Project Lead: Senior Planner – Sam
Telephone: 07 4189 9100
Our Reference: RAL25/0007

SOUTH BURNETT REGIONAL COUNCIL

South Burnett Regional Council
ABN 89 972 463 351
PO Box 336
Kingaroy QLD 4610
1300 789 279 or (07) 4189 9100
(07) 4162 4806
info@southburnett.qld.gov.au
www.southburnett.qld.gov.au

7 August 2025

Zachary Steinhardt
C/- ONF Surveyors
PO Box 896
KINGAROY QLD 4610

Dear Sir

Negotiated Decision Notice
Planning Act 2016

I refer to your application and the representations you made in respect to the decision notice. On 1 August 2025, Council decided your representations.

Details of the decision are as follows:

APPLICATION DETAILS

Application No:	RAL25/0007
Street Address:	102 Scott Street WONDAI QLD 4606
Real Property Description:	Lot 162 on FY713
Planning Scheme:	South Burnett Regional Council Planning Scheme

DECISION DETAILS

Council, on 1 August 2025, decided to issue the following type of approval:

Development Permit for Reconfiguring a Lot – Subdivision (1 Lot into 5 Lots)

In relation to representations, Council decided to:

A. Refuse to change condition ENG13.

B. Agree to delete duplicate condition ENG21.

C. Agree to change condition ENG22 (now ENG21).

CURRENCY PERIOD OF APPROVAL

The currency period for this development approval is four (4) years starting the day that this development approval takes effect. (Refer to Section 85 “Lapsing of approval at end of currency period” of the *Planning Act 2016*.)

INFRASTRUCTURE

Where conditions relate to the provision of infrastructure, these are non-trunk infrastructure conditions unless specifically nominated as a "***necessary infrastructure condition***" for the provision of trunk infrastructure as defined under Chapter 4 of the *Planning Act 2016*.

ASSESSMENT MANAGER CONDITIONS

GENERAL

GEN1. The approved development must be completed and maintained generally in accordance with the approved plans and documents, except where amended by the conditions of this permit:

Drawing Title	Prepared by	Ref No.	Rev.	Date
Proposed Subdivision	ONF Surveyors	12778P/1	-	16/01/2025
Bushfire Management Report	Range Environmental	J002247	1	04/03/2025

Timing: At all times.

GEN2. All works, including the repair or relocation of services is to be completed at no cost to Council.

COMPLIANCE

GEN3. All conditions of this approval are to be satisfied prior to Council endorsing the Survey Plan, and it is the applicant's responsibility to notify Council to inspect compliance with Conditions.

A fee will be charged, with payment required prior to Council's approval of the associated documentation requiring assessment.

OUTSTANDING FEES

GEN4. Prior to the sealing of the Plan of Survey the applicant is required to pay the Council all rates and charges or any expenses being a charge over the subject land under any Act in accordance with Schedule 18, Section 69 of the Planning Regulation 2017.

SURVEY MARKS

GEN5. Prior to the submission of the Survey Plan to Council, the applicant is to reinstate survey marks and install new survey marks in their correct position in accordance with the Survey Plan, and the work is to be certified in writing by a Licensed Surveyor.

PLANNING

GEN6. All development involving the emission of noise, odour and dust from ongoing uses, building and/or construction activities, must ensure that the emissions are in accordance with the requirements of the *Environmental Protection Act 1994*.

Timing: As indicated.

PROPERTY BOUNDARIES

GEN7. All existing on-site structure, dams and sewerage treatment facilities including transpiration and irrigation areas are to be relocated so as not to cross the proposed property boundary.

BUSHFIRE MANAGEMENT

GEN8. Establish and maintain the Asset Protection Zone (APZ) identified in the Bushfire Management Plan, prepared by Range Environmental and dated 4 March 2025.

Timing: At all times.

VALIDITY OF BUSHFIRE MANAGEMENT PLAN

GEN9. Prior to Council approval of the Plan of Survey provide written evidence that the approved Bushfire Management Plan (BMP), prepared by Range Environmental and dated 4 March 2025, and its recommendations are current in accordance with the BMP disclaimer.

Timing: As indicated.

ENGINEERING WORKS

ENG1. Submit to Council, an Operational Work application for all works that will become Council infrastructure.

ENG2. Complete all works approved and works required by conditions of this development approval and/or any related approvals at no cost to Council, prior to Council's endorsement of the Survey Plan unless stated otherwise.

ENG3. Undertake Engineering designs and construction in accordance with the Planning Scheme, Standard Drawings, relevant Australian Standards, WBBROC Regional Standards Manual and relevant design manuals.

ENG4. Be responsible for any alteration necessary to electricity, telephone, water mains, sewer mains, stormwater drainage systems or easements and/or other public utility installations resulting from the development or from road and drainage works required in connection with the development.

LOCATION, PROTECTION AND REPAIR OF DAMAGE TO COUNCIL AND PUBLIC UTILITY SERVICES INFRASTRUCTURE AND ASSETS

ENG5. Be responsible for the location and protection of any Council and public utility services infrastructure and assets that may be impacted on during construction of the development.

ENG6. Repair all damages incurred to Council and public utility services infrastructure and assets, as a result of the proposed development immediately should hazards exist for public health and safety or vehicular safety. Otherwise, repair all damages immediately upon completion of works associated with the development.

STORMWATER MANAGEMENT

ENG7. Provide overland flow paths that do not adversely alter the characteristics of existing overland flows on other properties or that create an increase in flood damage on other properties.

ENG8. Adjoining properties and roadways to the development are to be protected from ponding or nuisance from stormwater as a result of any site works undertaken as part of the proposed development.

WATER SUPPLY

ENG9. Connect each lot to Council’s reticulated water supply system.

ENG10. Remove any redundant water supply connections and reinstate the land.

ENG11. Design and construct all works in accordance with Council's requirements as set out in the WBBROC Design and Construction Code", WSAA Guidelines and relevant development standards used by Council.

ENG12. Install a separate water service connection to each lot as per Council's standards.

SEWERAGE

ENG13. Connect each lot to Council's reticulated sewerage system. The connections must be designed in accordance with Council's standards and be approved by Council's Utility Services Section.

ENG14. Actual connection to Council's live sewerage infrastructure must be undertaken by or under the supervision of Council.

ENG15. Do not build works within 1.5 metres from the centre of any existing sewer pipe work or within the Zone of Influence, whichever is the greater (measured horizontally).

ENG16. Maintain a minimum of a 3-metre-wide corridor to be maintained for maintenance/upgrade purposes.

ENG17. Ensure that a clear level area of a minimum of a 2.5 metre radius surrounding any existing sewer manholes on the site is provided for future maintenance/upgrade purposes.

ENG18. The above minimum clearances to Council's sewer infrastructure do not preclude the need for works to proposed structures to prevent loading to the sewer system.

SEWER EXTENSION

ENG19. Design and construct a 150mm diameter sewer extension from Manhole 2025/12. The sewerage network extension is to:

a. connect to existing sewer manhole 2025/12;
b. provide house connections to each proposed lot; and
c. be done in accordance with a development approval for Operational Work. Deleted.

ENG20. Design and construct all works in accordance with Council's requirements as set out in the WBBROC Design and Construction Code, WSAA Guidelines and relevant development standards used by Council.

~~ENG21. Actual connection to Council's live sewerage infrastructure must be undertaken by or under the supervision of Council.~~

ROADWORKS - ROAD WIDENING

ENG21. Design and construct roadworks for the ~~full~~ frontage of the ~~site~~ **proposed Lots** along **the eastern side of** Scott Street to relevant Austroads' Standards, and Council's Planning Scheme, including:

a. widening of the existing pavement and bitumen seal, from the edge of the existing bitumen seal to the new kerb and channel;
b. barrier kerb and channel to match the alignment of the existing kerb and channel adjacent;
c. formation of a grassed verge; and
d. tapers to existing road pavement.

TELECOMMUNICATION

ENG22. Design and provide telecommunications to all lots within the development.

ELECTRICITY

ENG23. Provide electricity supply to all lots within the development to comply with Ergon Energy's requirements.

ENG24. Submit to Council, written confirmation from an electricity provider that an agreement has been made for the supply of electricity.

ENG25. Remove all redundant electrical connections and reinstate the land.

ENG26. Submit electrical plans for Council's review prior to Council's submission of an Operational Work. Be responsible to check and ensure that electrical drawings do not conflict with the civil engineering design.

SERVICES - EXISTING CONNECTIONS

ENG27. Ensure that all services provided to the existing house on proposed Lot 5 are wholly located within the lot(s) it serves.

STREET LIGHTING

ENG28. Design and install street lighting to the full frontage of the site in accordance with Ergon requirements, and AS/NZS1158. Submit to Council, street light design plans showing the proposed public lighting system for Council's endorsement.

ENG29. Enter into an agreement with an electricity supplier to provide a public lighting system in accordance with the lighting design plans as required by the previous condition. Submit to Council, written confirmation from an electricity provider that an agreement has been made to provide a public lighting system.

ENG30. Ensure that any new street light poles required on external streets are of a consistent standard (i.e. steel poles) to street light poles within the immediate vicinity of the development.

EARTHWORKS - GENERAL

ENG31. Earthworks per site involving cut or fill greater than 1 metre in height and quantity of material greater than $50m^3$, or earthworks involving cut or fill less than 1 metre in height and quantity of material greater than $100m^3$ requires an Operational Work application.

ENG32. Undertake earthworks in accordance with the provisions of AS3798 Guidelines on Earthworks for Commercial and Residential Developments.

ENG33. Ensure that each lot is self-draining.

EROSION AND SEDIMENT CONTROL - GENERAL

ENG34. Ensure that all reasonable actions are taken to prevent sediment or sediment laden water from being transported to adjoining properties, roads and/or stormwater drainage systems.

ENG35. Remove and clean-up the sediment or other pollutants in the event that sediment or other pollutants are tracked or released onto adjoining streets or stormwater systems, at no cost to Council.

REFERRAL AGENCIES

Not Applicable.

APPROVED PLANS

The following plans are Approved plans for the development:

Approved Plans

Plan No.	Rev.	Plan Name	Date
12778P/1	-	*Proposed Subdivision*, prepared by ONF Surveyors.	16/01/2025

REFERENCED DOCUMENTS

The following documents are referenced in the assessment manager conditions:

Referenced Documents

Document No.	Rev.	Document Name	Date
J002247	1	*Bushfire Management Report*, prepared by Range Environmental.	04/03/2025

ADVISORY NOTES

The following notes are included for guidance and information purposes only and do not form part of the assessment manager conditions:

STANDARD ADVICE

ADV1. The ***relevant period*** for the development approval (Reconfiguring a Lot) shall be four (4) years starting the day the approval is granted or takes effect. In accordance with Section 85(1)(b) of the *Planning Act 2016*, the development approval for Reconfiguring a Lot lapses if a plan for the Reconfiguration that is required to be given to a local government is not given.

An applicant may request Council to extend the relevant period provided that such request is made in accordance with Section 86 of *Planning Act 2016* and before the development approval lapses under Section 85 of the *Planning Act 2016*.

ADV2. This development approval does not authorise any activity that may harm Aboriginal Cultural Heritage. Under the *Aboriginal Cultural Heritage Act 2003* you have a duty of care in relation to such heritage. Section 23(1) provides that *"A person who carries out an activity must take all reasonable and practicable measures to ensure the activity does not harm Aboriginal Cultural Heritage."* Council does not warrant that the approved development avoids affecting Aboriginal Cultural Heritage. It may therefore be prudent for you to carry out searches, consultation, or a Cultural Heritage assessment to ascertain the presence or otherwise of Aboriginal Cultural Heritage. The Act and the associated duty of care guidelines explain your obligations in more detail and should be consulted before proceeding. A search can be arranged by visiting https://www.datsip.qld.gov.au and filling out the Aboriginal and Torres Strait Islander Cultural Heritage Search Request Form.

ADV3. Attached for your information is a copy of Chapter 6 of the *Planning Act 2016* as regards Appeal Rights.

ADV4. Council is offering a reduction in infrastructure charges payable through the development incentive scheme which is available between 1 December 2020 and 31 December 2027. Eligible development under this scheme is required to be completed by 31 December 2027. For further information or application form please refer to the rules and procedures available on Council's website.

ADV5. Infrastructure charges are now levied by way of an infrastructure charges notice, issued pursuant to section 119 of the *Planning Act 2016*.

ADV6. All buildings should be designed and constructed to meet the requirements of the relevant building standards prevailing at the time. This includes the Building Code of Australia (BCAC), the Australian Standard for Construction of buildings in bushfire prone areas (AS3959 – 2018) and relevant Council Bylaws and building regulations.

PROPERTY NOTES

The following property notes will be placed against the subject property in Council's property record system:

PROPERTY NOTE

PN1. Proposed Lots 5-9 (original parcel Lot 162 on FY713) are subject to an approved Bushfire Management Plan. Future dwelling house/habitable building are to be sited in accordance with the approved building location envelope of the approved bushfire management plan.

Drawing Title	Prepared by	Ref No.	Rev.	Date
Bushfire Management Report	Range Environmental	J002247	1	04/03/2025

VARIATION APPROVAL

Not Applicable.

FURTHER DEVELOPMENT PERMITS REQUIRED

- Development Permit for Operational Work.

SUBMISSIONS

Not Applicable.

RIGHTS OF APPEAL

You are entitled to appeal against this decision. A copy of the relevant appeal provisions from the *Planning Act 2016* is attached.

OTHER DETAILS

If you wish to obtain more information about Council's decision, electronic copies are available on line at www.southburnett.qld.gov.au, or at Council Offices.

Yours faithfully

David Hursthouse
COORDINATOR DEVELOPMENT SERVICES

Enc: Adopted Infrastructure Charge Notice
Approved Plans/Documents
Appeal Rights

INFRASTRUCTURE CHARGES NOTICE

(Section 119 of the Planning Act 2016)

APPLICANT:	Zachary Steinhardt **C/-** ONF Surveyors PO Box 896 KINGAROY QLD 4610
APPLICATION:	Reconfiguration of a lot - Subdivision (1 Lot into 5 Lots) - Code Assessable
DATE:	06/05/2025
FILE REFERENCE:	RAL25/0007
AMOUNT OF THE LEVIED CHARGE: *(Details of how these charges were calculated are shown overleaf)*	**$80,340.00** **Total**

$39,368.00	Water Supply Network
$21,692.00	Sewerage Network
$9,640.00	Transport Network
$8,036.00	Parks and Land for Community Facilities Network
$1,604.00	Stormwater Network

AUTOMATIC INCREASE OF LEVIED CHARGE:	The amount of the levied charge is subject to an automatic increase. Refer to the Information Notice attached to this notice for more information on how the increase is worked out.
LAND TO WHICH CHARGE APPLIES:	Lot 162 on FY713
SITE ADDRESS:	102 Scott Street, Wondai
PAYABLE TO:	**South Burnett Regional Council**
WHEN PAYABLE: *(In accordance with the timing stated in Section 122 of the Planning Act 2016)*	Reconfiguring a Lot – When South Burnett Regional Council approves the Plan of Subdivision.
OFFSET OR REFUND:	Not Applicable.

This charge is made in accordance with South Burnett Regional Council's ***Charges Resolution (No. 3) 2019***

DETAILS OF CALCULATION

Water Supply

Adopted Charges

Development Description	Number of Units	Units of Measure	Charge Rate	Reference	Amount
Reconfiguring a Lot	5	Allotments	$9,842.00	CR Table 2.3	$49,210.00

Discounts*

Description	Number of Units	Units of Measure	Discount Rate	Reference	Amount
Reconfiguring a Lot	1	Allotment	$9,842.00	CR Table 2.3	$9,842.00

Sewerage

Adopted Charges

Development Description	Number of Units	Units of Measure	Charge Rate	Reference	Amount
Reconfiguring a Lot	5	Allotments	$5,423.00	CR Table 2.3	$27,115.00

Discounts*

Description	Number of Units	Units of Measure	Discount Rate	Reference	Amount
Reconfiguring a Lot	1	Allotment	$5,423.00	CR Table 2.3	$5,423.00

Transport

Adopted Charges

Development Description	Number of Units	Units of Measure	Charge Rate	Reference	Amount
Reconfiguring a Lot	5	Allotments	$2,410.00	CR Table 2.3	$12,050.00

Discounts*

Description	Number of Units	Units of Measure	Discount Rate	Reference	Amount
Existing Lot	1	Allotment	$2,410.00	CR Table 2.3	$2,410.00

Parks and Land for Community Facilities

Adopted Charges

Development Description	Number of Units	Units of Measure	Charge Rate	Reference	Amount
Reconfiguring a Lot	5	Allotments	$2,009.00	CR Table 2.3	$10,045.00

Discounts*

Description	Number of Units	Units of Measure	Discount Rate	Reference	Amount
Reconfiguring a Lot	1	Allotments	$2,009.00	CR Table 2.3	$2,009.00

Stormwater

Adopted Charges

Development Description	Number of Units	Units of Measure	Charge Rate	Reference	Amount
Reconfiguring a Lot	5	Allotments	$401.00	CR Table 2.3	$2,005.00

Discounts*

Description	Number of Units	Units of Measure	Discount Rate	Reference	Amount
Reconfiguring a Lot	1	Allotments	$401.00	CR Table 2.3	$401.00

Levied Charges

Development Description	Water Supply	Sewerage	Transport	Parks & Land for Community Facilities	Stormwater	Total
Reconfiguring a Lot	$39,368.00	$21,692.00	$9,640.00	$8,036.00	$1,604.00	$80,340.00
Total	**$39,368.00**	**$21,692.00**	**$9,640.00**	**$8,036.00**	**$1,604.00**	**$80,340.00**

** In accordance with Section 3.3 of the Charges Resolution, the discount may not exceed the adopted charge. Any surplus discounts will not be refunded, except at South Burnett Regional Council's discretion.*

