



LOCAL STRUCTURE PLAN AMENDMENT

Cell 9, Wattle Grove
44 St John Road





DOCUMENT CONTROL

Control Version	Date	Status	Distribution	Comment
A	25.06.21	Final	LG	Review
B	05.08.21	Final	LG	Assessment

Prepared for: City of Kalamunda
 Prepared by: CP
 Reviewed by: DM
 Date: 05.08.2021
 Job No: 21617
 Ref: RevB_05.08.2021

Harley Dykstra
 PO Box 316
 KELMSCOTT WA 6991
 Phone: (08) 9495-1947
 Email: metro@harleydykstra.com.au

DISCLAIMER

This document has been prepared by HARLEY DYKSTRA PTY LTD (the Consultant) on behalf of Saracen Properties (the Client). All contents of the document remain the property of the Consultant and the Client except where otherwise noted and is subject to Copyright. The document may only be used for the purpose for which it was commissioned and in accordance with the terms of engagement for the commission.

This document has been exclusively drafted. No express or implied warranties are made by the Consultant regarding the research findings and data contained in this report. All of the information details included in this report are based upon the existent land area conditions and research provided and obtained at the time the Consultant conducted its analysis.

Please note that the information in this report may not be directly applicable towards another client. The Consultant warns against adapting this report's strategies/contents to another land area which has not been researched and analysed by the Consultant. Otherwise, the Consultant accepts no liability whatsoever for a third party's use of, or reliance upon, this specific document.

PERTH & FORRESTDALE

Level 1, 252 Fitzgerald Street, Perth
 15/2 Hensbrook Loop, Forrestdale
 PO Box 316, Kelmscott WA 6991

T: 08 9228 9291

T: 08 9495 1947

E: metro@harleydykstra.com.au

ABN 77 503 764 248

Albany Bunbury Busselton Forrestdale Perth www.harleydykstra.com.au



ENDORSEMENT PAGE

This Local Structure Plan Amendment is prepared under the provisions of the City of Kalamunda Local
Planning Scheme No. 3

IT IS CERTIFIED THAT THIS LOCAL STRUCTURE PLAN AMENDMENT
WAS APPROVED BY RESOLUTION OF
THE WESTERN AUSTRALIAN PLANNING COMMISSION ON:

.....Date

Signed for and on behalf of the Western Australian Planning Commission:

.....

An officer of the Commission duly authorised by the Commission pursuant to section 16 of the *Planning and
Development Act 2005* for that purpose, in the presence of:

.....Witness

.....Date

.....Date of Expiry

TABLE OF AMENDMENT(S)

Amendment No.	Summary of Amendment	Amendment Type	Date approved by WAPC

Executive Summary

Local Structure Plan Amendment Lot 26 (No. 44) St John Road, Wattle Grove

This report represents an application for an amendment to the Cell 9 Wattle Grove Local Structure Plan (previously referred to as an Outline Development Plan). The amendment area primarily relates to Lot 26 (No. 44) St John Road, Wattle Grove ("the subject land"). The subject land has an approximate area of 3.0857 ha and is situated approximately 13km east of the Perth Central Business District.

The primary objectives of the proposed Local Structure Plan (LSP) Amendment are as follows:

1. Enabling the implementation of actions from the City's Public Open Space (POS) strategy.
2. Rationalising the remaining portions of land within the LSP and any surplus POS consistent with strategic direction 2.2 of the City's POS strategy.
3. Facilitating a logical subdivision pattern consistent with the remainder of LSP area.
4. Providing additional housing opportunities consistent with the LSP area.
5. Promoting active street frontages and surveillance of POS.

These objectives will be achieved by reducing the existing oversupply of POS and increasing the portion of land depicted for residential development within the LSP area. Subsequently, this will provide the City with an opportunity to use the monetary funds collected by the "Wattle Grove Cell 9 – Schedule 11 Part 1 Infrastructure Sharing Agreement" to not only acquire POS, but to also develop it in a manner that is beneficial to the Wattle Grove Community. Given that there is an oversupply of POS within the LSP area (15.29% compared to the 10% required by *Liveable Neighbourhoods*), this approach is considered appropriate. This amendment also proposes the closing of a portion of Tomah Road, which is adjacent to the south-western boundary of the subject land, given it does not have any useful function or need. This portion of road reserve is proposed to be designated as POS.

