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24 October 2022

Philip Rose
6 Parkview Road,
FAIRLIGHT NSW 2094

Dear Philip, By Email

Re: Building Code of Australia Inspection and Reporting Services
Fee Proposal: 152-154 Sydney Road, Fairlight NSW 2094

Further to our walk-through inspection of the premises on Monday, 17 October 2022 with Robert Costello.

Our inspection revealed that the site comprises an existing four (4) storey mixed use residential building containing four (4) residential units and four (4) retail units with associated storey and auxiliary areas. The building is located on the eastern corner of William Street and Sydney Road, Fairlight NSW 2094.

Photograph: Location plan – 152-154 Sydney Road, Fairlight NSW 2094 – Courtesy of Google Maps

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Purpose of Report

This report is a high-level commentary that will identify where the proposal is required to comply with the 'Deemed-to-Satisfy (DtS)' provisions of Parts C, D, E & F of the Building of Australia. Where non-compliances are identified, provide upgrading strategies.

BCA Version

The reference document for this report is the Building Code of Australia 2019 (BCA) Volume 1 Amendment 1 including the NSW variations as applicable, Deemed-to-Satisfy (DtS) provisions.

Plan Version

We are in receipt of a copy of architectural plans prepared by Costello & Graham Architects Project Name SRSF 22104, Drawing No. DA01 – DA04, DA10 – DA14, DA20, DA22, DA25 & DA26 and dated 05.10.2022.

Compliance Issues with the Building Code of Australia (BCA) 2019 Variation 1

In respect to this assessment and for the purposes of the BCA, we describe the existing building as a mixed used residential building, being a Class 2 Building with a portion of Classes 6 (Retail) and 7b (Storage).

The Class 2 building will have the following BCA characteristics –

Item	Category	Description
01.	Classification	Class 2 with portions of Class 6 & Class 7b
02.	Rise in storeys	Rise in storeys of four (4)
03.	Type of Construction	Required to satisfy Type A construction.
04.	Effective height	Effective height of approx. 12m.
05.	Climate Zone	Located in Climate Zone 5

The comments below are a summary of the DtS compliance issues detailed in the attached table, being –

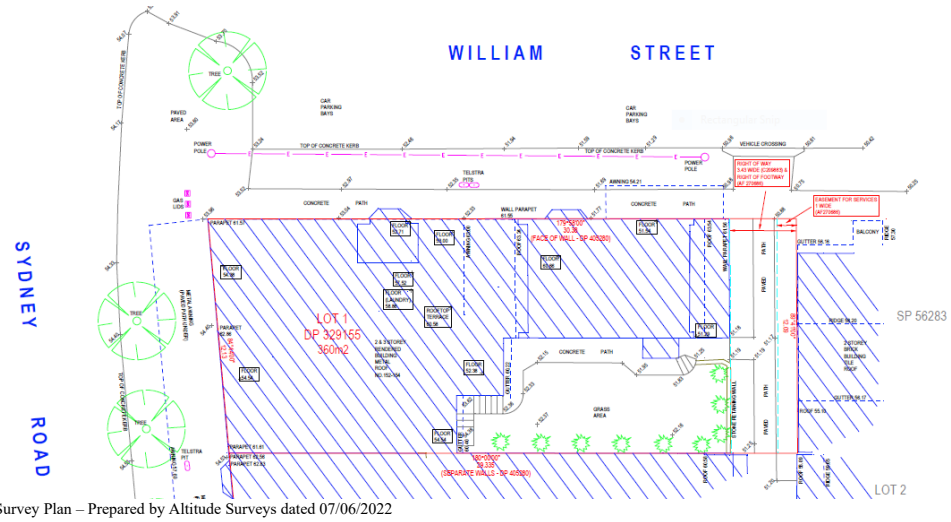
1. Fire Resistance and Compartmentation

Our inspection determined that the building comprises of external masonry walls, internal masonry walls between units and stairways, timber floor system with plasterboard between units for each and a timber framed roof, clad (in part) by metal.

In BCA terms, the type of fire-resistant construction required for a building is determined by the application of the number of storeys a building exhibits and compliance with the area and volume table in clause C2.2.