INFORMATION NOTICE

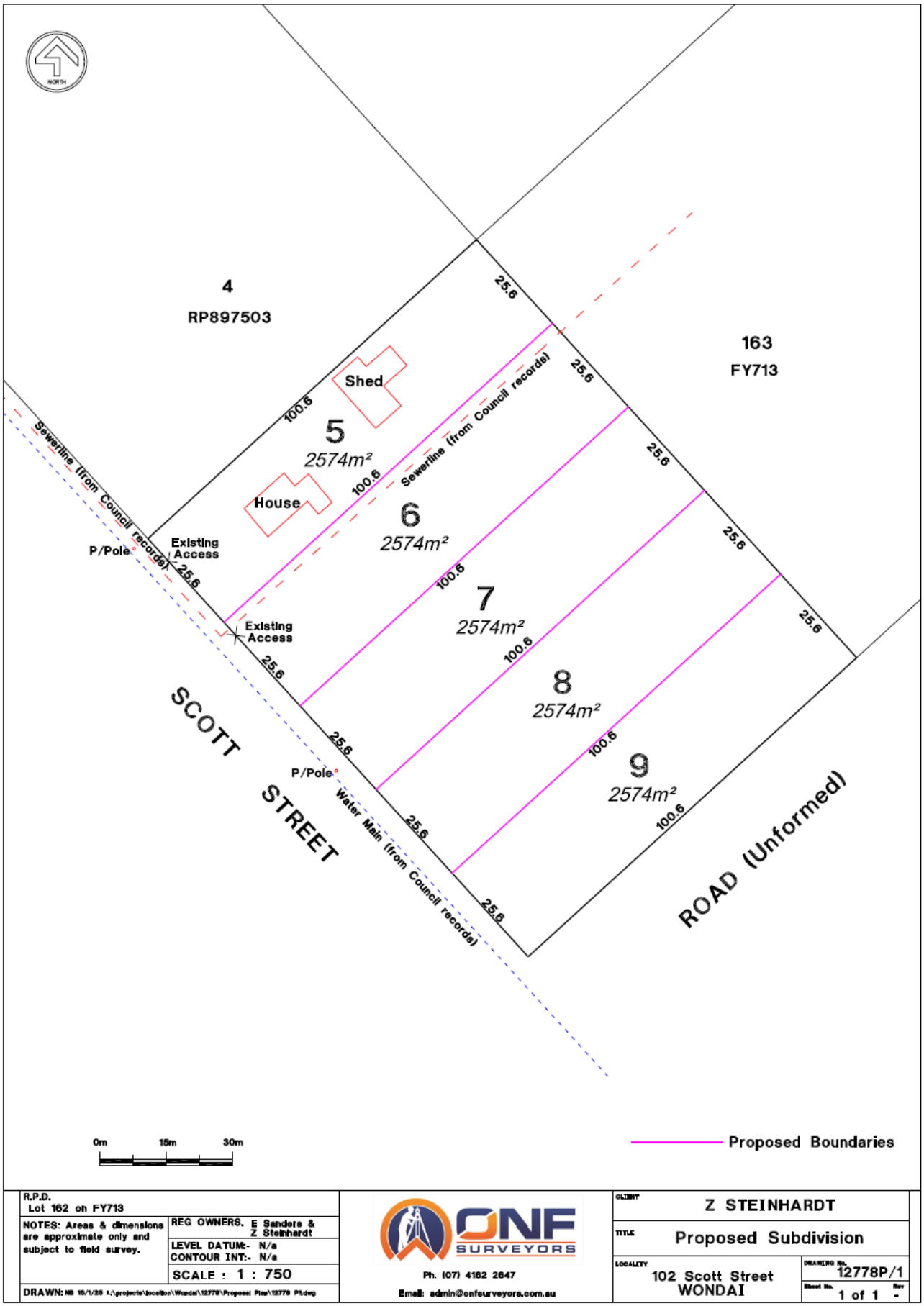
Authority and Reasons for Charge	This Infrastructure Charges Notice has been given in accordance with section 119 of the *Planning Act 2016* to support the Local government's long-term infrastructure planning and financial sustainability.
Appeals	Pursuant to section 229 and Schedule 1 of the *Planning Act 2016* a person may appeal an Infrastructure Charges Notice. Attached is an extract from the *Planning Act 2016* that details your appeal rights.
Automatic Increase Provision of charge rate ($)	An infrastructure charge levied by South Burnett Regional Council is to be increased by the difference between the Producer Price Index (PPI) applicable at the time the infrastructure charge was levied, and PPI applicable at the time of payment of the levied charge, adjusted by reference to the 3-yearly PPI average[1]. If the levied charge is increased using the method described above, the charge payable is the amount equal to the sum of the charge as levied and the amount of the increase. However, the sum of the charge as levied and the amount of the increase is not to exceed the maximum adopted charge the Authority could have levied for the development at the time the charge is paid.
GST	The Federal Government has determined that contributions made by developers to Government for infrastructure and services under the *Planning Act* 2016 are GST exempt.
Making a Payment	This Infrastructure Charges Notice cannot be used to pay your infrastructure charges. To pay the levied charge, you must request an Itemised Breakdown showing the total levied charge payable at the time of payment. An Itemised Breakdown must be presented at the time of payment. An Itemised Breakdown may be requested by emailing info@southburnett.qld.gov.au Payment can be made at any of the following South Burnett Regional Council Offices:

[1] 3-yearly PPI average is defined in section 114 of the *Planning Act 2016* and means the PPI adjusted according to the 3-year moving average quarterly percentage change between financial quarters. PPI Index is the producer price index for construction 6427.0 (ABS PPI) index number 3101 – Road and Bridge construction index for Queensland published by the Australian Bureau of Statistics.

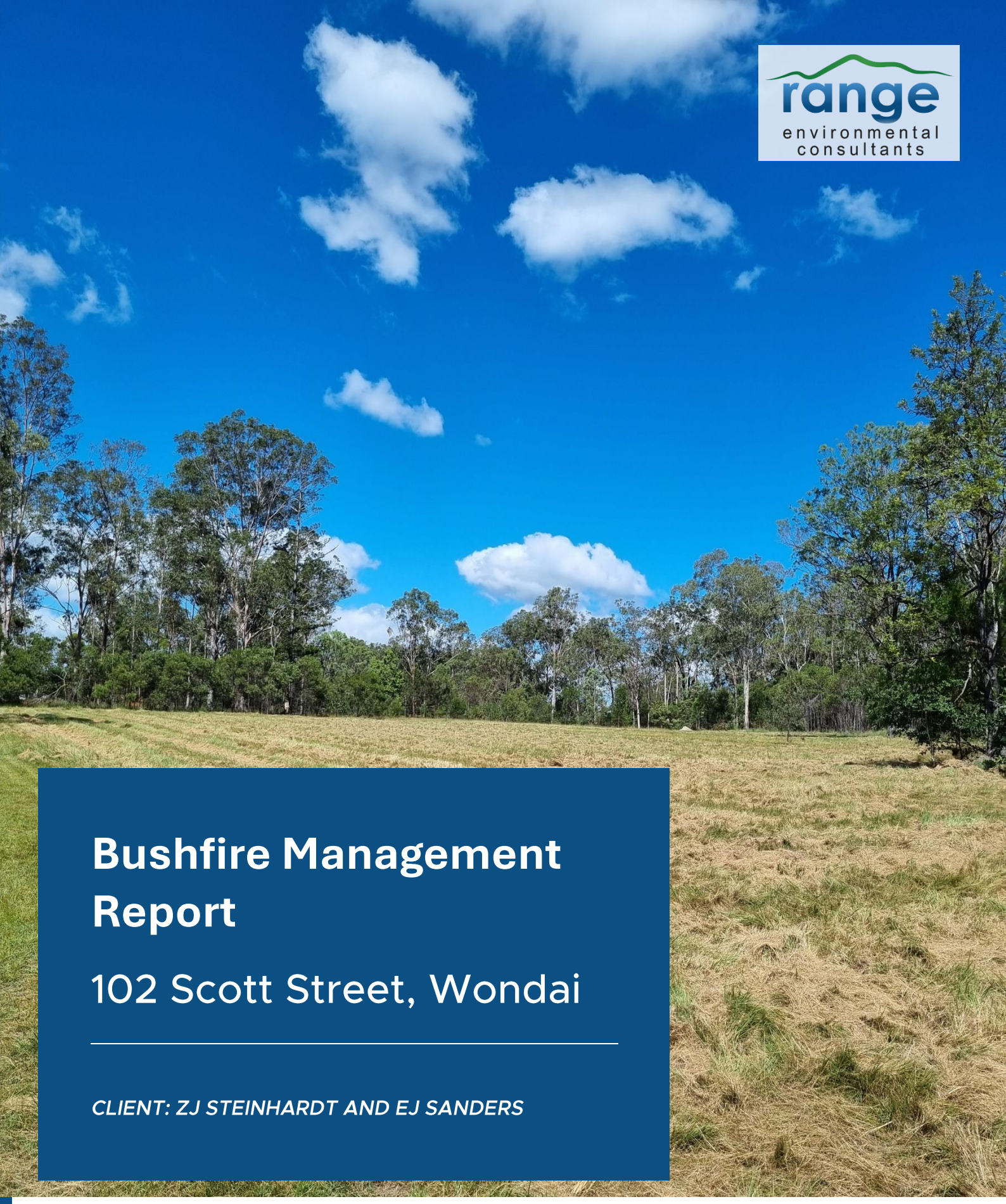
- 69 Hart Street, Blackbutt, 4314;
- 45 Glendon Street, Kingaroy, 4610;
- 42 Stephens Street West, Murgon, 4605;
- 48 Drayton Street, Nanango, 4615;
- McKenzie Street, Wondai, 4606; or
- via other methods identified on the Itemised Breakdown.

Enquiries

Enquiries regarding this Infrastructure Charges Notice should be directed to the SOUTH BURNETT REGIONAL COUNCIL, Department of Finance & Liveability, during office hours, Monday to Friday by phoning (07) 4189 9100 or email at info@sbrc.qld.gov.au



R.P.D. Lot 162 on FY713		ONF SURVEYORS	CLIENT: Z STEINHARDT
NOTES: Areas & dimensions are approximate only and subject to field survey.	REG OWNERS. E Sanders & Z Steinhardt		TITLE: Proposed Subdivision
	LEVEL DATUM:- N/a CONTOUR INT:- N/a	Ph. (07) 4162 2647	LOCALITY: 102 Scott Street WONDAI
	SCALE : 1 : 750	Email: admin@onfsurveyors.com.au	DRAWING No. 12778P/1
DRAWN: NB 18/1/25 L:\projects\boolbon\Wondai\12778\Proposal Plan\12778 P1.dwg			Sheet No. 1 of 1 Rev --



Bushfire Management Report

102 Scott Street, Wondai

CLIENT: ZJ STEINHARDT AND EJ SANDERS

PROJECT NO.	**J002247**
STATUS	**FINAL**
DATE	**04/03/2025**
VERSION	**1**

rangeenviro.com.au

Disclaimer

Range Environmental provides this report directly and exclusively to ZJ Steinhardt and EJ Sanders (the client) for their sole use and solely for the specific purpose for which it is supplied. This report is not to be distributed to any other party without the consent of Range Environmental and Range Environmental will not be liable to any other entity other than the Client in relation to any matters dealt with in this report. Third parties (including, but not limited to, successors or assigns of the Client) may not rely on anything contained in this report whatsoever. The Client indemnifies Range Environmental against any claim, loss, expense, damage or the like arising from any third party which results from the Client providing this report to that third party without the prior knowledge or consent of Range Environmental.

This report has been prepared based on the information, documentation and representations given by the Client to Range Environmental. The Client releases Range Environmental from any claim for damage, cost, loss, expense or the like which is caused or contributed to by the incorrect, inaccurate, false, misleading or deceptive information, documentation or representations given by the Client to Range Environmental. The validity and comprehensiveness of any information given by the Client has not been independently verified by Range Environmental and, for the purposes of this report, it is assumed that the information provided to Range Environmental is both complete and accurate.

Where site inspections, testing, surveying or fieldwork have taken place, this report is based on the site conditions and information made available by the Client or their agents or nominees during the visit, the visual observations and any subsequent discussions with regulatory authorities. It is further assumed that normal activities were being undertaken at the site on the day of the site visit(s), unless explicitly stated otherwise.

The Client acknowledges that this Report and all information and content in it shall at all times be and remain the property of Range Environment and must not be disclosed to any third party at any time, except with the prior consent of Range Environmental or where the Client is required by statute, rule, regulation, judicial process or in connection with any litigation to which it is a party.

It must be borne in mind that the measures dealt with in this report cannot guarantee that a building will survive a bushfire event. This is due mainly to the unpredictable nature and behaviour of fire and the difficulties associated with extreme weather conditions.

It must also be stated that this report is based on site conditions prevailing at the time the inspection was undertaken. These conditions can and will change dependent on both weather conditions and the maintenance undertaken by property owners.

This fire report has been prepared on the basis that bushfire mitigation measures identified are implemented and maintained into the future. Failure to maintain these measures may contribute to the development being exposed to a higher level of bushfire threat and attack.

As site conditions can and will change over time this report is valid for a period of 2 years. Where a development application is lodged greater than 2 years following the version date of this report Range Environmental Consultants are to be contacted to ensure accuracy of this report.

Document Control

Version	Purpose	Lead Author	Reviewer	Approved by	Date
1.	Final Report	SM	RG	LMT	4/03/2025

Executive Summary

A low density residential development comprising a Reconfiguration of a Lot (RoL) is proposed for 102 Scott Street, Wondai, which is formally described as Lot 162 FY713 (Figure 1) (hereafter referred to as 'the site'). The development comprises a one (1) into five (5) lot low density residential subdivision with lot sizes of 2,574m^2 (Figure 2 and Appendix A).

Consideration of bushfire hazard assessment is triggered through development located in an area mapped by the South Burnett Regional Council (SBRC) Bushfire Hazard Overlay. The site is mapped within a Bushfire Hazard Zone under the South Burnett Regional Council Planning Scheme (2017 Version 2.0) which duplicates the Queensland Government State Planning Policy (SPP) Interactive Mapping System Natural Hazards and Risk Resilience Mapping.

Bushfire

The site is identified by the SBRC Planning Scheme (2017 Version 1.4) and SPP mapping as containing areas of Medium Potential Bushfire Intensity and Potential Impact Buffer. The South Burnett Regional Council (SBRC) Planning Scheme utilises the SPP mapping.

Range Environmental completed both desktop and site-based field assessments to establish vegetation hazard classes and potential bushfire risk present and to prepare a bushfire hazard map to guide the development of a bushfire management plan to mitigate the risk of bushfire to life and property at the site.

Mitigation Measures

The implementation of the following measures will assist in identifying potential bushfire hazards and providing mitigating measures to manage potential risks. Mitigation of bushfire risks is predominantly proposed to be achieved through provision of building location envelopes, sensitive building design and construction, with adequate separation from adjacent areas of potentially hazardous vegetation achieved through subdivision design.

Construction of Buildings

Careful design of new buildings should be undertaken, taking into consideration site characteristics and relevant building standards including the Australian Standard for Construction of buildings in bushfire-prone areas (AS3959-2018) and the Building Code of Australia.

Bushfire Attack Levels (BALs) in the order of BAL-12.5 for building location envelopes on Lots 6-8 and BAL-12.5 to BAL-29 for the building location envelope on Lot 9 are identified (Appendix B), dependent on the final location of a dwelling, extent of vegetation management undertaken, and separation distances achieved and maintained.

A site specific bushfire building report should be prepared for new dwellings that identifies actual building location, separation distances from potentially hazardous vegetation, BAL and level of construction required.

Access and Egress

Access to the site is via Scott Street for all lots which is located on the south-western boundary of the site and is of sealed all-weather construction.

Vegetation Management

The majority of the site is mapped as containing Category X (non-remnant) with a limited patch of Category B (remnant) vegetation in the southern portion of the site comprising Regional Ecosystem (RE) 12.11.22. The site contains an existing dwelling and associated infrastructure in the northern portion of the site. The majority of the site contains a sparse canopy of Spotted gum (*Corymbia citriodora subsp. variegata*) with a maintained grassy

understory. The southern portion of the site contains a limited area of dense *Acacia sp*. regrowth with associated Spotted gum (*Corymbia citriodora subsp. variegata*) and Narrow-leaved ironbark (*Eucalyptus crebra*) with a grassy understory. Areas of potentially hazardous vegetation are located to the southeast and southwest of the site. Vegetation to the southeast of the site is separated by cleared vegetation in the adjacent unformed road reserve with vegetation to the southwest separated by Scott Street. To the north and east of the site roads, and properties containing maintained lawns and driveways are located between the site and potentially hazardous vegetation.

Fire Trails

No fire trails are proposed due to the extent of native vegetation present, level of bushfire hazard and separation distances achieved from potentially hazardous vegetation provided by the establishment of APZs at the time of constructing dwellings on individual lots. An existing separation of 8 metres is provided in the unnamed road reserve to the southeast of the site and Scott Street to the southwest of the site provides separation from potentially hazardous vegetation on adjacent lots.

The proposed Lots 5-9 will be readily accessible by emergency service vehicles from Scott Street. Adequate access to the site is available from Scott Street to the southwest. Lots 5-6 contain existing access tracks from Scott Street. The development is buffered by roads, properties containing managed vegetation, lawns and driveways.

Water Supply

The South Burnett Regional Council Planning Scheme (2017 Version 2.0) requires that an adequate water supply suitable for fire-fighting purposes should be available at all times. This can be achieved by connection to a reticulated water supply having sufficient pressure for fire-fighting purposes or provision of a dedicated static water supply that is available solely for fire-fighting purposes and can be accessed by fire fighting vehicles. The SBRC Planning Scheme refers to the QFES Bushfire Resilient Communities document to provide guidance regarding preferred solutions to achieve an appropriate static water supply for fire-fighting purposes.