The Local Structure Plan Amendment summary table below details the nature and key outcomes of the proposed amendment.

Table 1

ITEM	DATA	STRUCTURE PLAN REF (section no.)
Total area covered by the Structure Plan Amendment	3.0857ha	Section 1.2.1
Area of each land use proposed:		
Residential	3.0308 ha	Section 3.4.1
Public Open Space	0.0449ha	
Total estimated lot yield (Includes green title and survey-strata lots)	53 lots	Section 1.1
Estimated number of dwellings	53 dwellings	Section 1.1, 3.4.1
Estimated population	137 persons	Section 3.4.1
Estimated residential site density	17.48 dwellings per site hectare	Section 3.4.1

CONTENTS

APPENDICES LIST	3
PART ONE – Implementation	4
1.0 Local Structure Plan Amendment Area	4
2.0 Operation	4
3.0 Staging	4
4.0 Subdivision and Development Requirements	4
PLAN ONE – Structure Plan Amendment Map	5
PART TWO – Explanatory Report	6
1.0 PLANNING BACKGROUND	7
1.1 Introduction and Purpose	7
1.2 Land Description	7
1.2.1 Location	7
1.2.2 Area and land use	8
1.2.3 Legal description and ownership	8
1.3 Planning Framework	8
1.3.1 Statutory Planning Framework	8
1.3.2 Perth and Peel at 3.5 million	9
1.3.3 Structure Plans	9
1.3.3.1 Cell 9 Wattle Grove Local Structure Plan	9
1.3.4 State Planning Policies	9
1.3.4.1 SPP3.7-Planning in Bushfire Prone Areas	9
1.3.4.2 Draft SPP5.4-Road & Rail Transport Noise & Freight Considerations	9
1.3.5 Operation Policies	11
1.3.5.1 Liveable Neighbourhoods	11
1.3.6 Local Planning Policies	11
2.0 SITE CONDITIONS AND CONSTRAINTS	12
2.1 Bushfire Hazard	12
2.2 Noise Attenuation	12
3.0 LAND USE AND SUBDIVISION REQUIREMENTS	13
3.1 Land Use	13
3.2 Public Open Space (POS)	13
3.3 Residential	15
3.3.1 Residential Density and Layout	15
3.4 Movement Networks	15
3.4.1 Proposed Movement Network	15
3.4.2 Traffic Generation	15
3.5 Stormwater Management	15
3.6 Staging	16
3.7 Developer Contribution Arrangements	16
3.8 Implementation	15
APPENDICES INDEX	17

APPENDICES

Appendix A - Certificate of Title

Appendix B - Bushfire Management Plan

Appendix C - Conceptual Plan of Subdivision

PART ONE – IMPLEMENTATION

1.0 Local Structure Plan Amendment Area

This Local Structure Plan (LSP) Amendment relates to the land within the inner edge of the line denoted as the “Local Structure Plan Amendment Boundary” on the Amendment Map (Plan 1). This area is currently defined as Lot 26 (No. 44) St John Road, Wattle Grove (but also includes the adjacent portion of Tomah Road Reserve) - being a portion of the land contained in the northern portion of the Cell 9 Wattle Grove Local Structure Plan area. No amendments are proposed to any other portions of the LSP area.

2.0 Operation

The date the Local Structure Plan amendment comes into effect is the date that the amendment is approved by the WAPC.

