

Bushfire Hazard Assessment Report 54 Rangers Retreat Rd, Frenchs Forest. NSW 2086
1st May 2025

Steve Brooks Bushfire Consultant

Bushfire Hazard Assessment Report

Demolition of the existing dwelling and the construction of a new dwelling with attached garage

54 Rangers Retreat Rd, Frenchs Forest. NSW 2086



1st May 2025

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Steve Brooks Bushfire Consultant

Bushfire Risk Assessment Certificate

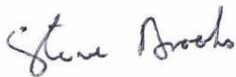
This form is to be completed by a recognised consultant in Bushfire Risk Assessment in accordance with Section 4.14 of the Environmental Planning and Assessment Act 1979

<i>Property Address</i>	54 Rangers Retreat Rd, Frenchs Forest. NSW 2086
<i>Description of the Proposal</i>	Demolition of existing dwelling and construction of a new dwelling
<i>Plan Reference</i>	1 st May 2025 - 1
<i>BAL Rating</i>	BAL-FZ
<i>Does Proposal rely on Alternate Solutions</i>	Yes
<i>Is Referral to NSW RFS Required</i>	Yes

I, Steve Brooks have carried out a Bushfire Risk Assessment on the above-mentioned property and the proposed development. A detailed Bushfire Assessment Report is attached which includes the requirements set out in Appendix 2 of Planning for Bushfire Protection 2019.

I hereby certify that in accordance with Section 4.14 of the Environmental Planning and Assessment Act 1979, I am a person recognised by the NSW Rural Fire Service as a qualified consultant in bushfire risk management. The bushfire risk assessment report for the development conforms to the relevant specifications and requirements of Planning for Bushfire Protection 2019 (NSWRFS).

I acknowledge that the Bushfire Assessment Report prepared for the above-mentioned property will be submitted and relied upon by Council in support of the proposed Development Application as the basis for ensuring that the bushfire requirement aspects of the proposed development have been met in accordance with Planning for Bushfire Protection 2019 (NSWRFS).



BPAD - Certification No. 40765
Graduate Diploma Bushfire Planning and Design (UWS)
Graduate Certificate in Fire Investigation (CSU)



Terms and Conditions

This Bushfire Hazard Assessment Report may only be copied, distributed or forwarded to other parties in its original format with the permission of Steve Brooks. This document cannot be altered in any way unless given permission by myself, Steve Brooks.

Disclaimer

Quote from Standards Australia *"It should be borne in mind that measures contained in this Standard cannot guarantee that a building will survive a bushfire event on every occasion. This is substantially due to the degree of vegetation management, the unpredictable nature of behaviour of fire, and extreme weather conditions"*

This report has been prepared with all honesty and the opinions contained in this report are provided in good faith and all comments and opinions are not misleading.

AS 3959-2018 is designed to improve the performance of buildings in designated Bushfire Prone Areas but there is no guarantee of a structure surviving a bushfire event due to the sometimes erratic and unpredictable behaviour of bushfires.

Steve Brooks is therefore not liable to any person or company for any damage or loss incurred in a bushfire event due to a person or company taking actions in respect to advice or statements contained within this Bushfire Hazard Assessment Report.

"
"

Document Control

Document Name	Project Ref	Date	Author	Status
54 Rangers Retreat Rd	1	17/02/2025	S.Brooks	Complete
	2	01/05/2025	S.Brooks	Complete

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List of Abbreviations

APZ	Asset Protection Zone
AS3959	Australian Standard 3959-2018
BAL	Bushfire Attack Level
BCA	Building Code of Australia
EP&A Act	Environmental Planning and Assessment Act 1979
FDI	Fire Danger Index
FRNSW	Fire & Rescue NSW
IPA	Inner Protection Area
OPA	Outer Protection Area
PBP	Planning for Bushfire Protection – 2019
RF Act	Rural Fires Act – 1997
RFS	NSW Rural Fire Service
SEPP	State Environmental Planning Policy
SFPP	Special Fire Protection Purpose
SWS	Static Water Supply

Executive Summary

I have been requested to undertake a Bushfire Hazard Assessment Report for the subject Lot located at 54 Rangers Retreat Rd, Frenchs Forest. NSW 2086, on behalf of the proponents, for the proposed demolition of the existing dwelling and the construction of a new dwelling with attached garage.

The proposal is Residential Infill Development and has been identified as being Bushfire Prone Land and is therefore subject to consideration under Section 4.14 of the Environmental Planning and Assessment Act 1979 (EP&A Act) and Planning for Bushfire Protection 2019. The subject Lot is located within the Northern Beaches Council LGA.

The subject Lot has been identified to be located within a Category 1 Bushfire Hazard Vegetation Buffer Zone as per the Northern Beaches Council LGA Bushfire Prone Land Map.

The nearest Classified Bushfire Hazard Vegetation is Category 1 Bushfire Hazard Vegetation – Forest Classified Vegetation located 12m to the South of the proposed development. The degree of effective slope under the Forest Classified Vegetation is 5° Downslope. There is a steeper slope located approx. 72m South-West of the proposed development, but I am using the 5° Downslope as the effective slope as it makes no difference to the BAL Rating.

To the West of the proposed development is Forest Classified Vegetation located 36m from the proposed development with an effective slope of 5° Downslope.

To the Northern and Eastern aspects of the subject Lot there is no Category of Bushfire Hazard Vegetation within 100m of the proposed dwelling in these aspects.

The proposed development is found to be in the BAL – FZ range as per Table A1.12.5 of Planning for Bushfire Protection 2019. It will also need to meet the requirements of Table 7.4a of PBP 2019 and will require referral to the NSW Rural Fire Service. Furthermore, the proposed development must also meet the requirements outlined in Section 7.5 – Additional Construction Requirements of PBP 2019.

In NSW BAL-FZ is deemed to be outside the scope of AS3959-2018 as Section 9 BALFZ of AS3959-2018 has not been accepted or adopted by the NSW Rural Fire Service as a set of deem to satisfy provisions. Therefore, the proposed construction of a dwelling must conform to a varied BAL-FZ under AS3959-2018 with additional measures considered appropriate i.e., Alternate Solutions are required.

I believe this development proposal can comply with the requirements of both, AS 3959-2018 Construction of Buildings in Bushfire Prone Areas and Planning for Bushfire Protection 2019.

Aspect	North	South	East	West
Vegetation	Maintained Land	Forest	Maintained Land	Forest
Slope	N/A	5° Downslope	N/A	5° Downslope
Total APZ	>100m	12m	>100m	36m
BAL Rating	BAL-FZ	BAL-FZ	BAL-FZ	BAL-FZ

Table 1 – Final BAL Ratings for the proposed construction of a dwelling with attached garage.

1 Introduction

I have been engaged by the proponents to prepare a Bushfire Hazard Assessment Report for inclusion in a Development Application to Northern Beaches Council for the consent approval for the proposed demolition of the existing dwelling and the construction of a new dwelling with attached garage on the subject Lot located at 54 Rangers Retreat Rd, Frenchs Forest. NSW 2086 as required by Section 4.14 of the Environmental Planning and Assessment Act 1979.

