

Coastal Consulting and Construction Pty Ltd



www.bushfireconstructioninspections.com

Darryl Pendlebury BPAD 36861

Email:

darryl@bushfireconstructioninspections.com

Phone: 0499 100 709



BUSHFIRE RISK ASSESSMENT

RSL LifeCare

Mark Donaldson House



Address: 301-305 Galston Road Galston

Date: January 2022

Report Prepared by: Darryl Pendlebury

BPAD Accreditation #36861

301-305 Galston Road Galston 2159

TABLE OF CONTENTS

TABLE OF CONTENTS.....	2
1.0 INTRODUCTION	3
2.0 PURPOSE OF THIS REPORT	4
3.0 SCOPE OF THIS REPORT	4
4.0 REGULATORY CONTROLS.....	4
5.0 THE PROPOSAL	5
6.0 SITE AND ADJACENT DEVELOPMENTS.....	10
6.1 Description of the Site	10
6.2 Description of surrounding lands.....	13
7.0 ENVIRONMENTAL CONSIDERATIONS	14
8.0 SITE ASSESSMENT METHODOLOGY	14
Step 1: Determine vegetation formation.....	14
Step 3: Determine the FDI for the local Council area.....	19
Step 4: Distance to vegetation	19
9.0 CATEGORY OF BUSHFIRE ATTACK:.....	20
10.0 ACCESS AND SERVICES.....	21
11.0 ASSET PROTECTION ZONES	21
12.0 SITING AND DESIGN OF THE PROPOSED DEVELOPMENT	23
13.0 CONSTRUCTION LEVEL	23
14.0 LANDSCAPING	23
15.0 BUSHFIRE HAZARD REDUCTION RECOMMENDATIONS	24
16.0 CONCLUSION/RECOMMENDATIONS	26

1.0 INTRODUCTION

Coastal Consulting and Construction Pty Ltd has been engaged to provide a bushfire hazard assessment for the proposed new lift installation to be constructed at the residential aged-care facility located at 301-305 Galston Road Galston.

The proposed works are classified as a Class 9c building under Part A6 BCA Volume 1 of the NCC BCA.

This report is provided to assist Hornsby Shire Council to determine an application for the above-mentioned works and to ensure the development meets the aims and objectives of Planning for Bushfire Protection, those objectives are as follows:

- Afford buildings and their occupants protection from exposure to a bush fire
- Provide for a defensible space to be located around buildings
- Provide appropriate separation between a hazard and buildings which, in combination with other measures, prevent the likely fire spread to buildings
- Ensure that appropriate operational access and egress for emergency service personnel and occupants is available
- Provide for ongoing management and maintenance of BPMs
- Ensure that utility services are adequate to meet the needs of firefighters.

The building into which the lift is being installed is considered to be a “Special Fire Protection Purpose” (**SFPP**) as defined by Section 100B of the Rural Fires Act 1997.

An SFPP includes:

- (a) a school,
- (b) a child care centre,
- (c) a hospital (including a hospital for the mentally ill or mentally disordered),
- (d) a hotel, motel or other tourist accommodation,
- (e) a building wholly or principally used as a home or other establishment for mentally incapacitated persons,
- (f) seniors housing within the meaning of State Environmental Planning Policy (Housing for Seniors or People with a Disability) 2004,
- (g) a group home within the meaning of State Environmental Planning Policy No 9—Group Homes,
- (h) a retirement village,
- (i) any other purpose prescribed by the regulations.

The Rural Fires Act requires a “Bushfire Safety Authority” be issued by the NSW Rural Fire Service and is therefore considered to be “Integrated Development”, requiring referral to the RFS.

The nature of SFPP developments mean that the residents are less able-bodied than other types of occupants and therefore usually require special consideration in relation to assisted evacuation etc.

2.0 PURPOSE OF THIS REPORT

- To ascertain the threat-level the subject building is likely to be exposed to during a bushfire event.
- To assess the proposed works as submitted for consideration under a Development Application with Hornsby Shire Council against the requirements of *Planning for Bushfire Protection 2019* and *Australian Standard 3959-2018* if applicable.
- To advise the applicant of construction standards for the proposed works.
- To advise the applicant if the proposal meets the aims and objectives of *Planning for Bushfire Protection 2019* and complies with *AS3959-2018* if not relying on a performance-based approach.
- Identify nearest bushfire prone land, vegetation on both the subject and adjoining lands and identify expected bushfire behaviour impacting on the subject works
- Provide advice to the applicant on potential measures that may improve but not guarantee the buildings chances of survival during a bushfire event.

3.0 SCOPE OF THIS REPORT

This report is limited to the construction requirements and bush fire risk associated with the proposed new lift installation and relocation of an existing doorway. This report does not address the requirements for any surrounding land or existing buildings; however, consideration is given regarding the impact the surrounding land has on the subject works. The report will, however, identify the Bushfire Attack Level the proposed works will be exposed to.

This report does not consider any NCC BCA matter in relation to access and egress from the building.

The relocation of the door does not involve the alteration or removal of an exit that is considered to be a “required exit” under the BCA. The doorway serves only as an exit to an outdoor activity area for the residents.

4.0 REGULATORY CONTROLS

An assessment has been made against the requirements of the *Environmental Planning and Assessment Act 1979 (Part 4, Division 4.3, Section 4.14)*, *Planning for Bushfire Protection 2019* and *AS3959-2018 if applicable* and the *Rural Fires Act 1997*.

5.0 THE PROPOSAL

The proposal is for the construction of a new lift-shaft located on the south-east corner of Mark Donaldson House and associated relocation of an existing doorway. The new lift is intended to provide double redundancy for the single lift currently used in the building. The lift does not have any external access and is intended to provide internal-only access between the basement level and other floors.