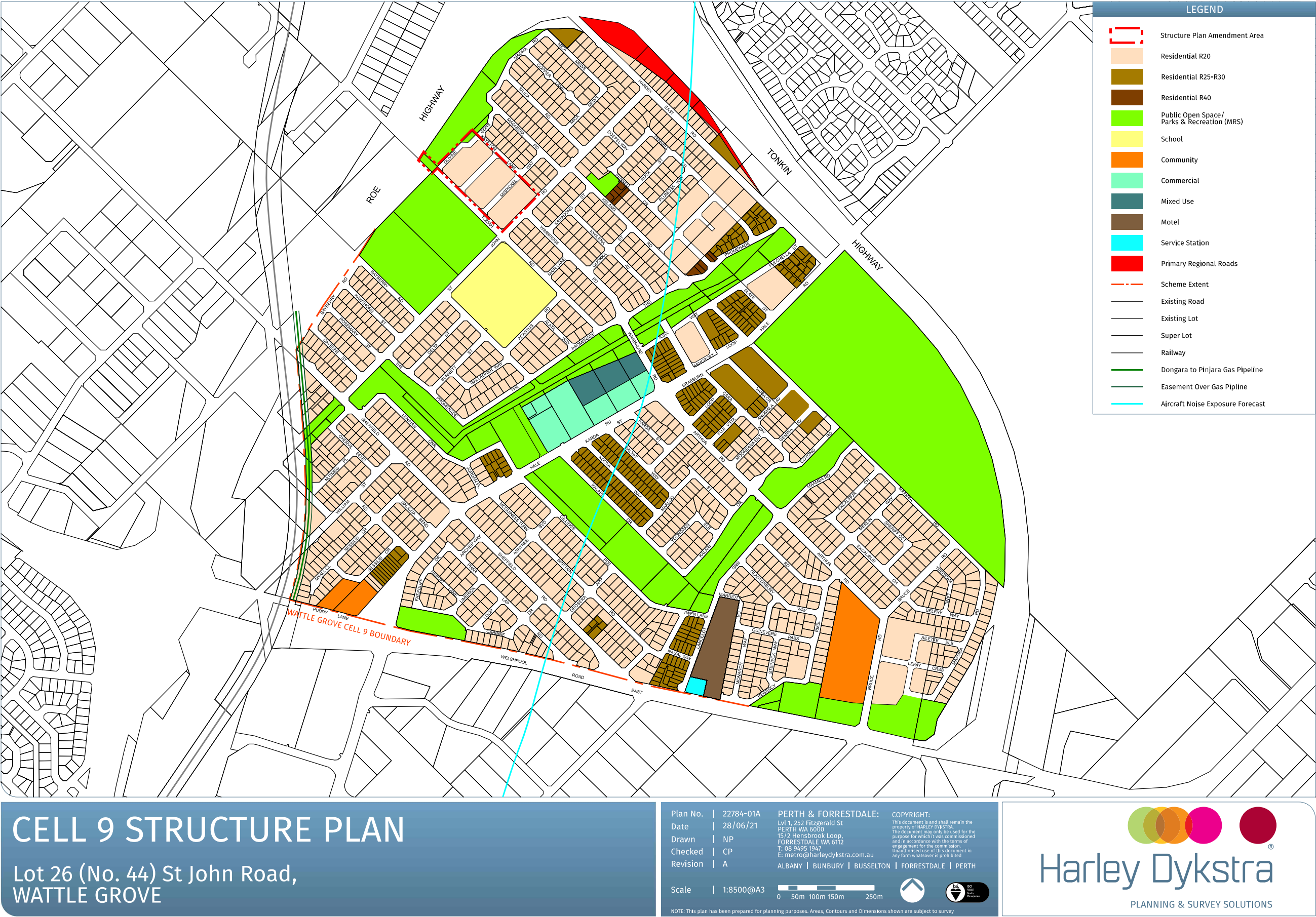
3.0 Staging

There are no infrastructure triggers that would influence the staging of future subdivision within this portion of the LSP area.

4.0 Subdivision and Development Requirements

4.1	Land Uses & Permissibility	The land use designations for the Local Structure Plan Area are as indicated on the Amendment Map. Land use permissibility within the LSP area shall be generally in accordance with the corresponding zone under the City of Kalamunda Local Planning Scheme No. 3.
4.2	Residential Density	Residential densities applicable to this amendment will be R20, as depicted on the amendment map.
4.3	Staging of Subdivision	Refer to Part 3.0 above.
4.4	Noise Attenuation	An acoustic study in accordance with State Planning Policy 5.4 – Road and Rail Noise is to be provided at the subdivision stage and the recommended noise attenuation measures implemented.
4.5	Notifications on Title	In respect of applications for subdivision of land, the City of Kalamunda shall recommend to the Western Australian Planning Commission that a condition be imposed on the grant of subdivision approval for a notification to be placed on the Certificate(s) of Title(s) to advise of the following: <ul style="list-style-type: none"> • Requirements of an approved Bushfire Management Plan (see Part Two – Section 2.1 Bushfire Management Plan); and • Requirements of a Noise Assessment (see Part Two – Section 2.2 Noise Assessment).