The site has been identified as being Bushfire Prone Land as per the Northern Beaches Council LGA Bushfire Prone Land Map and therefore compliance with Bushfire Legislation is required. The subject Lot is located within a Category 1 Bushfire Hazard Vegetation Buffer Zone.

The development is Residential Infill Development as defined by Planning for Bushfire Protection 2019 and this report has been prepared in accordance with the submission requirements of Section 4.14 of the Environmental Planning and Assessment Act 1979 and Appendix 2 of Planning for Bushfire Protection 2019.

Property Details

Council:	Northern Beaches
Council Reference	N/A
Address:	54 Rangers Retreat Rd, Frenchs Forest. NSW 2086 Lot 1 DP 29829
Site Area:	692 sqm approx.
Zoning	R2 – Low Density Residential

1.1 Purpose of this Report

The purpose of this Bushfire Hazard Assessment Report is to provide the owners, consent authority and the NSW Rural Fire Service with an independent Bushfire Hazard Assessment for the subject Lot. The report makes recommendations and details how the development proposal complies/not complies with the Performance Criteria and Acceptable Solutions of Chapter 7 in Planning for Bushfire Protection 2019.

1.2 Scope of the Report

This Bushfire Hazard Assessment Report and its' recommendations are limited to the subject Lot and the proposed development only and not neighbouring properties or lands. This report considers the current bushfire legislation, planning controls and standards for building in bushfire prone land areas.

This report is based on site plans, a site visit and relevant information from the local council and government agencies.

1.3 Referenced Documents

This Bushfire Hazard Assessment Report has been prepared with consideration given to the relevant legislation and regulations pertaining to developments in bushfire prone land areas including the *Environmental Planning and Assessment Act 1979*, the Building Code of Australia, *Planning for Bushfire Protection 2019* and AS 3959-2018 *Construction of building in bushfire prone areas*.

1.4 Methodology of the Report

The methodology for the Bushfire Hazard Assessment adheres to the method described in Appendix 2 of Planning for Bushfire Protection 2019.

- Determine all vegetation formations within 140m of the proposal.
- Determine the distance of each vegetation formation identified and the building.
- Determine the effective slope for each vegetation group.
- Determine the relevant FDI.
- Match the relevant FDI, appropriate vegetation, distance, and effective slope classes to determine the category of bushfire attack applicable to the site.
- Determine the appropriate level of construction found in Table A1.12.5 of PBP 2019.

1.5 The Proposed Development

The proponents seek consent approval from Northern Beaches Council for the proposed demolition of the existing dwelling and the construction of a new dwelling with attached garage on the subject Lot located at 54 Rangers Retreat Rd, Frenchs Forest. NSW 2086.

The Northern Beaches Council LGA Bushfire Prone Land Map indicates that the proposed development is located within a Category 1 Bushfire Hazard Vegetation Buffer Zone.

The hazardous vegetation that is a potential bushfire threat to the proposed development is Forest Classified Vegetation located 12m to the South and 36m to the West of the proposed dwelling. In the Northern and Eastern aspects of the subject Lot, and proposed dwelling, there is no category of bushfire vegetation within 100m in these aspects.

The subject Lot is zoned R2 – Low Density Residential and the proposed development is understood to comply with the requirements of the Northern Beaches Council LEP and DCP. The proposal constitutes “Residential Infill Development” as defined and as such must meet the Performance Requirements and Acceptable Solutions outlined in Chapter 7 of *Planning for Bushfire Protection* 2019.

Type of Proposal PBP 2019

☒
☐

New Building
Rural Residential

☒
☐

Urban
Alterations and
Additions

☐
☐

Dual Occupancy
Isolated Rural

1.6 Bushfire Prone Land Map

The land has been identified on the Northern Beaches Council LGA Bushfire Prone Land Map which covers the entire site.

A copy of the bushfire prone land status is shown below (Figure 1).



Figure 1 – 54 Rangers Retreat Rd, Frenchs Forest. NSW 2086 Bushfire Prone Land Map (NSW Government 2025). It should be noted that the Bushfire Prone Land Map above indicates that the site is located within a Category 1 Bushfire Hazard Vegetation Buffer Zone.

Hazard

Bushfire Prone Land (Non-EPI)

- Vegetation Category 1
- Vegetation Category 2
- Vegetation Category 3
- Vegetation Buffer

2 Bushfire Hazard Assessment

2.1 Preface

The bushfire hazard assessment was conducted for the proposed development using the methodology described in Appendix 1 of PBP 2019 to determine the bushfire attack level (BAL) likely upon the development.

Properties that are located within a designated Bushfire Prone Area as identified by a Council Area Bushfire Prone Map and Registered with the NSW RFS, must have either a Bushfire Hazard Assessment or a Bushfire Hazard Certificate (in certain Complying Development instances) completed and submitted prior to Council or a Private Certifier being able to approve the development.

The Development Application to Northern Beaches Council is for the proposed demolition of the existing dwelling and the construction of a new dwelling with attached garage on the subject Lot is Residential Infill Development and as such must comply with Section 4.14 of the EP&A Act 1979 and Chapter 7 of PBP 2019.

The property has direct access to Rangers Retreat Rd to the East of the subject Lot and the vegetation that is a potential bushfire hazard to the proposal is Forest Classified Vegetation located 12m to the South and 36m to the West of the proposed development.



Image 1 - Aerial View of the subject Lot (Nearmap 2025)

2.2 Location

The subject Lot is located at 54 Rangers Retreat Rd, Frenchs Forest. NSW 2086 (Lot 1 DP 29829) and is within a residential area of the Northern Beaches Council LGA.

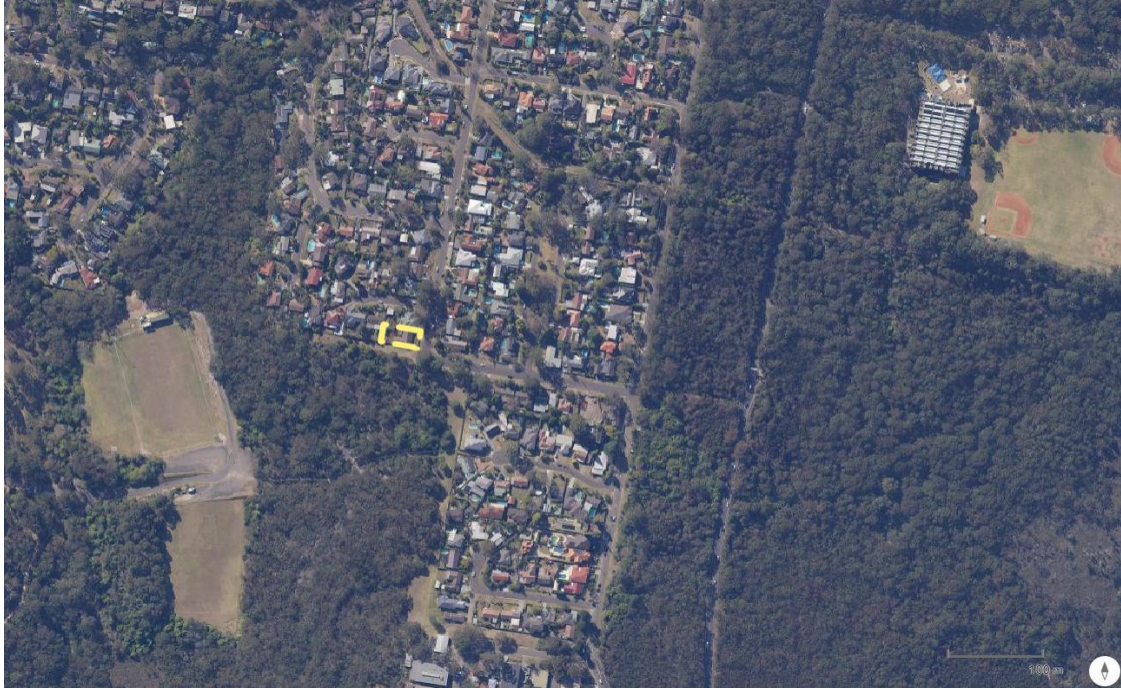


Image 2 - Site Aerial (NSW Government 2025)