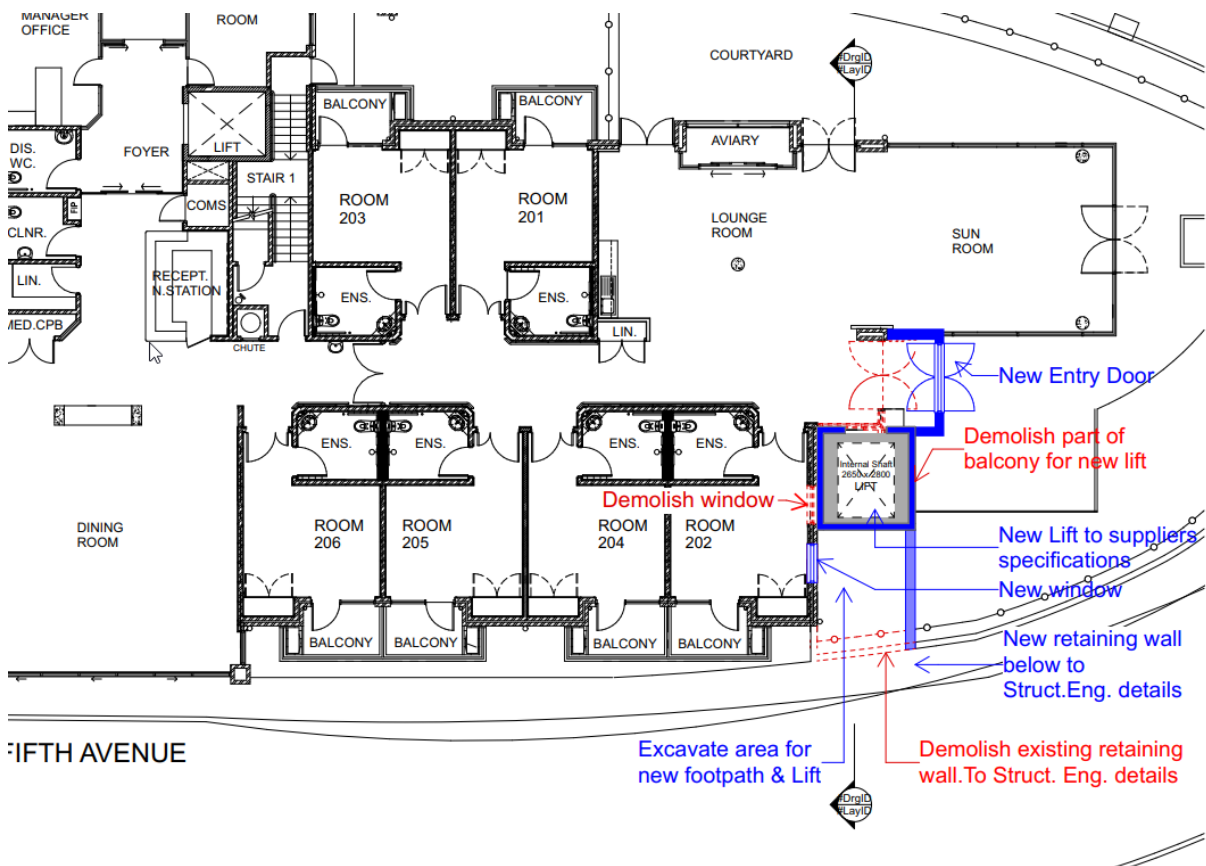


Figure 1: Plan (in part)

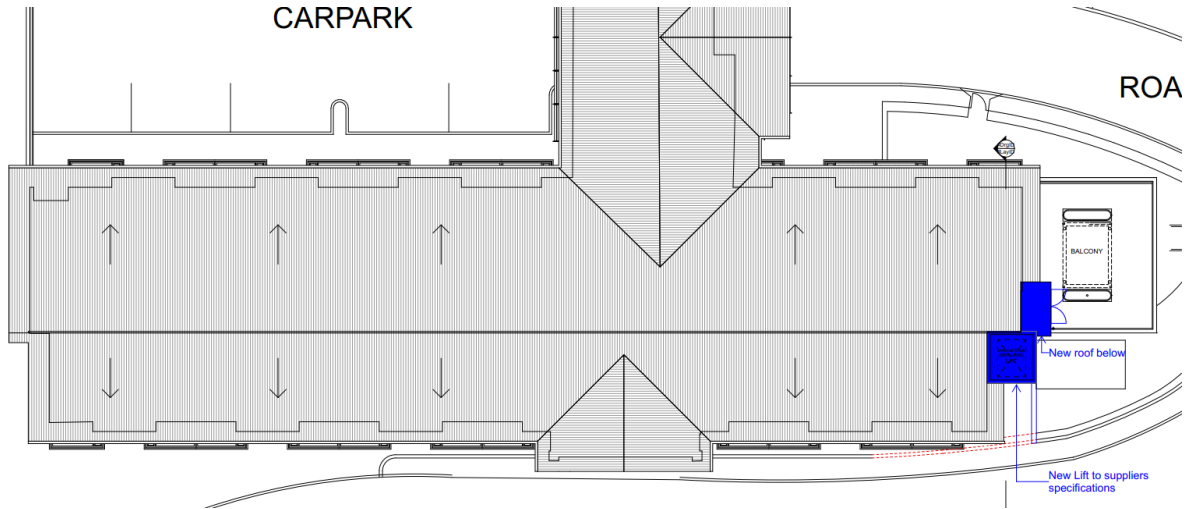


Figure 2: Lift location in relation to building.

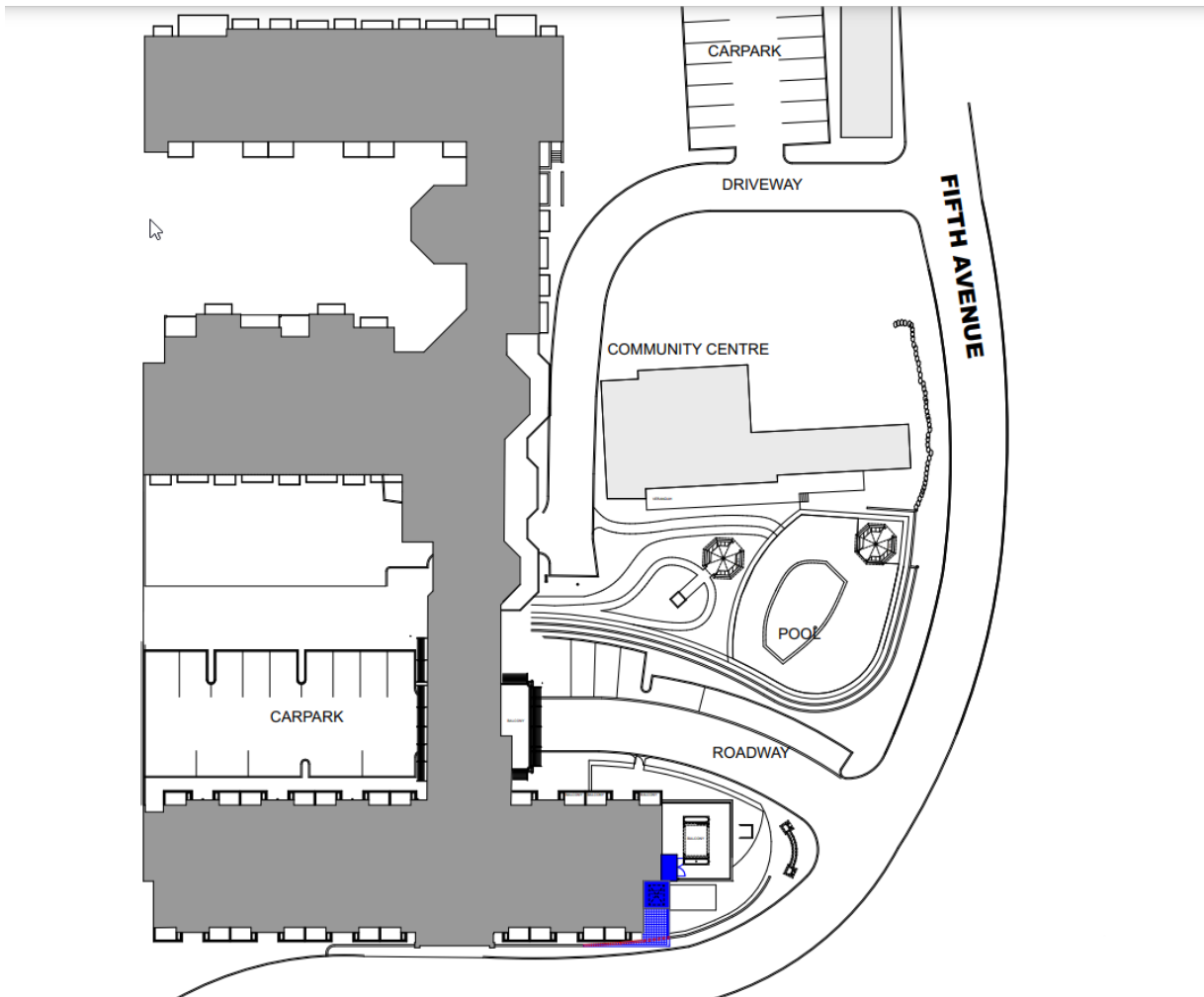


Figure 3: Location of works in relation to whole building.