The SPP (2017 version 6) state interest guidance material recommends a reticulated water supply or a dedicated static water supply that is available solely for fire-fighting purposes and can be accessed by fire-fighting vehicles. It refers to QFES Bushfire Resilient Communities, which recommends 10,000 litres for residential buildings.

Prepare, Act, Survive

It is important that residents are well prepared during times of high fire danger and have well made plans that can be readily enacted in a time of bushfire emergency. The key message being; Prepare, Act and Survive.

Maintenance of Bushfire Mitigation Measures

This bushfire management report has been prepared on the basis that bushfire mitigation measures identified are implemented and maintained into the foreseeable future. Failure to maintain these measures may contribute to the development being exposed to a higher level of bushfire threat and attack.

Routine maintenance of structures should be undertaken to ensure continual compliance with AS3959-2018.

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Tables

Figures

Photographs

Appendices

1 Introduction

Range Environmental was engaged by ZJ Steinhardt and EJ Sanders to prepare a Bushfire Management Report for a proposed development at 102 Scott Street, Wondai which is formally described as Lot 162 FY713 (Figure 1), (hereafter referred to as 'the site'). A development application is proposed for a one (1) into five (5) lot low density residential subdivision with lot sizes of 2,574m^2 (Figure 2 and Appendix A).

This bushfire hazard assessment is provided as an attached supporting document for lodgement of the Development Application (DA) for the site and allows for assessment against the SBRC Planning Scheme (2017 Version 2.0) Bushfire Hazard Overlay Code and the SPP (2017) Natural hazards, risk and resilience (Bushfire) assessment requirements.

1.1 Site Context and Proposed Development

The site occurs on 1.287 hectares of land currently zoned as low density residential under the SBRC Planning Scheme (2017 Version 2.0). The site is bounded by Scott Street to the southwest (Figure 1). Low density residential properties are located to the north, east and northwest, community facilities to the northeast and rural areas to the southeast and southwest. Areas of unmanaged vegetation is present in adjacent lots to the southeast, south and southwest. Wondai State Forest is located further to the east and southeast of the site with McEuen State forest further to the southwest. The site currently contains an existing dwelling and associated infrastructure within the northern extent. A summary of general site details is provided in Table 1.

Table 1 General site detail summary

Address	102 Scott Street, Wondai
Lot on Plan	Lot 162 FY713
Area	1.287 hectares
Local Government Area	South Burnett Regional Council
Planning Scheme / Local Plan	South Burnett Regional Council Planning Scheme (2017 Version 2.0) State Planning Policy
Overlays	Bushfire Hazard
VMA 1999	Category X, Category B
Area Classification / Zone	Low density residential
Proposed Land use	Low density residential

The proposed development will comprise a one (1) into five (5) lot low density residential subdivision (Figure 2). The development is located on a sloping site, with the land falling from the southeast to the northwest with underlying slopes in the order of 5% or 3 degrees (Figure 3). The lot on plan and addresses of adjacent properties are provided in Figure 4 for where reference to these are made.

The majority of the site contains managed grassy vegetation with scattered mature Spotted gum trees. The southern portion of the site contains a limited area of dense Acacia species regrowth with associated Spotted gum and Narrow-leaved ironbark with a grassy understory. The following photographs provide an overview of the condition of the site and surrounds at the time of site assessment.

Photograph 1 View to the southwest from the site of potentially hazardous VHC 9.2.

Photograph 2 View of existing separation by Scott Street from potentially hazardous vegetation to the southwest.

Photograph 3 View to the southeast over the unnamed road reserve and areas of native vegetation.

Photograph 4 View to the northeast over the southern portion of the site of existing separation from potentially hazardous vegetation.

Photograph 5 View southeast of potentially hazardous vegetation in the unnamed road reserve and on Lot 470 FY2937.

Photograph 6 View to the southeast of existing regrowth of Acacia on the boundary of Lot 9.

Photograph 7 View of VHC 41.4 to the east of Lot 8.

Photograph 8 View of typical VHC 39.2 in association with mature Spotted gum trees and maintained understory on Lots 160 and 163 FY713.

Figure 1
Site Locality

Project: Bushfire Management Report, 102 Scott Street, Wondai

Client: ZJ Steinhardt & EJ Sanders

Project No.: J002247

Compiled by: SkyeMelton Date: 17/02/2025
Approved by: RG Date: 17/02/2025

Metres
0 25 50

Legend

- Cadastre
- Roads
- Site Boundary

The content of this document includes third party data. Range Environmental Consultants does not guarantee the accuracy of such data.

Source: Cadastral data sourced from DNRME (2025). Aerial imagery sourced from NearMap (2025).

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Figure 2 Proposed Development

Project: Bushfire Management Report, 102 Scott Street, Wondai

Client: ZJ Steinhardt & EJ Sanders

Project No.: J002247

Compiled by: SkyeMelton Date: 17/02/2025
Approved by: RG Date: 17/02/2025

Metres
0 10 20

Legend

- Cadastre
- Roads
- Lot Layout
- Building Location Envelope
- Asset Protection Zone

The content of this document includes third party data. Range Environmental Consultants does not guarantee the accuracy of such data.

Source: Cadastral data sourced from DNRME (2025). Aerial imagery sourced from NearMap (2025).

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Figure 3 Topography of the Site

Project: Bushfire Management Report, 102 Scott Street, Wondai

Client: ZJ Steinhardt & EJ Sanders

Project No.: J002247

Compiled by: SkyeMelton Date: 17/02/2025
Approved by: RG Date: 17/02/2025

Metres
0 30 60

Legend

- Cadastre
- Roads
- 150m Buffer
- Lot Layout
- Building Location Envelope
- Asset Protection Zone
- Contours (5m)

Source: Cadastral data sourced from DNRME (2025). Aerial imagery sourced from NearMap (2025).

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Figure 4
Real Property Descriptions for Adjacent Lots

Project: Bushfire Management Report, 102 Scott Street, Wondai

Client: ZJ Steinhardt & EJ Sanders

Project No.: J002247

Compiled by: SkyeMelton Date: 17/02/2025
Approved by: RG Date: 17/02/2025

Metres
0 25 50

Legend

- Cadastre
- Roads
- Site Boundary

Source: Cadastral data sourced from DNRME (2025). Aerial imagery sourced from NearMap (2025).

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2 Vegetation

2.1 Regulated Vegetation

The current Vegetation Management Supporting Map identifies that the majority of the site is mapped as Category X (non-remnant) vegetation with a limited patch of Category B (remnant) vegetation in the southern portion of the site comprising Regional Ecosystem (RE) 12.11.22.

The extent of mapped vegetation in the area and its conservation status is shown in Figure 5, with Table 2 providing a description of the mapped RE. Spotted gum (*Corymbia citriodora subsp. variegata*) and Narrow-leaved ironbark (*Eucalyptus crebra*) were the dominant mature overstorey species on site with heights in the order of 15-20 metres. Vegetation within the southern portion of the site contained a limited area of dense *Acacia sp.* regrowth with associated Spotted gum and Narrow-leaved ironbark with a grassy understory.

Table 2 Description of regional ecosystems for the site

Regional Ecosystem	12.11.22	**Conservation Status**	Least concern
Description	*Angophora leiocarpa*, *Eucalyptus crebra* +/- *Corymbia intermedia*, *E. longirostrata*, *E. major*, *E. portuensis*, *C. citriodora subsp. variegata* woodland to open forest. Occurs on Palaeozoic and older moderately to strongly deformed and metamorphosed sediments and interbedded volcanics. Not a Wetland. (BVG1M: 9h).		

Figure 5 Regulated Vegetation and Regional Ecosystems

Project: Bushfire Management Report, 102 Scott Street, Wondai

Client: ZJ Steinhardt & EJ Sanders

Project No.: J002247

Compiled by: SkyeMelton Date: 17/02/2025
Approved by: RG Date: 17/02/2025

Metres
0 30 60

Legend

- Cadastre
- Roads
- 150m Buffer
- Lot Layout
- Building Location Envelope
- Asset Protection Zone
- Category A or B that is of least concern
- non-remnant

Source: Cadastral data sourced from DNRME (2025). Aerial imagery sourced from NearMap (2025).

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3 Bushfire

3.1 Overview

The Queensland State-wide mapping methodology was used to identify Bushfire Prone Areas on and surrounding the site. This methodology scales bushfire hazard based on the Potential Fire-line Intensity of a severe bushfire and can be used to predict the radiation profile of areas adjacent to potentially hazardous vegetation. The Potential Fire-line Intensity is a useful indicator of the level of safety afforded for resident egress and firefighter access.

The Potential Fire-line Intensity is calculated using 3 key factors operating at a landscape level, these being Potential Fuel Load (tonnes / hectare), Maximum Landscape Slope (degrees) and Fire Weather Severity (Forest Fire Danger Index). Figure 6 illustrates the variables used to determine the Potential Fire-line Intensity.

Figure 6 Variables used to determine Potential Fire-line Intensity. (Redrawn from Leonard et al 2013)

Potential Fuel Load represent the approximate mass (measured in tonnes/ha) of combustible fuel material that would typically accumulate if vegetation is not regularly burnt or subject to fuel reduction practices. Potential fuel loads vary according to the type of vegetation present and management of it. Fuel; its availability, arrangement, size, amount and moisture content contribute to the speed and intensity of a bushfire. The type of vegetation present determines the flammability of the fuel, with the finer and drier the fuel, the more easily it will burn. Fuel loads in general are related to the quantities of fine fuels available to burn. The primary components of fuel loads are the fine fuels; that is; flammable materials that are less than 6 mm in diameter such as leaves, twigs and bark principally on or near the ground.

Slope or steepness of land (described as Landscape Slope) is a major determinant of fire behaviour, controlling fire spread, the rate of fuel consumption and thus Potential Fire-line Intensity.

Fire behaviour is influenced by a range of weather variables including recent precipitation, current wind speed, relative humidity and temperature. Due to the complexity of these influences, they are commonly combined into a single weather index that can be used to estimate potential fire behaviour. The McArthur (1973) Forest Fire Danger Index (FFDI) is the best known, most widely used and thoroughly tested fire weather index adopted by fire agencies throughout Australia.

3.2 Bushfire Hazard Mapping

The bushfire hazard for the site and surrounds as identified by the Queensland Government SPP Interactive Mapping System using the Statewide mapping methodology is shown in Figure 7. The SPP mapping indicates the site contains areas of Medium Potential Bushfire Hazard and Potential Impact Buffer. SBRC utilises the SPP Bushfire Hazard mapping.

The site assessment identified that the bushfire hazard is less than levels mapped by the Queensland Government due to historical and current vegetation management practices on the site and in the surrounding landscape. Additional details are provided in Section 3.6 which identifies the VHCs present.

Under adverse conditions, a bushfire could potentially approach from the east, southeast and southwest. Severe fire weather conditions are typically associated with hot strong westerly to northerly winds. Bushfires in the area have the potential to generate quantities of embers that could impact on a building even though the fire does not necessarily reach it.

A field assessment was conducted to ground-truth the vegetation hazard classes (VHCs) present within and surrounding the site and the level of exposure to bushfire risk. VHCs are discussed in Section 3.6.

3.3 Fire Brigade

The development site is contained within the Queensland Fire and Rescue Service Wondai Fire and Rescue Station district. The closest fire brigade equipped to fight structural fires is the Wondai Fire and Rescue Station (auxiliary) located at 82 Mackenzie Street, Wondai approximately 1 kilometre to the northwest of the site.

3.4 Fire Run

The length of fire run influences the area in which a fire has to develop and reach its potential maximum intensity for the conditions prevailing at the time. It is important to assess the length of fire run to determine the potential scale and intensity of fires that may occur in the area. Fire runs less than 1 kilometre in length are generally considered to pose a lesser risk than those with a longer run. Fire runs may be modified by natural features such as creeks, rock formation and vegetation types and be influenced by weather and fuel conditions.

A fire run of 0.4km is identified to the southwest and is fragmented by Scott Street and Old Wondai Road. Fire runs of greater than 2km to the southwest in association with McEuen State Forest and to the east and southeast in association with Wondai State Forest have been identified and are connected to the site by areas of unmanaged vegetation on neighbouring properties. Fire runs to the southwest are fragmented by tracks, with fire runs to the east and southeast fragmented by tracks, overhead electricity easements and roads.

Figure 8 shows the location of potential fire runs and their relationship to the development.

Figure 7
SPP Bushfire Hazard Map

Project: Bushfire Management Report, 102 Scott Street, Wondai

Client: ZJ Steinhardt & EJ Sanders

Project No.: J002247

Compiled by: SkyeMelton Date: 17/02/2025
Approved by: RG Date: 17/02/2025

Metres
0 30 60

Legend

- Cadastre
- Roads
- 150m Buffer
- Lot Layout
- Building Location Envelope
- Asset Protection Zone
- Very High Potential Bushfire Intensity
- High Potential Bushfire Intensity
- Medium Potential Bushfire Intensity
- Potential Impact Buffer

Source: Cadastral data sourced from DNRME (2025). Aerial imagery sourced from NearMap (2025).

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Figure 8 Potential Fire Runs

Project: Bushfire Management Report, 102 Scott Street, Wondai

Client: ZJ Steinhardt & EJ Sanders

Project No.: J002247

Compiled by: SkyeMelton Date: 18/02/2025
Approved by: RG Date: 18/02/2025

Metres
0 140 280

Legend

- Cadastre
- Roads
- 150m Buffer
- Lot Layout
- Asset Protection Zone
- Potential Fire Runs

Source: Cadastral data sourced from DNRME (2025). Aerial imagery sourced from NearMap (2025).

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3.5 Climatic Conditions and Forest Fire Danger Index

The McArthur Forest Fire Danger Index (or FFDI) is the most common proxy of fire weather severity in Australia and is used for bushfire hazard assessments, emergency management and in regulations such as the Australian Standard 3959–2018 Construction of buildings in bushfire-prone areas.

Unlike Queensland's adoption of AS 3959–2018 (Method 1) that uses a single FFDI value for all of Queensland (40), the estimate of fire weather severity is used as an input to identifying the SPP bushfire prone areas in Queensland recognises that weather conditions vary across the state.

Spatially explicit 5% annual exceedance probability (AEP) fire weather event FFDI values for Queensland have been estimated from a gridded (83 kilometre, three-hourly resolution) prediction of FFDI from long-term spatial weather products produced by the Australian Bureau of Meteorology (BoM). The adopted FFDI values reflect a 5% AEP weather event. Adopted FWS (i.e. 5% AEP fire weather event FFDI) values for Queensland vary from 50 in Southeast Queensland and Cape York bioregions to 130 in the south-western parts of the state.

Adopting a worst case scenario, an FDI of 55 was used for the site when calculating Bushfire Attack Levels (BAL) for 'the site'. Figure 9 provides a Fire Danger Index (FDI) map of Southeast Queensland and identifies the location of the site.

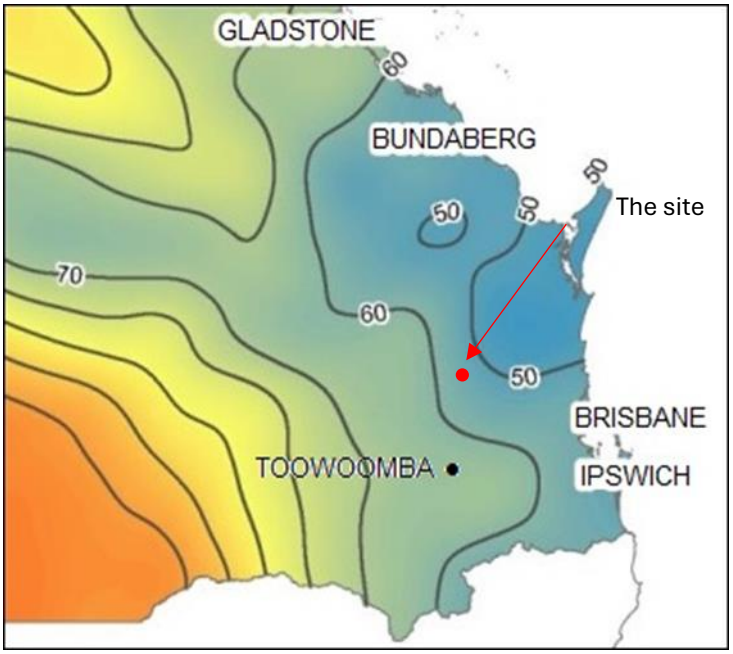

Figure 9 FDI map for Southeast Queensland. Leonard. J. A New Methodology for State-wide Mapping of Bushfire Prone Areas in Queensland. 2014

3.6 Vegetation Hazard Classes

The new methodology for State-wide mapping of bushfire prone areas in Queensland identifies Potential Fuel Loads that are assigned to vegetation categories (Vegetation Hazard Classes) formed by amalgamating land use and vegetation types with a moderately consistent fuel load and structure. The Potential Fuel Load assigned to each Vegetation Hazard Class (VHC) is generally representative of the higher fuel load expected for the typical vegetation types, landscape and site conditions within each Vegetation Hazard Class. This Potential Fuel Load of each Vegetation Hazard Class would approximate the 80th percentile fuel load of the "long unburnt condition" for the class (generally greater than 10 years without burning). A field assessment was conducted to ground-truth the vegetation hazard classes (VHCs) present within and surrounding the site and the level of exposure to bushfire risk. The mapped VHCs for the site are shown in Figure 10.

The Queensland State Government has introduced a State-wide mapping methodology to identify Bushfire Prone Areas. This methodology was developed by the CSIRO Climate Adaptation Flagship and scales bushfire hazard based on the Potential Fire-line Intensity of a severe bushfire. It is used to predict the radiation profile of areas adjacent to potentially hazardous vegetation. A key component of the methodology is the allocation of Vegetation Hazard Classes (VHC) which are used to estimate Potential Fuel Loads. These fuel loads were derived from a combination of expert appraisals and field measurements using the upper range of fuel loads for each fuel element (i.e. surface, near surface, elevated and bark). A "long unburnt condition" of generally greater than 10 years without burning was used for estimating fuel loads.