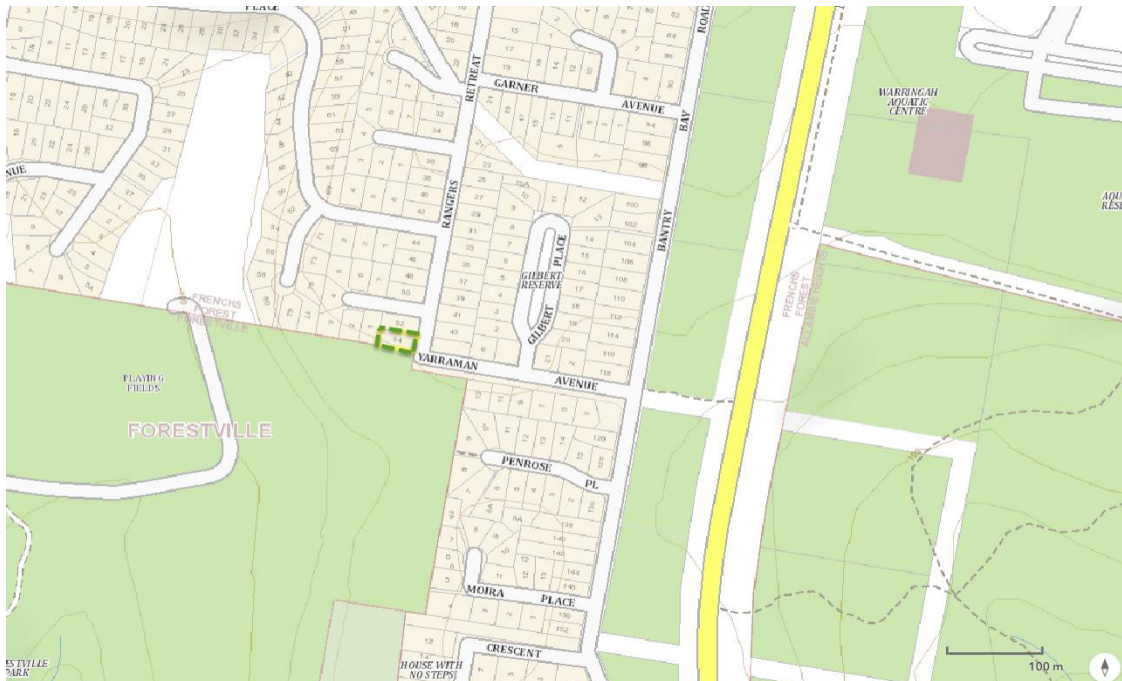


Figure 2 - Street Location of Property (NSW Government 2025)

2.3 Vegetation

The vegetation that is deemed the hazard and poses a potential bushfire threat to the proposed development is Forest Classified Vegetation located 12m to the South and 36m to the West of the proposed development. Northern Beaches Council has deemed the hazardous vegetation as being Category 1 Bushfire Hazard Vegetation.

The Forest Classified Vegetation is located outside the subject Lots' boundary and is situated to the South and West of a maintained grassed APZ between the subject Lot and the hazardous vegetation.

The Forest Classified Vegetation is described as having an open tree canopy dominated by Eucalypt species (typically >10m in height) with crowns that touch or overlap. The canopy allows most sunlight to penetrate supporting growth of a prominent understorey layer varying between hard-leaved shrubs to luxuriant soft leaved shrubs, ferns, and herbs.

Aspect	Vegetation Formation	Distance to Hazard
North	Maintained Land N/A	>100m
South	Forest Classified Vegetation	12m
East	Maintained Land N/A	>100m
West	Forest Classified Vegetation	36m

Table 2 – Distances to Classified Bushfire Hazard Vegetation



Image 3 – Indicates the distance to Category 1 Bushfire Hazard Vegetation – Forest Classified Vegetation (Nearmap 2025)



Photo 1 – Indicates Forest Classified Vegetation to the South of the subject Lot (Steve Brooks 2022)



Photo 2 – Indicates Forest Classified Vegetation and the maintained APZ to the South and West of the subject Lot (Steve Brooks 2022)



Photo 3 – Indicates the understorey of the Forest Classified Vegetation to the South of the subject Lot (Steve Brooks 2022)

2.4 Slope

The effective slope that would most significantly affect bushfire behaviour is assessed for no less than 100 metres from the proposed development. The slope is measured under the identified hazard.

The effective slope under the Forest Classified Bushfire Hazard Vegetation to the South is 5° Downslope and to the West is 5° Downslope. There is a steeper slope located approx. 72m South-West of the proposed development, but I am using the 5° Downslope as the effective slope affecting a bushfire's behaviour within the Forest Classified Vegetation as it makes no difference to the BAL Rating assessed.

Furthermore, there is a slope of approx. 26° Downslope located 95m to the West-South-West of the subject Lot but will have no bearing on the BAL Rating of BAL-FZ and I am not assessing this slope.

The need to assess the effective slopes in the Northern and Eastern facades is not required as there is no hazardous bushfire vegetation located within 100m of the proposed development in these aspects.

North	South	East	West
<input checked="" type="checkbox"/> N/A >100m	<input type="checkbox"/> N/A >100m	<input checked="" type="checkbox"/> N/A >100m	<input type="checkbox"/> N/A >100m
<input type="checkbox"/> Upslope Flat	<input type="checkbox"/> Upslope Flat	<input type="checkbox"/> Upslope Flat	<input type="checkbox"/> Upslope Flat
<input type="checkbox"/> 0-5	<input checked="" type="checkbox"/> 0-5	<input type="checkbox"/> 0-5	<input checked="" type="checkbox"/> 0-5
<input type="checkbox"/> >5-10	<input type="checkbox"/> >5-10	<input type="checkbox"/> >5-10	<input type="checkbox"/> >5-10
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<input type="checkbox"/> > 15-20	<input type="checkbox"/> > 15-20	<input type="checkbox"/> > 15-20	<input type="checkbox"/> > 15-20

Table 3 - Degree of Slope under the Classified Bushfire Hazard Vegetation



Figure 4 - Indicates the degree of slope under the Forest Classified Bushfire Hazard Vegetation (Mecone Mosaic 2025)

2.5 Asset Protection Zones

Asset Protection Zones are a fuel-reduced area surrounding a building or structure. It is located between the building or structure and the bushfire hazard and provides: a Buffer Zone between a bushfire hazard and an asset; an area of reduced bushfire fuel that allows for suppression of fire; an area from which backburning or hazard reduction can be conducted; and an area which allows emergency services access and provides a relatively safe area for firefighters and homeowners to defend their property.