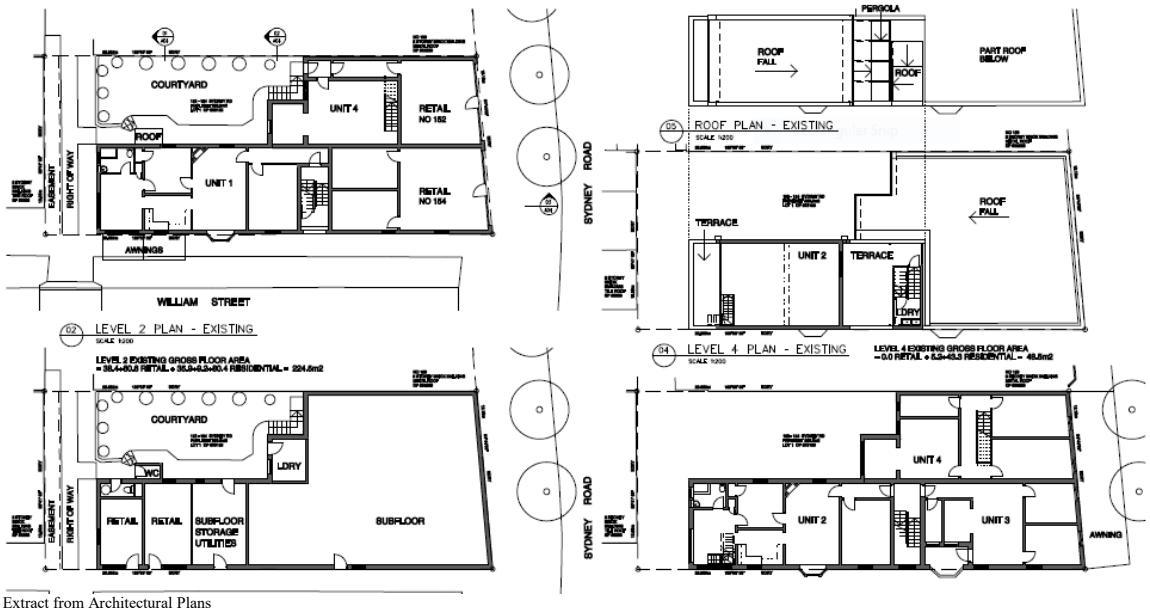
In this instance, it is our assessment that the building is required to comply with the provisions of Type A construction. This is evident when the building is viewed from the William Street Elevation, where the building has a rise in storeys of four (4).

In a building of Type A construction, fire resistant levels are required to be provided for the external walls, internal separation walls between units, common spaces including the sub-floor area created by raised timber floor construction, stairways, floors and ceiling space.



Extract from Survey Plan – Prepared by Altitude Surveys dated 07/06/2022

The building is located on the eastern corner of Sydney Road and William Street. The external masonry walls will satisfy the FRL requirements as it is expected that these walls are made up of 270mm cavity brickwork. It is noted that the external wall to the eastern side boundary stands closer than 3m to the boundary and contains a doorway entry for Unit 4. The window and door openings to William Street and Sydney Road elevations do not require protection as the fire source feature is the far side of the Road. Further, it is noted that the existing vertical spandrel separation provided between the windows in the external William Street façade, is less than the required 900mm.



Extract from Architectural Plans

The internal masonry wall construction allows the building to be separated into four (4) residential units and four (4) retail units.

We have investigated (in part) the building's sub-floor area. We have determined that some of the separation walls have been brought down to the finished ground level. Further, investigation by a licenced builder should be completed to determine if all of the separation walls have been brought down and have not been damaged by any past work.

A suitably qualified written report and plans are to be provided identifying all internal sub-floor separation walls, the extent they have been brought down to the finished ground level and any required works needed for those walls to be into BCA conformity.

In terms of the BCA, the fire separation between units must be in accordance with the following–

1. Separation between residential to retail units –
    a. Internal walls - an FRL of not less than 180/180/180,
    b. Floor and ceiling system – an FRL of not less than 180/180/180.
2. Separation between residential units -
    a. Internal walls - an FRL of not less than 90/90/90,
    b. Floor and ceiling system – an FRL of not less than 90/90/90.
3. Separation between residential units and common areas, spaces and stairways –
    a. Internal walls with an FRL of not less than 90/90/90.

