

Date: 01/04/2025

Our Ref: BR-2025-00364-A

BUSHFIRE PLANNING & DESIGN**BUSHFIRE REPORT ADDENDUM****239 MCCARRS CREEK ROAD CHURCH POINT 2105**

To: NSW Rural Fire Service

Prepared by: Matthew Noone

BPAD Accreditation Number: BPAD-25584 (Level 3)

RFS REFERENCE: DA20230919004137-Original-1

Dear Sir/Madam,

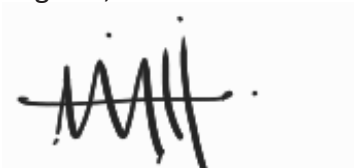
We have prepared this Addendum to request a modification to the approved BAL ratings for the sole occupancy dwelling at 239 Mccarrs Creek Road, Church Point. Our client spoke with two RFS officers (William Bapon and Mackayla(?)) and was advised that a modification may be considered if a formal submission was provided for RFS review.

The following pages outline:

- **Previous Assessment and Background**
- **Current Site Conditions**
- **Method 2 modelling and results**
- **Consent from Adjoining Landowner**
- **Proposed downgrades of Certain Facades from BAL-FZ to BAL-40**

We trust this information will address the points raised. Should you require clarification or additional details, please feel free to contact us.

Regards,



Matthew Noone

Grad.Dip. Design for Bushfire Prone Areas.

BSc (Geology)

0406077222

PREVIOUS ASSESSMENT AND BACKGROUND

Our original bushfire assessment (BR-569722-A) classified the development as BAL-FZ. Since construction began, the adjoining lands to the south have also been developed, removing vegetation and reducing the bushfire threat for that aspect.

The allotment to the north (Lot 32 / #237 Mccarrs Creek Road) is expected to be developed soon. The Development Application (DA) for Lot 32 was lodged and later withdrawn. The applicant intends to re-submit after addressing Council's comments. Meanwhile, the owner of Lot 32 has consented to the creation of an Asset Protection Zone (APZ) on their land for the benefit of our client.

Our objective with this Addendum is to seek a partial or full downgrade of the BAL rating from BAL-FZ to BAL-40, based on:

1	Lesser bushfire threat to the south due to new development.
2	Method 2 modeling of the up-slope to the east, showing reduced radiant heat.
3	Owner consent to create an APZ on the northern lot (Lot 32).
4	Pending Development Application for the northern lot (Lot 32) which will provide partial shielding.

The above items are discussed in more detail on the following pages.

DETAILS OF THE LESSER BUSHFIRE THREAT TO THE SOUTH

Figure A (below) shows how new dwellings to the south have removed vegetation and established **at least 40 m** of managed land. This development significantly lowers bushfire risk from that direction.