PLAN 1 – LOCAL STRUCTURE PLAN AMENDMENT MAP



PART TWO - EXPLANATORY REPORT

1.0 PLANNING BACKGROUND

1.1 Introduction and Purpose

This submission has been prepared by Harley Dykstra on behalf of the City of Kalamunda in respect of Lot 26 (No. 44) St John Road, Wattle Grove ("the subject site").

The primary objectives of this submission are as follows:

1. Enabling the implementation of actions from the City's Public Open Space (POS) strategy.
2. Rationalising the remaining portions of land within the LSP and any surplus POS consistent with strategic direction 2.2 of the City's POS strategy.
3. Facilitating a logical subdivision pattern consistent with the remainder of LSP area.
4. Providing additional housing opportunities consistent with the LSP area.
5. Promoting active street frontages and surveillance of POS.

This amendment will promote greater efficiency in the development of land within the Structure Plan area. Currently, there is a surplus of POS within the Structure Plan area. Therefore, this amendment seeks to reduce this, which, in turn, will allow the City to deliver higher quality portions of POS, via the existing "Wattle Grove Cell 9 – Schedule 11 Part 1 Infrastructure Sharing Agreement" (referred to herein as the Cell 9 ISA). The Cell 9 ISA is used to acquire and develop the remaining portions of POS within the Cell 9 Wattle Grove Structure Plan Area. Therefore, the reduction in POS will allow the City to direct a portion of the funds acquired from the Cell 9 ISA towards the improvements of POS that would otherwise be required for the purchase of POS land. This amendment will, therefore provide a better outcome for the Wattle Grove community in a manner that continues to comply with the relevant development standards.

Specifically, in relation to the 5 primary objectives, identified above, the following demonstrates how these objectives will be met through the proposed amendment:

1. The City's POS Strategy details various actions that are relevant to this proposal. Specifically, strategy actions include measures to optimise POS spaces to ensure they are of a high quality, represent safe and accessible environments, and generally provide the community with spaces for recreational and social opportunities (See strategic directions 2.2, 2.6 and 4.1 of the POS Strategy).
2. By reducing the overall supply of POS in the LSP area, in accordance with *Liveable Neighbourhoods*, the remaining POS areas in the LSP area can be better rationalised to meet the objectives of the City's POS Strategy.
3. This amendment will ensure that a logical subdivision pattern can occur, as evidenced by the Conceptual Plan of Subdivision that is attached at **Appendix C**.
4. The reduction in POS results in an increase in residentially zoned land, which subsequently increases the lot yield in the LSP area.
5. Any subsequent subdivision design, such as that contemplated in the Conceptual Plan of Subdivision, can be designed in a manner that promotes an active street frontage between the remaining POS and the residentially zoned land. This, subsequently, increases passive surveillance over the portion of POS that is within the Amendment Area.

The intended land uses within the LSP Amendment area include:

- A total of fifty-three R20 residential lots; and
- 1 area of POS within the site of 449m² in area.

This proposal is accompanied by a Local Structure Plan Amendment Map (**Plan 1**) prepared in accordance with the *Planning and Development (Local Planning Schemes) Regulations 2015*, which is included at Part One of this Report.

The Explanatory Section of this LSP Amendment Report includes a description of the proposal, an evaluation of the relevant town planning, traffic, acoustic, bushfire management, water management and servicing considerations applicable to the land, and details the rationale supporting the proposed LSP Amendment.

The amendment has been formulated by Harley Dykstra in collaboration with the City of Kalamunda, and an expert bushfire management consultant, being Bushfire West, who have prepared the Bushfire Management Plan relevant to this proposal (attached at **Appendix B**).

1.2 Land Description

1.2.1 Location

The subject land is located within the suburb of Wattle Grove and is situated approximately 13km east of the Perth Central Business District, near the western municipality boundary of the City of Kalamunda.

The subject land is 3.0857ha in area and has frontage to St John Road along its south eastern boundary and Tomah Road on its south western boundary, which is an unconstructed road reserve. The site also has frontage to the termination of cul-de-sacs that are servicing the residential development to the north of the site, being Mispickel Way and Olivine Gardens.