Photo 1: Proposed location of lift.



Photo 2: Door to be relocated



Photo 3: Area of proposed lift (left) door to be relocated (right)



Photo 4: Doorway to be relocated leads to covered activities area.

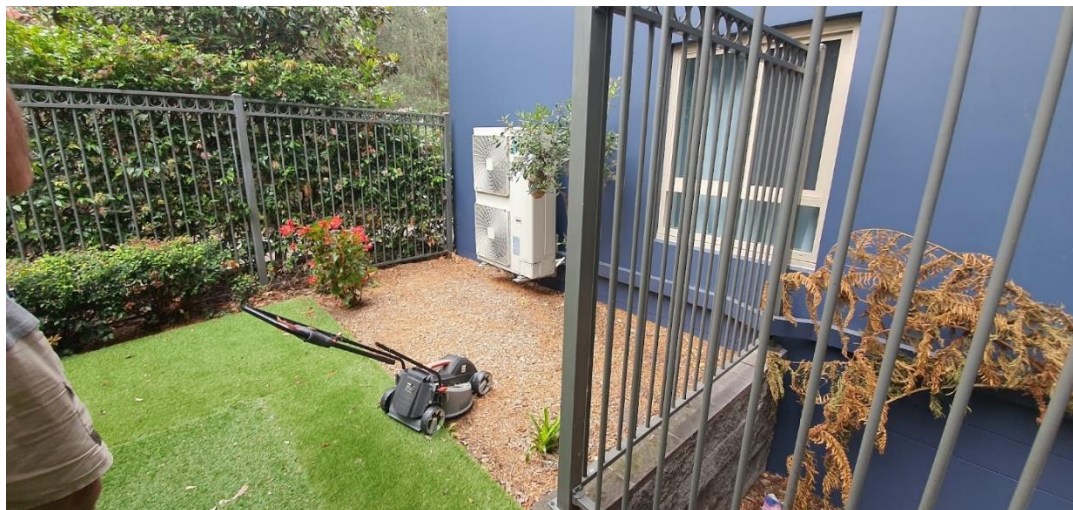


Photo 5: Proposed lift area.



Photo 6: Lift to extend to top of existing building.



Photo 7: Window to be relocated



Photo 8: Door to be relocated from inside - note not a required exit.

6.0 SITE AND ADJACENT DEVELOPMENTS

6.1 DESCRIPTION OF THE SITE

The site consists of an approximately 7.7 hectare lot located on the southern side of Galston Road.

The lot is legally known as Lot 2/-/DP713848. The site is zoned Ru4 under Hornsby Shire Council's LEP.

The site is mapped as being bushfire prone land consisting of category 1, and buffer zone.

The site is multi-use with a combination of an aged-care facility, detached single dwellings for over 55s accommodation and retirement village style units and villas.

The site is a combination of built-upon, managed land and unmanaged natural forest vegetation

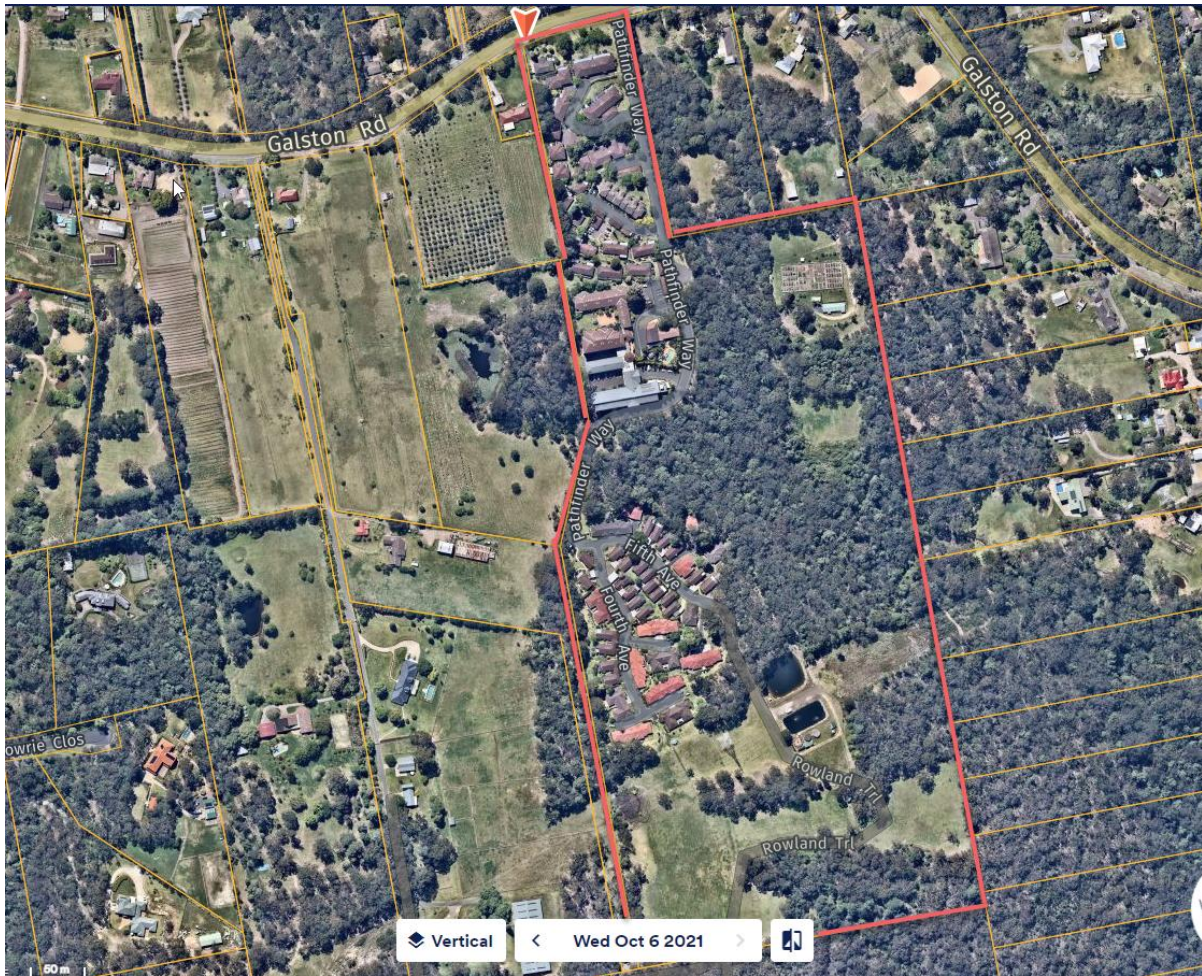


Figure 4: Subject site



Photo 9: Building link to retirement units shown in following picture.