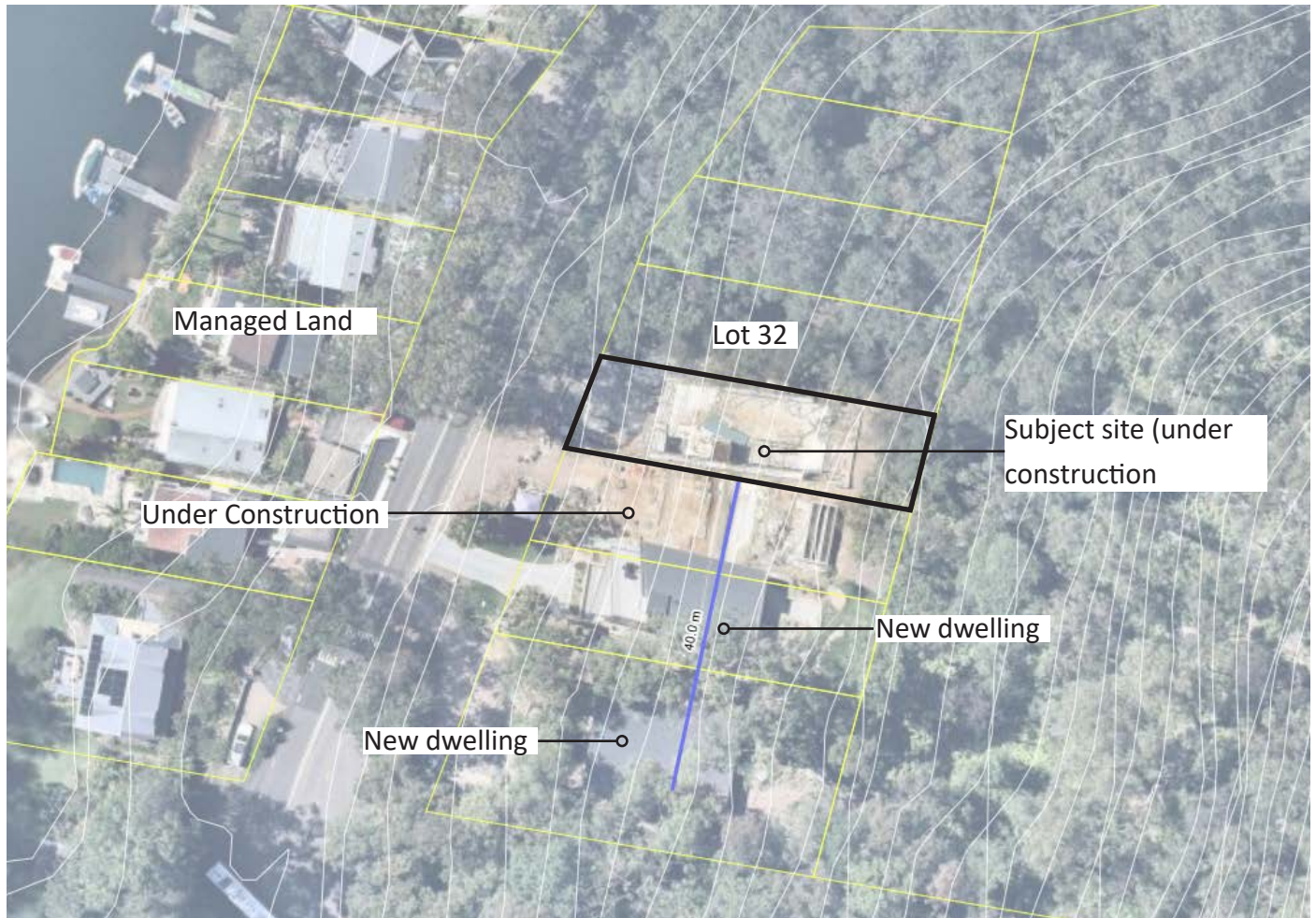


Figure A - minimum 40m Managed land to the south.

METHOD 2 - MODELLING THE UP-SLOPE TO THE EAST

The eastern boundary features vegetation on a steep **up-slope**. The distance to vegetation is **12.2 m** (see **Figure B**, Third Floor Plan). Per RFS requirements, the slope has been capped at 10° for modeling, and the building height on that side is **4.2 m**.

The dwelling is partially cut into the hillside, offering some shielding from potential fire. Although we have not formally quantified the retaining wall's shielding effect, a Method 2 model indicates a radiant heat load of 35.73 kW/m² (BAL-40) on the eastern facade.