The proposed development of the construction of the replacement dwelling with attached garage on the subject Lot has been found to have an Asset Protection Zone (APZ) of >100m to the North to any category of hazardous bushfire vegetation, 12m to the South to Forest Classified Vegetation, >100m to the East to any category of hazardous bushfire vegetation and 36m to the West to Forest Classified Vegetation.

The APZ is made up of an Inner Protection Area (IPA). The IPA is critical to providing a defensible space and managing heat intensities at the building surface.

The subject Lot will be maintained as an IPA within the boundaries of the subject Lot in all aspects and maintained land in neighbouring Lots in the Northern, Southern, Eastern and Western aspects which meets the intent of Section 3.2 - Asset Protection Zones, Section A.1.10 – Low Threat Vegetation Exclusions and Appendix 4 – APZ Requirements of PBP 2019.

The APZ, outside the subject Lot boundaries, to the South and West of the proposal is grass maintained to a height <100mm in perpetuity which meets the intent of Section A1.10 – Low Threat Vegetation Exclusions and Appendix 4 – APZ Requirements of PBP 2019.

An IPA should provide a tree canopy cover of less than 15% and should be located greater than 2 metres from any part of the roofline of a dwelling. Garden beds of flammable shrubs are not to be located under trees and should be no closer than 10 metres from an exposed window or door. Trees should have lower limbs removed up to a height of 2 metres above the ground.

Direction/Aspect	Effective Slope	Distance to Hazard	Required by PBP Table A1.12.2	Vegetation Classification	Complies
Northern	N/A	>100m	N/A	Maintained Land	Yes
Southern	5° Downslope	12m	29m	Forest	No
Eastern	N/A	>100m	N/A	Maintained Land	Yes
Western	5° Downslope	36m	29m	Forest	Yes

Table 4 -APZ distances as required by Table A1.12.2 of PBP 2019

The proposal cannot meet the requirements of Table A1.12.2 Minimal Distances for APZ of PBP 2019 as the Southern aspect APZ does not meet the distance required by PBP 2019. The proposal has exceptional circumstances via:

-In NSW BAL-FZ is deemed to be outside the scope of AS3959-2018 as Section 9 BAL-FZ of AS3959-2018 has not been accepted or adopted by the NSW Rural Fire Service as a set of deem to satisfy provisions. Therefore, the proposed construction of the new dwelling with attached garage must conform to a varied BAL-FZ under AS3959-2018 with additional measures considered appropriate i.e., Alternate Solutions are required to provide an increased bushfire protection construction standard to the proposed dwelling.

Furthermore, there are exceptional circumstances consisting of the following:

- The proposal is a Residential Infill Development, and the site constraints do not allow APZ requirements to be met.
- The proposal will not be closer to hazardous vegetation than neighbouring properties.
- The proposal allows for the minimum defensible space on all sides of the building envelope.
- The proposed construction of the new dwelling will be constructed with increased bushfire protection, i.e., constructed to BAL-FZ which will afford the occupants a greater level of protection from a bushfire than the existing dwelling.

Bushfire Hazard Assessment Report 54 Rangers Retreat Rd, Frenchs Forest. NSW 2086
1st May 2025



Image 5 – Indicates the proximity to Classified Bushfire Hazard Vegetation (Nearmap 2025)

2.6 Compliance with AS 3959-2018

Based on the known Vegetation Classification, Distance from Vegetation (APZ), Effective Slope and FDI for the subject Lot, the BAL for the proposed construction of a new dwelling with attached garage can be determined in accordance with Table A1.12.5 of PBP 2019. The FDI for Northern Beaches Council is 100.

The following BAL has been determined for the proposed construction of a new dwelling with attached garage on the subject Lot located at 54 Rangers Retreat Rd, Frenchs Forest. NSW 2086.

Aspect	Distance to Vegetation	Vegetation Classification	Slope in degrees	Construction Requirements AS3959-2018
North	>100m	Maintained Land	N/A	BAL-LOW
South	12m	Forest	5° Downslope	BAL-FZ
East	>100m	Maintained Land	N/A	BAL-LOW
West	36m	Forest	5° Downslope	BAL-29

Table 5 - Construction requirements of AS3959-2018.

The proposed development has been found to be in the BAL-FZ range. In NSW BAL-FZ is deemed to be outside the scope of AS3959-2018 as Section 9 BAL-FZ of AS3959-2018 has not been accepted or adopted by the NSW Rural Fire Service as a set of deem to satisfy provisions. Therefore, the proposed construction of the new dwelling must conform to a varied BAL-FZ under AS3959-2018 with additional measures considered appropriate i.e., Alternate Solutions are required.

The final BAL Ratings have been determined as BAL-FZ on all facades. The reason why the Northern, Eastern and Western façades have been rated as BAL-FZ is because the NSW RFS does not accept any performance-based solutions for any development rated as BAL-FZ.

3 Site Constraints

The subject Lot has not been identified by the NSW Government nor Northern Beaches Council to contain any cultural, historical, or environmentally significant features.

4 Compliance with the Performance Criteria of Table 7.4a of PBP 2019

The following indicates that the proposed development complies/not complies with the Performance Criteria outlined in Table 7.4a of PBP 2019 for Residential Infill Development.

Performance Criteria Section 7 PBP 2019	Acceptable Solution	Compliance
Asset Protection Zones APZs are provided commensurate with the construction of the building; and A defensible space is provided.	An APZ is provided in accordance with Table A1.12.2 or A1.12.3 in Appendix 1.	Complies – The APZs in the Northern, Eastern and Western meet the required distances in Table A1.12.2. for FDI-100 areas. However, the Southern aspect does not meet the distances required by PBP 2019. (See page 19 for exceptional circumstances description)
APZs are managed and maintained to prevent the spread of a fire to the building.	APZs are managed in accordance with the requirements of Appendix 4 of PBP.	Complies – The APZ is to be managed/maintained in perpetuity as an IPA in the Northern, Southern, Eastern and Western aspects within the subject Lot. The IPA on the subject Lot will be managed in accordance with Appendix 4 of PBP 2019.
The APZ is provided in perpetuity.	APZs are wholly within the boundaries of the development site and	Complies – the APZs are within the subject Lot boundaries in all aspects and maintained land in the Northern, Southern, Eastern and Western aspects.
The APZ maintenance is practical, soil stability is not compromised and the potential for crown fires is minimized.	The APZs are located on lands with a slope less than 18 degrees.	Complies – The APZ of the proposed development and is made up of maintained land within the subject Lot and neighbouring maintained land in the Northern, Southern, Eastern and Western aspects which is <18 degrees slope.