301-305 Galston Road Galston 2159



Photo 10: Retirement units on site.



Photo 11: Community Hall on site.

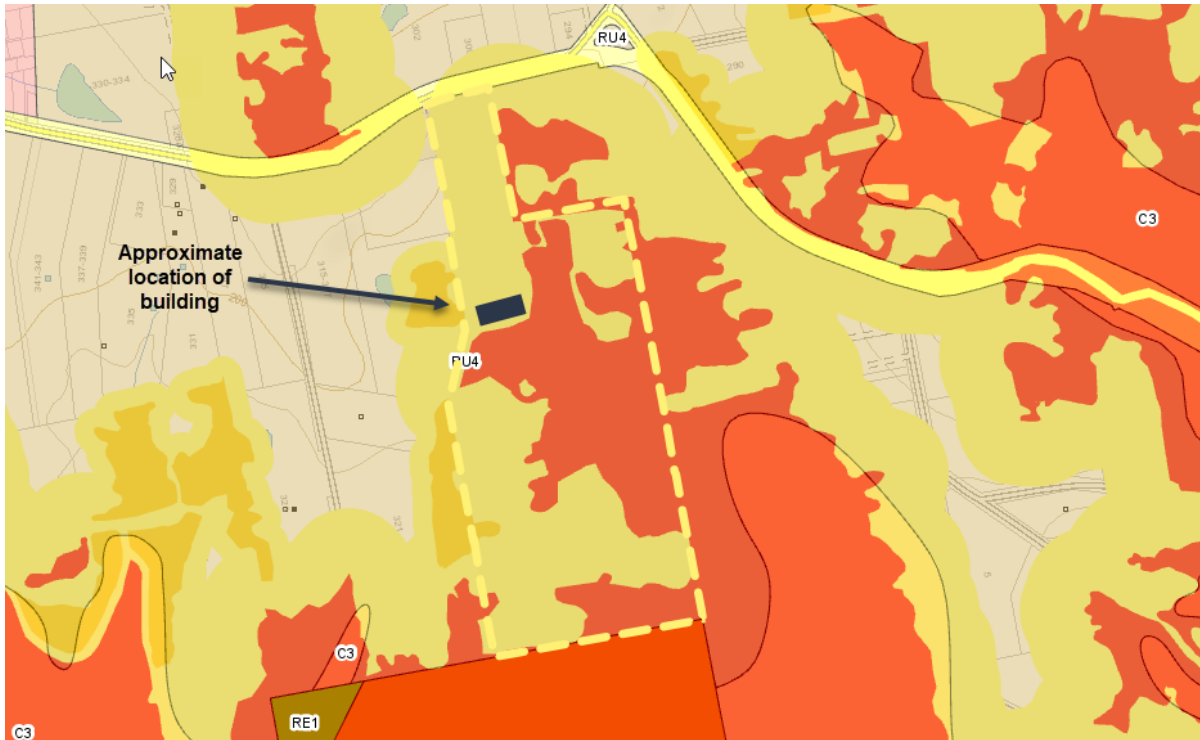


Figure 5: Bushfire Prone Land Map

6.2 DESCRIPTION OF SURROUNDING LANDS

Galston is a mixture of rural-lifestyle lots and residential land use. Figure 6 below shows the location of the proposed works circled in red.

The area most affecting the subject works is an area of unmanaged land located on the subject lot. Although some clearing of the understorey has been undertaken the unmanaged area is considered to be a risk to the development. No adjoining properties affect the subject work other than the fact the unmanaged forest area is directly linked to Galston Gorge.



Figure 6: Surrounding land use

301-305 Galston Road Galston 2159

7.0 ENVIRONMENTAL CONSIDERATIONS

The proposed works do not pose a threat to any native habitat.

8.0 SITE ASSESSMENT METHODOLOGY

Appendix 1 of Planning for Bushfire Protection 2019 provides a methodology for undertaking a Site Bushfire Attack Assessment in relation to appropriate classification of relevant vegetation, determining the effective slope, fire danger index, provision of asset protection zones and construction levels. The site was assessed according to the following procedure:

STEP 1: DETERMINE VEGETATION FORMATION

The vegetation was assessed out to a distance of 140m in all directions. The vegetation deemed to have the most significant impact on the development was determined to be Forest in accordance with A1.2 of Planning for Bushfire Protection 2019.

The area shown below to the south, had a reduced understory to the creek which was located approximately 35m from the commencement of the vegetation.

The vegetation did not qualify for use as an Outer Protection Area pursuant to A4.1.2 given the canopy cover was not separated by a gap of 2-5m and had a canopy cover exceeding 30%.



Figure 7: Vegetation Map

Figure A4.1

Typical Inner and Outer Protection Areas.