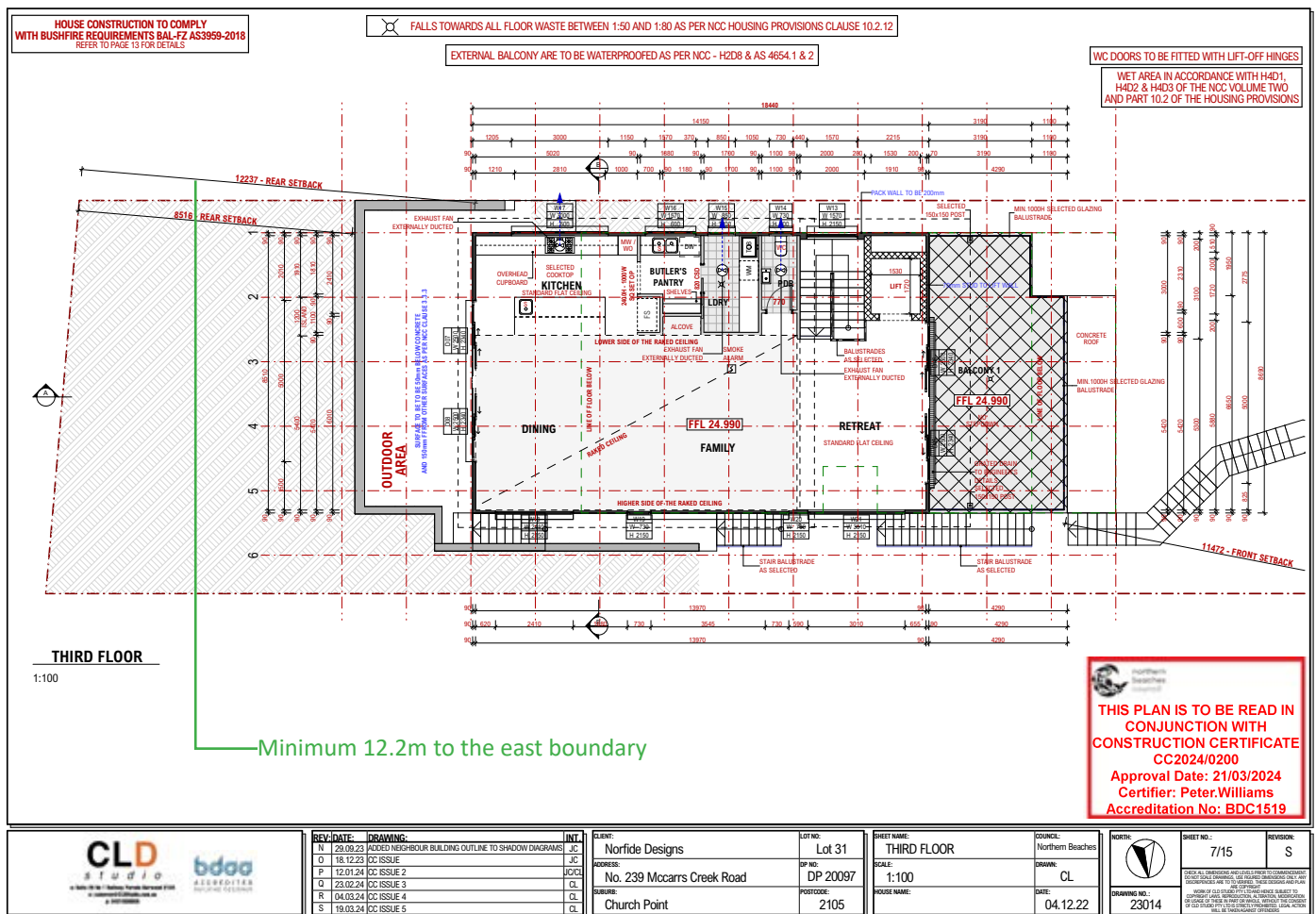


Figure B- Third Floor Plan

The eastern elevation is largely shielded by the retaining walls cut into the hillside. Our Method 2 model does not rely on shielding. Relies only on the calculation of the up-slope. The calculated radiant heat (without shielding) is 35.73 kW/m² (see Figure D).

