terrace houses are unlikely to comply with the requirements of this provision. Council discretion is sort under Clause 94 of the EP&A Regs 2000.	The proposed building is capable of complying Possible alternative solution
D2.14	Landings	Landings are to be designed in accordance with this clause. The current documentation does not contain this level of detail. Construction documentation should demonstrate compliance for new works. Existing stairs within heritage terrace houses are unlikely to comply with the requirements of this provision. Council discretion is sort under Clause 94 of the EP&A Regs 2000.	The proposed building is capable of complying Possible alternative solution
NSW D2.15	Thresholds	New works are to comply with the requirements of this provision. Construction documentation to demonstrate compliance.	The proposed building is capable of complying

BCA Clause	Title	Assessment and Comment	Status
NSW D2.16	Balustrades and other barriers	New balustrades are to be designed to comply with this clause. Existing balustrades within heritage terrace houses are unlikely to comply with the requirements of this provision. Council discretion is sort under Clause 94 of the EP&A Regs 2000. Construction documentation should also demonstrate compliance.	The proposed building is capable of complying Possible alternative solution
D2.17	Handrails	Handrails are required along at least one side of the stairways or ramps, or on both sides of stairs or ramps with a total width of more than 2m. Construction documentation should demonstrate compliance. Existing handrails within heritage terrace houses are unlikely to comply with the requirements of this provision. Council discretion is sort under Clause 94 of the EP&A Regs 2000.	The proposed building is capable of complying Possible alternative solution
NSW D2.19	Doorways and doors	A doorway serving as a required exit or forming part of a required exit must not be fitted with a revolving door, roller shutter or tilt-up door. Sliding doors must also not be fitted unless it leads directly to a road or open space and the door provided that it is capable of being opened manually under a force of not more than 110 N. A doorway serving as a required exit or forming part of a required exit is fitted with a door which is power-operated— (a) it 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 (b) if it leads directly to a road or open space it must open automatically if there is a power failure to the door or on the activation of a fire or smoke alarm anywhere in the fire compartment served by the door. Construction documentation should also demonstrate compliance.	The proposed building is capable of complying
D2.20	Swinging doors	A swinging door in a required exit or forming part of a required exit must not encroach at any part of its swing by more than 500mm on the required width (including any landings) of a required stairway, ramp or passageway if it is likely to impede the path of travel of the people already using the exit; and when fully open, by more than 100 mm on the required width of the required exit. The measurement of encroachment in each case is to include door handles or other furniture or attachments to the door. The doors must swing in the direction of egress unless serving as the only required exit from the building or part less than 200m², 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); and must not otherwise impede the path or direction of egress. Construction documentation should also demonstrate compliance.	The proposed building is capable of complying
NSW D2.21	Operation of latch	All the doors in the required exits, or doors forming part of the required exits, must be readily openable without a key from the side that faces a person seeking egress, by a single hand downward or pushing action on a single device which is located between 900mm and 1.1m from the floor. Construction documentation should also demonstrate compliance.	The proposed building is capable of complying

BCA Clause	Title	Assessment and Comment	Status
D2.22	Re-entry from fire-isolated exits	N/A	N/A
D2.23	Signs on doors	A sign, to alert persons that the operation of certain doors must not be impaired, must be installed where it can readily be seen on, or adjacent to the following; • A required fire door providing direct access to a fire-isolated exit, • A required smoke door, • A fire door forming part of a horizontal exit; • A smoke door that swings in both directions; • door leading from a fire isolated exit to a road or open space, Signage is required to be in capital letters not less than 20 mm high in a colour contrasting with the background and state— (i) for an automatic door held open by an automatic hold-open device— “FIRE SAFETY DOOR—DO NOT OBSTRUCT”; or (ii) for a self-closing door— “FIRE SAFETY DOOR DO NOT OBSTRUCT DO NOT KEEP OPEN”; or (iii) for a door discharging from a fire-isolated exit— “FIRE SAFETY DOOR—DO NOT OBSTRUCT”. Construction documentation should demonstrate compliance.	The proposed building is capable of complying
D3.1	General building access requirements	Access is required to be provided to and within all areas normally used by occupants in accordance with the requirements of this provision and AS1428.1-2009. Construction documentation should demonstrate compliance.	Subject to separate access report
D3.2	Access to buildings	An accessway must be provided to a building required to be accessible— - from the main points of a pedestrian entry at the allotment boundary; and - from another accessible building connected by a pedestrian link; and - from any required accessible carparking space on the allotment. In a building required to be accessible, an accessway must be provided through the principal pedestrian entrance (except for pedestrian entrances serving only areas exempted by D3.4), - through not less than 50% of all pedestrian entrances including the principal pedestrian entrance; and - in a building with a total floor area more than 500 m², a pedestrian entrance which is not accessible must not be located more than 50 m from an accessible pedestrian entrance, Where a pedestrian entrance required to be accessible has multiple doorways— - if the pedestrian entrance consists of not more than 3 doorways — not less than 1 of those doorways must be accessible; and - if a pedestrian entrance consists of more than 3 doorways, not less than 50% of those doorways must be accessible. Where a doorway on an access way has multiple leaves, (except an automatic opening door) one of those leaves must have a clear opening width of not less than 850 mm in accordance with AS 1428.1-2009. Construction documentation should demonstrate compliance.	Subject to separate access report