1.2.2 Area and Land Use

The subject land comprises an existing dwelling, a number of outbuildings including sheds and stables associated with the keeping of a small number of stock at the site.

Residential redevelopment of land to the north and east of the subject site is well established. Land to the west comprises a Primary Regional Road Reserve that is associated with the existing Roe Highway, whilst land to the south is reserved for parks and recreation purposes. The Aerial Photograph at (**Figure 1**, below) depicts the nature of existing land use.



Figure 1 – Aerial Photograph (subject land)

1.2.3 Legal Description and Ownership

Table 1, below, provides details in respect to the legal ownership of the subject land.

Table 1 – Certificate of Title details

Lot No.	House No.	Plan / Diagram	Volume	Folio	Registered Proprietor(s)	Lot Area
26	44	3217	740	20	Gwenyth Betty Fuller	3.0857ha

A Copy of the Certificate of Title is included at **Appendix A**.

1.3 Planning Framework

1.3.1 Statutory Planning Framework

Metropolitan Region Scheme

The subject site is zoned “Urban” under the Metropolitan Region Scheme, as is land surrounding the site, to the east and north. Reservations for Primary Regional Road and Parks and Recreation exist to the west and south, respectively.

City of Kalamunda Local Planning Scheme No. 3

The subject site is zoned “Urban Development” under the City of Kalamunda’s Local Planning Scheme No. 3 (LPS 3), which requires the preparation of a structure plan in order to enable subdivision or obtain subdivision or development approval within the zone. This proposal is consistent with that requirement.

1.3.2 Perth and Peel at 3.5million

Perth and Peel at 3.5million is a high-level spatial framework and strategic plan that provides a vision for the future growth of the Perth metropolitan region towards a population of 3.5 million residents.

As depicted within the North East Metropolitan Peel and Perth Subregional Framework, the subject site has been identified as existing urban development in accordance with the zoning of the site under the Metropolitan Region Scheme and the existing Cell 9 Wattle Grove Local Structure Plan.

The proposed LSP Amendment provides for a more efficient use of land by reducing the oversupply of POS within this area, and increasing the portion of residential space, thereby assisting in achieving the density targets set within this strategic planning document.

1.3.3 Structure Plans

1.3.3.1 Cell 9 Wattle Grove Local Structure Plan

The subject land is included within the existing Cell 9 Wattle Grove Local Structure Plan area, which seeks to primarily facilitate residential development, in addition to small areas of commercial developments, in an area bounded by Tonkin Highway, Roe Highway and Welshpool Road.

Development within the LSP area has largely been completed, with the subject site being one of the few sites with further subdivision and development potential remaining.

1.3.4 State Planning Policies

1.3.4.1 SPP 3.7 – Planning in Bushfire Prone Areas

State Planning Policy 3.7 (SPP 3.7) seeks to guide the implementation of effective risk based land use planning and development to preserve life and reduce the impact of bushfire on property and infrastructure. SPP 3.7 applies to strategic planning proposals, including Structure Plans and Structure Plan Amendments over land designated as bushfire prone by the Map of Bushfire Prone Areas prepared

by the Department of Fire and Emergency Services. An extract from the Map of Bushfire Prone Areas Mapping, as it relates to the subject land, is included at **Figure 3 below** (overleaf).

Given the subject land is designated as Bushfire Prone, SPP 3.7 is applicable to this Structure Plan Amendment proposal. A Bushfire Management Plan has been prepared in accordance with SPP 3.7 and is included at **Appendix B**. Further details are included at Section 2.1 of this Report.

1.3.4.2 SPP 5.4 – Road and Rail Transport Noise and Freight Considerations in Land Use Planning

State Planning Policy 5.4 (SPP 5.4) includes the following relevant objectives:

- protect people from unreasonable levels of transport noise;
- protect major transport corridors from incompatible urban encroachment;
- ensure that noise impacts are addressed as early as possible in the planning process; and
- encourage best-practice noise mitigation design and construction standards.

The subject site is potentially affected by traffic noise from vehicles using Roe Highway, which is classified as a “Primary Regional Road”. It is noted that noise attenuation measures, specifically a noise wall, have been constructed along the recently upgraded portion of Roe Highway, adjacent to the site. A photograph of the existing noise wall, as viewed from the subject site, is included below at **Figure 4**. Accordingly, whilst it is likely that there may be the need to place a notification on the title to advise prospective purchasers of traffic noise and the requirement for quiet house design packages, a noise assessment provided at subdivision implementation stage (via a condition of subdivision approval) can provide clarity on this matter.