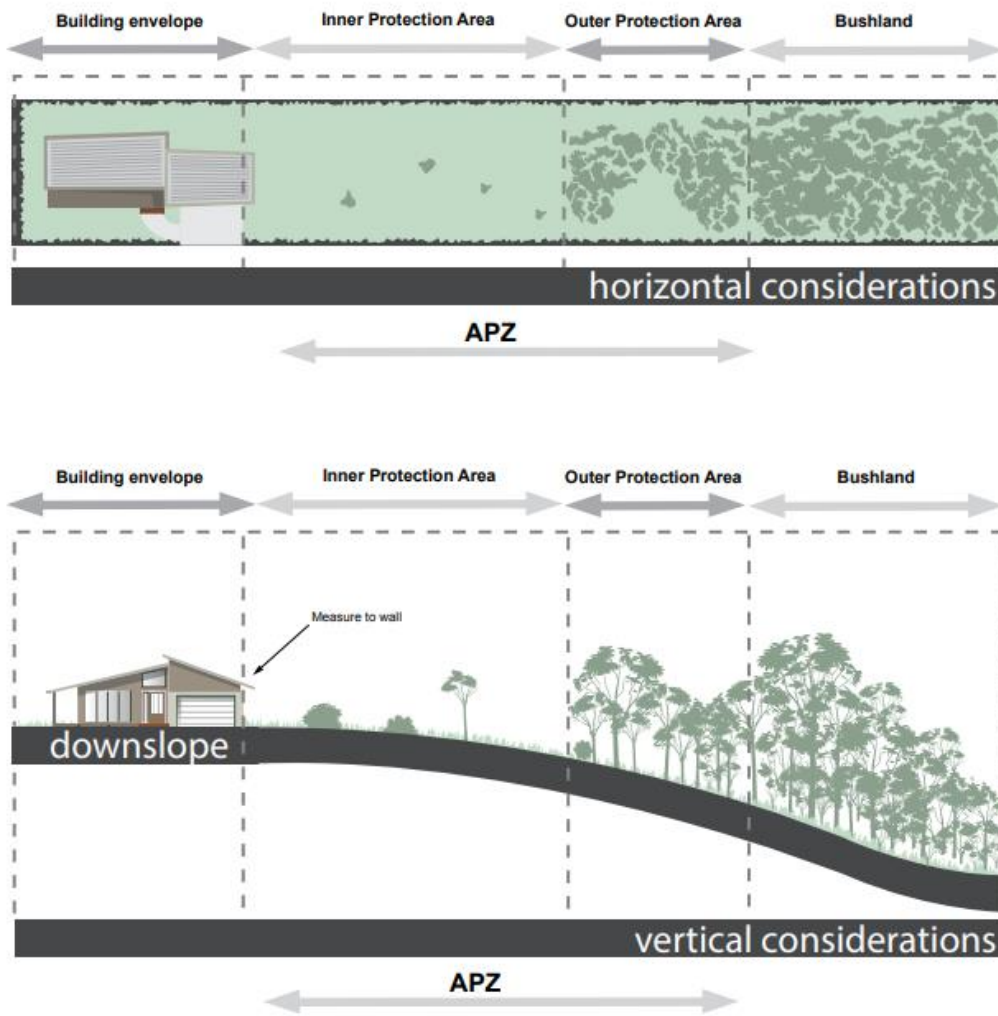


Figure 8: APZ definitions (IPA and OPA)



Photo 12: Reduced understorey in area located to the south-east of the proposed works.



Photo 13: Image of upslope approx. 35m from works with creek shown in foreground.



Photo 14: Image of upslope approx. 35m from works with creek shown in foreground.



Photo 15: Vegetation shown to right of picture (building is located above retaining wall on left).



Photo 16: Vegetation shown to left of picture.



Photo 17: Building on left in relation to hazard on right.



Photo 18: Reduced understorey below hazard.

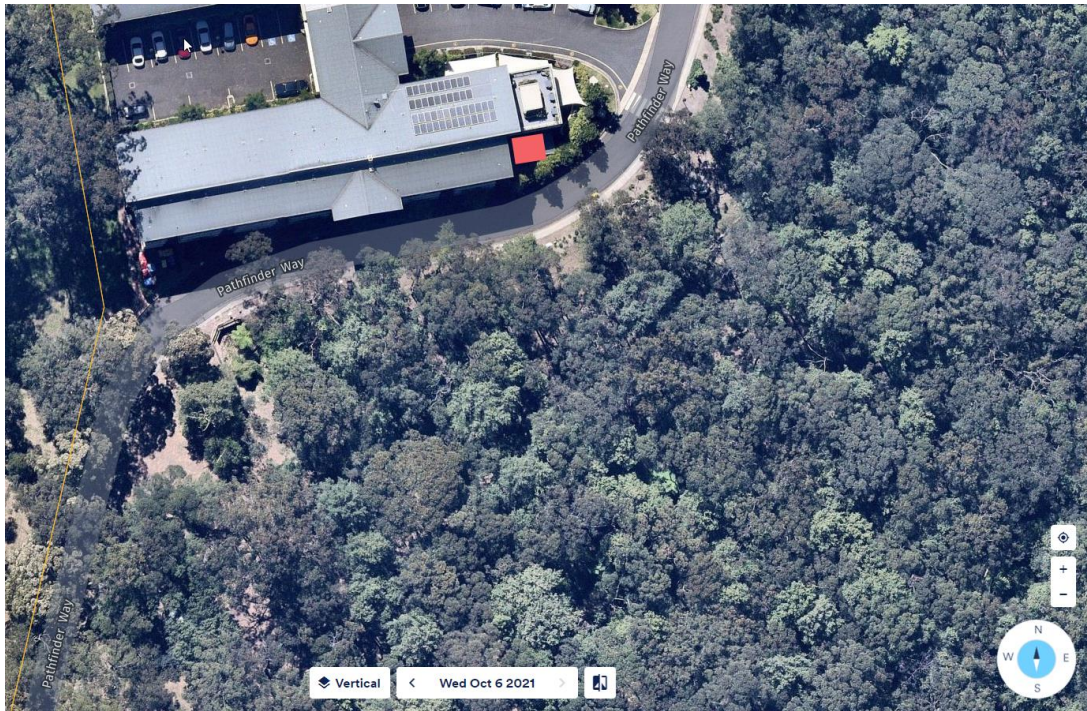


Figure 9: Canopy cover touching (proposed works shown in red).

STEP 2: DETERMINE THE EFFECTIVE SLOPE OF THE LAND

Given the development must be comply with the maximum exposure limit of 10kw/m², Table A1.12.1 has more stringent requirements as far as distances from any bushfire hazard is concerned than for “infill” development.

The slope under the vegetation was determined to be 12 degrees on site using an inclinometer with 2m contour mapping indicating a slope of 7 degrees.

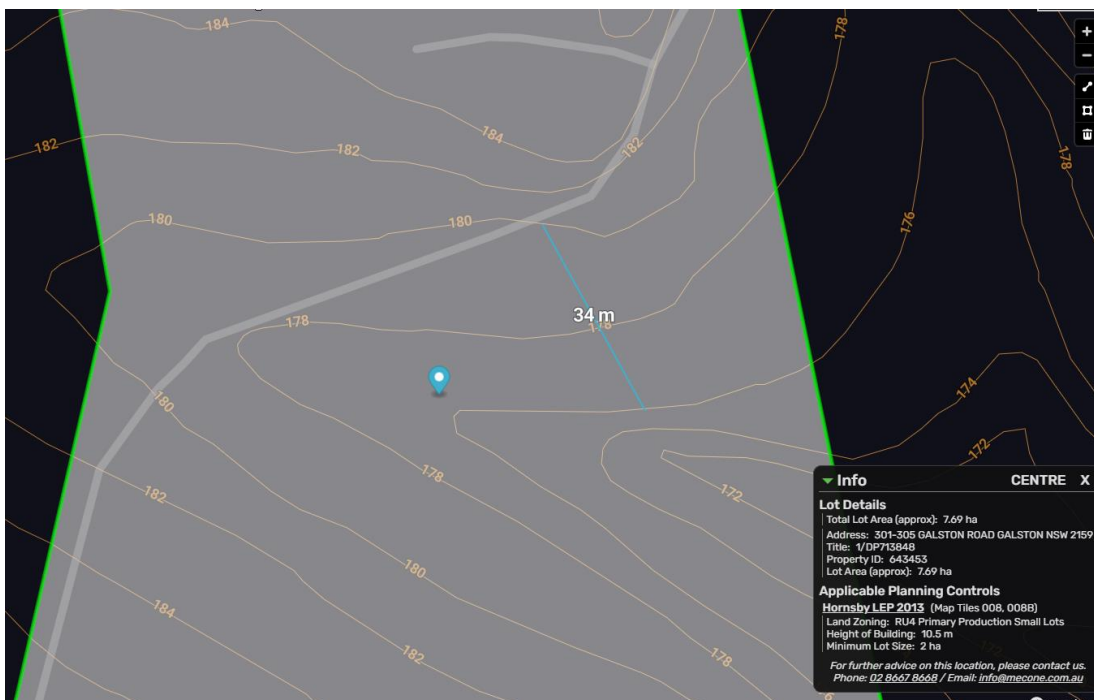


Figure 10: Slope under the vegetation.

STEP 3: DETERMINE THE FDI FOR THE LOCAL COUNCIL AREA.