BCA Clause	Title	Assessment and Comment	Status
D3.3	Parts of building to be accessible	Every ramp and stairway (except for ramps and stairways in areas exempted by D3.4) must comply with— i. for a ramp, except a fire-isolated ramp, clause 10 of AS 1428.1; and ii. for a stairway, except a fire-isolated stairway, clause 11 of AS 1428.1; and iii. for a fire-isolated stairway, clause 11.1(f) and (g) of AS 1428.1-2009. Every passenger lift must comply with E3.6; and Accessways must have— i. passing spaces complying with AS 1428.1 at maximum 20 m intervals on those parts of an accessway where a direct line of sight is not available; and ii. turning spaces complying with AS 1428.1— (A) within 2 m of the end of accessways where it is not possible to continue travelling along the accessway; and (B) at maximum 20 m intervals along the accessway; and An intersection of accessways satisfies the spatial requirements for a passing and turning space and a passing space may serve as a turning space. In addition to the above, Clause 7.4.1(a) of AS 1428.1 does not apply and is replaced with 'the pile height or pile thickness shall not exceed 11 mm and the carpet backing thickness shall not exceed 4 mm'; and The carpet pile height or pile thickness dimension, carpet backing thickness dimension and their combined dimension shown in figure 8 of AS 1428.1 do not apply and are replaced with 11 mm, 4 mm and 15 mm respectively. Construction documentation should demonstrate compliance.	Subject to separate access report
D3.4	Exemptions	The following areas are not required to be accessible: (a) An area where access would be inappropriate because of the particular purpose for which the area is used. (b) An area that would pose a health or safety risk for people with a disability. (c) Any path of travel providing access only to an area exempted by (a) or (b).	Note
D3.5	Car parking	N/A	N/A

BCA Clause	Title	Assessment and Comment	Status
D3.6	Signage	Braille and tactile signage complying with Specification D3.6 and incorporating the international symbol of access or deafness, as appropriate, in accordance with AS 1428.1 must identify each— i. sanitary facility, except a sanitary facility within the sole-occupancy unit of the Class 3 component; and ii. a space with a hearing augmentation system; Signage including the international symbol for deafness in accordance with AS 1428.1 must be provided within a room containing a hearing augmentation system identifying— i. the type of hearing augmentation; and ii. the area covered within the room; and iii. if receivers are being used and where the receivers can be obtained. Signage in accordance with AS 1428.1 must be provided for accessible unisex sanitary facilities to identify if the facility is suitable for left or right handed use. Signage to identify an ambulant accessible sanitary facility in accordance with AS 1428.1 must be located on the door of the facility. Where a pedestrian entrance is not accessible, directional signage incorporating the international symbol of access, in accordance with AS 1428.1 must be provided to direct a person to the location of the nearest accessible pedestrian entrance. Where a bank of sanitary facilities is not provided with an accessible unisex sanitary facility, directional signage incorporating the international symbol of access in accordance with AS 1428.1 must be placed at the location of the sanitary facilities that are not accessible, to direct a person to the location of the nearest accessible unisex sanitary facility. Construction documentation should demonstrate compliance.	The building is capable of complying
D3.7	Hearing augmentation	A hearing augmentation is to comply if an inbuilt amplification system is installed within the Class 9b parts of the building.	The building is capable of complying
D3.8	Tactile indicators	Tactile ground surface indicators are required to be provided to warn people who are blind or have a vision impairment that they are approaching— (i) a stairway, other than a fire-isolated stairway; and (ii) an escalator; and (iii) a passenger conveyor or moving walk; and (iv) a ramp other than a fire-isolated ramp, step ramp, kerb ramp or swimming pool ramp; and (v) in the absence of a suitable barrier— (A) an overhead obstruction less than 2 m above floor level, other than a doorway; and (B) an accessway meeting a vehicular way adjacent to any pedestrian entrance to a building, excluding a pedestrian entrance serving an area referred to in D3.4, if there is no kerb or kerb ramp at that point, except for areas exempted by D3.4. Tactile ground surface indicators required are required to comply with sections 1 and 2 of AS/NZS 1428.4.1. Construction documentation should demonstrate compliance.	The proposed building is capable of complying
D3.9	Wheelchair seating spaces in Class 9b assembly buildings	N/A	N/A

BCA Clause	Title	Assessment and Comment	Status
D3.10	Swimming Pools	N/A	N/A
D3.11	Ramps	A series of connected ramps must not have a combined vertical rise of more than 3.6 m and a landing for a step ramp must not overlap a landing for another step ramp or ramp. Construction documentation should demonstrate compliance.	The proposed building is capable of complying
D3.12	Glazing on an accessway	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, must be clearly marked in accordance with AS 1428.1. Construction documentation should demonstrate compliance.	The proposed building is capable of complying