Performance Criteria Section 7 PBP 2019	Acceptable Solution	Compliance
In relation to access/egress:		
Firefighting vehicles are provided with safe, all-weather access to structures and hazard vegetation.	Property access roads are two-wheel drive, all-weather roads.	Complies - The subject Lot has direct access to Rangers Retreat Rd which is a sealed two-wheel drive all weather road.
The capacity of access roads is adequate for firefighting vehicles.	The capacity of road surfaces and any bridges/ causeways is sufficient to carry fully loaded firefighting vehicles (up to 23 tonnes), bridges and causeways are to clearly indicate load rating.	Complies - The capacity of Rangers Retreat Rd and surrounding roads, are enough to carry fully loaded firefighting vehicles (up to 23 tonnes).
Firefighting vehicles can access the dwelling and exit the property safely.	There are no specific access requirements in an urban area where an unobstructed path (no greater than 70m) is provided between the most distant external part of the proposed dwelling and the nearest part of the public access road (where the road speed limit is not greater than 70kph) that supports the operational use of emergency firefighting vehicles.	Complies – The proposed dwelling can be accessed without placing emergency personnel in an unsafe environment. The proposed dwelling footprint is <70m from the roadway.
In relation to Water Supplies		
An adequate water supply is provided for firefighting purposes.	Reticulated water is to be provided to the development, where available; and a static water supply is provided where no reticulated water is available in accordance with Table 5.3d.	Complies - The site is connected to reticulated mains pressure water supply and there is fire hydrants located along Rangers Retreat Rd with the nearest being located directly opposite the subject Lot outside No.45 Rangers Retreat Rd.

Performance Criteria Section 7 PBP 2019	Acceptable Solution	Compliance
Water supplies are located at regular intervals; and the water supply is accessible and reliable for firefighting operations.	Fire hydrant spacing, design and sizing comply with the relevant clauses of AS 2419.1:2021; hydrants are not located within any road carriageway; and reticulated water supply to urban subdivisions uses a ring main system for areas with perimeter roads.	Complies – There are fire hydrants located along Rangers Retreat Rd with nearest being located directly opposite the subject Lot on the nature strip outside No.45 Rangers Retreat Rd.
Flows and pressure are appropriate.	Fire hydrant flows and pressures comply with the relevant clauses of AS 2419.1:2021.	Complies
The integrity of the water supply is maintained.	All above-ground water service pipes external to the building are metal, including and up to any taps.	Complies - All above-ground service pipes to the proposed new dwelling, including taps, will be metal.
In relation to Electricity Supply: The Location of electricity services limits the possibility of ignition of surrounding bushland or the fabric of buildings.	Where practicable, electrical transmission lines are underground; and where overhead, electrical transmission lines are proposed as follows: lines are installed with short pole spacing (30m), unless crossing gullies, gorges or riparian areas; and no part of a tree is closer to a power line than the distance set out in accordance with the	Complies - The proposed new dwelling will be provided with electricity via an underground supply.

Performance Criteria Section 7 PBP 2019	Acceptable Solution	Compliance
	specifications in ISSC3 Guideline for Managing Vegetation Near Power Lines.	
<p>In relation to Gas Supply:</p> <p>The location and design of gas services will not lead to ignition of surrounding bushland or the fabric of buildings.</p>	<p>Reticulated or bottled gas is installed and maintained in accordance with AS/NZS 1596:2014 and the requirements of relevant authorities, and metal piping is used; all fixed gas cylinders are kept clear of all flammable materials to a distance of 10m and shielded on the hazard side.</p> <p>Connections to and from gas cylinders are metal.</p> <p>Polymer-sheathed flexible gas supply lines are not used; and above-ground gas service pipes are metal, including and up to any outlets.</p>	<p>Complies – The site is not connected to reticulated gas supply. Any future gas connection shall comply with AS/NZS 1596:2014</p>
<p>In relation to Construction Standards:</p> <p>The proposed building can withstand bushfire attack in the form of embers, radiant heat and flame contact.</p>	<p>BAL is determined in accordance with Tables A1.12.5 to A1.12.7; and construction provided in accordance with the NCC and as modified by section 7.5 (please see advice on construction in the flame zone).</p>	<p>Complies - The proposed new dwelling has been found to be in the BAL-FZ range as per Table A1.12.5 of PBP and will be constructed to a varied Section 9 BAL-FZ under AS3959-2018 with additional measures considered appropriate i.e., Alternate Solutions are required.</p>

Performance Criteria Section 7 PBP 2019	Acceptable Solution	Compliance
Proposed fences and gates are designed to minimise the spread of bush fire.	Fences and gates are constructed in accordance with section 7.6.	Complies – Any new fencing is to be made from non-combustible materials.
Proposed Class 10a buildings are designed to minimise the spread of bush fire.	Class 10a buildings are constructed in accordance with section 8.3.2.	Complies – The attached garage will be constructed to BAL-FZ requirements with additional measures considered appropriate i.e., Alternate Solutions are required.
In relation to Landscaping: Landscaping is designed and managed to minimise flame contact and radiant heat to buildings, and the potential for wind-driven embers to cause ignitions	Compliance with the NSW RFS ‘Asset protection zone standards’ (see Appendix 4); a clear area of low-cut lawn or pavement is maintained adjacent to the house; fencing is constructed in accordance with section 7.6; and trees and shrubs are located so that: the branches will not overhang the roof; the tree canopy is not continuous; and any proposed windbreak is located on the elevation from which fires are likely to approach	Complies – The APZ will be managed as an Inner Protection Area in the Northern, Southern, Eastern and Western aspects within the boundaries of the subject Lot and neighbouring maintained land in all aspects. The APZs meet the standards outlined in Appendix 4 of PBP 2019 in relation to APZ Standards The footprint of the proposed dwelling with attached garage is in a clear area with no trees or shrubs around the perimeter

Furthermore, the proposed development must also comply with Section 7.5 Additional Construction Requirements of PBP 2019. To ensure the performance criteria for construction standards given in section 7.4 can be met, PBP 2019 adopts additional measures over and above AS 3959 and NASH Standard.

The flame zone is the area that has significant potential for sustained flame contact during a bushfire. The flame zone is determined by the calculated distance at which the radiant heat of the design fire exceeds 40kW/m².

All flame zone developments should be sited and designed to minimise the risk of bushfire attack. Buildings should be designed and sited in accordance with appropriate siting and design principles to ensure the safest protection from bushfire impacts.

Where there is potential for materials of construction to ignite because of bushfire attack, the proposed building solution generally fails the construction performance criteria for residential infill development.

For development which may be subject to flame contact (BAL-40 and BAL-FZ), systems tested in accordance with AS 1530.8.1 and AS 1530.8.2 respectively will be considered, except that there is to be no flaming of the specimen except for:

- Window frames that have passed the criteria of AS 1530.8.1 and AS 1530.8.2, may be approved provided their flaming is not considered to compromise the safety of other elements of the building; and
- Use of other minor elements which allow flaming may be considered provided they do not compromise the integrity of the fire safety of the building (examples include address numbers, house names, decorative artwork, etc).

Flaming of other more significant elements of the building (such as aesthetic wall cladding) is considered to pose an unacceptable risk and will not be supported.