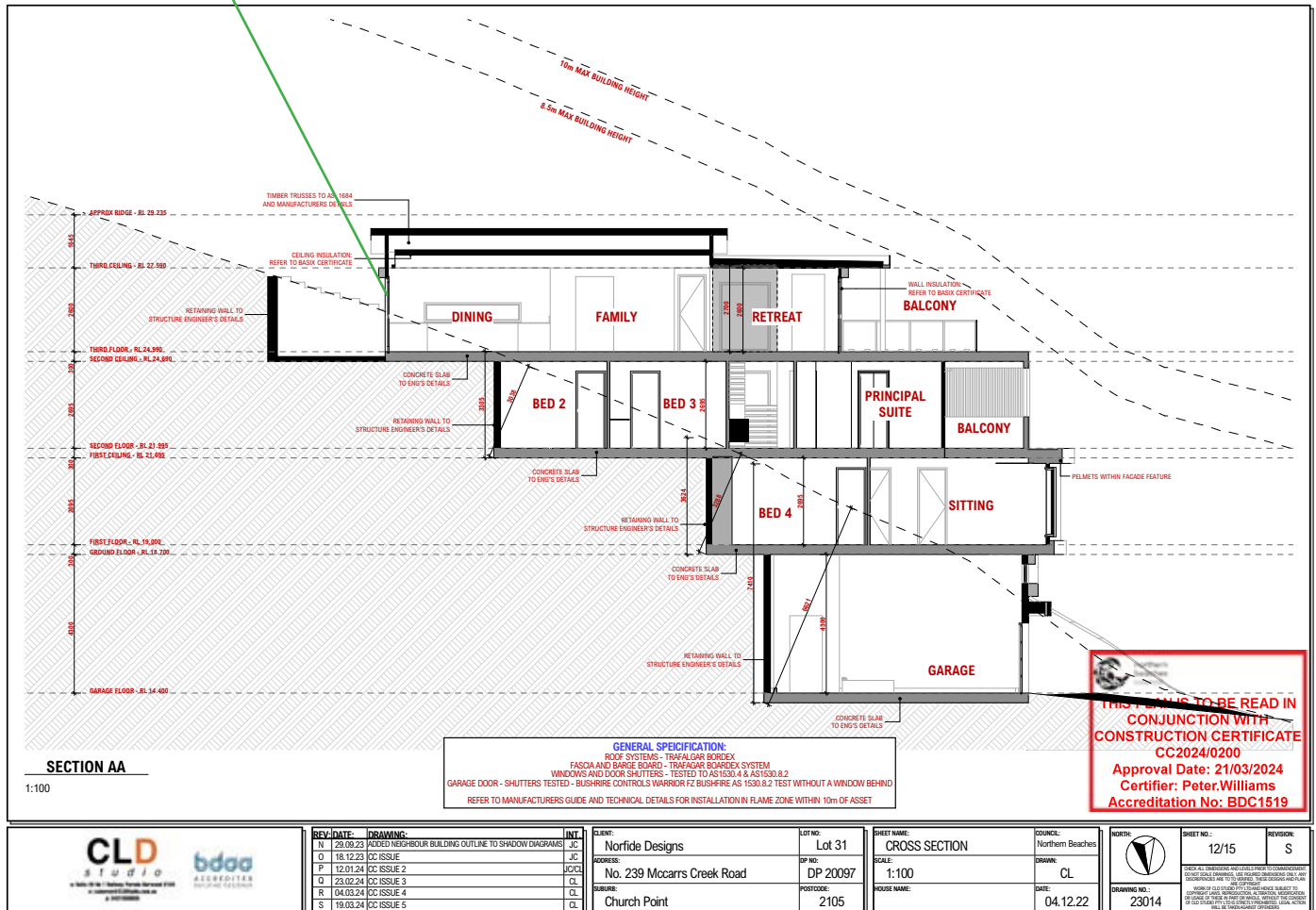


Figure C- Site Section



NBC Bushfire Attack Assessment Report V4.1

AS3959 (2018) Appendix B - Detailed Method 2

Print Date: 21/03/2025

Assessment Date: 21/03/2025

Site Street Address: 239 Mccarrs Creek Road, Church Point

Assessor: Matthew Noone; Bushfire Planning and Design

Local Government Area: Northern Beaches

Alpine Area: No

Equations Used

Transmissivity: Fuss and Hammins, 2002

Flame Length: RFS PBP, 2001/Vesta/Catchpole

Rate of Fire Spread: Noble et al., 1980

Radiant Heat: Drysdale, 1985; Sullivan et al., 2003; Tan et al., 2005

Peak Elevation of Receiver: Tan et al., 2005

Peak Flame Angle: Tan et al., 2005

Run Description: East

Vegetation Information

Vegetation Type: Forest (including Coastal Swamp Forest)

