



**BUSHFIRE
CONSULTING
SERVICES** PTY LTD

Designing Bushfire Protection Measures



**SILVER
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Our Ref J21/1023

19 September 2023

Kylie Wright

kylie@wincrest.com.au

Dear Kylie

Bushfire Statement of Compliance of APZ at 231-233 McCarrs Creek Road Church Point (Address)

In response to your request for a Bushfire Statement of Compliance of Inner Protection Area (IPA) Asset Protection Zone (APZ) for the above address, we have completed a review of the arborist report on 19/09/2023.

We have compared the design to

- Appendix 4, Planning For Bush Fire Protection 2019 (PBP)
- NSW RFS Standards for Asset Protection Zones, undated

Supporting Documents

- Arboricultural Impact Assessment Report by Blues Bros Arboriculture, Revision 4, dated 9/08/2023
- Tree Retention Plan, by Blues Brothers Arboriculture, Revision 01, dated 09/08/2023
- Council's email forwarded from Kylie Wright requesting the following:

ADDITIONAL COUNCIL HAVE ADVISED

- The Bushfire report has recommended that the entirety of the site be managed as an Asset Protection Zone and has applied/granted a Bushfire risk level of BAL FZ to the site. Conditions shall apply to ensure that clearing is undertaken in the appropriate areas and in order to reduce impacts to native vegetation and biodiversity. It is noted that the 10/50 Clearing Exemption does

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not apply to the property and as such, any future proposals to remove these retained trees will require approval or a relevant exemption under Part 2 of SEPP (Biodiversity and Conservation) 2021 or Part 4 of the NSW Environmental Planning and Assessment Act 1979.

Below is extracts from our assessment of the Arborist Report and Tree Retention Plans. This is not the Bushfire Compliance of Design Statement as the comments in the right columns identify some areas where compliance is not achieved and requires further consideration by the Arborist.

Work to be completed:

Planning For Bushfire Protection 2019 Appendix 4 Asset Protection Zone requirements	
Trees	
tree canopy cover should be less than 15% at maturity	<p>Not Achievable without further significant tree removal</p> <p>The trees nominated for retention in the Arborist Report are:</p> <ul style="list-style-type: none"> • T2 • T3 • T5 • T6 • T7 • T8 • T10 • T11 • T14 • T16 • T17 • T18 <p>Calculations of canopy cover based on the Tree Retention Plan, Rev 01, dated 09/08/2023 contained within the Arborist Report are as follows:</p> <p>Total tree canopy cover required by PBP: = 15% x 744.84m² (site area) = 111.7m²</p> <p>Total Tree Canopy Cover of trees to be retained from Tree Retention Plan: = 533.1m² / 744.84m² = 71.6%</p> <p>The Tree Retention Plan prepared by the Arborist nominates the following trees for removal:</p> <ul style="list-style-type: none"> • T1, T4, T9, T12, T13, T15, T19, T20, T21

Planning For Bushfire Protection 2019 Appendix 4 Asset Protection Zone requirements

	It is therefore determined that the 15% tree canopy cover requirement is not achievable without significant further tree removal.
trees at maturity should not touch or overhang the building	Not Achieved Provide a plan note that trees will be pruned so that they do not touch or overhang the building. We recommend consultant with the Arborist and/or Council as the majority of overhanging branches belong to trees outside the subject site boundaries and that pruning large portions of some trees may compromise their health and stability such as T7, T8 &16.
lower limbs should be removed up to a height of 2m above the ground	Add notation to the plans
tree canopies should be separated by 2 to 5m and	Not Achieved – The tree canopy cover is all connected, there is no 2-5m tree canopy separation indicated by the Tree Retention Plan. As such, we recommend the Arborist provides for additional tree removal.
preference should be given to smooth barked and evergreen trees	Trees are existing
Shrubs	
create large discontinuities or gaps in the vegetation to slow down or break the progress of fire towards buildings should be provided	No details provided to demonstrate compliance. Add notations to final plans
shrubs should not be located under trees	No details provided to demonstrate compliance. Add notations to final plans
shrubs should not form more than 10% ground cover	No details provided to demonstrate compliance. Add notations to final plans
clumps of shrubs should be separated from exposed windows and doors by a distance of at least twice the height of the vegetation	No details provided to demonstrate compliance. Add notations to final plans