3.5 Services & Equipment (BCA Section E)

BCA Clause	Title	Assessment and Comment	Status
E1.3	Fire hydrants	<u>2-12 Kensington Lane (only)</u> A fire hydrant system must be provided in accordance with this clause to serve the whole building and must also be installed in accordance with AS2419.1-2005. No other buildings require hydrant systems installed. The locations of hydrant boosters and pumps have not been detailed and the construction documentation should demonstrate compliance. It is understood the protection of the fire hydrant booster assembly is unlikely to comply with the prescriptive requirements of AS2419.1-2005 and is to be subject to performance justification. Construction documentation should demonstrate compliance otherwise.	The proposed building is capable of complying Alternative solution
E1.4	Fire hose reels	<u>2-12 Kensington Lane (only)</u> A hose reel system must be provided to serve the whole building. The hose reel system must be installed in accordance with this clause and AS2441. All fire hose reels are currently not documented and the construction documentation should demonstrate compliance noting that hose reels must be located less than 4m from a required exit and are not permitted to cross fire or smoke doors, so careful design is required to ensure compliant coverage is achieved.	The proposed building is capable of complying
E1.5	Sprinklers	A sprinkler system is not required to be installed in the buildings under the requirements of this provision.	N/A
E1.6	Portable fire extinguishers	Portable fire extinguishers are to comply with this provision and sections 1, 2, 3 and 4 of AS2444. Construction documentation should demonstrate compliance.	The proposed building is capable of complying
E1.8	Fire control centres	A fire control room is not required.	N/A

BCA Clause	Title	Assessment and Comment	Status
E1.9	Fire precautions during construction	In a building under construction— (a) not less than one 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 exit or temporary stairway or exit; and (b) after the building has reached an effective height of 12 m— (i) the required fire hydrants and fire hose reels must be operational in at least every storey that is covered by the roof or the floor structure above, except the 2 uppermost storey's; and (ii) any required booster connections must be installed.	The proposed building is capable of complying
E2.2	General requirements	An air-handling system which does not form part of a smoke hazard management system in accordance with Table E2.2a 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— • be designed and installed to operate as a smoke control system in accordance with AS/NZS 1668.1; or • incorporate smoke dampers where the air-handling ducts penetrate any elements separating the fire compartments served; and • 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 4.10 of AS/NZS 1668.1. Miscellaneous air-handling systems covered by Sections 5 and 11 of AS/NZS 1668.1 serving more than one fire compartment and not forming part of a smoke hazard management system must comply with that Section of the Standard. <u>2-12 Kensington Lane & 38 Kensington Lane</u> The Class 5, 6 and 9b parts of these buildings are also required to be protected with an automatic smoke detection and alarm system complying with Specification E2.2a & AS1670.1-2004. The system must also activate a Building Occupant Warning System in accordance with Clause 6.	The proposed building is capable of complying Note
E3.2	Stretcher facility in lifts	<u>2-12 Kensington Lane</u> A stretcher facility must be provided in accordance with the requirements of this clause and must be able to accommodate a raised stretcher with a patient lying on it horizontally by providing a clear space not less than 600 mm wide x 2000 mm long x 1400 mm high above the floor level. Construction documentation should demonstrate compliance.	The proposed building is capable of complying
E3.3	Warning against use of lifts in fire	Warning signs must be displayed near every call button for a passenger lift or group of lifts throughout the building in accordance with this clause and must comply with the details and dimensions of Figure E3.3.	The proposed building is capable of complying
E3.4	Emergency lifts	Emergency lifts are not required.	N/A
E3.5	Landings	The provisions of Clause 12.2 "Access" of AS1735.2 do not apply. The provisions of Clause A3.2 —"Access to landings" of Appendix A of AS1735.1 do not apply. Access and egress to and from lift well landings must comply with the Deemed-to-Satisfy Provisions of Section D.	The proposed building is capable of complying
E3.6	Facilities for people with disabilities	Every passenger lift must comply with the requirements of this provision. Construction documentation should demonstrate compliance.	The proposed building is capable of complying

BCA Clause	Title	Assessment and Comment	Status
E3.7	Fire service controls	Fire service controls are required to every lift serving any storey above an effective height of 12m. This applies to the lift in <u>2-12 Kensington Lane</u> only. Construction documentation should demonstrate compliance.	The proposed building is capable of complying
E3.8	Aged care buildings	N/A	N/A
E4.2	Emergency lighting requirements	Emergency lighting must be provided to <u>2-12 Kensington Lane</u> only in accordance with this clause. Emergency lighting is required to comply with AS2293.1-2005. Construction documentation should demonstrate compliance.	The proposed building is capable of complying
E4.5	Exit signs	Exit signage must be provided in accordance with this clause. Exit signage is required to comply with AS2293.1-2005 and be clearly visible at all times. Construction documentation should demonstrate compliance.	The proposed building is capable of complying
NSW E4.6	Direction signs	If an exit is not readily apparent to persons occupying or visiting the building then exit signs must be installed in appropriate positions in corridors, hallways, lobbies, and the like, indicating the direction to a required exit. Construction documentation should demonstrate compliance.	The proposed building is capable of complying
E4.9	Sound systems and intercom systems for emergency purposes	A sound system and intercom system for emergency purposes is not required under the requirements of this provision.	N/A