Vegetation Group: Forest and Woodland

Vegetation Slope: 10 Degrees

Vegetation Slope Type: Upslope

Surface Fuel Load(t/ha): 22

Overall Fuel Load(t/ha): 36.1

Vegetation Height(m): 2

Only Applicable to Shrub/Scrub and Vesta

Site Information

Site Slope: 10 Degrees

Site Slope Type: Upslope

Elevation of Receiver(m): 4.2

APZ/Separation(m): 12.2

Fire Inputs

Veg./Flame Width(m): 100

Flame Temp(K): 1090

Calculation Parameters

Flame Emissivity: 95

Relative Humidity(%): 25

Heat of Combustion(kJ/kg) 18600

Ambient Temp(K): 308

Moisture Factor: 5

FDI: 100

Program Outputs

Level of Construction: BAL FZ

Peak Elevation of Receiver(m): 6.96

Radiant Heat(kW/m2): 35.73

Flame Angle (degrees): 39

Flame Length(m): 12.94

Maximum View Factor: 0.537

Rate Of Spread (km/h): 1.32

Inner Protection Area(m): 12

Transmissivity: 0.875

Outer Protection Area(m): 0

Fire Intensity(kW/m): 24698

BAL Thresholds

BAL-40: BAL-29: BAL-19: BAL-12.5: 10 kw/m2: Elevation of Receiver:

Asset Protection Zone(m): 12 15 21 30 47 4.2

Figure D- Method 2 modelling.

ADJOINING LAND OWNER CONSENT TO CREATE AN APZ OVER LOT 32 (NORTH).

In support of this application, the owner of **Lot 32** has agreed to allow an APZ on their allotment. The signed letter (see below) confirms their consent to works that would maintain an APZ in line with Planning for Bush Fire Protection (2019), Section 3.2.5. See below.

26 March 2025

The General Manager

NORTHERN BEACHES COUNCIL

Dear Sir/Madam,

RE: Development at 239 Mccarrs Creek Road Church Point 2105

We the registered proprietor(s) of 32/-/DP20097, hereby consent to the lodgement of the Development Application for the property at 239 Mccarrs Creek Road Church Point 2105, which includes works proposed on our land at 32/-/DP20097. The works on our land are limited to the creation of an Asset Protection Zone for bushfire protection in accordance with Planning for Bushfire Protection (2019) section 3.2.5.

Yours sincerely,

.....

Date:

Print Name:

Registered proprietor

.....

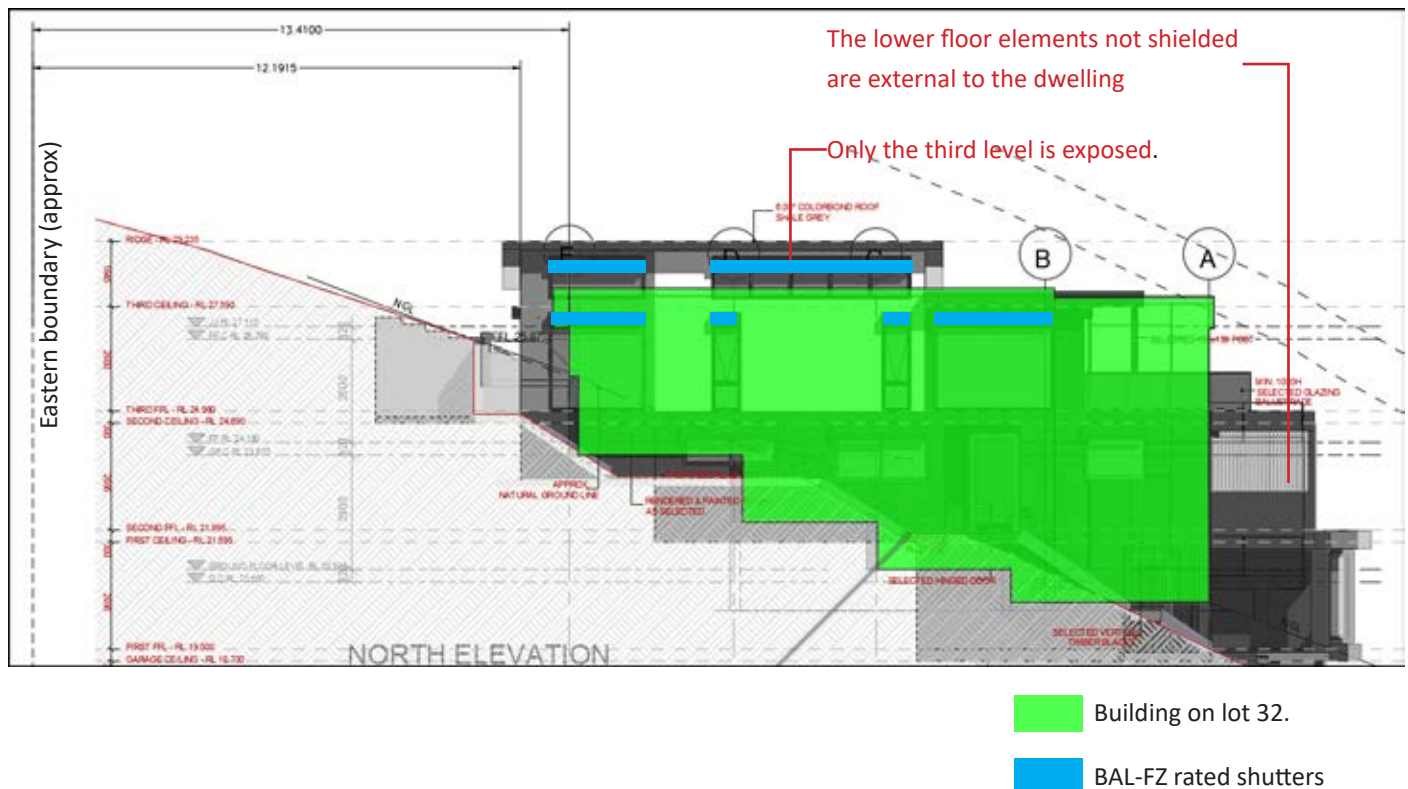
Date:.....