The dominant VHC mapped for the site and immediate adjoining areas by the State-wide mapping methodology was VHC 9.2 Moist to dry eucalypt woodland on coastal lowlands and ranges, VHC 39.2 Low to moderate tree cover in built-up areas, VHC 40.4 Continuous low grass or tree cover, VHC 41.4 Discontinuous low grass or tree cover and VHC 42.6 Nil to very low vegetation cover (Figure 10). Table 3 provides a summary of the mapped VHCs and potential fuel loads.

Table 3 Mapped Vegetation Hazard Classes and Potential Fuel Loads

Vegetation Hazard Class (VHC)	Surface and near surface Fuel Load (t/ha)	Total Fuel Load (t/ha)	Prone type[1]	Fuel continuity[2]
9.2 Moist to dry eucalypt woodland on coastal lowlands and ranges	14.9	17.2	1	1
39.2 Low to moderate tree cover in built-up areas	5.0	8.0	3	2
40.4 Continuous low grass or tree cover	4.5	5.0	2	1
41.4 Discontinuous low grass or tree cover	2.5	3.0	3	2
42.6 Nil to very low vegetation cover	2.0	2.0	3	2

Fuel load data sources from Bushfire Resilient Communities Technical Reference Guide October 2019

Range Environmental completed a detailed site assessment to facilitate preparation of a representative vegetation hazard class map in relation to the site. Based on detailed field assessment a site-based vegetation hazard class map has been produced to accurately determine potential bushfire hazards and resulting building requirements for the site. Vegetation immediately southeast on adjacent lots was assessed as aligning with mapped levels of VHC 9.2 Moist to dry eucalypt woodland on coastal lowlands and ranges. Vegetation to the southwest of the site aligned with VHC 9.2 and was separated from the site by Scott Street Road reserve which aligned with VHC 42.6. Managed vegetation surrounding the existing infrastructure onsite was assessed as aligning with VHC 41.4 Discontinuous low grass or tree cover with areas of VHC 39.2 Low to moderate tree cover in built-up areas in the southern portion of the site in association with existing sparse trees. Vegetation to the north and northwest of the site aligned with VHC 42.6 Nil to very low vegetation cover in association with low density residential areas. Vegetation to the east of the site aligned with VHC 39.2 Low to moderate tree cover in built-up areas with Spotted gum canopy trees in adjacent lots and a managed grassy understory. The ground-truthed VHCs for the site and surrounds are shown in Figure 11. Following development for the site, a concept post-development VHC map is presented in Figure 12 which demonstrates the VHCs following vegetation management of the concept APZs onsite. Post-development, the BLEs will be located within areas of VHC 41.1 Discontinuous low grass or tree cover with a Potential Bushfire Hazard Class of 'Low hazard' (further detailed in

[1] Prone type: 1= Bushfire prone, 2 = Grass fire prone, 3 = Low hazard

[2] Fuel continuity: 1= Continuous, 2 = Discontinuous

section 3.7). Post-development the APZs will be located within an area of VHC 41.4. Table 4 provides a summary of the ground-truthed and post development VHCs and potential fuel loads.

The identification of VHCs determines the extent to which the vegetation contributes to prevailing bushfire hazard. All VHCs are identified as being one of three prone types[1], with prone types being a categorical indicator of the capacity of a VHC to support a significant bushfire. VHCs are also given a binary indicator of fuel continuity[2]. Continuous fuel vegetation generally has a consistent distribution of fuel. Discontinuous fuel types include non-hazardous vegetation or land uses.

VHC 39.2, 40.4, 41.4 and 42.6 are considered non-bushfire prone VHCs under Bushfire Resilient Communities (2019) and BAL calculations using the SPP APZ calculator involving these VHCs results in a radiant heat flux of 0kW/m^2 (BAL-Low). Lots 5-9 will be located within an area of VHC 41.4 which have a prone type of Low hazard and discontinuous fuel loads and have been assessed as having Potential Bushfire Hazard Class of 'Low hazard' (further detailed in Section 3.7).

Table 4 Ground-truthed and Post-development Vegetation Hazard Classes and Potential Fuel Loads

Vegetation Hazard Class (VHC)	Surface and near surface Fuel Load (t/ha)	Total Fuel Load (t/ha)	Prone type[1]	Fuel continuity[2]
9.2 Moist to dry eucalypt woodland on coastal lowlands and ranges	14.9	17.2	1	1
39.2 Low to moderate tree cover in built-up areas	5.0	8.0	3	2
40.4 Continuous low grass or tree cover	4.5	5.0	2	1
41.4 Discontinuous low grass or tree cover	2.5	3.0	3	2
42.6 Nil to very low vegetation cover	2.0	2.0	3	2

Fuel load data sources from Bushfire Resilient Communities Technical Reference Guide October 2019

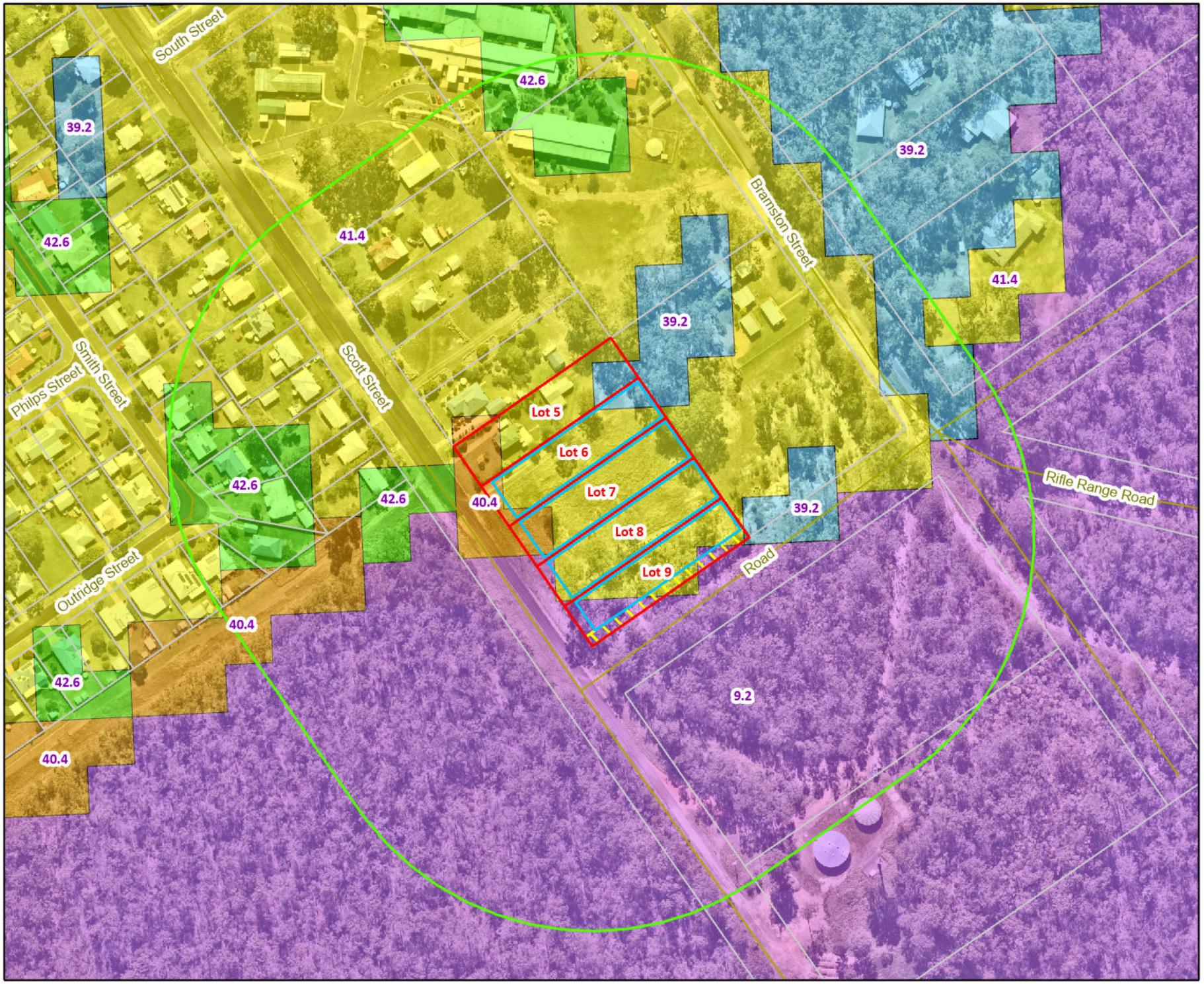

Figure 10 Vegetation Hazard Class Mapping

Project: Bushfire Management Report, 102 Scott Street, Wondai

Client: ZJ Steinhardt & EJ Sanders

Project No.: J002247

Compiled by: SkyeMelton Date: 18/02/2025
Approved by: RG Date: 18/02/2025

Metres
0 30 60

Legend

- Cadastre
- Roads
- 150m Buffer
- Lot Layout
- Building Location Envelope
- Asset Protection Zone
- 9.2 Moist to dry eucalypt woodland on coastal lowlands and ranges
- 39.2 Low to moderate tree cover in built-up areas
- 40.4 Continuous low grass or tree cover
- 41.4 Discontinuous low grass or tree cover
- 42.6 Nil to very low vegetation cover

Source: Cadastral data sourced from DNRME (2025). Aerial imagery sourced from NearMap (2025).

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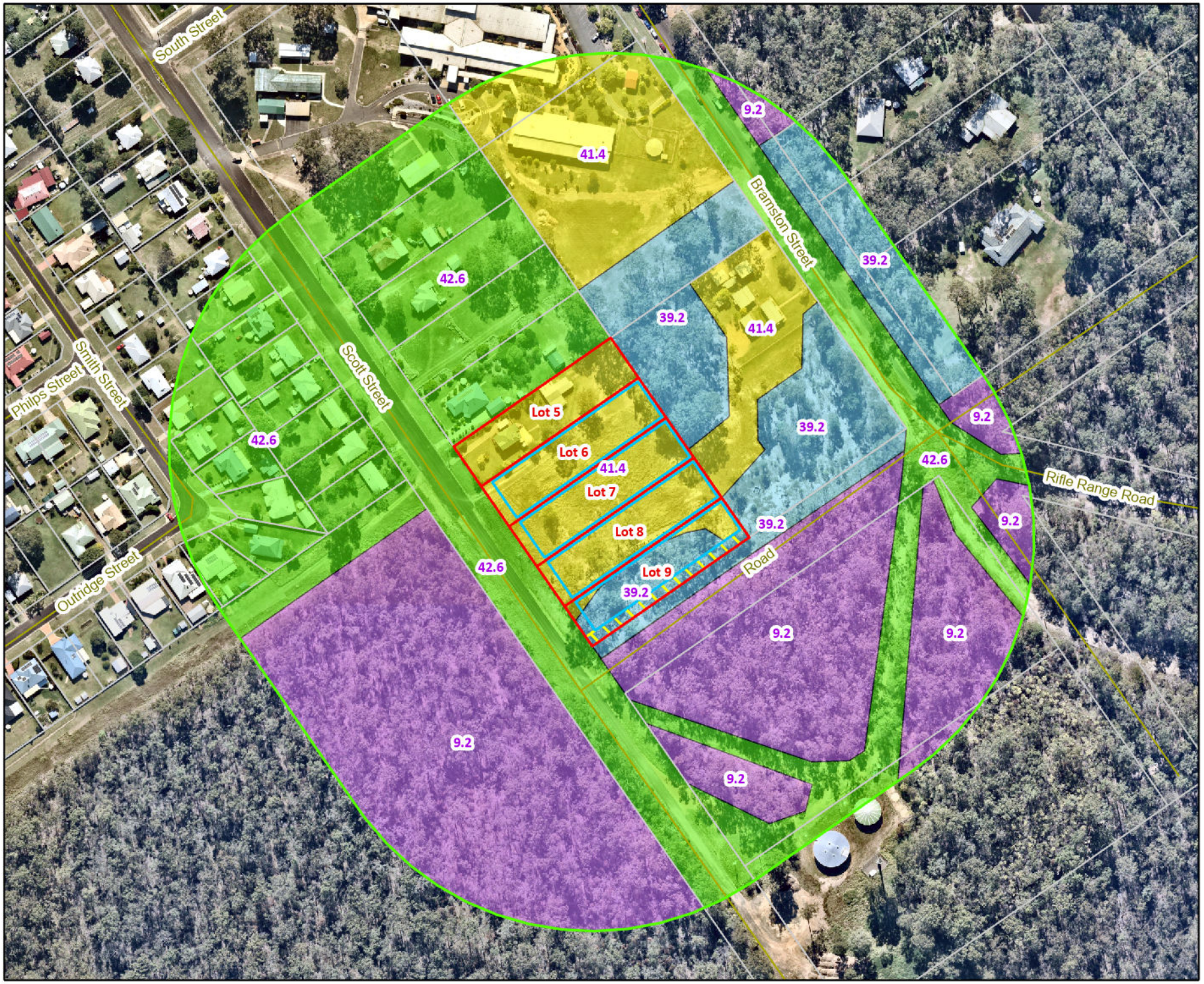

Figure 11 Ground-truthed Vegetation Hazard Class

Project: Bushfire Management Report, 102 Scott Street, Wondai

Client: ZJ Steinhardt & EJ Sanders

Project No.: J002247

Compiled by: SkyeMelton Date: 3/03/2025
Approved by: RG Date: 3/03/2025

Metres
0 30 60

Legend

- Cadastre
- Roads
- 150m Buffer
- Lot Layout
- Building Location Envelope
- Asset Protection Zone
- 9.2 Moist to dry eucalypt woodland on coastal lowlands and ranges
- 39.2 Low to moderate tree cover in built-up areas
- 40.4 Continuous low grass or tree cover
- 41.4 Discontinuous low grass or tree cover
- 42.6 Nil to very low vegetatoin cover

Source: Cadastral data sourced from DNRME (2025). Aerial imagery sourced from NearMap (2025).

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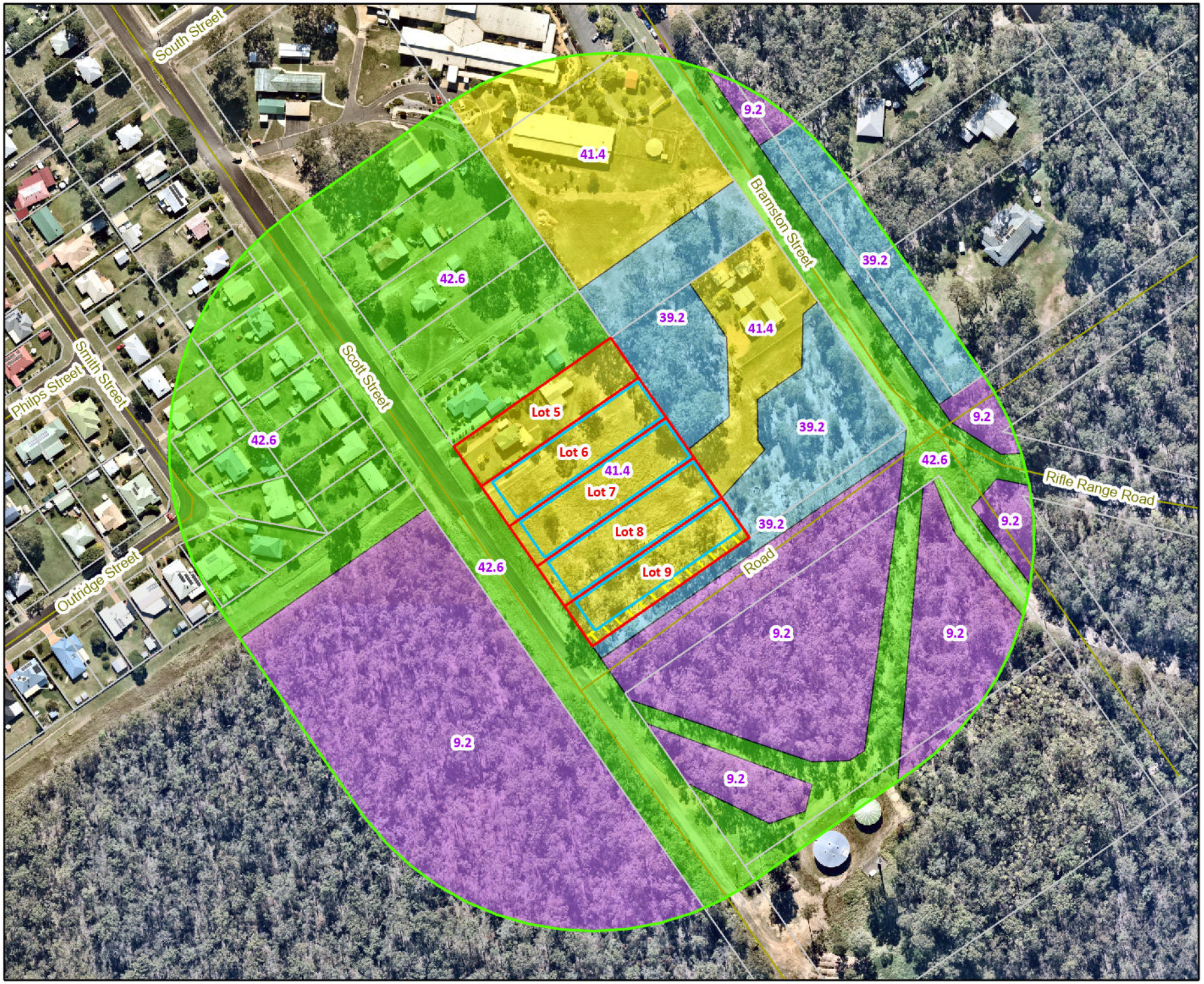

Figure 12 Post-development Vegetation Hazard Class

Project: Bushfire Management Report, 102 Scott Street, Wondai

Client: ZJ Steinhardt & EJ Sanders

Project No.: J002247

Compiled by: SkyeMelton Date: 3/03/2025
Approved by: RG Date: 3/03/2025

Metres
0 30 60

Legend

- Cadastre
- Roads
- 150m Buffer
- Lot Layout
- Building Location Envelope
- Asset Protection Zone
- 9.2 Moist to dry eucalypt woodland on coastal lowlands and ranges
- 39.2 Low to moderate tree cover in built-up areas
- 41.4 Discontinuous low grass or tree cover
- 42.6 Nil to very low vegetatoin cover

Source: Cadastral data sourced from DNRME (2025). Aerial imagery sourced from NearMap (2025).