3.5 Health & Amenity (BCA Section F)

BCA Clause	Title	Assessment and Comment	Status
F1.0	Deem to satisfy provisions	Performance requirement FP1.4, for the prevention of the penetration of water through external walls, is required to be complied with. Details are to be provided with construction documentation.	The proposed building is capable of complying
F1.1	Stormwater drainage	Stormwater drainage is required to be designed to comply with AS/NZS3500.3. Construction documentation should demonstrate compliance.	The proposed building is capable of complying
F1.5	Roof coverings	Lightweight metal roof sheeting is to comply with AS1562.1. Construction documentation should demonstrate compliance.	The proposed building is capable of complying
F1.6	Sarking	Sarking-type materials used for weatherproofing of roofs and walls are required to comply with AS/NZS 4200 Parts 1 and 2. Construction documentation should demonstrate compliance.	The proposed building is capable of complying
F1.7	Waterproofing of wet areas in buildings	Waterproofing of wet areas are required to comply with this clause. Construction documentation should demonstrate compliance.	The proposed building is capable of complying
F1.9	Damp-proofing	Damp proof course is required to be provided to walls to comply with this clause.	The proposed building is capable of complying
F1.10	Damp-proofing of floor on ground	Damp-proofing is required to be provided in accordance with the requirements of this provision.	The proposed building is capable of complying

BCA Clause	Title	Assessment and Comment	Status
F1.11	Provision of floor wastes	N/A	N/A
F1.12	Sub-floor ventilation	The sub-floor space between the suspended floor of a building and the ground must be provided with cross ventilation, be cleared of all debris and graded to prevent ponding and evenly spaced ventilation openings. The minimum sub-floor ventilation openings are to be achieved in accordance with Table F1.12 providing 6000 mm²/m wall. Sub-floor spaces are not proposed.	N/A
F1.13	Glazed assemblies	Glazed assemblies to comply with AS 2047 as applicable.	The proposed building is capable of complying
F2.1	Facilities in residential buildings	N/A	N/A
F2.3	Facilities in Class 3 to 9 buildings	The sanitary facilities provided comply with the populations as proposed by the development. Populations have been assessed in accordance with Table D1.13 and seating layouts provided by the design team.	The proposed building complies
F2.4	Facilities for people with disabilities	Unisex sanitary compartments must be provided on every storey containing sanitary facilities and where a storey has more than 1 bank of sanitary compartments, at not less than 50% of these banks in accordance with AS1428.1-2009. In addition to the unisex sanitary compartment, each bank of toilets must be provided with a sanitary compartment suitable for a person with an ambulant disability in accordance with AS 1428.1 and must be provided for use by males and females. An accessible unisex sanitary compartment must contain a closet pan, washbasin, shelf or bench top and adequate means of disposal of sanitary towels. The circulation spaces, fixtures and fittings of all accessible sanitary facilities provided in accordance with Table F2.4(a) and Table F2.4(b) must comply with the requirements of AS 1428.1; and Access to unisex sanitary facility must be located so that it can be entered without crossing an area reserved for one sex only. Where two or more of each type of accessible unisex sanitary facility are provided, the number of left and right handed mirror image facilities must be provided as evenly as possible, Construction documentation should demonstrate compliance.	The proposed building is capable of complying
F2.5	Construction of sanitary compartments	The construction of sanitary compartments is required to comply with this requirement. Doorways located less than 1.2m from the closet pan are required to swing outwards, slide or be capable of being removed from the outside (lift off hinges).	The proposed building is capable of complying
F2.6	Interpretation: Urinals and washbasins	A urinal may be—an individual stall or wall-hung urinal; or each 600 mm length of a continuous urinal trough, or a closet pan used in place of a urinal. A washbasin may be an individual basin or a part of a hand washing trough served by a single water tap.	Note
F3.1	Height of rooms and other spaces	The minimum ceiling height requirements are to comply with the requirements of this provision. Generally the new buildings are compliant however full construction documentation is to demonstrate compliance.	The proposed building is capable of complying

BCA Clause	Title	Assessment and Comment	Status
F4.1	Provision of natural light	N/A	N/A
F4.4	Artificial lighting	Artificial lighting is to be provided in accordance with AS/NZS1680.0 and in accordance with this clause. Construction documentation should demonstrate compliance.	The proposed building is capable of complying
F4.5	Ventilation of rooms	Ventilation is to be provided by natural or mechanical means in accordance with this provision and Clause F4.6. Construction documentation should demonstrate compliance.	The proposed building is capable of complying
F4.8	Restriction on the position of water closets and urinals	A room containing a closet pan or urinal must not open directly into a room used for public assembly, workplace or kitchen. An air lock or mechanical ventilation must be provided: 1. <u>40-48 Kensington Lane</u> - Between the sanitary facilities and adjoining bar area 2. <u>2-12 Kensington Lane</u> - Between the accessible WC and adjoining office on level 4. Construction documentation should demonstrate compliance.	The proposed building is capable of complying
F4.9	Airlocks	If the room containing a closet pan or urinal must not open directly into rooms identified in F4.8 above then an airlock of not less than 1.1 m ² and fitted with self-closing doors at all access doorways or the room containing the closet pan or urinal must be provided with mechanical ventilation and the doorway to the room adequately screened from view. Mechanical ventilation of the bathrooms is to be provided.	The proposed building is capable of complying
F4.11	Car park exhaust	N/A.	N/A
F4.12	Kitchen local exhaust	Commercial kitchens are to be provided with exhaust hoods to AS1668 where required by this clause. Construction documentation should demonstrate compliance.	The proposed building is capable of complying
F5.1	Application of part	Part F5 is not applicable to the subject development.	N/A