Grass	
grass should be kept mown (as a guide grass should be kept to no more than 100mm in height) and	Ground covers having a mature height exceeding 100mm are considered as shrubs
leaves and vegetation debris should be removed	Noted

Landscape Design or Installation Assessment

Standards for Asset Protection Zones, NSW Rural Fire Service	BFCS Comment
ensure that vegetation does not provide a continuous path to the house	Not Achieved - Vegetation along boundaries is to be broken up into clumps
remove all noxious and environmental weeds	Add notations to plans
plant or clear vegetation into clumps rather than continuous rows	Add notations to plans
prune low branches two metres from the ground to prevent a ground fire from spreading into trees	Add notations to plans
locate vegetation far enough away from the asset so that plants will not ignite the asset by direct flame contact or radiant heat emission	Add notations to plans
plant and maintain short green grass around the house as this will slow the fire and reduce fire intensity. Alternatively, provide non-flammable pathways directly around the dwelling	Add notations to plans
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	Add notations to plans
avoid erecting brush type fencing and planting "pencil pine" type trees next to buildings, as these are highly flammable	Add notations to plans
<i>Removal of other materials</i> Woodpiles, wooden sheds, combustible material, storage areas, large quantities of garden mulch, stacked flammable building materials etc. should be located away from buildings. These items should preferably be located in a designated cleared location with no direct contact with bush fire hazard vegetation	Add notations to plans

Note, mulch and other materials within 6m of the building to be non-combustible, eg scoria	
<i>Other protective features</i> Take advantage of existing or proposed protective features such as fire trails, gravel paths, rows of trees, dams, creeks, swimming pools, tennis courts and vegetable gardens as part of the property's APZ	Add notations to plans

Please contact me once the design has been amended to meet the requirements of the APZ to enable us to issue your requested Statement of Compliance.

Kind Regards




Catherine Gorrie

(a person who is recognised by the NSW Rural Fire Service as a suitably qualified consultant in bush fire risk assessment)

Accredited Bushfire Planning and Design Practitioner

Fire Protection Association Australia BPAD-Level 3 (BPAD 20751)

Grad Dip Bushfire Protection (UWS 2010)

Diploma Environmental Health & Building Surveying (TAFE 2005)

Corporate Silver Member Fire Protection Association Australia

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Disclaimer

Any recommendation or advice expressed in this report is made in good faith and in accordance with the relevant legislation for bushfire prone development in New South Wales. It should be borne in mind that the measures recommended in this report cannot guarantee that a building will survive a bushfire event on every occasion. This is due to the degree of vegetation management, the unpredictable behaviour of bushfires and extreme weather conditions. As such, the author is not liable to any person for any damage or loss whatsoever which has occurred or may occur in relation to the person taking action or not taking action based on the recommendations of this document.