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3.7 Potential Bushfire Hazard Classes

A 'fit for purpose' approach was undertaken to identify the bushfire risk present using the statewide mapping methodology in conjunction with local-scale vegetation and slope maps. The location of post-development VHCs on the site and in the surrounding landscape in conjunction with the underlying slope of land was utilised to develop Potential Bushfire Hazard Classes. The Potential Fireline Intensity calculator was used to calculate the Potential Fireline Intensity (kW/m) to which a Potential Bushfire Hazard Class was attributed. The maximum slope in any direction was used for each area of identified post-development VHC as outlined in Figure 11. Potentially hazardous vegetation is located downslope and level with and upslope of the proposed development. Table 5 provides the various site attributes used to calculate the Potential Bushfire Hazard Class at representative locations around the site. Table 6 provides the correlation between Potential Fireline Intensity and Potential Bushfire Hazard Class.

Table 5 Attributes used to calculate the Potential Bushfire Hazard Class

Vegetation Hazard Class (VHC)	Potential Fuel Load (t/ha)	Potential Fire Weather Severity (FFDI)	Slope under hazardous vegetation (deg)	Potential Fireline Intensity (kw/m)	Potential Bushfire Hazard Class
9.2 Moist to dry eucalypt woodland on coastal lowlands and ranges	17.2	55	1	10809	Medium
9.2 Moist to dry eucalypt woodland on coastal lowlands and ranges	17.2	55	3	12408	Medium
39.2 Low to moderate tree cover in built-up areas	8.0	55	1	2338	Low
39.2 Low to moderate tree cover in built-up areas	8.0	55	3	2684	Low
41.4 Discontinuous low grass or tree cover	3.0	55	1	329	Low
41.1 Discontinuous low grass or tree cover	3.0	55	3	377	Low
42.6 Nil to very low vegetation cover	2.0	55	1	146	Low
42.6 Nil to very low vegetation cover	2.0	55	3	168	Low

Table 6 Potential Bushfire Hazard Classes

Potential Bushfire Intensity Class	Potential Fire-line Intensity
1. Very high (potential intensity)	40,000+kW/m
2. High (potential intensity)	20,000 – 40,000kW/m
3. Medium (potential intensity)	4,000 – 20,000kW/m
4. Low hazard (potential impact buffer)	<4,000kW/m

Figure 13 identifies the Potential Bushfire Hazard for the site and immediate surrounding areas (within a radius of 150 metres of the site). Areas assessed as Low hazard within a 100 metre radius of vegetation mapped as comprising Medium Potential Intensity or higher were classified as 'Potential Impact Buffer'.

The location of vegetation in relation to the site is a key attribute to be considered when mapping bushfire hazards. In this situation, most of the potentially hazardous vegetation is located downslope and level with and upslope of the site.

Additional details on the Bushfire Attack Level (BAL) that the site may be exposed to is provided in Appendix D Explanation of Bushfire Attack Levels.

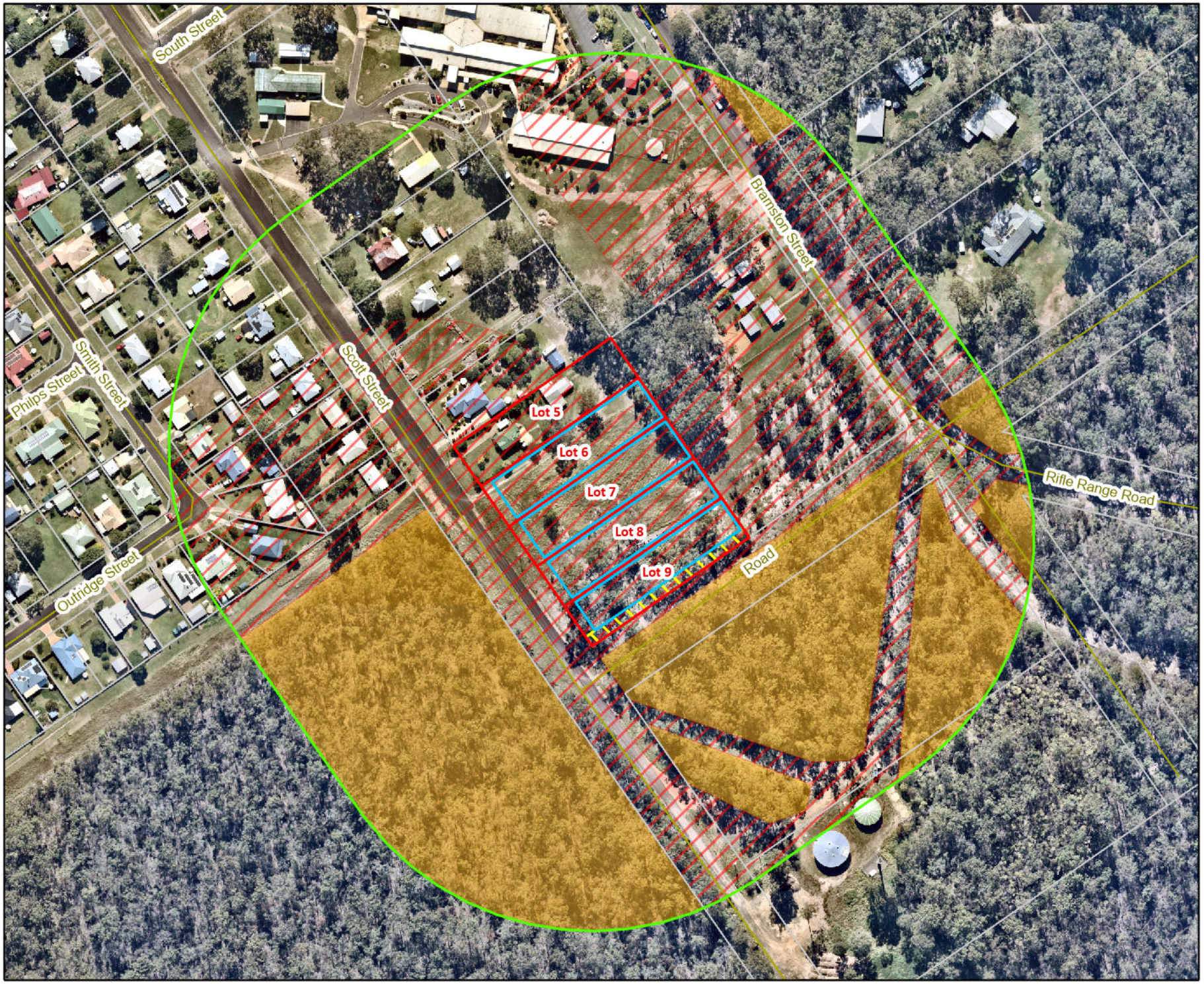

Figure 13 Potential Bushfire Hazard Map

Project: Bushfire Management Report, 102 Scott Street, Wondai

Client: ZJ Steinhardt & EJ Sanders

Project No.: J002247

Compiled by: SkyeMelton Date: 18/02/2025
Approved by: RG Date: 18/02/2025

Metres
0 30 60

Legend

- Cadastre
- Roads
- 150m Buffer
- Lot Layout
- Building Location Envelope
- Asset Protection Zone
- Very High Potential Bushfire Intensity
- High Potential Bushfire Intensity
- Medium Potential Bushfire Intensity
- Potential Impact Buffer

Source: Cadastral data sourced from DNRME (2025). Aerial imagery sourced from NearMap (2025).

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4 Mitigating Potential Bushfire Impact

A number of actions should be implemented to mitigate the potential impacts of bushfire on the development. This suite of bushfire mitigation measures, when implemented in an integrated manner can achieve a better outcome for the site than when used individually and in isolation from other measures. This suite of potential measures is illustrated in Figure 14.

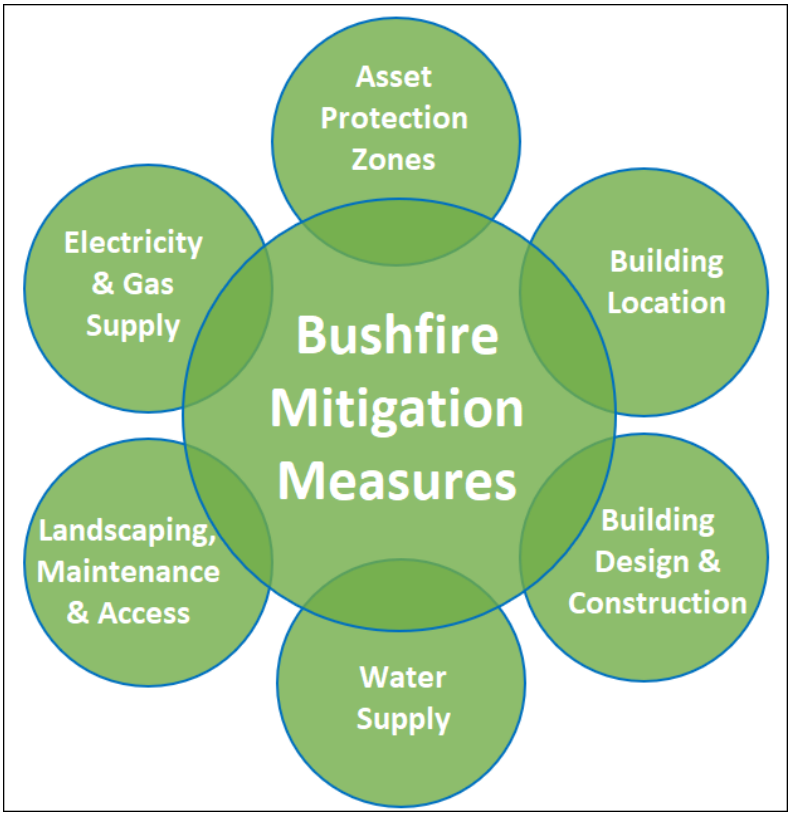


Figure 14 Bushfire mitigation measures in combination. (Redrawn from Guideline for Building in Bushfire Prone Areas; Emergency Management Victoria 2016)

4.1 Building Location and Separation

The location of buildings and their relationship with vegetation in the immediate surrounding area is critical for maximising their survival in the event of a bushfire. A building location envelope has been identified for Lots 6-8 to ensure that a potential dwelling achieves a minimum separation distance of 35 metres to the southeast and southwest from potentially hazardous vegetation to enable a BAL of no greater than BAL 12.5 to be achieved. A building location envelope has been identified for Lot 9 to ensure that a potential dwelling achieves a minimum separation distance of 14 metres to the southeast and 35 metres to the southwest from potentially hazardous vegetation to enable a BAL of no greater than BAL-29 to be achieved (Appendix B). An asset protection zone of 6 metres is to be maintained on the southeastern boundary of Lot 9, with an existing 8 metre separation provided within the unnamed road reserve to the southeast of the site. Failure to maintain these separation distances will result in a higher Bushfire Attack Level (BAL) being applied to the dwelling. Building issues can be adequately addressed during the design and construction phase with compliance to the National Construction Code and the Australian Standard for construction of buildings in bushfire-prone areas (AS3959-2018).

Appendix C Calculation of Bushfire Hazard contains additional information on the methodologies used to calculate the potential bushfire hazard that the site is exposed to and Appendix D has an explanation of BALs.

4.2 Asset Protection Zones

The establishment of an Asset Protection Zone (APZ) is an effective mechanism for reducing bushfire hazards that a building may be exposed to. An APZ is a fuel-reduced area surrounding a built asset or structure. Potential bushfire fuels should be minimised within an APZ, so that the vegetation within it does not provide a path for the transfer of fire to the asset either from the ground level or through the tree canopy. An APZ, if designed correctly, implemented and maintained regularly, will reduce the risk of:

- direct flame contact on the asset;
- damage to the built asset from intense radiant heat; and
- ember attack.

The APZ is located between the asset and the bushfire hazard and consists of an Inner Protection Area (IPA) and an Outer Protection Area (OPA). The IPA is the area closest to the asset and creates a fuel-managed area which can minimise the impact of direct flame contact and radiant heat on the development and be a defendable space. Vegetation within the IPA should be kept to a minimum level. Litter fuels within the IPA should be kept below 1cm in height and be discontinuous. The OPA is located between the IPA and the unmanaged vegetation. Vegetation within the OPA can be managed to a more moderate level with the reduction of fuel in this area substantially decreasing the intensity of an approaching fire. It also assists restricting the pathways to crown fuels; reducing the level of direct flame, radiant heat and ember attack on the IPA and built assets. Figure 15 provides a visual representation of a building, separation from areas of potentially hazardous vegetation and the creation of an APZ.

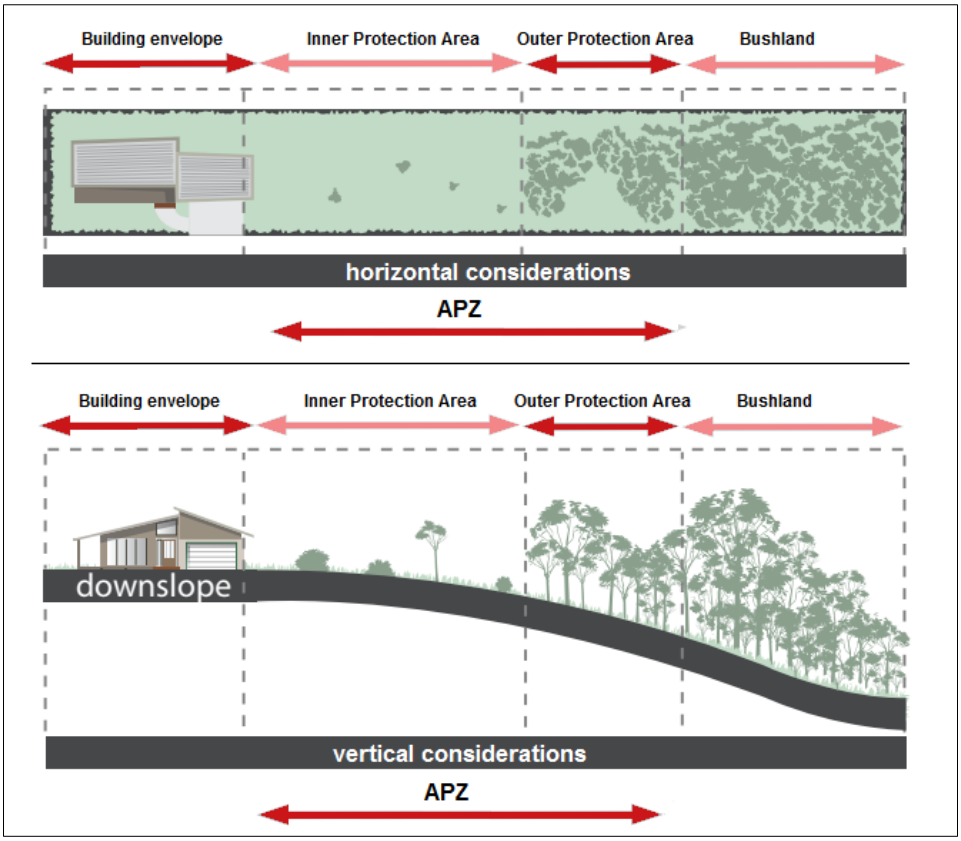


Figure 15 Building envelopes and their relationship to potentially hazardous vegetation. (Planning for Bushfire Protection 2017)

Additional details on creating and managing an APZ are provided Appendix E Living in a Bushfire Prone Area.

4.3 Building Design and Construction

Careful design of new buildings in areas of mapped bushfire hazard needs to be undertaken; which includes consideration of site characteristics. Buildings should be constructed to meet the requirements of the relevant building standards and Council bylaws prevailing at the time to enable a building to be designed and constructed according to the site conditions. This includes the Building Code of Australia (BCA 2019) and the Australian Standard for "Construction of buildings in bushfire-prone areas (AS3959 – 2018). Currently a site-specific assessment is required for all new dwellings being constructed in identified bushfire prone areas.

Indicative Bushfire Attack Levels (BAL) for the building location envelopes on Lots 6-8 are in the order of BAL-12.5 and the building location envelope on Lot 9 is in the order of BAL-12.5 to BAL-29 (Appendix B), dependent on the final location of a dwelling, separation distances from unmanaged and potentially hazardous vegetation and extent of vegetation management activities undertaken on the site.

In assessing vegetation classes for forests, woodlands and rainforests, the classified vegetation will be determined by the unmanaged understorey rather than either the canopy (drip line) or trunk of any trees (AS3959-2018).

Appendix C Calculation of bushfire hazard contains information on the potential Bushfire Attack Levels that could be experienced on the site and Appendix D has an explanation of BALs.

4.4 Access and Egress

Access to the site is via Scott Street for all lots which is located on the south-western boundary of the site and is of sealed all-weather construction.

4.5 Vegetation Management

The majority of the site is mapped as containing Category X (non-remnant) with a limited patch of Category B (remnant) vegetation in the southern portion of the site comprising Regional Ecosystem (RE) 12.11.22. The site contains an existing dwelling and associated infrastructure in the northern portion of the site. The majority of the site contains a sparse canopy of Spotted gum with a maintained grassy understory. The southern portion of the site contains a limited area of dense *Acacia sp.* regrowth with associated Spotted gum and Narrow-leaved ironbark with a grassy understory. Areas of potentially hazardous vegetation are located to the southeast and southwest of the site. Vegetation to the southeast of the site is separated by cleared vegetation in the adjacent unformed road reserve with vegetation to the southwest separated by Scott Street. To the north and east of the site, roads, and properties containing maintained lawns and driveways are located between the site and potentially hazardous vegetation.