5 Recommendations

- 1- The proposed construction of a new dwelling with attached garage has been found to be in the BAL-FZ range and are recommended to be constructed to conform with a varied BAL-FZ under AS3959-2018 with additional measures considered appropriate i.e., Alternate Solutions are required.
- 2- The proposed new dwelling and attached garage must also comply with the construction standards outlined in Section 7.5 – Additional Construction Standards of AS3959-2018.
- 3- All above ground water pipes external to the proposed dwelling and attached garage are to be metal including and up to any taps.
- 4- Any future gas connection is installed and maintained in accordance with AS1596, metal piping should be used.
- 5- The Asset Protection Zone is to be maintained as an Inner Protection Area within the boundaries of the subject Lot in all aspects and the vegetation selections for landscaping, vegetation management and property management should be in accordance with Appendix 4 PBP 2019.
- 6- It is recommended that a Bushfire Emergency Management and Evacuation Plan be developed for the proposed new dwelling.

It is recommended that Northern Beaches Council and the NSW Rural Fire Service approve the proposed new dwelling located on the subject Lot at 54 Rangers Retreat Rd, Frenchs Forest. NSW 2086 in respect to Bushfire Requirements.

6 Conclusion

The Development Application to Northern Beaches Council for the proposed construction of a dwelling with attached garage on the subject Lot located at 54 Rangers Retreat Rd, Frenchs Forest. NSW 2086 can meet the planning requirements of *Planning for Bushfire Protection* 2019 and, are capable of meeting Australian Standard AS3959-2018 and the *Building Code of Australia* in relation to construction standards.

The subject Lot has been identified to be located within a Category 1 Bushfire Hazard Vegetation Buffer Zone as per the Northern Beaches Council LGA Bushfire Prone Land Map.

The nearest Classified Bushfire Hazard Vegetation is Category 1 Bushfire Hazard Vegetation – Forest Classified Vegetation located 12m to the South of the proposed development. To the West of the proposed development is Forest Classified Vegetation located 36m from the proposed development with an effective slope of 5° Downslope.

The BAL Rating for the proposed dwelling with attached garage was determined from Table A1.12.2 of PBP 2019 to be in the BAL-FZ range of AS3959-2018. Therefore, the proposed dwelling with attached garage must conform to a varied BAL-FZ under AS3959-2018 with additional measures considered appropriate i.e., Alternate Solutions are required.

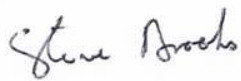
The Asset Protection Zones determined from Table A1.12.2 of PBP 2019 do not meet the required distances in the Southern aspect. However, there are exceptional circumstances relating to this Development Application by way of –

- The proposal is Residential Infill Development, and the site constraints do not allow APZ requirements to be met.
- The proposal will not be closer to hazardous vegetation than neighbouring properties.
- The proposal allows for the minimum defendable space on all sides of the building envelope.
- The proposed dwelling will be constructed with increased bushfire protection, i.e., constructed to BAL-FZ.

The proposal has adequate defendable space in all aspects made up from an Inner Protection Area on the subject Lot and neighbouring maintained land in all aspects which meets the intent of Section 3.2 Asset Protection Zones, Section A1.10 – Low Threat Vegetation Exclusions and Appendix 4 – APZ Requirements of PBP 2019.

In accordance with the bushfire measures contained with this report and the site-specific assessment as per Appendix 2 of PBP 2019. It is my opinion that combined will provide a satisfactory level of bushfire safety to the property and satisfies the requirements of the RFS and Councils obligations for this area.

Prepared by Steve Brooks



BPAD - Certification No. 40765

Graduate Diploma Bushfire Planning and Design (UWS)

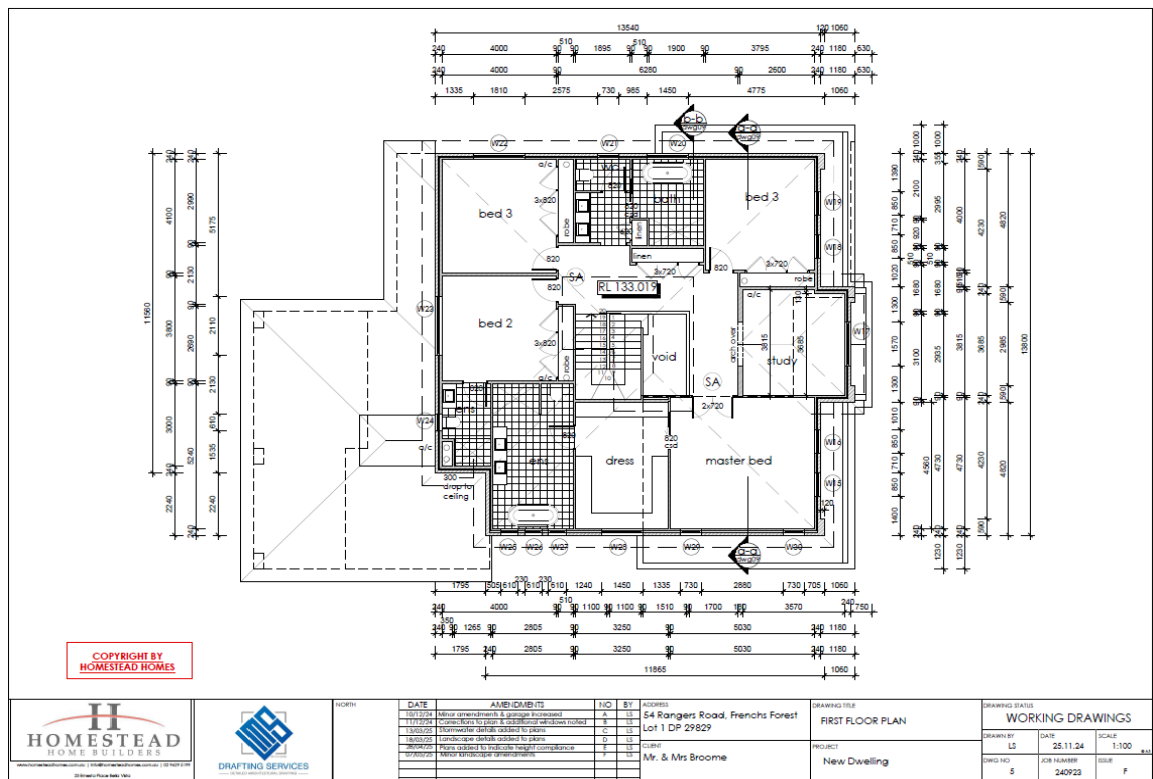
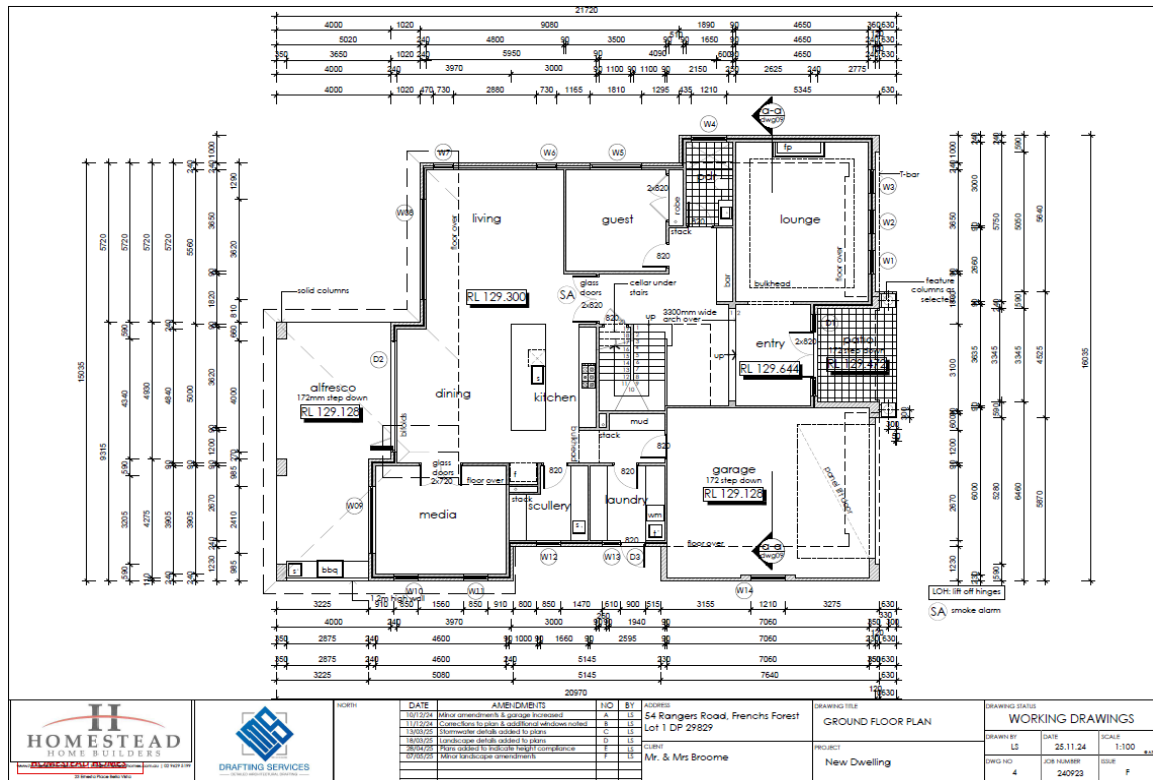
Graduate Certificate in Fire Investigation (CSU)