Appendix 1 – Extracts from Arborist Report

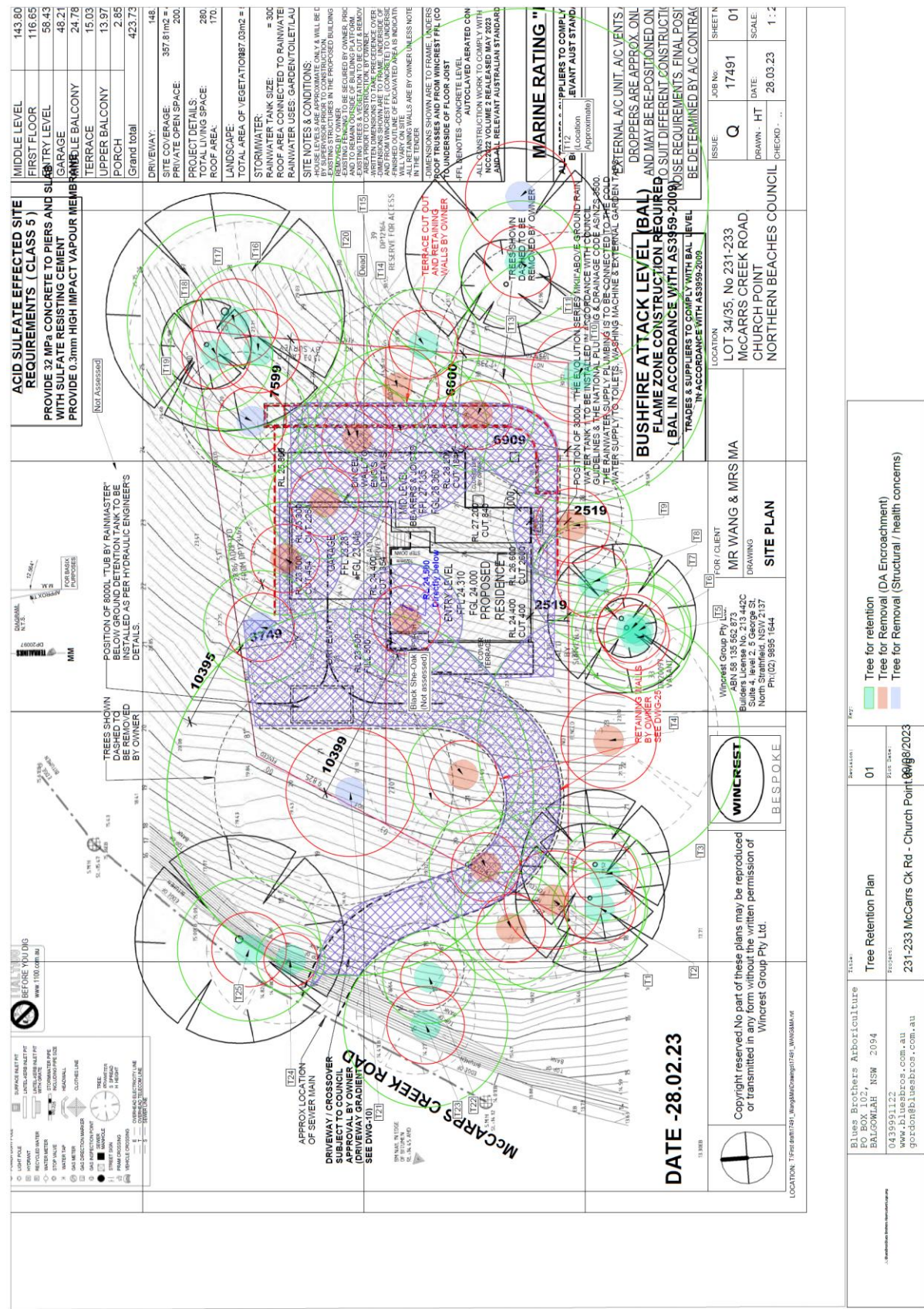
Trees highlighted are to be retained as indicated in the Tree Retention Plan

Tree Data Summary - 231-233 McCarrs Ck Road, Church Point - Assessed 30/09/2021																			
Tree ID	Species	Height (m)	Canopy Area (m ²)	Canopy Density	DBH (cm)	DGL (cm)	Foliage Condition	Maturity	Trunk type	Trunk lean	Canopy Balanced	Past Pruning	Stability	Vigour	Canopy deadwood	Significance value	Notes	TPZ (M) Radius	SRZ (M) Radius
T1	<i>Syncarpia glomulifera</i> (Sydney Turpentine)	17	10	51	99	Good	Mature	Triple	Upright	Yes	No	Appears Stable	Good	0-5%	High	Slight bark inclusion at base of tr-dominant stems	6.2	3.3	
T2	<i>Allocasuarina littoralis</i> (Black She-Oak)	17	7	27	45	Moderate	Mature	Single	Upright	Bias North	No	Stability Suspect	Good	5-10%	Moderate	Basal dieback on the South-Eastern Flank to 4m likely due to fire. Remove irrespective of development.	3.2	2.4	
T3	<i>Allocasuarina littoralis</i> (Black She-Oak)	17	7	26	39	Moderate	Mature	Single	Upright	Bias South West	No	Imminent Failure Likely	Good	5-10%	Moderate	Termite & Fire damage with lower trunk appearing to be at risk of imminent failure. Remove irrespective of development.	3.1	2.2	
T4	<i>Eucalyptus robusta</i> (Bangalay)	25+	18	73	91	Good	Remnant	Single	Upright	Yes	No	Appears Stable	Good	5-10%	High	Active <i>Nasutitermes walkeri</i> with nest in tree, Needs dead wood removal Previously impacted by fire.	8.8	3.2	
T5	<i>Allocasuarina littoralis</i> (Black She-Oak)	12	10	31	39	Moderate	Mature	Single	Bias North West	Bias North West	No	Stability Suspect	Moderate	5-10%	Low	Active <i>Nasutitermes walkeri</i> with nest in tree, Cambium dieback to South	3.7	2.2	
T6	<i>Livistona australis</i> (Cabbage Tree Palm)	5.5	6	26	Good	Good	Mature	Single	Upright	Yes	No	Appears Stable	Moderate	0-5%	Moderate	Old termite activity Past fire impacts Kino Staining of lower trunk Slight epicormic growth within canopy Active habitat tree - Tawny Frogmouth.	3.1	0.0	
T7	<i>Eucalyptus microcorys</i> (Tallow Wood)	20	16	33	43	Good	Mature	Single	Upright	Yes	No	Appears Stable	Moderate	10-15%	Moderate	Active habitat tree - Tawny Frogmouth.	4.0	2.3	
T8	<i>Allocasuarina littoralis</i> (Black She-Oak)	20	11	34	45	Good	Mature	Single	Upright	Yes	No	Appears Stable	Good	5-10%	Moderate	Past fire impact & cambium injury to 5m	4.1	2.4	
T9	<i>Allocasuarina littoralis</i> (Black She-Oak)	18	11	33	49	Good	Mature	Single	Upright	Yes	No	Appears Stable	Good	5-10%	Moderate	Past fire impact & cambium injury to 5m	4.0	2.5	