Figure 3 – Bushfire Prone Areas Mapping



Figure 4 – Existing Roe Highway Noise Wall

1.3.5 Operational Policies

1.3.5.1 Liveable Neighbourhoods

Liveable Neighbourhoods represents the adopted policy that forms the basis for the assessment of urban structure plans, such as that proposed. The original Local Structure Plan report confirms consistency with the policy and as such, the proposed amendment remains consistent with it.

1.3.6 Local Planning Policies

There are no Local Planning Policies specifically relevant to this proposal.

2.0 SITE CONDITIONS AND CONSTRAINTS

2.1 Bushfire Hazard

A Bushfire Management Plan has been prepared to address the requirements of SPP 3.7 - *Planning in Bushfire Prone Areas* and the associated *Guidelines* in support of this application to amend the LSP. The Bushfire Management Plan addresses the potential subdivision that could occur at the subject site, following the approval of the LSP amendment contemplated within this application. A copy of the Bushfire Management Plan is included at **Appendix B**.

The Bushfire Management Plan concludes that the future development of the site will be able to occur in accordance with the requirements of the associated *Guidelines*. In particular, all dwellings will be able to have a determined rating of BAL-29 or less, multiple means of access and egress are available, and a reticulated water supply will be able to be connected to any development.

It is anticipated that as a condition of subdivision approval, the WAPC may require a Notification, pursuant to Section 165 of the *Planning and Development Act 2005* to be placed on the certificate of title of the proposed lots with a Bushfire Attack Level (BAL) rating of 12.5 or above, which would be required to state:

'This land is within a bushfire prone area as designated by an Order made by the Fire and Emergency Services Commissioner and may be subject to a Bushfire Management Plan. Additional planning and building requirements may apply to development on this land'.

2.2 Noise Attenuation

The proposed amendment to the Local Structure Plan occurs within proximity to the existing and recently upgraded Roe Highway. As a part of those works a noise wall was installed along the Primary Regional Road (PRR) reserve boundary, to ensure that noise attenuation to residential development within this LSP area would be adequately addressed.

Given the existing situation, and the fact that this amendment will not lead to residential development being closer to the PRR reserve than those on adjacent sites, it is considered that acoustic studies can be completed as conditions of any subdivision approval. These studies will investigate the need for additional noise mitigation measures such as the imposition of quiet house design requirements. Additionally, lots that are subject to an excessive noise level as a result of their proximity to Roe Highway may require the following Notification on their Certificate of Title:

"This lot is situated in the vicinity of the Roe Highway and is currently affected, and/or may in the future be affected by transport noise".

3.0 LAND USE AND DEVELOPMENT REQUIREMENTS

3.1 Land Use

The primary driver of the proposed amendment of the Local Structure Plan is to create greater efficiency in the development of land within the Structure Plan area. This will be achieved by reducing the existing oversupply of POS and increasing the portion of land depicted for residential development within the LSP area. Accordingly, the primary land use considerations related to this amendment are focussed on residential and POS land uses. The road layout has also been adjusted to reflect these land use changes.

3.2 Public Open Space (POS)

The proposed Structure Plan Amendment results in a small reduction to the overall provision of POS identified in the adopted LSP. In particular, the majority of the portion of POS within the subject site is being redesignated as residential. Whilst this is somewhat offset by the partial reallocation of a portion of Tomah Road back into POS, the overall reduction still equates to a small reduction of 3,693m² to the Tomah Reserve portion of POS.

A POS schedule that demonstrates the proposed Local Structure Plan amendment satisfies the 10% public open space requirement for the LSP area is provided below. In preparing this schedule we note the following factors:

- Data from the original Outline Development Plan report (prepared in 1996) has been utilised to determine the size of drainage basins in each POS cell.
- The size of the drainage basins is necessary to determine the area of uncredited and restricted POS areas.
- A table comparing the proposed areas of POS (determined in the 1996 report) with the actual developed and proposed (Tomah Reserve) areas has been provided.
- This comparison table does not include the two Community Purpose sites given these were not considered to form a part of the POS contribution in the 1996 report.
- The purpose of this table is to demonstrate POS provision has generally occurred in accordance with the intent of the ODP, thereby complying with the relevant requirement for a 10% POS provision.
- The names of each portion of POS (aside from Community Purpose sites) are as they were identified on the “Open Space Provision” plan in the 1996 report. This plan is attached at **Appendix D**.
- The total land area of the Local Structure Plan is slightly smaller than the original ODP area given the portions of road widening that have been taken in respect of Tonkin Highway and Roe Highway.