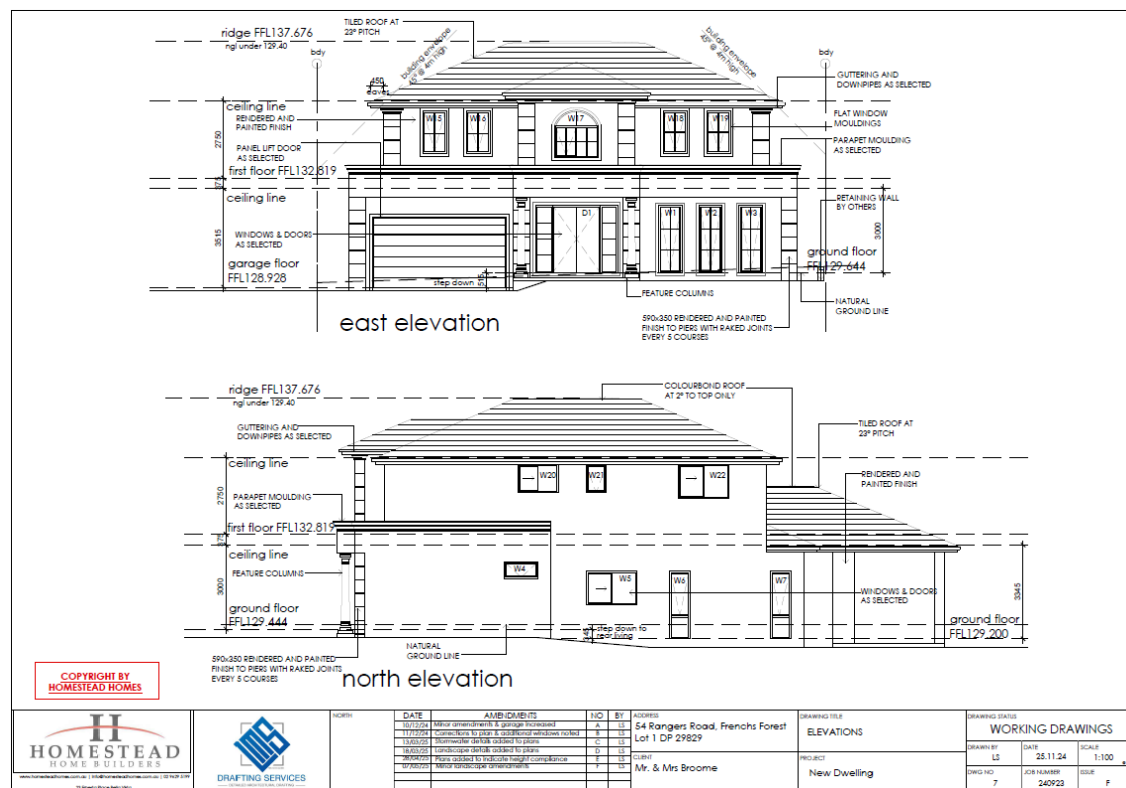


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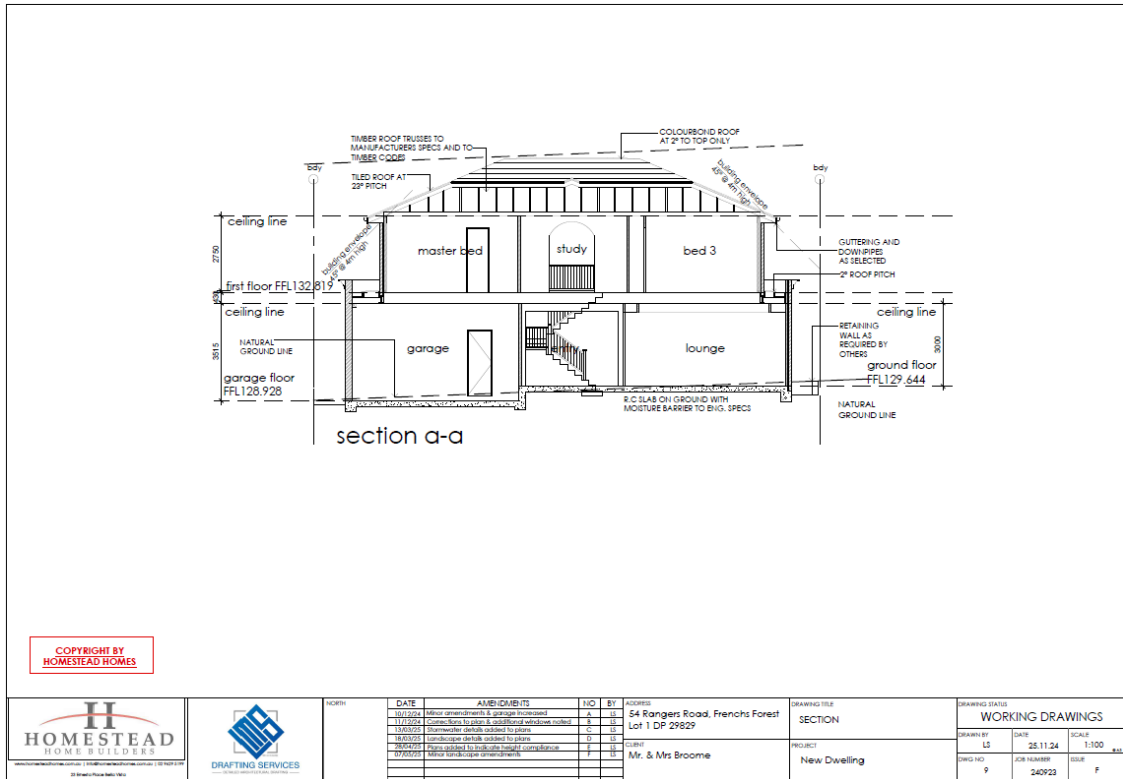
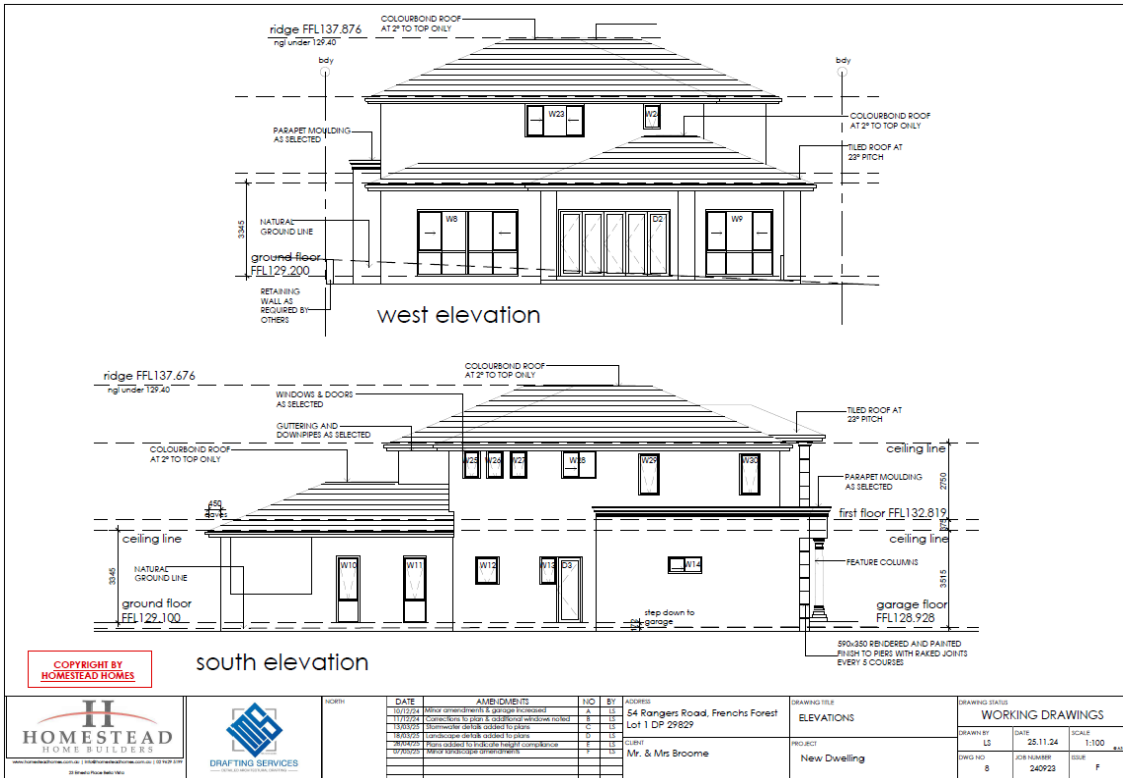
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- NSW Government E-Planning Spatial Viewer 2025
- Mecone Mosaic 2025
- Nearnmap 2025

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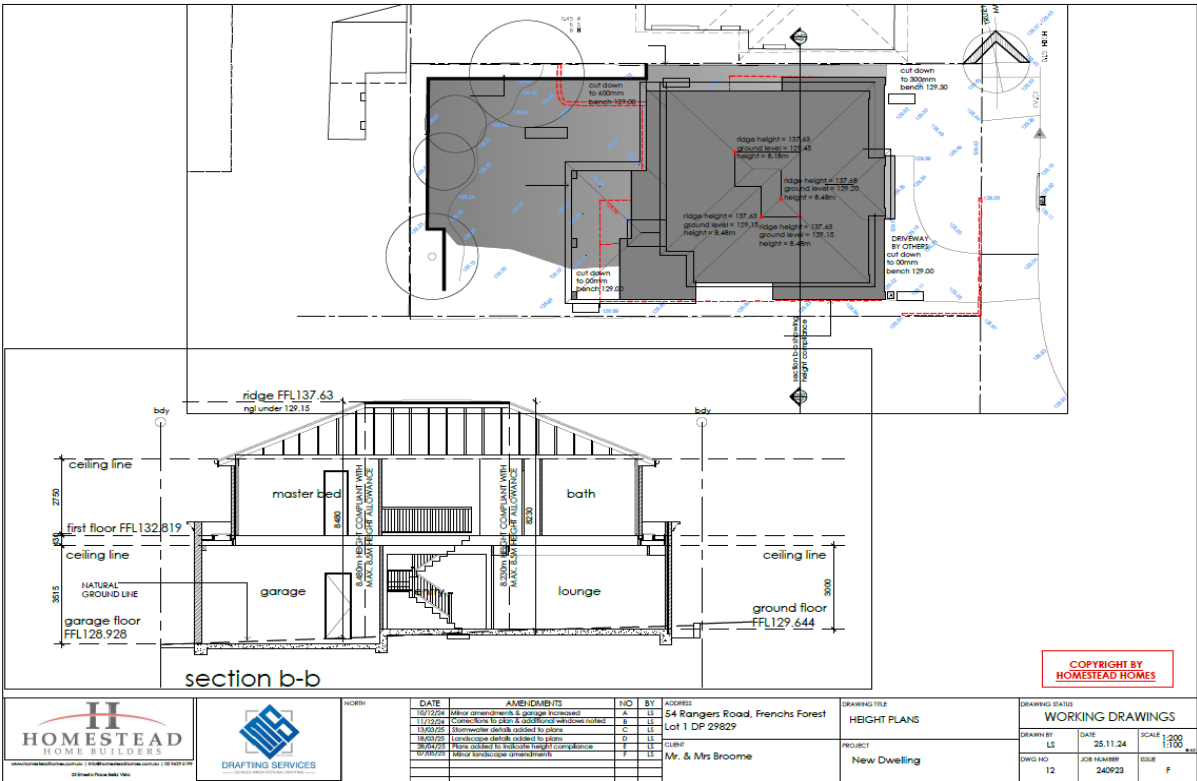




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Appendix 2

Site Photos



Photo 4 – Indicates Rangers Retreat Rd looking North (Steve Brooks 2022)



Photo 5 – Indicates the fire hydrant located opposite the subject Lot (Steve Brooks 2022)



Photo 6 – Indicates the maintained APZ to the South and West of the subject Lot (Steve Brooks 2022)



Photo 7 – Indicates the understory of the Forest Classified Vegetation to the South of the subject Lot (Steve Brooks 2022)