The Rural Fire Service and Hornsby Shire Council (Bushfire Prone land mapping) has designated the land as bushfire prone consisting of “Category 1 vegetation and Buffer zone. Given the land is mapped as bushfire prone, the development must comply with Section 4.14 of the EP&A Act 1979.

This part of the act requires any development on bushfire prone land to comply with Planning for Bushfire Protection 2019. Given the site is located in the greater Sydney region and is determined to be FDI 100

Step 4: DISTANCE TO VEGETATION

The proposed works are to be located 15m from the vegetation as shown in figure 11 below.

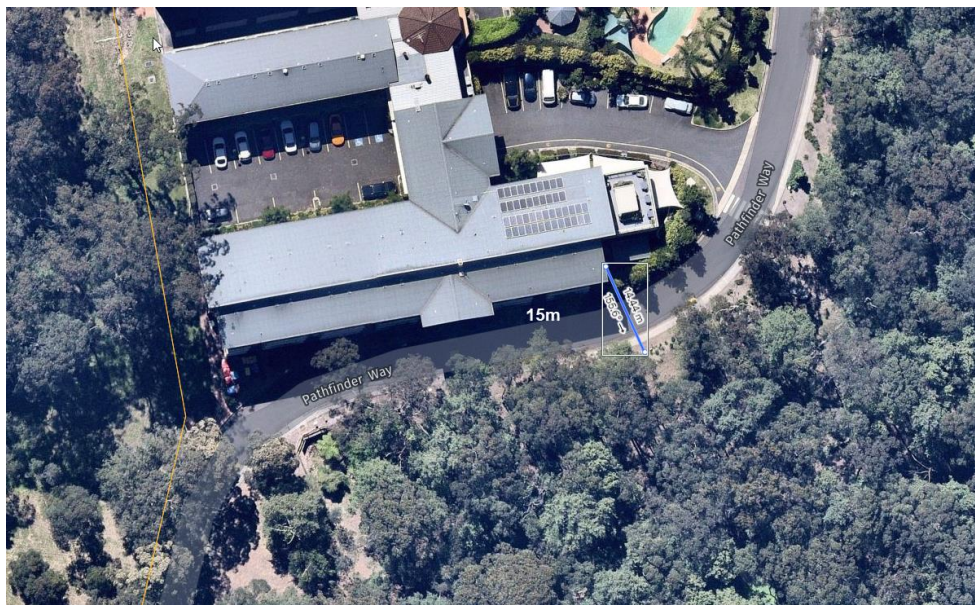


Figure 11: Distance to forest vegetation

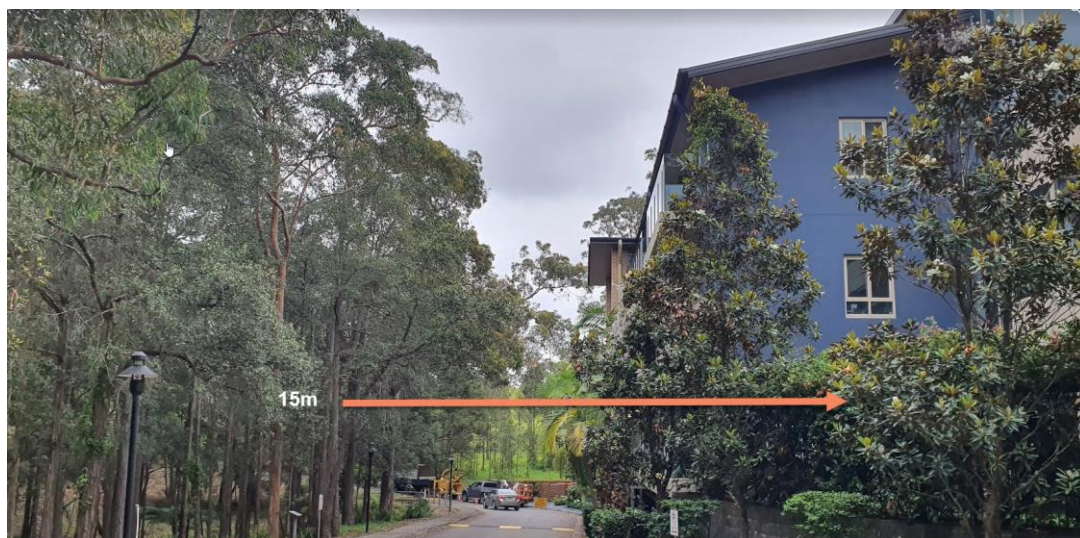


Photo 19: Distance to vegetation.



Photo 20: Distance to vegetation.

9.0 CATEGORY OF BUSHFIRE ATTACK:

Using the methodology as specified in Appendix 1 of PBP the development has been assessed as having the following characteristics:

- Type of development: (SFPP Development)
- Type of Vegetation: (Forest)
- Slope under the vegetation: (5-10 degrees)
- FFDI: (100)
- Distance to the vegetation: (15m)

Table A1.12.5 is the table under which the proposed works are to be assessed. When considered against the criteria of Table A1.12.5 below, the development would be exposed to a BAL level of BAL FZ.

Table A1.12.5

Determination of BAL, FFDI 100 - residential developments

KEITH VEGETATION FORMATION	BUSH FIRE ATTACK LEVEL (BAL)				
	BAL-FZ	BAL-40	BAL-29	BAL-19	BAL-12.5
	Distance (m) asset to predominant vegetation class				
Rain Forest	< 14	14 -< 18	18 -< 26	26 -< 37	37 -< 100
Forest (wet and dry sclerophyll) including Coastal Swamp Forest, Pine Plantations and Sub-Alpine Woodland	< 28	28 -< 36	36 -< 49	49 -< 65	65 -< 100
Grassy and Semi-Arid Woodland (including Mallee)	< 15	15 -< 20	20 -< 28	28 -< 39	39 -< 100
Forested Wetland (excluding Coastal Swamp Forest)	< 12	12 -< 16	16 -< 23	23 -< 33	33 -< 100
Tall Heath	< 15	15 -< 20	20 -< 29	29 -< 40	40 -< 100
Short Heath	< 9	9 -< 12	12 -< 18	18 -< 25	25 -< 100
Arid-Shrublands (acacia and chenopod)	< 6	6 -< 8	8 -< 12	12 -< 18	18 -< 100
Freshwater Wetlands	< 5	5 -< 6	6 -< 10	10 -< 14	14 -< 100
Grassland	< 10	10 -< 13	13 -< 20	20 -< 28	28 -< 50

10.0 ACCESS AND SERVICES

SFPP developments have specific access and service requirements given the vulnerable nature of the occupants.

The proposed works do not increase the occupancy of the building and therefore services and access will not be affected.

The works are of a minor nature and could be considered as Class 10 attachments appurtenant to a Class 9 building, therefore access and services have not been considered as part of this assessment.

11.0 ASSET PROTECTION ZONES

The requirements for asset protection zones on Special Fire Protection Purpose developments are more stringent than those for residential-type developments.

Table 6.8a of PBP provides guidance on the performance criteria and acceptable solutions for SFPP APZs.