A building location envelope has been identified for Lot 9 to ensure that a potential dwelling achieves a minimum separation distance of 14 metres to the southeast and 35 metres to the southwest from potentially hazardous vegetation to enable a BAL of no greater than BAL-29 to be achieved. An asset protection zone of 6 metres is to be maintained on the southern boundary of Lot 9, with an existing 8 metre separation provided within the unnamed road reserve to the southeast of the site. Lots 6-8 contain an existing minimum separation of 35 metres to the southeast and southwest from potentially hazardous vegetation to enable a BAL of no greater than BAL-12.5 to be achieved.

Ongoing vegetation management of the shrub layer across the site will assist in the prevention of potentially hazardous fuel loads accumulating. General site maintenance (i.e. slashing or mowing) on proposed lots will limit the potential for the accumulation of potentially hazardous vegetation to occur and maintain the existing level of low bushfire hazard.

Failure to maintain these measures may contribute to the development being exposed to a higher level of bushfire threat and attack.

4.6 Fire Trails

No fire trails are proposed due to the extent of native vegetation present, level of bushfire hazard and separation distances achieved from potentially hazardous vegetation provided by the establishment of APZs at the time of constructing dwellings on individual lots. An existing separation of 8 metres is provided in the unnamed road reserve to the southeast of the site and Scott Street located to the southwest of the site provides separation from potentially hazardous vegetation in adjacent lots.

The proposed Lots 5-9 will be readily accessible by emergency service vehicles from Scott Street. Adequate access to the site is available from Scott Street to the southwest. Lots 5-6 contain existing access tracks from Scott Street. The development is buffered by roads, properties containing managed vegetation, lawns and driveways.

4.7 Water Supply

The South Burnett Regional Council Planning Scheme (2017 Version 2.0) requires that an adequate water supply suitable for fire-fighting purposes should be available at all times. This can be achieved by connection to a reticulated water supply having sufficient pressure for fire-fighting purposes or provision of a dedicated static water supply that is available solely for fire-fighting purposes and can be accessed by fire fighting vehicles. The SBRC Planning Scheme refers to the QFES Bushfire Resilient Communities document to provide guidance regarding preferred solutions to achieve an appropriate static water supply for fire-fighting purposes.

The SPP (2017 version 6) state interest guidance material recommends a reticulated water supply or a dedicated static water supply that is available solely for fire-fighting purposes and can be accessed by fire-fighting vehicles. It refers to QFES Bushfire Resilient Communities, which recommends 10,000 litres for residential buildings.

4.8 Landscaping

The design, management and maintenance of the landscape in the immediate vicinity of buildings are fundamental to the chances of survival of both people and buildings in a bushfire event. Vegetation provides the major fuel element in a bushfire. All vegetation, regardless of how succulent or green it is will eventually burn, provided the fire has sufficient intensity. Contrary to common belief, the area around the building does not need to be totally devoid of vegetation, and in fact some trees in this area can serve a valuable role in trapping embers before they impact on the asset. It is important however that:

- There are substantial gaps (of at least 2 - 5m) between the canopies of any trees in this area;
- There are no continuous fuels linked horizontally or vertically. (Smooth barked trees provide a lesser fuel ladder to the canopy than rough barked or ribbon barked species);
- Tree canopies do not overhang the roof;
- Surface and near surface fuels are kept to a minimum. This includes lawns to be kept short (less than 10 cm in height) and removal of accumulated leaf and bark litter;
- Avoidance of flammable mulches on garden beds such as woodchip or straw within 10 metres of dwellings; and
- Use of non-flammable mulches such as river pebbles or stones on garden beds near dwellings and buildings.

Guidelines for landscaping in fire prone areas are provided in Appendix F.

4.9 Prepare, Act, Survive

It is important that residents are well prepared during times of high fire danger and have well made plans that can be readily enacted in a time of bushfire emergency. This includes having plans in place to guide actions on days of extreme and catastrophic, identifying safe refuge areas and planning to either 'stay' or 'go'. The key message being; Prepare, Act and Survive. The Queensland Fire and Emergency Services have information readily available to assist people living in bushfire prone areas to develop their own plans. Details can be downloaded from:

https://www.qfes.qld.gov.au/sites/default/files/2023-06/Bushfire-Safety-Guide_0.pdf and

https://bushfire-survival-plan.qfes.qld.gov.au/

4.10 Maintenance of Bushfire Mitigation Measures

This fire report has been prepared on the basis that bushfire mitigation measures identified are implemented and maintained into the foreseeable future. Failure to maintain these measures may contribute to the development being exposed to a higher level of bushfire threat and attack.

5 Planning Requirements

The Queensland Government's State Planning Policy (SPP) for Natural Hazards (Bushfire) contains development assessment requirements that developments in bushfire prone areas are required to address. Likewise, the SBRC (2017) Bushfire Hazard Overlay Code contains provisions to protect the safety of people and property in bushfire risk areas. The Code proposes Performance outcomes and Acceptable outcomes which have been addressed through Proposed solutions.

A summary of compliance with SBRC Bushfire Hazard Overlay Code is presented in Table 7. It is noted that the SBPS has appropriately integrated the relevant state interest of Natural hazards, risk and resilience which incorporates bushfire hazard. As such, assessment against the example SPP planning scheme assessment benchmarks has not been conducted.

A summary of compliance with SBRC Bushfire hazard overlay code is presented in Table 7.

Table 7 Summary of compliance with the SBRC Bushfire hazard overlay code

	Compliance	Reference
Development Action	SBRC Bushfire Hazard Overlay Code	SBRC Table 8
Risk mitigation	✓	PS1.1, PS1.2
Water access	✓	N/A
Access and Egress	✓	PS2 (b), PS9 (b)
Vegetation management	✓	PS1.2, PS2 (a), PS9 (a), PS17
Asset Protection Zones	✓	PS1.2, PS9 (a)
Location of buildings	✓	PS1.1, PS2
Building design & construction	✓	PS2 (a)
Hazardous materials	✓	N/A
Community infrastructure	N/A	N/A

5.1 State Planning Policy-Bushfire

The State Planning Policy (July 2017) provides a comprehensive set of principles which underpin Queensland's planning system to guide local government and the state government in land use planning and development assessment. The State's interest in relation to natural hazards is: "The risks associated with natural hazards are avoided or mitigated to protect people and property and enhance the community's resilience to natural hazards".

South Burnett Regional Council has appropriately integrated the relevant state interest of Natural hazards, risk and resilience which incorporates bushfire hazard. As such, assessment against the example SPP planning scheme assessment benchmarks has not been conducted.

5.2 South Burnett Regional Council Planning Scheme – Bushfire

The South Burnett Regional Council Planning Scheme (SBRC) (2017 V 2.0) contains a Bushfire Hazard Overlay Code that addresses bushfire matters. The overall outcomes sought for the Bushfire Hazard Overlay Code are to ensure appropriate design of development in potential bushfire prone areas so as to minimise the number of people and properties subject to Potential Bushfire Intensity. The SBRC development assessment requirements have been addressed in Table 8.

Table 8 Response to SBRC Bushfire Hazard Overlay Code- Performance Outcome and Acceptable Outcomes for accepted and assessable development.

Performance outcomes	Acceptable Outcomes	Proposed solutions
Reconfiguring a Lot (RaL)- where creating any number of lots more than 2,000 square metres:		
PO1 The subdivision layout: (a) Enable future buildings to be located away from slopes and land forms that expose people to property to an intolerable risk to life or property; and (b) Facilitates emergency access and operational space for firefighters in a reduced fuel area between future buildings and structures and hazardous vegetation, that reduce risk to an acceptable or tolerable level.	**AO1.1** A development footprint plan is identified for each lot that avoids ridgelines, saddles and crests where slopes exceed 28 per cent. **AO1.2** A development footprint plan is identified for each lot that is separated from the closest edge to the adjacent mapped medium, high or very high potential bushfire intensity area by a distance that achieves a radiant heat flux level of 29 kW/m2 or less at all development footprint plan boundaries.	**PS1.1** The proposed lots are located in an area with a gradient in the order of 5% or 3 degrees. **PS1.2** A building location envelope has been identified for Lot 9 to ensure that a potential dwelling achieves a minimum separation distance of 14 metres to the southeast and 35 metres to the southwest from potentially hazardous vegetation to enable a BAL of no greater than BAL-29 to be achieved. An asset protection zone of 6 metres is to be maintained on the southern boundary of Lot 9, with an existing 8 metre separation provided within the unnamed road reserve to the southeast of the site. Lots 6-8 contain an existing minimum separation of 35 metres to the southeast and southwest from potentially hazardous vegetation to enable a BAL of no greater than BAL-12.5 to be achieved. Vegetation within the APZs will be managed at low fuel loads such that the dwelling on Lot 9 will not be subject to a BAL greater than BAL-29.
PO2 The subdivision layout enables: a. Future buildings to be located as close as possible to property entrances to facilitate safe evacuation during a bushfire event; and	**AO2** A development footprint plan is identified for each lot that: a. is located within 60 metres of the street frontage; and b. sited to enable a route between the development footprint plan and the street frontage with a gradient that does not exceed of 12.5 per cent.	**PS2** a. The proposed lots allow future dwellings to be located within 60 metres of the street frontage, dependent on the final location of a dwelling. Buildings are to comply with relevant standards for construction including the Building Code of Australia (BCA) and the Australian Standard Construction for buildings in bushfire prone areas AS3959-2018. An asset protection zone of 6 metres is to be maintained on the southern boundary of Lot 9, with an existing 8 metres separation provided within the

b. Future site access to be located and designed to allow safe evacuation of the site by occupants and maintain access by emergency service under critical event conditions.		unnamed road reserve to the southeast of the site. Lots 6-8 contain an existing separation of 35 metres or greater to the southeast and southwest from potentially hazardous vegetation, dependent on final building location within the lot. This minimum separation distance achieves a BAL of no greater than BAL-29 for Lot 9 and BAL 12.5 for Lots 6-8. b. Lots 5-9 will be accessible by Scott Street on the western portion of the site. Lots 5-6 contain existing access tracks from Scott Street. Driveways are to be of all-weather construction and will be readily accessible by emergency service vehicles. Proposed driveways will be established with a gradient not exceeding 5% or 3 degrees.
Reconfiguring a lot (RAL)- where creating any number of lots of 2,000 square metres or less:		
PO3 The subdivision layout: a. avoids creating lots on slopes and land forms that expose people or property to an intolerable risk to life or property; and b. facilitates emergency access and operational space for firefighters in a reduced fuel area between future buildings and structures and hazardous vegetation, that	**AO3.1** The subdivision layout results in lots that are sited so that they are separated from the closest edge to the adjacent mapped medium, high or very high potential bushfire intensity area by a distance that achieves a radiant heat flux level of 29 kW/m2 or less: a. at the building envelope, if identified at RaL stage; or b. where a building envelope is not identified, at all lot boundaries. **AO3.2** The subdivision layout does not create lots that are within bushfire prone areas and on ridgelines, saddles and crests where slopes exceed 28 per cent (roads and parks may be located in these areas).	**PS3** Not applicable. The development proposes the creation of five (5) low density residential lots with lot sizes of 2,574 square metres that are adjacent to areas of mapped medium potential bushfire intensity and potential impact buffer.

reduce risk to an acceptable or tolerable level.		
Reconfiguring a lot (RaL)- additional provisions where creating more than 20 lots:		
PO4 The subdivision layout is designed to minimise the length of the development perimeter and number of lots exposed to hazardous vegetation	No acceptable outcome is prescribed.	**PS4** Not applicable. The development proposes the reconfiguration of one (1) low density residential lot into five (5) low density residential lots.
PO5 The subdivision layout provides for adequate access and egress and safe evacuation routes, to achieve an acceptable or tolerable risk to people.	**AO5.1** The subdivision layout: a. avoids the creation of bottle-neck points in the movement network within the development (for example, avoids hourglass patterns); and b. ensures the road network has sufficient capacity for the evacuating population **AO5.2** The subdivision layout ensures evacuation routes: a. direct occupants away from rather than towards or through areas with a greater potential bushfire intensity; and b. minimise the length of route through bushfire prone areas.	**PS5** Not applicable. The development proposes the reconfiguration of one (1) low density residential lot into five (5) low density residential lots.
PO6 The subdivision layout provides adequate buffers between hazardous vegetation and development.	**AO6.1** The subdivision layout results in an asset protection zone being located to create a separation area from adjacent mapped medium, high or very high potential bushfire intensity areas.	**PS6** Not applicable. The development proposes the reconfiguration of one (1) low density residential lot into five (5) low density residential lots.

	AO6.2 The asset protection zone is comprised of: a. parks and open spaces; and/or b. lots greater than 2000 square metres; and/or c. public roads (termed perimeter roads). **AO6.3** Where the asset protection zone includes lots greater than 2000 square metres a development footprint plan is identified for each lot that is located in accordance with AO1.2.	
PO7 Parks or open space provided as part of the asset protection zone do not create additional bushfire prone areas.	**AO7** Where the asset protection zone includes parks or open spaces, they: a. comprise only low threat vegetation, including grassland managed in a minimal fuel condition, maintained lawns, golf courses, maintained public reserves and parklands, cultivated gardens and nature strips; or b. are designed to ensure a potential available fuel load is maintained at less than eight tonnes/hectare in aggregate and with a fuel structure that remains discontinuous.	**PS7** Not applicable. The development proposes the reconfiguration of one (1) low density residential lot into five (5) low density residential lots.
PO8 Perimeter roads are accessible for firefighting vehicles, to facilitate emergency access and operational space for firefighting, maintenance works and hazard reduction activities.	**AO8.1** Where the asset protection zone includes a perimeter road it: a. has a two-lane sealed carriageway clear of hazardous vegetation; and b. is connected to the wider public road network at both ends and at intervals of no more than 200 metres; and	**PS8** Not applicable. The development proposes the reconfiguration of one (1) low density residential lot into five (5) low density residential lots.

	c. does not include design elements that may impede access for fire-fighting and maintenance for fire-fighting purposes (for example traffic calming involving chicanes). **AO8.2** Where the subdivision contains a reticulated water supply, the road network and fire hydrants are designed and installed in accordance with: a. *Fire Hydrant and Vehicle Access Guidelines for residential, commercial and industrial lots*, Queensland Fire and Emergency Services, 2015, unless otherwise specified by the relevant water entity; and b. the *Road Planning and Design Manual 2nd edition*, Department of Transport and Main Roads, 2013.	
Reconfiguring a lot (RaL)- where creating additional lots for the purpose of residential development and a reticulated water supply is not provided:		
PO9 The subdivision layout provides for perimeter roads or fire trail and working areas that are accessible by the type of fire-fighting vehicles servicing the area, to facilitate emergency access and operational space for firefighting, maintenance works and hazard reduction activities.	**AO9** The subdivision layout includes: a. a fire trail and working area designed and constructed in accordance with the design parameters in Table 1 that separates the residential lot or development footprint plan from adjacent mapped medium, high or very high potential bushfire intensity areas; or b. a perimeter road designed and constructed in accordance with AO8.1.	**PS9** a. A fire trail is not identified for the development due to level of bushfire hazard exposure, ready site access and identification of asset protection zones to separate future dwellings from areas of hazardous vegetation. An asset protection zone of 6 metres is to be maintained on the southern boundary of Lot 9, with an existing 8 metre separation provided within the unnamed road reserve to the southeast of the site. Lots 6-8 contain an existing minimum separation distance of 35 metres to the southeast and southwest from potentially hazardous vegetation. An existing separation of 8 metres is provided in the unnamed road reserve to the southeast of the site and Scott Street located to the southwest of the site provides separation from potentially hazardous vegetation in adjacent lots.

		This effectively separates areas where a dwelling may be constructed from areas of Medium Potential Bushfire Intensity and is suitable for use by QFES rural fire brigade vehicles. b. A perimeter road is not prescribed for the reasons identified in PS9 (a).
Where involving an asset protection zone:		
PO17 Asset protection zones are designed and managed to ensure they do not increase the potential for bushfire hazard.	**AO17** Landscaping treatments within any asset protection zone comprise only low threat vegetation, including grassland managed in a minimal fuel condition, maintained lawns, golf courses, maintained public reserves and parklands, vineyards, orchards, cultivated gardens, commercial nurseries, nature strips and windbreaks. OR Landscape management within any asset protection zone maintains a: a. potential available fuel load which is less than eight tonnes/hectare in aggregate; and b. fuel structure which is discontinuous.	**PS17** Landscaping within an asset protection zone will comply with the requirements of AO17.2 as discussed in Appendix E and Appendix F of this report.
Where planning provisions or conditions of approval require revegetation or rehabilitation:		
PO18 Revegetation or rehabilitation areas are designed and managed to ensure they do not result in an unacceptable risk or an increase in bushfire intensity level.	**AO18.1** Required revegetation or rehabilitation: a. is located outside of any asset protection zone; or b. maintains a potential available fuel load which is less than eight tonnes/hectare in aggregate and fuel structure which is discontinuous. **AO18.2**	**PS18** Not applicable. No revegetation or rehabilitation areas are proposed onsite.

	Revegetation or rehabilitation of areas located within mapped medium, high or very high potential bushfire intensity areas, revegetate and rehabilitate in a manner that maintains or reduces the existing fuel load. OR Revegetation or rehabilitation of areas located within the mapped potential impact buffer area, revegetate and rehabilitate in a manner that maintains or reduces the existing fuel load.	