3.6 Ancillary Provisions (Section G)

BCA Clause	Title	Assessment and Comment	Status
G1.1	Swimming Pools	N/A	N/A
G1.2	Refrigerated chambers, strongrooms & vaults	Refrigerated chambers are to comply with the requirements of this provision. Construction documentation should demonstrate compliance.	The proposed building is capable of complying
NSW G1.101	Provision for the cleaning of windows	The method of provision for the cleaning of windows is required to be in accordance with this clause (windows 3 or more storeys above the ground). This clause applies to <u>2-12 Kensington Lane</u> (only). Details are to be provided with the construction documentation submitted with the construction certificate.	The proposed building is capable of complying
G5.2	Protection in bushfire prone areas	N/A	N/A

3.7 Energy Efficiency – (Section J – Class 3 and 5 to 9 buildings)

The assessment is based on buildings located within Climate Zone 5.

Note: The development will be the subject of a separate energy efficiency assessment report.

3.7.1 External fabric (Part J1)

BCA Clause	Title	Assessment and Comment	Status
J1.2	Thermal Construction General	Required insulation, reflective insulation and bulk insulation is to be installed in accordance with this clause and AS/NZS 4859.1.	The proposed building is capable of complying
J1.3	Roof and Ceiling Construction	A roof or ceiling that is part of the envelope must achieve the Total R-Value specified in Table J1.3a for the direction of heat flow. Climate Zone 5 requires a minimum total R-Value of 3.2 and up to 4.2 measured downwards, depending on the roofs solar absorptance level. A roof that— (i) is required to achieve a minimum Total R-Value; and (ii) has metal sheet roofing fixed to metal purlins, metal rafters or metal battens; and (iii) does not have a ceiling lining or has a ceiling lining fixed directly to those metal purlins, metal rafters or metal battens (see Specification J1.3 Figure 2(c) and (f)), must have a thermal break, consisting of a material with an R-Value of not less than R0.2, installed between the metal sheet roofing and its supporting member. Details of the roof construction and Total R-Value is to be provided with the construction documentation to demonstrate compliance.	The proposed building is capable of complying
J1.4	Roof Lights	Roof lights are required to comply with the requirements of this provision. This applies to the glass roof over <u>46-48 Kensington Lane</u>. The total area of roof lights must not exceed 5% of the floor area of the room served. The roof light area proposed is approximately 50% of the floor area. An alternative solution is proposed verifying the building will meet the performance requirements of Section J via JV3 modelling. Details are to be provided with the construction documentation to demonstrate compliance.	The proposed building is capable of complying Alternative solution

BCA Clause	Title	Assessment and Comment	Status
J1.5	Walls	Each part of an external wall that is part of the envelope must satisfy one of the options in Table J1.5a. Generally walls are required to achieve a total R-Value of 2.8. Any internal wall forming part of the <i>envelope</i> must achieve the total R-value in Table J1.5b. Generally walls are required to achieve a total R-Value of 1.0 or 1.8, depending on the location. A wall that— (i) is required to achieve a minimum Total R-Value; and (ii) has lightweight external cladding such as weatherboards, fibre cement or metal sheeting fixed to a metal frame; and (iii) does not have a wall lining or has a wall lining that is fixed directly to the metal frame, must have a thermal break, consisting of a material with an R-Value of not less than R0.2, installed between the external cladding and the metal frame. Detail of the wall construction and Total R-Value is to be provided with the construction documentation to demonstrate compliance.	The proposed building is capable of complying
J1.6	Floors	(a) A floor that is part of the envelope of the building, including a floor above a plant room or other non-conditioned space— (i) must achieve the Total R-Value specified in Table J1.6; (b) The minimum Total R-Value required in (a) may be reduced by R0.5 provided R0.75 is added to the Total R-Value required for the roof and ceiling construction. Floor construction is deemed to have the thermal properties listed in Specification J1.6. Construction documentation is to demonstrate compliance.	The proposed building is capable of complying

3.7.2 External Glazing (Part J2)

BCA Clause	Title	Assessment and Comment	Status
J2.4	Glazing	Glazing must be designed in accordance with J2.4 to achieve the aggregate air-conditioning energy value. A glazing calculator results are to be provided with the construction documentation to demonstrate compliance.	The proposed building is capable of complying
J2.5	Shading	Required shading must be designed in accordance with the requirements of this condition. The construction documentation is to identify if shading is required and details to demonstrate compliance.	The proposed building is capable of complying

3.7.3 Building Sealing (Part J3)

BCA Clause	Title	Assessment and Comment	Status
J3.2	Chimneys and flues	Solid fuel burning appliances are not proposed and the requirements of this provision do not apply.	N/A