The site does not provide sufficient areas for compliant asset protection zones however as previously mentioned the works are relatively minor in nature, do not increase the number of occupants or require the provision of additional access or services.

Table 6.8a

Performance criteria and acceptable solutions for APZs and construction for SFPP development.

	PERFORMANCE CRITERIA	ACCEPTABLE SOLUTIONS
	The intent may be achieved where:	
ASSET PROTECTION ZONES	<ul style="list-style-type: none"> radiant heat levels of greater than 10kW/m² (calculated at 1200K) will not be experienced on any part of the building. 	<ul style="list-style-type: none"> the building is provided with an APZ in accordance with Table A1.12.1 in Appendix 1.
	<ul style="list-style-type: none"> APZ maintenance is practical, soil stability is not compromised and the potential for crown fires is minimised. 	<ul style="list-style-type: none"> APZs are located on lands with a slope less than 18 degrees.
	<ul style="list-style-type: none"> APZs are managed and maintained to prevent the spread of fire to the building. 	<ul style="list-style-type: none"> the APZ is managed in accordance with the requirements of Appendix 4 of this document, and is wholly within the boundaries of the development site;
	<ul style="list-style-type: none"> the APZ is provided in perpetuity. 	<ul style="list-style-type: none"> APZ are wholly within the boundaries of the development site; and other structures located within the APZ need to be located further than 6m from the refuge building.
	VARIATIONS	
	<p>Camping and primitive camping: no performance criteria applicable.</p>	<ul style="list-style-type: none"> N/A.
	<p>Bed and breakfast and farmstay: the building will not be exposed to radiant heat levels exceeding 29kW/m² (1090K).</p>	<ul style="list-style-type: none"> an APZ is provided in accordance with Tables A1.12.2 or A1.12.3 in Appendix 1 of this document around the entire building or structure.
	<p>Ecotourism: radiant heat levels of greater than 10kW/m² (1200K) are not experienced by emergency service personnel and occupants during firefighting and emergency management around a building on site that can be used as a refuge.</p>	<ul style="list-style-type: none"> an APZ is provided in accordance with Table A1.12.1 in Appendix 1 of this document around the entire refuge building or structure.
	<p>Manufactured home estates: APZs achieve radiant heat levels that are commensurate with the construction standard for the proposed dwellings.</p>	<ul style="list-style-type: none"> an APZ in accordance with Table A1.12.1 in Appendix 1 of this document is provided to all new dwellings; or an APZ in accordance with Table A1.12.2 or A1.12.3 in Appendix 1 of this document is provided where it is demonstrated that all new dwellings will be constructed in accordance with BAL-29.

Figure 12: APZ requirements PBP - Table 6.8a

Given the development is considered to be a Special Fire Protection Purpose the development must be assessed against the more stringent requirements of Table A1.12.1 below. In order to comply with the minimum setback requirements for SFPP developments (see conclusion) the development must have a minimum setback of 93m. The development is located 15m from the bushfire hazard.

Table A1.12.1Minimum distances for APZs – SFPP developments ($\leq 10\text{kW/m}^2$, 1200K)

KEITH VEGETATION FORMATION	EFFECTIVE SLOPE				
	Up slopes and flat	>0°-5°	>5°-10°	>10°-15°	>15°-20°
Rainforest	38	47	57	69	81
Forest (wet and dry sclerophyll) including Coastal Swamp Forest, Pine Plantations and Sub-Alpine Woodland	67	79	93	100	100
Grassy and Semi-Arid Woodland (including Mallee)	42	50	60	72	85
Forested Wetland (excluding Coastal Swamp Forest)	34	42	51	62	73
Tall Heath	50	56	61	67	72
Short Heath	33	37	41	45	49
Arid-Shrublands (acacia and chenopod)	24	27	30	34	37
Freshwater Wetlands	19	22	25	28	30
Grassland	36	40	45	50	55

Figure 13: Table 7.9 of PBP**Recommendations for Inner Protection Areas:**

- tree canopy cover should be less than 15% at maturity;
- trees at maturity should not touch or overhang the building;
- lower limbs should be removed up to a height of 2m above the ground; tree canopies should be separated by 2 to 5m; and preference should be given to smooth barked and evergreen trees.
- Shrubs create large discontinuities or gaps in the vegetation to slow down or break the progress of fire towards buildings should be provided; shrubs should not be located under trees; shrubs should not form more than 10% ground cover; and clumps of shrubs should be separated from exposed windows and doors by a distance of at least twice the height of the vegetation.
- Grass should be kept mown (as a guide grass should be kept to no more than 100mm in height); and leaves and vegetation debris should be removed.

Recommendations Outer Protection Areas:

- tree canopy cover should be less than 30%;
- canopies should be separated by 2 to 5m.
- Shrubs should not form a continuous canopy
- Shrubs should form no more than 20% of ground cover.

- Grass should be kept mown to a height of less than 100mm; and leaf and other debris should be removed.

12.0 SITING AND DESIGN OF THE PROPOSED DEVELOPMENT

The proposed lift and relocated door are minor in nature and although subject to bushfire attack, construction to a higher level than existing will improve the bushfire integrity of the building.

13.0 CONSTRUCTION LEVEL

Under the NCC BCA Volume 1, bushfire construction in NSW is affected by Part G5.2. This part of the BCA excludes Sections 3 and 9 of AS3959-2018 and requires buildings subject to BAL-FZ to comply with “specific conditions of development consent” or as modified by consultation with the RFS.

In this regard no category of construction can be applied via this assessment and must be imposed by Council following consultation with the Rural Fire Service.

14.0 LANDSCAPING

Landscaping is to comply with the requirements of Appendix 4 of PBP and maintained in accordance with the RFNSW document entitled “Asset Protection Zone Standards”

Table 7.4a *Continued*

	PERFORMANCE CRITERIA	ACCEPTABLE SOLUTIONS
	The intent may be achieved where:	
LANDSCAPING	<ul style="list-style-type: none"> ➤ landscaping is designed and managed to minimise flame contact and radiant heat to buildings, and the potential for wind-driven embers to cause ignitions. 	<ul style="list-style-type: none"> ➤ 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: <ul style="list-style-type: none"> ➤ 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.

Choice of species should consider the recommendations made in the paper “Landscape and Building Design for Bushfire Areas” by G.C Ramsay and L. Rudolph:

- Moisture content of leaves
- Volatile oil content of leaves
- Mineral Content of leaves
- Leaf fineness
- Density of foliage

- Continuity of plant form
- Height of lowest foliage above ground
- Size of plant
- Dead foliage on the plant
- Bark Texture
- Quantity of ground fuels
- Fineness of ground fuels
- Compaction ability of ground fuels

15.0 BUSHFIRE HAZARD REDUCTION RECOMMENDATIONS

Vegetation Management:

- Maintain a clear area of low cut lawn or pavement adjacent to the house
- Keep areas under fences, fence posts and gates and trees raked and cleared of fuel
- Utilise non-combustible fencing and retaining walls
- Breaking up the canopy of trees and shrubs with defined garden beds
- Organic mulch should not be used in bush fire prone areas and non flammable material should be used as ground cover, eg Scoria, pebbles, recycled crushed bricks.
- Planting trees and shrubs such that: - the branches will not overhang the roof; - the tree canopy is not continuous; and - there is a windbreak in the direction from which fires are likely to approach.