The separation walls between each of the residential units will need to be extended from the ground and sub-floor area and taken through to the underside of the roof covering or a fire rated ceiling. No investigation of the top floor roof space has been completed at this time and will be required to determine the nature and degree of the roof space separation (if any).

The horizontal separating ceiling/floor construction is of timber and plasterboard between any of the units within the building. This form of construction is not able to deliver the required fire resisting separation required by the BCA. No investigation of the floor separation has been completed at this time for the existing fire resistance and sound attenuation levels between units.

In terms of the BCA for entry into the units, we have observed –

1. Commercial/Retail Units

All commercial/retail units are provided with access directly from the street and do not require any further consideration.

2. Residential Units

a. Units No. 1-2-3 are afforded access internally from the building's non-fire isolated concrete stairway.

b. Unit 4 is provided with its our direct access at the rear of the building by a metal stairway.

c. The unit entry doors appear to be an existing 35mm solid core door in timber framed rebates. The doors in some instances are provided with glass inserts. They are not self-closing or latching.

d. Milk and bread box openings in the separation walls will need to be removed and closed with infill brick work.

In reviewing the proposed new works, the following is noted –

1. Level 2 - Unit 4 – proposed new deck, stairway and sliding entry door
2. Level 3 - Unit 2 – proposed internal alterations to kitchen/dinning, bathroom and laundry and new inter-connecting internal stairway to top floor roof area
3. Level 4 – Unit 2 – proposed bedroom, ensuite and upgrade deck and terrace
4. Level 4 – Upgrade common stairway

In terms of compliance with the fire resistance and separation requirements of the BCA, the following works are required –

1. Floor ceiling upgrade for Class 2 - FRL 90/90/90 and Class 6 – FRL 180/180/180.
2. Roof and sub-floor space upgrade for bounding wall construction.

3. Protection of door and window openings along eastern boundary with external drenches – Unit 4.
4. Residential entry doors U1-3 be upgraded to a fire door and frame that is self-closing, tight fighting and achieves a fire resistance of not less than FRL -/60/30.
5. Remove and brick up milk/bread boxes with masonry construction achieving a fire resistance of not less than FRL 90/90/90.

BCA Compliance Outcomes – Fire Resistance

The use of a sprinkler system, a smoke detection system interconnected to an occupant warning system to compensate for items 1-5 above is available for consideration as a performance-based BCA solution that could be incorporated into a Fire Engineering Report allowing to for wall and ceiling separation construction to be retained to FRL 60/60/60, Unit entry doors (U1-3) to be self-closing 35mm tight fitting solid core doors with self-closers, proposed new work to U4 entry.

1. Part D – Access and Egress

(i) Part D1 – Provision for Escape

For egress, the building can be segregated between the commercial and residential uses.

1. Commercial/Retail Units

For each of the four (4) commercial units, egress is provided directly into the street.

2. Residential Units

a. Units 1-3: Egress is provided directly into the non-fire isolated stairway, leading directly to William Street via the stairway's concrete stair flights.

b. Unit 4: Egress is provided directly to the rear yard space behind the building. A pathway allows access to William Street via the right-of-way along the rear northern side boundary.

(ii) Part D2 – Construction of Exits

In terms of compliance with Part D2, our inspection revealed the following issues –

1. <u>Units 1-3</u>

a. the internal stairway serving Units1-3 is non fire isolated as it is connected to or passes through 4 consecutive floors

b. the width of the internal stairway is approximately 830mm, which is less than the required internal free un-obstructed width of 1m.

c. the landing width is 900mm in lieu of 1m

d. No handrail is provided

e. Balustrade height is 700mm, in lieu of 865mm

f. the balustrade is not continuous

g. the grade of the stairway flight past the laundry is not compliant

h. the stair trends have not be provided with non-slip nosing protection

i. the goings and risers are uneven and non-compliant on the final flight discharge to the street

j. a non-fire rated cupboard storeage area is provided under the stairway at the street entry

k. the final egress door swings against the direction of travel

2. <u>Unit 4</u>

a. the non-compliant open metal framed stairs serving Unit 1 are to be removed and upgraded with the proposed new works. No objection is raised to this proposal, provided the new construction will comply with the deemed-to-comply provisions of the BCA. Details to be supplied for review.