BCA Clause	Title	Assessment and Comment	Status
J3.3	Roof Light	Roof lights are required to be sealed or capable of being sealed. This applies to the glass roof over <u>46-48 Kensington Lane</u> . Construction documentation is to demonstrate compliance.	The proposed building is capable of complying
J3.4	Windows and doors	Windows and doors forming part of the envelope are required to be sealed to restrict air infiltration. The requirements of this provision do not apply to, 1. Windows complying with AS2047, 2. A fire or smoke door, 3. Roller shutter doors. The bottom edge of a swing door required to be sealed must have a draft protection device and the other edges of doors or windows must have a foam or rubber compression strip, fibrous seal or the like. An entrance to a building, if leading to a conditioned space must have an airlock, self-closing door, revolving door or the like, other than where the conditioned space has a floor area of not more than 50 m². The construction documents are to have details demonstrating compliance.	The proposed building is capable of complying
J3.5	Exhaust Fans	A miscellaneous exhaust fan must be fitted with a sealing device such as a self-closing damper or the like when serving a; (a) conditioned space; or (b) a habitable room in climate zone 4, 6, 7 & 8. The construction documents are to have details demonstrating compliance.	The proposed building is capable of complying
J3.6	Construction of roofs, walls and floors	Roofs, ceilings, walls, floors and any openings are required to be designed and constructed to minimize air leakage in accordance with this clause. The construction documents are to have details demonstrating compliance.	The proposed building is capable of complying
J3.7	Evaporative Coolers	Evaporative coolers are not proposed.	N/A

3.7.4 Air Conditioning and Ventilation Systems (Part J5)

BCA Clause	Title	Assessment and Comment	Status
J5.2	Air Conditioning and Ventilating system	Any proposed air-conditioning systems and mechanical ventilation systems must; i. Be capable of being deactivated when the SOU or part of the building served is not occupied; and ii. When serving a SOU of a Class 3 building, not operate when any external door including a door opening to a balcony, patio, courtyard or the like is open for more than 1 minute; and iii. In a Class 3 building be capable of controlling the temperature of a SOU at a different temperature during sleeping periods than during other periods; and iv. When the air flow rate is greater than 1000 L/s, be designed so that the total fan power of the fans in the system is in accordance with Table J5.2, except as permitted. The construction documents are to have details demonstrating compliance.	The proposed building is capable of complying

BCA Clause	Title	Assessment and Comment	Status
J5.3	Time Switch	The mechanical ventilation system and air conditions system design would is required to be provided with a time switch in accordance with Spec J6. The requirement does not apply to an air-conditioning system that serves only one SOU. The construction documents are to have details demonstrating compliance.	The proposed building is capable of complying
J5.4	Heating and chilling systems	Heating a space other than via water, must be i. A solar heater; or ii. A gas heater; or iii. An oil heater if reticulated gas is not available at the allotment boundary; and iv. A heat pump heater; or v. A heater using reclaimed heat from another process such as reject heat from refrigeration plant; or vi. A combination of 2 or more Package air-conditioning equipment with a capacity of not less than 65 kW_r, including a split unit and a heat pump, must have an energy efficiency ratio complying with Table J5.4c when tested in accordance with AS/NZS 3823.1.2 at test condition T1.	The proposed building is capable of complying
J5.5	Miscellaneous exhaust system	A miscellaneous exhaust system with an air flow rate of more than 1000 L/s, that is associated with equipment having a variable demand such as a stove in a commercial kitchen or a chemical bath in a factory is required to be design to comply with this clause. The construction documents are to have details demonstrating compliance.	The proposed building is capable of complying

3.7.5 Artificial Lighting and Power (Part J6)

BCA Clause	Title	Assessment and Comment	Status
J6.2	Artificial lighting	The requirements of this provision relate to the illumination load and power of artificial lighting. Artificial lighting is to be designed in accordance with this provision. The construction documents are to have details demonstrating compliance.	The proposed building is capable of complying
J6.3	Interior artificial lighting and power control	Artificial lighting and power control are to be designed and provided in accordance with this provision. The construction documents are to have details demonstrating compliance.	The proposed building is capable of complying
J6.4	Interior decorative and display lighting	Interior decorative and display lighting, such as for foyer mural or art display, must be controlled in accordance with this clause. i. Individually operated; ii. An occupant activation device to activate artificial lighting, air-conditioning, local exhaust fans and bathroom heaters when SOU is not occupied; iii. An artificial lighting switch must be located in a visible position; The construction documents are to have details demonstrating compliance.	The proposed building is capable of complying

BCA Clause	Title	Assessment and Comment	Status
J6.5	Artificial lighting around the perimeter of a building	Artificial lighting around the perimeter of a building must be designed to comply with this clause. i. Controlled by a daylight sensor; ii. A time switch at variable pre-programmed times and on variable pre-programmed days; and iii. When the total perimeter lighting exceeds 100 W it must have an average light source efficacy of not less than 60 lumens/W or be controlled by a motion detector; The construction documents are to have details demonstrating compliance.	The proposed building is capable of complying
J6.6	Boiling water and chilled water storage units	Power supply to a boiling water or chilled water storage unit is required to be controlled by a time switch in accordance with Spec J6. The construction documents are to have details demonstrating compliance.	The proposed building is capable of complying