6 Conclusion

The bushfire assessment of the site identified that in general hazards are in the Medium category with Bushfire Attack Levels (BAL) in the order of BAL-12.5 for Lots 6-8 and BAL 12.5 to BAL-29 for Lot 9 for potential dwellings on the site, dependent on the final location of a dwelling, extent of vegetation management undertaken, and separation distances achieved and maintained (Appendix B). The bushfire risk to built assets can be effectively managed through the identification of the building location envelopes on Lots 6-9, ready ingress and egress to the site from Scott Street and ongoing management of groundcover on the site to maintain it in a low fuel load state (less than 5 tonnes per hectare) and the provision of a dedicated fire-fighting water supply at the time of constructing a dwelling on the site.

Building measures can be adequately addressed at the design and construction phase through the application of the National Construction Code and the Australian Standard Construction of buildings in bushfire-prone areas (AS3959-2018).

6.1 Recommendations

The following recommendations are made for the proposed development with reference to the ecological values and bushfire management requirements of the site:

- That future dwellings on Lot 9 are to be located in the building location envelope to achieve the minimum setback required for a maximum BAL-29.
- That future dwellings on Lots 6-8 are to be located in the building location envelope to achieve a minimum setback required for a maximum BAL-12.5.
- That an asset protection zone of 6 metres is to be maintained on the southern boundary of Lot 9, with an existing 8 metre separation provided within the unnamed road reserve to the southeast of the site. An asset protection zone is to be maintained on lands under the management of the landholder.
- That buildings are designed and constructed to meet the requirements of the relevant building standards prevailing at the time. This includes AS3959 – 2018, the BCA and relevant Council bylaws and building regulations.
- That lots are connected to a reticulated water supply having sufficient pressure for fire-fighting purposes or that a minimum 10,000L permanent water supply be established at the time of construction of a structure which is capable of supplying water for fire-fighting purposes.
- That vegetation be managed in the proposed lots to prevent the accumulation of hazardous fuel loads to minimise the accumulation of hazardous fuel loads and to control understory woody and highly flammable weeds.
- That any landscaping works utilise plant species and design principles suitable for bushfire prone areas and in accordance with Appendix F.
- That bushfire mitigation measures identified in this bushfire management report are implemented and maintained.

7 References

Australian Standard; 2018. Construction of Buildings in Bushfire-prone Areas (AS3959–2018). Sydney.

Building Code of Australia (BCA); 2019. National Construction Code Volumes 1 and 2.

Bushfire Resilient Communities: Technical Reference Guide for SPP State Interest 'Natural Hazards, Risk and Resilience - Bushfire'; 2019

Emergency Management Victoria; 2016. Guideline for Building in Bushfire Prone Areas. Melbourne.

Gould JS, McCaw WL, Cheney NP, Ellis PF, Knight IK, Sullivan AL; 2008. Project Vesta: Fire in Dry Eucalypt Forest. Fuel Structure, Fuel Dynamics and Fire Behaviour, CSIRO publishing.

Leonard, J, Newnham, G, Opie, K, and Blanchi, R; 2014. A New Methodology for State-wide Mapping of Bushfire Prone Areas in Queensland. CSIRO, Australia.

NSW Rural Fire Service; 2019. Planning for Bush Fire Protection. Sydney.

Queensland Development Assessment Mapping System, 2025: https://sara.dsdip.esriaustraliaonline.com.au/saraviewer/

Queensland Department of Natural Resources and Mines website; 2025. https://www.dnrm.qld.gov.au/

Queensland Fire and Emergency Service (QFES); 2017. Bushfire prone area - Vegetation hazard class – Wide Bay Burnett

Queensland Government SPP Interactive Mapping System; 2025. https://spp.dsdip.esriaustraliaonline.com.au/geoviewer/map/planmaking

Ramsay, C & Rudolph, L.; 2003. Landscape and Building Design for Bushfire Areas. CSIRO, Australia.

South Burnett Regional Council Planning Scheme (2017 v. 2.0)

The State of Queensland, July 2017. Queensland State Planning Policy (July 2017). Queensland Department of Infrastructure, Local Government and Planning. Brisbane.

Victoria State Government, July 2010. Overall Fuel Hazard Assessment Guide 4th Edition. Melbourne.

Victoria State Government; 2014. Planning Practice Note 65. Melbourne.

Appendices

Appendix A Site Plan

NORTH

4

RP897503

163

FY713

Shed

5

2574m²

House

6

2574m²

7

2574m²

8

2574m²

9

2574m²

25.6

100.6

Sewerline (from Council records)

Existing Access

P/Pole

SCOTT STREET

Water Main (from Council records)

ROAD (Unformed)

0m 15m 30m

Proposed Boundaries

R.P.D.
Lot 162 on FY713

NOTES: Areas & dimensions are approximate only and subject to field survey.

REG OWNERS. E Sanders & Z Steinhardt

LEVEL DATUM:- N/a
CONTOUR INT:- N/a

SCALE : 1 : 750

DRAWN: NB 16/1/25 L:\projects\location\Wondai\12778\Proposal Plan\12778 P1.dwg

ONF SURVEYORS
Ph. (07) 4162 2647
Email: admin@onfsurveyors.com.au

CLIENT: Z STEINHARDT

TITLE: Proposed Subdivision

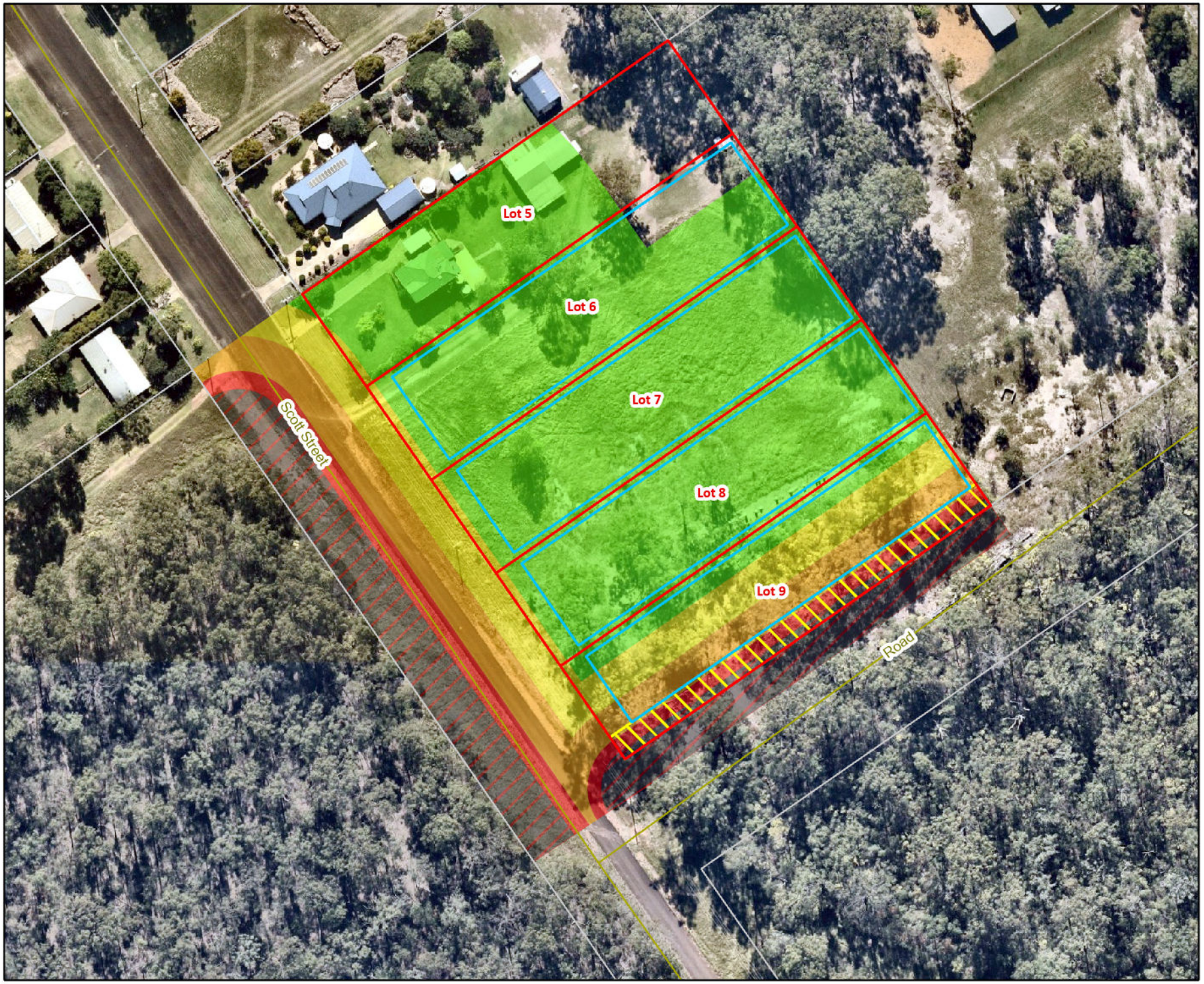
LOCALITY: 102 Scott Street WONDAI

DRAWING No. 12778P/1

Sheet No. 1 of 1

Rev -

Appendix B Bushfire Attack Levels



Appendix B Bushfire Attack Levels

Project: Bushfire Management Report, 102 Scott Street, Wondai

Client: ZJ Steinhardt & EJ Sanders

Project No.: J002247

Compiled by: SkyeMelton Date: 17/02/2025
Approved by: RG Date: 17/02/2025

Metres
0 10 20

Legend

- Cadastre
- Roads
- Lot Layout
- Building Location Envelope
- Asset Protection Zone
- BAL-12.5
- BAL-19
- BAL-29
- BAL-40
- BAL-FZ

Source: Cadastral data sourced from DNRME (2025). Aerial imagery sourced from NearMap (2025).

N

range environmental consultants

Appendix C Calculation of Bushfire Hazard

In accordance with SPP guidance material (Bushfire Resilient Communities (QFES 2019) the vegetation hazard class (VHC) mapping was reviewed and modified to accurately represent the on-ground matters through a field assessment.

Vegetation hazard class and 80th percentile potential fuel load inputs from QFES (2019) were utilised to determine the radiant heat exposure using a Method 2 Calculator.

Determination of Bushfire Attack Level – SPP APZ Calculator

The bushfire hazard that buildings could potentially be exposed to was calculated using the QFES SPP Asset Protection Zone Calculator and utilising fuel loads consistent with the ground-truthed VHCs as set out in SPP technical reference guide 'Bushfire Resilient Communities' (2019). AS 3959-2018 identifies the level of construction required for the purpose of ensuring that a building is constructed to withstand a potential bushfire attack. This Standard is primarily concerned with improving the ability of buildings in designated bushfire-prone areas to better withstand attack from bushfire, thus giving a measure of protection to the building occupants (until the fire front passes) as well as to the building itself. AS3959-2018 requires that vegetation be assessed within 100 metres of a building when determining the Bushfire Attack Level.

Bushfire Resilient Communities Technical Reference Guide for the State Planning Policy State Interest 'Natural Hazards, Risk and Resilience - Bushfire' (2019) requires that bushfire hazard is to be assessed within 150m of the development footprint.

Adopting a worst-case scenario, an FDI of 55 was used for the site when calculating Bushfire Attack Levels (BAL) for 'the site'. The following steps were carried out using information collected from the relevant site and applying this information to the conditions required and set out in QFES SPP Bushfire Asset Protection Zone Calculator and the Australian Standard 'Construction of Buildings in Bushfire-prone areas' (AS 3959-2018).

Table 9 Parameters used in SPP APZ calculations

Step	Procedure	Value southeast Lot 9	Value southwest	Value east
1	Fire Danger Index (FDI)	55	55	55
2	Vegetation Hazard Class (VHC)	9.2	9.2	39.2
3	Surface fuel load (t/ha)	14.9	14.9	5.0
4	Overall fuel load (t/ha)	17.2	17.2	8.0
5	Location of vegetation (Upslope/Downslope)	Upslope	Downslope	Downslope
6	Site slope	1 degree	3 degrees	3 degrees
7	Effective slope of land under classified vegetation	1 degree	3 degrees	3 degrees

In assessing vegetation classes for forests, woodlands and rainforests, the classified vegetation will be determined by the unmanaged understorey rather than either the canopy (drip line) or trunk of any trees (AS3959-2018).

The site assessment identified that vegetation within the site aligned predominantly with VHC 41.4 with vegetation to the southeast and southwest of the site aligning with VHC 9.2. Existing separation within the unnamed road reserve to the southeast aligned with VHC 39.2. Table 10 to Table 12 provides details of the BAL calculations for the site using the SPP APZ Calculator in relation to the area of vegetation to the southeast, southwest and east.

Table 10 State Planning Policy Asset Protection Zone Width Calculator (VHC 9.2 to the southeast– upslope Lot 9)

SPP Bushfire Asset Protection Zone Width Calculator			
VARIABLE DESCRIPTION	**VARIABLE**	**UNITS**	**VALUE**
Input Values			
FIRE WEATHER SEVERITY	**FDI**		55.00
VEGETATION HAZARD CLASS	**VHC**	-	9.2 Moist to dry eucalypt woodland on coastal lowlands and ranged
REMNANT STATUS	**-**	-	Remnant
SLOPE TYPE (UPSLOPE OR DOWNSLOPE)	**ST**	-	Upslope
EFFECTIVE SLOPE UNDER THE HAZARDOUS VEGETATION	**eSlope**	degrees	1.00
SLOPE BETWEEN SITE AND HAZARDOUS VEGETATION	**θ**	degrees	1.00
DISTANCE OF THE SITE FROM HAZARDOUS VEGETATION	**d**	m	14.00
Output Values			
SURFACE FUEL LOAD	**-**	t/ha	11.40
NEAR SURFACE FUEL LOAD	**-**	t/ha	3.50
BARK FUEL LOAD	**-**	t/ha	1.30
ELEVATED FUEL LOAD	**-**	t/ha	1.00
TOTAL OVERALL FUEL LOAD	**W**	t/ha	17.20
TOTAL SURFACE FUEL LOAD	**w**	t/ha	14.90
POTENTIAL FIRE LINE INTENSITY	**I**	kW/m	8739
RADIANT HEAT FLUX	**q**	kW/m^2	28.71
BUSHFIRE ATTACK LEVEL (AS 3959-2018)	**BAL**	-	BAL-29
reDISCLAIMER: Fire-line intensity and radiant heat calculations where effective slope exceeds 20 degrees (downslope) or 15 degrees (upslope) may be unreliable. In these locations, specialist assessment is warranted.			

Table 11 State Planning Policy Asset Protection Zone Width Calculator (VHC 9.2 to the southwest-downslope)

SPP Bushfire Asset Protection Zone Width Calculator			
VARIABLE DESCRIPTION	**VARIABLE**	**UNITS**	**VALUE**
Input Values			
FIRE WEATHER SEVERITY	**FDI**		55.00
VEGETATION HAZARD CLASS	**VHC**	-	9.2 Moist to dry eucalypt woodland on coastal lowlands and ranges
REMNANT STATUS	**-**	-	Remnant
SLOPE TYPE (UPSLOPE OR DOWNSLOPE)	**ST**	-	Downslope
EFFECTIVE SLOPE UNDER THE HAZARDOUS VEGETATION	**eSlope**	degrees	3.00
SLOPE BETWEEN SITE AND HAZARDOUS VEGETATION	**θ**	degrees	3.00
DISTANCE OF THE SITE FROM HAZARDOUS VEGETATION	**d**	m	35.00
Output Values			
SURFACE FUEL LOAD	**-**	t/ha	11.40
NEAR SURFACE FUEL LOAD	**-**	t/ha	3.50
BARK FUEL LOAD	**-**	t/ha	1.30
ELEVATED FUEL LOAD	**-**	t/ha	1.00
TOTAL OVERALL FUEL LOAD	**W**	t/ha	17.20
TOTAL SURFACE FUEL LOAD	**w**	t/ha	14.90
POTENTIAL FIRE LINE INTENSITY	**I**	kW/m	10749
RADIANT HEAT FLUX	**q**	kW/m^2	11.56
BUSHFIRE ATTACK LEVEL (AS 3959-2018)	**BAL**	-	BAL-12.5
DISCLAIMER: Fire-line intensity and radiant heat calculations where effective slope exceeds 20 degrees (downslope) or 15 degrees (upslope) may be unreliable. In these locations, specialist assessment is warranted.			

Table 12 State Planning Policy Asset Protection Zone Width Calculator (VHC 39.2 to the east-downslope)

SPP Bushfire Asset Protection Zone Width Calculator			
VARIABLE DESCRIPTION	**VARIABLE**	**UNITS**	**VALUE**
Input Values			
FIRE WEATHER SEVERITY	**FDI**		55.00
VEGETATION HAZARD CLASS	**VHC**	-	39.2 Low to moderate tree cover in built-up areas
REMNANT STATUS	**-**	-	Non-remnant
SLOPE TYPE (UPSLOPE OR DOWNSLOPE)	**ST**	-	Downslope
EFFECTIVE SLOPE UNDER THE HAZARDOUS VEGETATION	**eSlope**	degrees	3.00
SLOPE BETWEEN SITE AND HAZARDOUS VEGETATION	**θ**	degrees	3.00
DISTANCE OF THE SITE FROM HAZARDOUS VEGETATION	**d**	m	5.00
Output Values			
SURFACE FUEL LOAD	**-**	t/ha	2.00
NEAR SURFACE FUEL LOAD	**-**	t/ha	3.00
BARK FUEL LOAD	**-**	t/ha	2.00
ELEVATED FUEL LOAD	**-**	t/ha	1.00
TOTAL OVERALL FUEL LOAD	**W**	t/ha	8.00
TOTAL SURFACE FUEL LOAD	**w**	t/ha	2.00
POTENTIAL FIRE LINE INTENSITY	**I**	kW/m	0
RADIANT HEAT FLUX	**q**	kW/m^2	0.00
BUSHFIRE ATTACK LEVEL (AS 3959-2018)	**BAL**	-	BAL-Low
DISCLAIMER: Fire-line intensity and radiant heat calculations where effective slope exceeds 20 degrees (downslope) or 15 degrees (upslope) may be unreliable. In these locations, specialist assessment is warranted.			