Print Name:

Registered proprietor

SHIELDING FROM ADJOINING BUILDING

The proposed dwelling at 239 Mccarrs Creek Road will also be partially shielded by the future building on Lot 32, once it is constructed. Because that building does not yet exist, we recognize that full shielding is not currently guaranteed; accordingly, we propose maintaining BAL-FZ construction for the roof and the northern facade and BAL-FZ rated shutters for the north elevation. When the building on lot 32 (#237) is constructed and shielding is demonstrated, the applicant will lodge a second 4.55 modification to remove the bushfire shutters from the lower levels (0, 1 & 2). The bushfire shutters will be retained on Level 3 as shown below.



CONSTRUCTION RECOMMENDATIONS

The dwelling is currently under construction, with walls and roof initially designed to BAL-FZ standards. However, based on the reduced threat:

•	South and West Facades: May be constructed to BAL-40 without compromising overall bushfire protection (since vegetation to the south has been cleared and there is less exposure for the southern and western aspects).
•	East Facade: Although partially shielded by the retaining wall, we recommend a non-combustible shutter system. Our modeling shows radiant heat loads do not exceed 40 kW/m² on this side.
•	North Facade and Roof: Retain BAL-FZ construction due to potential interim exposure until the northern allotment is developed. Retain BAL-FZ rated shutters for the Level 3 north elevation (see above markup).

In summary, we recommend the following condition be added to the RFS General Terms of Approval subject to RFS concurrence:

New construction to the north (including, windows, doors and roof) must comply with Section 3 and Section 9 (BAL-FZ) of AS3959-2018 Construction of buildings in bushfire-prone areas, or the relevant BAL-FZ requirements under the NASH Standard – Steel Framed Construction in Bushfire Areas (amended 2015).

New construction to the east, west, and south is to comply with Section 3 and Section 8 (BAL-40) of AS3959-2018. All construction must also align with Section 7.5 of Planning for Bush Fire Protection 2019, and the recommendations outlined in Report BL-2025-00364-A (dated 01/04/2025).

*****It is noted the walls throughout are currently constructed to BAL-FZ**.***

Conclusion

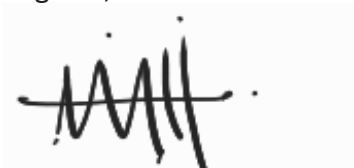
Our Addendum demonstrates that the bushfire threat is now lower than at the time of the original assessment, given:

1	Reduced vegetation to the south from recent developments.
2	Method 2 modeling confirming BAL-40 levels of radiant heat from the east.
3	Proposed APZ on the northern allotment (Lot 32) and eventual shielding by the future dwelling.

We respectfully request that the NSW Rural Fire Service review this submission and consider modifying the approved BAL rating where appropriate.

Should you have any questions or require further information, please get in contact.

Regards,



Matthew Noone
Grad.Dip. Design for Bushfire Prone Areas.
BSc (Geology)
0406077222