3.7.6 Hot Water Supply and Swimming Pool and Spa Pool Plant (Part J7)

BCA Clause	Title	Assessment and Comment	Status
J7.2	Hot Water Supply	A hot water supply system for food preparation and sanitary purposes, other than a solar hot water supply system in climate zones 1, 2 and 3, must be designed and installed in accordance with Section 8 of AS/NZS 3500.4.	The proposed building is capable of complying
J7.3	Swimming pool heating and pumping	A swimming pool is not proposed.	N/A
J7.4	Spa pool heating and pumping	A spa pool is not proposed.	N/A

3.7.7 Access for Maintenance and Facilities Monitoring (Part J8)

BCA Clause	Title	Assessment and Comment	Status
NSW J8.2	Access for maintenance	Access for maintenance must be provided to services, equipment and other building elements identified in this clause is required to be provided in accordance with this clause. The construction documents are to have details demonstrating compliance.	The proposed building is capable of complying

BCA Clause	Title	Assessment and Comment	Status
J8.3	Facilities for energy monitoring	A building is required to have a facility to record the consumption of gas and electricity. In addition, the building is required to have a facility to record individually the energy consumption of— (i) <i>air-conditioning</i> plant including, where appropriate, heating plant, cooling plant and air handling fans; and (ii) artificial lighting; and (iii) appliance power; and (iv) central hot water supply; and (v) internal transport devices including lifts, escalators and travelators where there is more than one serving the building; and (vi) other ancillary plant. The construction documents are to have details demonstrating compliance.	The proposed building is capable of complying

4.0 SUMMARY OF NON-COMPLIANCE ISSUES

The following is a summary table of non-compliances with the deemed-to-satisfy provisions of the BCA, identification of the Performance Requirements of the BCA and the appropriate justification method.

SUMMARY OF NON-COMPLIANCE ISSUES WITH THE DEEMED-TO-SATISFY PROVISIONS OF BCA

BCA CLAUSE	Performance Requirements	ISSUE
Clauses 3.1, 4.1 & 5.1 of Spec C1.1	CP1 & CP2	Fire Resistance Levels The fire resistance levels of the existing / proposed buildings are proposed to be reduced and or justified.
D1.3	DP5 and EP2.2	Fire Isolated Exits 1. The open stair in 2-12 Kensington Lane connects 4 levels and is not proposed to be fire isolated and will be performance justified via an alternative solution. 2. The existing open stair in 38 Kensington Lane connects 3 levels and is not proposed to be fire isolated as part of the adaptive reuse and will be performance justified to ensure fire and life safety considerations are addressed.
D1.4	DP4 & EP2.2	Exit Travel Distances Travel distances within 2-12 Kensington Lane exceed 20m to an exit or point of choice in the following locations: 1. Level 2 Bar - 23m to an exit or point of choice. 2. Level 3 Roof Terrace - 26.5m to an exit or point of choice.
D1.5	DP4 & EP2.2	Distance Between Alternative Exits The exit stairs within 2-12 Kensington Lane are located less than 9m apart (5.4m) and require justification against the performance requirements of the BCA.
D1.7	DP4 & DP5	Travel via Fire Isolated Exits The final exit door of the fire isolated stair in 2-12 Kensington Lane discharges into a covered area that is less than 3m in height.
D1.10	DP4 & DP6	Discharge from Exits The path of travel to the road within 22-38 Kensington Lane contains parts less than 1m wide, which are also covered by glazed awnings.
NSW D2.13	N/A discretion from Council sought	Goings & Risers Existing stairs within heritage terrace houses are unlikely to comply with the requirements of this provision. Council discretion is sought under Clause 94 of the EP&A Regs 2000.
D2.14	N/A discretion from Council sought	Landings Existing landings within heritage terrace houses are unlikely to comply with the requirements of this provision. Council discretion is sought under Clause 94 of the EP&A Regs 2000.
NSW D2.16	N/A discretion from Council sought	Balustrades or other Barriers Existing Balustrades within heritage terrace houses are unlikely to comply with the requirements of this provision. Council discretion is sought under Clause 94 of the EP&A Regs 2000.
D2.17	N/A discretion from Council sought	Handrails Existing handrails within heritage terrace houses are unlikely to comply with the requirements of this provision. Council discretion is sought under Clause 94 of the EP&A Regs 2000.
E1.3	EP1.3	Fire Hydrants (2-12 Kensington Lane only) The protection of the fire hydrant booster assembly is unlikely to comply with AS2419.1-2005 and is to be subject to performance justification.

J1.4	JP1 (JV3)	Roof Lights (46-48 Kensington Lane only) The total area of the glass roof exceeds 5% of the floor area of the room served (approximately 50% of the floor area). Performance justification via JV3 modelling is proposed.
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The following is a summary table of compliance issues which require further design development by the architect / design team at the construction certificate stage.