BCA Compliance Outcomes – Egress

The use of a sprinkler system, a smoke detection system interconnected to an occupant warning system to compensate for the items identified in Point 1 above is available for consideration as a performance-based BCA solution that could be incorporated into a Fire Engineering Report.

2. Services and Equipment

In terms of services and equipment for the building, we note that the BCA DtS requires the following equipment to be installed in the building, being – hydrants, fire hose reels, portable fire extinguishers, smoke alarms (units) sprinkler system, smoke detection system, occupant warning system, emergency lights and Illuminated exit signs.

We have calculated that the total floor area of the building as being greater than 500m² and so it might be possible to use the existing street hydrant system, but compliance will be dependent upon hydrant hose coverage not exceeding 70m to the most disadvantaged space within the building. Details to be provided.

3. Health and Amenity

The fire rated separating walls and ceilings between all units within the building will need to be provided with sound impact rating for compliance with the DTS provisions of the BCA. Details to be provided.

Summary

In terms of BCA compliance, several issues have been identified as requiring further and additional actions for the building to become compliant with the BCA to allow for the strata sub-division of the building.

For any additional information, please contact the undersigned.

Yours faithfully,
All State Building Surveying Pty Ltd

Sean O'Brien, Managing Director
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Summary of Items for Compliances

The non-compliance's highlighted from the BCA compliance table are summarised below: -

No	DTS Non-Compliance	Method for Compliance
01.	FRL – between unit walls	FSER
02.	FRL of separating construction between units - Ceiling	FESR
03.	FRL of separating construction between units – walls in roof space and sub-floor space	FESR
04.	Protection of openings on eastern side boundary	FSER
05.	Stair Construction	FSER
06.	Egress and discharge	FSER
07.	Cupboard under stairway	FSER

Note - This is subject to review of construction plans once finalised.

PROJECT: Class 2, 5/6 & 7b
ADDRESS: 152 – 154 Sydney Road, Fairlight NSW 2094

BCA CHECKLIST

Part A – General				
CLASSIFICATION	A1.3	Use		Class 2
Whole building mixed use Classes 2, 5.6 & 7b				
Part C – Fire Resistance	**Clause**	**Compliant?**	**Comment**	**Work required**
RISE IN STOREYS	C1.2	Noted	4	
TYPE OF CONSTRUCTION	C1.1	DNC	Type A	FER
FRLs REQUIRED	Spec C1.1	FI		
FLOOR WALL & CEILING COVERINGS	C1.10	FI	whole	Spec C1.10
COMPARTMENTATION	C2.2	DNC	Whole	
VERTICAL SEPARATION	C2.6	DNC		William St Elevation
FIRE WALLS AFFECTED	C2.7	N/A		
ELECTRICAL SUPPLY SYSTEM	C2.13	N/A		
OPENINGS IN EXTERNAL WALLS	C3.2	DNC		
PROTECTION OF OPENINGS	C3.4	FI		FER
OPENINGS IN FIRE WALLS	C3.5	N/A		
BOUNDING CONSTRUCTION	C3.11	DNC		FER
Part D1 PROVIOSION FOR EGRESS				
NO OF EXITS NEEDED	D1.2	Complies		1 provided
FIRE ISOLATED?	D1.3	DNC		FER
TRAVEL DISTANCES	D1.4	Complies		
EXIT SEPARATION	D1.5	N/A		
EXIT DIMENSIONS	D1.6	DNC		FER
FIRE ISOLATED STAIRS	D1.7	N/A		
NON-FIRE ISOLATED STAIRS	D1.9	N/A		
DISCHARGE FROM EXITS	D1.10	DNC		FER
NON-REQUIRED STAIRS	D1.12	Noted		
PERSONS ACCOMMODATED	D1.13	Noted		
DISTANCE MEASUREMENT	D1.15	Noted		
Part D2 CONSTRUCTION OF EXITS				
FIRE ISOLATED STAIRS	D2.2	DNC		FER
NON-FIRE ISOLATED STAIRS	D2.3	N/A		
SEPARATION OF STAIRS	D2.4	N/A		
SMOKE LOBBIES	D2.6	N/A		
INSTALLATIONS IN EXITS	D2.7	N/A		
ENCLOSURE under stairs	D2.8	DNC		FER
WIDTH OF STAIR	D2.9	DNC		FER
RAMP GRADE max 1:8	D2.10	FI		
FIRE ISOLATED PASSAGEWAYS	D2.11	N/A		
TREADS & RISERS	D2.13	DNC		FER
LANDINGS	D2.14	DNC		FER
THRESHOLDS	D2.15	DNC		FER
BALUSTRADES	D2.16	DNC		FER
HANDRAILS	D2.17	DNC		FER
DOORWAYS & DOORS	D2.19	DNC		FER
DOOR SWINGS	D2.20	N/A		
RE-ENTRY FROM EXITS	D2.22	N/A		
SIGNS	D2.23	DNC		