Tree Data Summary - 231-233 McCarrs Ck Road, Church Point - Assessed 30/09/2021

Tree ID	Species	Height (m)	Canopy dims n/s in metres	DBH (cm)	DGL (cm)	Foliage condition	Maturity	Trunk type	Trunk lean	Canopy Balanced	Past Pruning	Stability	Vigour	Canopy deadwood	Significance value	Notes	TPZ (M) Radius	SRZ (M) Radius
T10	<i>Eucalyptus robusta</i> (Bangalay)	30	15	72	90	Good	Remnant	Single	Upright	Bias East	No	Stability Suspect	Good	0-5%	High	Active termite nest (<i>Nasutitermes walkeri</i>) Past fire impact Cambium dieback of southern flank to 5m Heartwood sounding hollow	8.6	3.2
T11	<i>Allocasuarina littoralis</i> (Black She-Oak)	25	17	34	45	Good	Mature	Single	Bias North East	Entirely North East	No	Appears Stable	Good	5-10%	High	Active termites, otherwise without comment	4.1	2.4
T12	<i>Eucalyptus pillularis</i> (Blackbutt)	20+	20+	105	130	Good	Remnant	Single	Critically North East (25° above horizontal)	Entirely North East	No	Stability Suspect	Good	5-10%	High	Growing atop rockshelf, likely to have suffered partial root plate failure decades previously. Major hollow in lower main trunk	12.6	3.7
T13	<i>Allocasuarina littoralis</i> (Black She-Oak)	14	9	32	44	Moderate	Mature	Single	Upright	Yes	No	Appears Stable	Moderate	5-10%	Moderate		3.8	2.3
T14	<i>Allocasuarina littoralis</i> (Black She-Oak)	14	9	32	44	Moderate	Mature	Single	Upright	Yes	No	Appears Stable	Moderate	5-10%	Moderate		3.8	2.3
T15	<i>Anagapha floribunda</i> (Rough-Barked Apple)	17	11	48	70	Good	Mature	Single	Upright	Yes	No	Appears Stable	Good	0-5%	High	Active termites (<i>Nasutitermes walkeri</i>). Kino staining of lower trunk	5.8	2.8
T16	<i>Eucalyptus robusta</i> (Bangalay)	21	14	49	70	Good	Remnant	Single	Upright	Yes	No	Stability Suspect	Good	0-5%	High	Significant fire impact to 3m with Heartwood sounding hollow. Vertical cracking to 2m Remove irrespective of development.	5.9	2.8
T17	<i>Eucalyptus paniculata</i> (Grey Ironbark)	22	13(N/E)	60	73	Good	Remnant	Single	Upright	Yes	No	Appears Stable	Excellent	0-5%	High	Excellent recovery following previous fire impact.	7.2	2.9
T18	<i>Allocasuarina littoralis</i> (Black She-Oak)	14	9	32	44	Moderate	Mature	Single	Upright	Yes	No	Appears Stable	Moderate	5-10%	Moderate		3.8	2.3