SUMMARY OF NON-COMPLIANCE ISSUES WITH THE DEEMED-TO-SATISFY PROVISIONS OF BCA WHICH REQUIRE FURTHER DESIGN DEVELOPMENT

BCA CLAUSE	ISSUE
C2.6	Vertical Separation of Openings in External Walls Spandrel separation is required to be achieved in <u>No. 2-12 Kensington Lane</u> (only). An alternative solution may be required in order to preserve existing building fabric.
C2.7	Separation by Fire Walls The adequacy of existing fire separation between No. 36 Kensington Lane (Type C - Retail) and No. 38 Kensington Lane (Type B - Office) is to be assessed. An FRL of 2 hours is required by the deemed to satisfy provisions of this clause. Compliance with the construction requirements of this clause will also need to be assessed. An alternative solution may be required in order to preserve existing building fabric.
C2.8	Separation of Classifications in the Same Storey The adequacy of existing fire separation between No. 36 Kensington Lane (Type C - Retail) and No. 38 Kensington Lane (Type B - Office) is to be assessed. An FRL of 2 hours is required by the deemed to satisfy provisions of this clause. Compliance with the construction requirements of this clause will also need to be assessed. An alternative solution may be required in order to preserve existing building fabric.
C3.2	Protection of Openings in External Walls Openings in the following buildings are exposed to a fire source feature and would require protection/justification; 1. North, east and west elevations of 2-12 Kensington Lane. 2. Openings within 14-20 Kensington Lane (separate buildings on same allotment exposed to each other). 3. South elevation of 20 Kensington Lane (exposed to property boundary). 4. West elevation of 18-20 Kensington Lane. 5. Openings within 22-38 Kensington Lane (separate buildings on same allotment exposed to each other). 6. North elevation of 30 Kensington Lane (exposed to 28 Kensington Lane). 7. West elevation of 38 Kensington Lane. 8. West elevation of 40 Kensington Lane. 9. Openings within 40-48 Kensington Lane (separate buildings on same allotment exposed to each other). 10. West elevation of 48 Kensington Lane. Note: A concession applies to non-combustible curtain walls, where fully protected by automatic wall wetting sprinklers.
D1.6	Dimensions of Exits & Paths of Travel to Exits A required exit or path of travel to an exit are required to be a minimum unobstructed height of not less than 2m and minimum width of 1m. The existing terrace houses are unlikely to comply in this regard and may require justification against the performance requirements of the BCA via an alternative solution to ensure fire and life safety considerations are appropriately addressed.
D1.7	Travel via Fire Isolated Exits The path of travel after discharging from the final exit door of the fire isolated stair in 2-12 Kensington Lane necessitates travelling within 6m of the wall and door serving the Loading / Recycling Room. The external wall requires a minimum FRL of 60/60/60 (for 3m above) and -/60/30 self closing fire doors are required to the Loading / Recycling Room.

5.0 CONCLUSION

The design as proposed is capable of complying with the Building Code of Australia, and will be subject to construction documentation that will provide appropriate details to demonstrate compliance. This report has identified areas of non-compliance with the deemed-to-satisfy provisions and indicates the design intent to demonstrate compliance with the Performance Requirements of the BCA. Whilst the performance based solutions are to be design developed, it is my view that the solutions will not impact on the current design.

Darren Bugg

For and on behalf of City Plan Services Pty Ltd

APPENDIX 1

Assessed plans prepared by Tonkin Zulaikha Greer Architects

Plan Title	Drawing No	Revision	Date
Cover Page	A-000	-	09.11.2012
Site Analysis & Location Plan	A-001	-	09.11.2012
Site Plan	A-002	-	09.11.2012
1:200 Plans	A-200	-	09.11.2012
1:200 Plans	A-201	-	09.11.2012
Ground Floor Plan 1/2	A-202	-	09.11.2012
Ground Floor Plan 1/2	A-202	-	09.11.2012
Level 1 Floor Plan 1/2	A-204	-	09.11.2012
Level 1 Floor Plan 1/2	A-205	-	09.11.2012
Level 2 Floor Plan 1/2	A-206	-	09.11.2012
Level 2 Floor Plan 2/2	A-207	-	09.11.2012
Level 3 Floor Plan	A-208	-	09.11.2012
Level 4 & Roof Plan	A-209	-	09.11.2012
North Elevation	A-300	-	09.11.2012
West Elevation 1/2	A-301	-	09.11.2012
West Elevation 2/2	A-302	-	09.11.2012
East Elevation 1/2	A-303	-	09.11.2012
East Elevation 2/2	A-304	-	09.11.2012
Section 01 - No.2-10 (1/2)	A-401	-	09.11.2012
Section 01 - No.2-10 (2/2)	A-402	-	09.11.2012
Section 02 No.12	A-403	-	09.11.2012
Section 3 + South Elevation No.14	A-404	-	09.11.2012
Section 4 Lantern	A-405	-	09.11.2012
Section 5 No.42-44	A-406	-	09.11.2012
Section 6 No.48	A-407	-	09.11.2012
Masterplan Analysis - 3D	A-501	-	09.11.2012
Masterplan Analysis - Elevations	A-502	-	09.11.2012
Existing & New Work Analysis	A-503	-	09.11.2012
View Analysis	A-504	-	09.11.2012
View Analysis	A-505	-	09.11.2012
Material Schedule	A-506	-	09.11.2012
GFA Diagrams	A-3000	-	09.11.2012
GFA Diagrams	A-3001	-	09.11.2012
GFA Diagrams	A-3002	-	09.11.2012