Part D3 - ACCESS FOR DISABLED – excluded from Report				
Part E1 - FIRE FIGHTING EQUIPMENT				
HYDRANTS	E1.3	FI		Upgrade Required
HOSE REELS	E1.4	FI		Upgrade Required
SPRINKLERS	E1.5	FI		Upgrade Required
PORTABLE EXTINGUISHERS	E1.6	FI		Upgrade Required
Part E2 - SMOKE HAZARD MANAGEMENT				
PROVISION FOR SMOKE HAZARDS	E2.2	DNC	Smoke Alarms and Fire detection	
Part E3 - LIFT INSTALLATIONS				
STRETCHER FACILITY	E3.2	N/A		
FIRE USE WARNING	E3.3	N/A		
EMERGENCY LIFTS	E3.4	N/A		
LANDINGS	E3.5	N/A		
DISABILITIES FACILITIES	E3.6	N/A		
Part E4 - EMERGENCY LIGHTING, EXITS SIGNS & WARNING SYSTEMS				
EMERGENCY LIGHTING NEEDS	E4.2	FI		Upgrade Required
DESIGN & OPERATION	E4.4	Noted		
EXIT SIGNS	E4.5	FI		Upgrade Required
DIRECTION SIGNS	E4.6	FI		Upgrade Required
COMMUNICATION SYSTEMS	E4.9	N/A		
Part F2 - HEALTH & AMENITY				
NO. OF FIXTURES	F2.2	Existing		
FACILITIES IN CLASS 3-9	F2.3	Provided		
DISABILITIES FACILITIES	F2.4	N/A		
TOILET CONSTRUCTION	F2.5	N/A		
MICROBIAL CONTROLS	F2.7	Noted		
WASTE MANAGEMENT	F2.8	Noted		
Part F3 - ROOM SIZES				
SIZES OF ROOMS	F3.0	Noted		
HEIGHTS	F3.1	Existing		Compliance assumed
Part F4 - LIGHT & VENTILATION				
PROVISION OF NATURAL LIGHT	F4.1	Existing	FI	
EXTENT OF NATURAL LIGHT	F4.2	N/A		
ARTIFICAL LIGHTING	F4.4	Existing	FI	
VENTILATION	F4.5	Existing	FI	
NATURAL VENTILATION	F4.6	Existing	FI	
WATER CLOSET POSITIONS	F4.8	N/A		
CAR PARKS	F4.11	N/A		
KITCHEN ETC EXHAUSTS	F4.12	N/A		
Part F5 – SOUND TRANSMISSION & INSULATION				
Sound Transmission & Insulation	F5.1	FI	Walls, ceilings and services	

152-154 Sydney Road, Fairlight NSW 2094
Fire Safety Measures Table

1. Proposed Fire Safety Measure

No.	Element	Design Standard	Maintenance Standard
01.	Fire Hydrant	AS 2419.1	AS 2419.1
02.	Fire Hose Reel	AS 2441.1	AS 2441.1
03.	Portable Fire Extinguishers	AS 2444	AS 2444
04.	Sprinkler System	AS 1288.4	AS 1288.4
05.	Smoke Alarms (Units)	BCA Part E2.2a	BCA Part E2.2a
06.	Smoke detection and Alarm	AS 1670.1	AS 1670.1
07.	Occupant Warning System	AS 1670.1	AS 1670.1
08.	Illuminated Exit & Directional Signs	AS2293.1	AS2293.1
09.	Emergency Lights	AS2293.1	AS2293.1
10.	Path of Travel	BCA Part D1	BCA Part D1