Tree Retention Plan



ACID SULFATE AFFECTED SITE REQUIREMENTS (CLASS 5)
 PROVIDE 32 MPa CONCRETE TO PIERS AND SUBSTRATE
 WITH SULFATE RESISTING CEMENT
 PROVIDE 0.3mm HIGH IMPACT VAPOUR MEMBRANE

MIDDLE LEVEL	143.80
FIRST FLOOR	116.65
ENTRY LEVEL	58.43
GARAGE	48.21
SHARABLE BALCONY	24.78
TERRACE	15.03
UPPER BALCONY	13.97
PORCH	2.85
Grand total	423.73

DRIVEWAY: 148.
 SITE COVERAGE: 357.81m² = 148.
 PRIVATE OPEN SPACE: 200.
 PROJECT DETAILS:
 TOTAL LIVING SPACE: 280.
 ROOF AREA: 170.

LANDSCAPE:
 TOTAL AREA OF VEGETATION: 1087.03m² = 170.
 STORMWATER:
 RAINWATER TANK SIZE: = 300
 ROOF AREA CONNECTED TO RAINWATER: = 300
 RAINWATER USES: GARDEN/TOILET/LAU

SITE NOTES & CONDITIONS:
 HOUSE LEVELS ARE APPROXIMATE ONLY & WILL BE DETERMINED BY SURVEYOR.
 EXISTING STRUCTURES IN THE PROPOSED BUILDING AREA TO REMAIN OUTSIDE OF BUILDING PLATFORM AND TO REMAIN OUTSIDE OF BUILDING PLATFORM AREA PRIOR TO CONSTRUCTION BY OWNER.
 DIMENSIONS SHOWN ARE TO FRAME, UNLESS NOTED OTHERWISE.
 ALL WALLS ARE BY OWNER UNLESS NOTED OTHERWISE.
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 PROVIDE 32 MPa CONCRETE TO PIERS AND SUBSTRATE
 WITH SULFATE RESISTING CEMENT
 PROVIDE 0.3mm HIGH IMPACT VAPOUR MEMBRANE

POSITION OF 8000L TUB BY RAINMASTER TO BE INSTALLED AS PER HYDRAULIC ENGINEERS DETAILS.

TREES SHOWN TO BE REMOVED BY OWNER

RESERVE FOR ACCESS

TERRACE CUT OUT TO BE REMOVED BY OWNER

TREES SHOWN TO BE REMOVED BY OWNER

POSITION OF 3000L THE EVOLUTION SERIES (W/IK) ABOVE GROUND RAINWATER TANK TO BE INSTALLED IN ACCORDANCE WITH COUNCIL GUIDELINES & THE NATIONAL PLUMBING & DRAINAGE CODE AS 1222:2000. WATER SUPPLY TO TOILETS, WASHING MACHINES & EXTERNAL GARDEN WATER SUPPLY TO TOILETS.

EXTERNAL A/C UNIT, A/C VENTS, DROPPERS ARE APPROX. ONL AND MAY BE RE-POSITIONED TO SUIT DIFFERENT CONSTRUCTION REQUIREMENTS. FINAL POSI BE DETERMINED BY A/C CONTRACTORS.

ALL APPLICABLE TO COMPLIANT EVIANT AUST STAND. (Approximate)

MARINE RATING "A"

TRADES & SUPPLIERS TO COMPLY WITH BAL LEVEL IN ACCORDANCE WITH AS 3959-2009.

BUSHFIRE ATTACK LEVEL (BAL) 25
 FLAME ZONE CONSTRUCTION REQUIRED TO SUIT DIFFERENT CONSTRUCTION REQUIREMENTS. FINAL POSI BE DETERMINED BY BAL CONTRACTORS.

WINDREST
 B.S.P.O.K.E.

FOR CLIENT
 MR WANG & MRS MA
 DRAWING
SITE PLAN

WINDREST
 B.S.P.O.K.E.

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