Property Maintenance:

Prior to each bushfire season special attention should be made to the following tasks:

- Removal of material such as litter from the roof and gutters
- Ensure painted surfaces are in good condition with decaying timbers being given particular attention to prevent the lodging of embers within gaps
- Check pumps and water supplies are available and in working order
- Driveways are in good condition with trees not being too close and forming an obstacle during smoky conditions
- Check tiles and roof lines for broken tiles or dislodged roofing materials
- Screens on windows and doors are in good condition without breaks or holes in flyscreen material and frames are well fitting into sills and window frames

- Drenching or spray systems are regularly tested before the commencement of the fire season
- Hoses and hose reels are not perished and fittings are tight and in good order
- Doors are fitted with draught seals and well maintained
- Mats are of non combustible material or in areas of low potential exposure
- Woodpiles, garden sheds and other combustible materials are located downslope and well away from the house.
- ensure that vegetation does not provide a continuous path to the house;
- Remove all noxious and environmental weeds
- Plant or clear vegetation into clumps rather than continuous rows
- Prune low branches two metres from the ground to prevent a ground fire from spreading into trees
- Locate vegetation far enough away from the asset so that plants will not ignite the asset by direct flame contact or radiant heat emission
- Plant and maintain short green grass (grass not to exceed 100mm in height) around the house as this will slow the fire and reduce fire intensity. Alternatively, provide non-flammable pathways directly around the dwelling
- Ensure that shrubs and other plants do not directly abut the dwelling. Where this does occur, gardens should contain low-flammability plants and non flammable ground cover such as pebbles and crush tile; and • avoid erecting brush type fencing and planting “pencil pine” type trees next to buildings, as these are highly flammable.
- Ensure all leaf material is removed regularly from surrounding areas
- Future planting of unsuitable species of trees with the potential to impact on the survivability of the building post-approval should be discouraged
- Keep all grassland located on the site managed to a height not exceeding 100mm out to either the adjoining boundaries of 50m
- Ensure a maintenance schedule is enacted for the maintenance of all asset protection zones located on the property.

Frequency of Maintenance:

Although maintenance should be continued throughout the year, special attention should be given to the items mentioned above in late spring prior to the beginning of the bushfire season. However, given the increasing effects of Climate Change the frequency and timing of management may have to be adjusted depending on seasonal variations.

A sensible approach to maintenance with lawns being mowed every 2 – 3 weeks (this was indicated on site as being the occurrence of APZ mowing) depending on seasonal changes (again, may require more frequent attention to maintain height not exceeding 100mm) is to be implemented along with implementation of “Property Maintenance” schedule in

accordance with items listed on previous page and in accordance with the Fuel Management Plan (attached)

16.0 CONCLUSION/RECOMMENDATIONS

- The site has been designated as bushfire prone land (Category 1 and buffer zone). The site is currently used as an RSL – aged care home and retirement village.
- The works are attached to a building classified as a “Special Fire Protection Purpose” as defined by the Rural Fires Act 1997 and therefore referral to the Rural Fire Service is required. The lift could be considered as a “Class 10 building attached to a Class 9 building.
- Although the works do not qualify as “Minor development in SFPP facilities” as defined by Section 6.5 of PBP the works are not extensive in nature consisting only of a lift shaft, and relocation of a non-required exit. The existing door is not constructed to BAL FZ and installation of a new door to a higher construction level can only improve the overall performance of the building.
- Under the NCC BCA Volume 1, bushfire construction in NSW is affected by Part G5.2. This part of the BCA excludes Sections 3 and 9 of AS3959-2018 and require buildings subject to BAL-FZ to comply with “specific conditions of development consent” or as modified by consultation with the RFS. In this regard no category of construction can be applied via this assessment and must be imposed by Council following consultation with the Rural Fire Service.
- The vegetation seen as having the most significant impact on the development was located 15m to the south (Forest). Although a reduction in understorey was present, the area to the south of the building could not be discounted as a threat given the canopy cover exceeded 30 percent and was continuous.
- The proposed works do not increase occupancy of the building, with the additional lift being constructed to provide redundancy for the single lift currently serving the building.
- The lift does not have any exits that are open to the external fabric of the building. The door to be relocated is not a required exit meaning emergency services or occupants will not be egressing via this door during a bushfire event. Exposure to radiant heat at this point therefore should not be an issue.
- Given the occupancy will not be increased and the minor nature of the work an assessment of the access and services for the site were not considered necessary.
- The building is staffed 24 hours, 7-days a week providing the occupants with ongoing assurance of evacuation assistance.

The development achieves the performance criteria of PBP in the following matters:

Is a defensible space provided onsite and has the APZ been determined in accordance with Chapter 3 and Table A1.12.2 of PBP 2019.	No
Can the asset protection zone be maintained over the life of the development	YES
Is the building sited and designed to minimise the risk of attack	No however increased construction over existing is proposed.
Is it demonstrated the building can withstand bushfire attack in the form of embers, wind and radiant heat	YES if constructed to higher construction standards than existing when imposed by RFS and Council.
Is there safe operation access for emergency service and residents – does the access and egress comply with Appendix 3 and Table 7.4a	N/A not undertaken as part of this report.
Is there adequate water supply and electrical services and compliant access to services for emergency services.	Yes however a review of the water supply provisions pursuant to Section E of Volume 1 NCC BCA and AS2419 was not undertaken.
Is gas and electrical supply located to minimise risk to building	N/A – not undertaken.
Is landscaping designed to minimise flame and radiant heat	YES, future planting to consider the recommendations contained in this report
The adequacy of sprinkler systems and other fire protection measures to be incorporated into the development.	N/A
The proposal does not increase the bushfire risk to adjoining land	YES

The extent to which the proposed development deviates from the standards, specific objectives, performance criteria and acceptable solutions set out in Chapters 5 to 8 of PBB.	The development does not meet the minimum setback requirements for SFPP.
Does the development not result in and increased bushfire management and maintenance responsibility on adjoining land owners	YES
Are the radiant heat levels acceptable pursuant to Table A1.12.1	No – however see conclusion
Does the development provide an appropriate operational environment for emergency service personnel during firefighting and emergency management.	YES – however road width subject to RFS approval.
Does the development ensure the capacity of existing infrastructure can accommodate the increase in demand.	N/A
Does the development ensure emergency evacuation procedures and management which provides for the special characteristics and needs of the occupants.	N/A - Does not affect egress or access to the building.

Notwithstanding the precautions adopted, it should always be remembered that bushfires burn under a wide range of conditions and an element of risk, no matter how small always remains, and although the standard is designed to improve the performance of such buildings, there can be no guarantee, because of the variable nature of bushfires, that any one building will withstand bushfire attack on every occasion.

This Report is a Bush Fire Hazard Assessment that provides the required information to assist Local Council and the Rural Fire Service in determining compliance in accordance with Planning for Bushfire Protection and AS 3959, 2019. The Local Council is the Final Consenting Authority and the construction of the building must comply with the recommendations included in the Council's conditions of consent.

Signed



Darryl Pendlebury
BPAD Accredited Bushfire Practitioner 36861