Appendix D Explanation of Bushfire Attack Levels

Table 13 BAL Descriptions - Australian Standard - Construction of Buildings in Bushfire-prone Areas (AS 3959-2018)

				
BAL-12.5	BAL-19	BAL-29	BAL-40	BAL-FZ
The risk is considered to be LOW	The risk is considered to be MODERATE	The risk is considered to be HIGH.	The risk is considered to be VERY HIGH.	The risk is considered to be EXTREME.
There is a risk of ember attack. The construction elements are expected to be exposed to a heat flux not greater than 12.5 kW/m^2.	There is a risk of ember attack and burning debris ignited by wind borne embers and a likelihood of exposure to radiant heat. The construction elements are expected to be exposed to a heat flux not greater than 19 kW/m^2.	There is an increased risk of ember attack and burning debris ignited by windborne embers and a likelihood of exposure to an increased level of radiant heat. The construction elements are expected to be exposed to a heat flux not greater than 29 kW/m^2.	There is a much increased risk of ember attack and burning debris ignited by windborne embers, a likelihood of exposure to a high level of radiant heat and some likelihood of direct exposure to flames from the fire front. The construction elements are expected to be exposed to a heat flux not greater than 40 kW/m^2.	There is an extremely high risk of ember attack and burning debris ignited by windborne embers, and a likelihood of exposure to an extreme level of radiant heat and direct exposure to flames from the fire front. The construction elements are expected to be exposed to a heat flux greater than 40 kW/m^2.

Images sourced from Planning Practice Note 65 September 2014 Victoria State Government

Appendix E Living in a Bushfire Prone Area

Bushfire embers can ignite fuel and spread in three ways:

- Embers and burning debris carried by wind;
- Heat radiation from fire; and
- Direct flame contact.

Ignition of buildings by burning embers carried by the wind

Ignition of* buildings *by heat radiation from the fire

Ignition of buildings by direct flame contact

Figure 16 The three main elements of bushfire which threaten life and property (Ramsay & Rudolf 2003)

Overall, the intention of bush fire protection measures should be to prevent flame contact to a structure, reduce radiant heat to below the ignition thresholds for various elements of a building, to minimise the potential for wind driven embers to cause ignition and reduce the effects of smoke on residents and fire-fighters.

Whilst research shows that ember attack ultimately claims more vacant houses than radiant heat or flames, if a house is occupied, ember attack can be relatively easily dealt with. The consequence of leaving a house unattended is that there will probably be nobody there to prevent the small fires which initially start, from gradually taking hold of various parts of the structure. This process can occur over a significant period of time, usually simply with embers which fly about and settle, and start smouldering. The hot windy conditions associated with the fire help fan the smouldering clumps of fuel, and bring many small fires to life. These are

usually easy fires to extinguish if there is someone there with the equipment and water to put them out. In their absence, often some time, even hours after the initial fire front, the house succumbs to small fires which have grown to larger ones.

Over 90% of houses burnt down in bushfires are attributable to ember attack, and the vast majority of these are unattended at the time. In the 1984 study of the Ash Wednesday Fires around Mt Macedon, the survival rate amongst the 450 houses was 82% where they were occupied and 90% where the occupants were active, able bodied defenders, while only 30% of houses survived without someone to patrol them (Wilson & Ferguson, 1984).

Asset Protection Zones

The most immediate form of defence for an asset is a well-designed Asset Protection Zone (APZ). An APZ is a fuel reduced area surrounding a built asset or structure. This can include any residential building or major building such as farm and machinery sheds, or industrial, or commercial buildings.

Various amenities can contribute to the Asset Protection Zone, provided they are not combustible or otherwise they will add to radiant heat levels. Such amenities include driveways, tennis courts, swimming pools or fire trails, each adding to the distance from the hazard.

Radiant heat barriers such as non-combustible walls or water tanks can help shield assets from radiant heat, thereby complementing the APZ, and in some cases reducing the requirement for distance from the hazard to a degree.

An APZ provides:

- a buffer zone between a bush fire hazard and an asset;
- an area of reduced bush fire fuel that allows suppression of fire;
- an area from which backburning may be conducted; and
- an area which allows emergency services access and provides a relatively safe area for firefighters and home owners to defend their property

Potential bush fire fuels should be minimised within an APZ. This is so that the vegetation within the planned zone does not provide a path for the transfer of fire to the asset either from the ground level or through the tree canopy.

An APZ, if designed correctly and maintained regularly, will reduce the risk of:

- direct flame contact on the asset;
- damage to the built asset from intense radiant heat; and
- ember attack on the asset.

The APZ can be made up of an Inner Protection Area (IPA) and an Outer Protection Area (OPA).

Inner Protection Area (IPA)

The IPA is the area closest to the building and creates a fuel-managed area which can minimise the impact of direct flame contact and radiant heat on the development and act as a defendable space. Vegetation within the IPA should be kept to a minimum level. Litter fuels within the IPA should be kept below 1cm in height and be discontinuous.

In practical terms the IPA is typically the curtilage around the building, consisting of a mown lawn and well-maintained gardens.

When establishing and maintaining an IPA the following requirements apply:

Trees

- tree canopy cover should be less than 15% at maturity;
- trees at maturity should not touch or overhang the building (preferably, there should be no trees within 10 metres of a dwelling);
- lower limbs should be removed up to a height of 2m above the ground; and
- tree canopies should be separated by 2 to 5m.

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

- 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.

Outer Protection Area (OPA)

An OPA is located between the IPA and the unmanaged vegetation. It is an area where there is maintenance of the understorey and some separation in the canopy. The reduction of fuel in this area aims to decrease the intensity of an approaching fire and restricts the potential for fire spread from crowns; reducing the level of direct flame, radiant heat and ember attack on the IPA.

When establishing and maintaining an OPA the following requirements apply:

Trees

- tree canopy cover should be less than 30%; and
- canopies should be separated by 2 to 5m

Shrubs

- shrubs should not form a continuous canopy; and
- shrubs should form no more than 20% of ground cover.

Grass

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

An APZ should be maintained in perpetuity to ensure ongoing protection from the impact of bushfires. Maintenance of the IPA and OPA as described above should be undertaken regularly, particularly in advance of the bush fire season.

The required distances for Asset Protection Zones are dependent on the vegetation type (hazard), the slope of the site and whether the hazard is upslope or downslope from the asset. An example of an APZ in relation to a dwelling is provided in Figure 17.

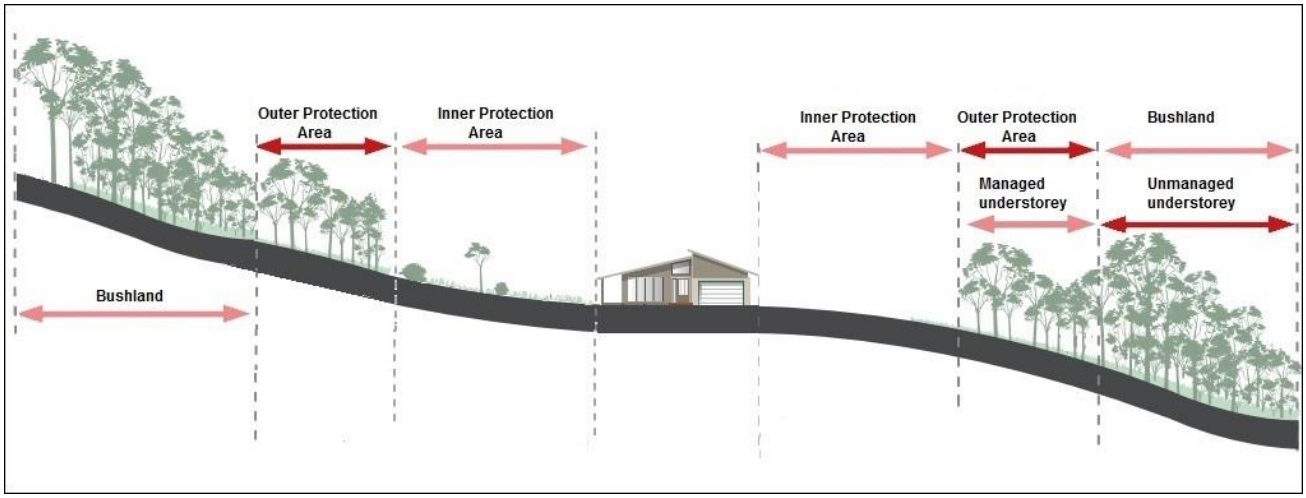


Figure 17 APZ Elements (Adapted from Planning for Bushfire Protection 2019)

Information presented in this Appendix was drawn from Planning for Bushfire Protection, A guide for councils, planners, fire authorities and developers (NSW Rural Fire Service November 2019) and Standards for Asset Protection Zones (NSW Rural Fire Service undated).

Appendix F Landscaping in Fire Prone Areas

The design, management and maintenance of the landscape in the immediate vicinity of buildings are fundamental to the chances of survival of both people and buildings in a bushfire event. Vegetation provides the major fuel element in a bushfire. All vegetation, regardless of how succulent or green it is will eventually burn, provided the fire has sufficient intensity. When landscaping in bushfire prone areas, it is important to use or retain plants of low flammability that have the relevant characteristics as identified in Table 14.

Table 14 Characteristics of low flammability species and effect on performance in bushfire situations

Plant attribute	Effect	Design measure
Foliage moisture content	Leaves with higher moisture content retard ignition and slow the rate of combustion	Select species with high leaf moisture content (e.g. rainforest species, succulents and semi-succulents)
Foliage volatile oil content	Foliage with higher volatile oil content ignite more readily and enhance ignition of surrounding vegetation, even though volatile oils themselves do not contribute significantly to total radiant heat	Select species with lower volatile oil content
Foliage mineral content	Foliage with higher mineral content tend to be less flammable (e.g. Amyema spp mistletoes)	Species selection should favour species with higher leaf mineral content
Leaf fineness	The ratio of area-to-volume of leaves is one of the main factors affecting ease of ignition and intensity of burning. Finer leaves (greater area to volume ratio) tend to ignite and burn more easily than broader leaves	Species selection should favour broad-leafed species
Density of foliage and continuity of plant form	Species with continuous, denser foliage can act as a barrier to wind-borne embers and radiant heat; however, increased density can increase flammability. Species with open branching and low foliage density are less effective as a barrier, though can be less flammable	Select species on a case-by-case basis
Height of lowest foliage	Shrub and tree species with persistent low height foliage are more likely to be ignited by surface fires, allowing the spread of fires into the canopy above	Species selection should favour species which can be maintained or pruned to reduce persistent, near-ground foliage
Size of plant (volume and spread)	The effect of plant size varies according to volume or spread. Species with a greater spread tend to be more effective as a barrier to the diffusion of radiant heat than narrower trees with the same volume. Species with a greater volume can result in increased ember attack, radiation and flame if ignited. For example, narrow columnar trees are less effective as a barrier than wider trees with the same overall volume	Species selection should ensure plant size (volume and spread) does not increase ignition likelihood

Plant attribute	Effect	Design measure
Dead foliage on plant	Persistent dead leaves and woody twigs increase flammability	Species selection should favour species which have a low volume of persistent dead leaves and woody material or can be maintained or pruned to reduce persistent, dead leaves and woody material
Bark texture	Loose, flaky, stringy, papery or ribbon-like bark contribute to ladder fuels which: • can contribute to destructive crown fires • act as a potential source of flame, radiant heat and ember attack	Avoid species with persistent loose, flaky, stringy, papery or ribbon-like bark. Species selection should favour smoothbarked and tightly-held bark species
Potential available surface fuel	The availability of surface fuel is a function of volume (quantity) and fineness. The fireline intensity increases in proportion to available fine fuel quantity. Fine fuel includes dead fallen material such as leaves, bark, twigs and branches up to 6mm in diameter (forest) and grass greater than 5cm in height (grasslands). Coarse fuel ignites less readily but may burn for longer	Species selection should favour species which do not contribute significantly to persistent, fine ground fuel

The characteristics of low flammability species and effect on performance in bushfire situations was sourced from the publication *Bushfire Resilient Communities, Technical Reference Guide for the State Planning Policy State Interest 'Natural Hazards, Risk and Resilience - Bushfire'*.

To assist building survival in a bushfire event, it is important that a fuel-reduced zone is maintained around it. This can be achieved by keeping all vegetation away from the building or by using low flammability plantings to help shield the building from radiant heat. Trees and shrubs that drop litter should not be planted or retained close to buildings where they can contribute to the accumulation of flammable material.

Ongoing maintenance of vegetation should be undertaken in the area surrounding the site to prevent hazardous fuel loads from occurring. These actions include:

- Pruning lower branches of trees to provide a minimum vertical 2 metre high fire break;
- Removal of loose bark, dead twigs, leaves;
- Regular mowing of lawns;
- Keeping other grassed areas to less than 100mm in height;
- Use of non-flammable mulches such as river pebbles or stones on garden beds near buildings; and
- Avoidance of flammable mulches on garden beds such as woodchip or straw.

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Appeal Rights

PLANNING ACT 2016 & THE PLANNING REGULATION 2017

Chapter 6 Dispute resolution

Part 1 Appeal rights

229 Appeals to tribunal or P&E Court

(1) Schedule 1 of the *Planning Act 2016* states –
  (a) Matters that may be appealed to –
    (i) either a tribunal or the P&E Court; or
    (ii) only a tribunal; or
    (iii) only the P&E Court; and
  (b) The person-
    (i) who may appeal a matter (**the *appellant***); and
    (ii) who is a respondent in an appeal of the matter; and
    (iii) who is a co-respondent in an appeal of the matter; and
    (iv) who may elect to be a co-respondent in an appeal of the matter.

(Refer to Schedule 1 of the Planning Act 2016)

(2) An appellant may start an appeal within the appeal period.
(3) The ***appeal period*** is –
  (a) for an appeal by a building advisory agency – 10 business days after a decision notice for the decision is given to the agency; or
  (b) for an appeal against a deemed refusal – at any time after the deemed refusal happens; or
  (c) for an appeal against a decision of the Minister, under chapter 7, part 4, to register premises or to renew the registration of premises – 20 business days after a notice us published under section 269(3)(a) or (4); or
  (d) for an appeal against an infrastructure charges notice – 20 business days after the infrastructure charges notice is given to the person; or
  (e) for an appeal about a deemed approval of a development application for which a decision notice has not been given – 30 business days after the applicant gives the deemed approval notice to the assessment manager; or
  (f) for any other appeal – 20 business days after a notice of the decision for the matter, including an enforcement notice, is given to the person.

Note –
See the P&E Court Act for the court's power to extend the appeal period.

(4) Each respondent and co-respondent for an appeal may be heard in the appeal.
(5) If an appeal is only about a referral agency's response, the assessment manager may apply to the tribunal or P&E Court to withdraw from the appeal.
(6) To remove any doubt. It is declared that an appeal against an infrastructure charges notice must not be about-
  (a) the adopted charge itself; or
  (b) for a decision about an offset or refund-
    (i) the establishment cost of trunk infrastructure identified in a LGIP; or
    (ii) the cost of infrastructure decided using the method included in the local government's charges resolution.

230 Notice of appeal

(1) An appellant starts an appeal by lodging, with the registrar of the tribunal or P&E Court, a notice of appeal that-
  (a) is in the approved form; and
  (b) succinctly states the grounds of the appeal.
(2) The notice of appeal must be accompanied by the required fee.
(3) The appellant or, for an appeal to a tribunal, the registrar must, within the service period, give a copy of the notice of appeal to –
  (a) the respondent for the appeal ; and
  (b) each co-respondent for the appeal; and
  (c) for an appeal about a development application under schedule 1, table 1, item 1 – each principal submitter for the development application; and
  (d) for and appeal about a change application under schedule 1, table 1, item 2 – each principal submitter for the change application; and
  (e) each person who may elect to become a co-respondent for the appeal, other than an eligible submitter who is not a principal submitter in an appeal under paragraph (c) or (d); and
  (f) for an appeal to the P&E Court – the chief executive; and
  (g) for an appeal to a tribunal under another Act – any other person who the registrar considers appropriate.
(4) The *service period* is –
  (a) if a submitter or advice agency started the appeal in the P&E Court – 2 business days after the appeal has started; or
  (b) otherwise – 10 business days after the appeal is started.
(5) A notice of appeal given to a person who may elect to be a co-respondent must state the effect of subsection (6).
(6) A person elects to be a co-respondent by filing a notice of election, in the approved form, within 10 business days after the notice of appeal is given to the person.

231 Other appeals

(1) Subject to this chapter, schedule 1 and the P&E Court Act, unless the Supreme Court decides a decision or other matter under this Act is affected by jurisdictional error, the decision or matter is non-appealable.
(2) The *Judicial Review Act 1991*, part 5 applies to the decision or matter to the extent it is affected by jurisdictional error.
(3) A person who, but for subsection (1) could have made an application under the Judicial Review Act 1991 in relation to the decision or matter, may apply under part 4 of that Act for a statement of reasons in relation to the decision or matter.
(4) In this section –
decision includes-
  (a) conduct engaged in for the purpose of making a decision; and
  (b) other conduct that relates to the making of a decision; and
  (c) the making of a decision or failure to make a decision; and
  (d) a purported decision ; and
  (e) a deemed refusal.
non-appealable, for a decision or matter, means the decision or matter-
  (a) is final and conclusive; and
  (b) may not be challenged, appealed against, reviewed, quashed, set aside or called into question in any other way under the Judicial Review Act 1991 or otherwise, whether by the Supreme Court, another court, a tribunal or another entity; and
  (c) is not subject to any declaratory, injunctive or other order of the Supreme Court, another court, a tribunal or another entity on any ground.

232 Rules of the P&E Court

(1) A person who is appealing to the P&E Court must comply with the rules of the court that apply to the appeal.

However, the P&E Court may hear and decide an appeal even if the person has not complied with the rules of the P&E Court.