Therefore, on the basis of the above, the POS Comparison Table is provided in the following, followed by the POS Schedule that is prepared in accordance with the *Liveable Neighbourhoods* document.

Public Open Space Comparison Table		
	Originally proposed POS Area (ha)	Actual POS area (ha)
Tomah Reserve	2.9	2.2308
Woodlupine Reserve	10.5	9.5578
East Cell 9 Reserve	5.3	9.0285
Yule Brook	4.8	3.3260
Pocket Reserve No. 1	0.8	0.9996
Pocket Reserve No. 2	0.4	0.29
Total Area:	24.7	25.4327

The above POS Comparison Table demonstrates that the actual provision of POS has complied with the general intent of the original ODP throughout the development of the structure plan area. In fact, the actual POS exceeds the originally proposed POS provision by 0.7327ha. Accordingly, it can be noted that the provision of POS has occurred in accordance with the planning framework that applied in 1996 as well as the current planning framework (which includes *Liveable Neighbourhoods*), as demonstrated in the following schedule:

Public Open Space Schedule		
Total Land Area		234.3ha
Deductions		
Parks and Recreation Reservations (Tomah Swamp & Hartfield Park)		30.2473
Commercial Development		3.0157
Primary School		4.0304
Uncredited POS (Incl. 1 in 1 year basins)		2.35
Tonkin Highway Road Widening		1.827
	Total:	41.4704
	Gross Subdivisible Area:	192.83
	POS Requirement:	19.283
Public Open Space Calculation		
To Comprise		
Minimum 80% unrestricted Open Space		15.4264
Maximum 20% restricted Open Space		3.8566
Public Open Space Provided		
	Unrestricted	Restricted
Tomah Reserve	1.9308	0.3
Woodlupine Reserve	8.0578	1.5
East Cell 9 Reserve	8.6285	0.4
Yule Brook Reserve	3.176	0.15
Pocket Reserve No. 1	0.9996	0
Pocket Reserve No. 2	0.29	0
Community Purpose Site (West)	0.9279	0
Community Purpose Site (East)	3.1239	0
Total	27.1345	2.35
Total Open Space Provided:		29.4825 ha (15.29%)

As noted above, the proposed Structure Plan amendment reduces the total POS provision (in the Tomah Reserve) by 0.3693ha. Therefore, the overall provision of POS has been reduced from 15.48% down to 15.29%, which represents a very minor (0.19%) reduction.

3.3 Residential

3.3.1 Residential Density and Layout

The residential densities proposed by the Local Structure Plan Amendment continue to be consistent with the existing densities depicted on the adopted Local Structure Plan, specifically being R20 for the subject site.

The Structure Plan Amendment proposes the creation of standard street blocks where practical to accommodate a variety of lot sizes. Overall, 30,408m² of residential coded land is proposed within the subject site. This appears capable of allowing for a total of 53 lots, which equates to approximately 17.45 dwellings per site hectare. Based on 2016 ABS statistics and the expected dwelling yield (53), the estimated population within the Structure Plan Amendment area is 137 persons at 2.6 persons per dwelling.

An Indicative Subdivision Plan has been attached at **Appendix C**.

Street blocks and road layouts have been designed to provide for an efficient use of space including rectangular lots that also respond to the current market demand in regard to lot depths and widths.

3.4 Movement Networks

3.4.1 Proposed Movement Network

The proposed public road network shall remain generally consistent with the adopted Structure Plan. Road reserves and laneways will be constructed generally in accordance with Liveable Neighbourhoods guidelines. The various road widths are considered consistent with those previously approved in both the Local Structure Plan and subsequent subdivision approvals.

3.4.2 Traffic Generation

The proposed subdivisional road network within the current Local Structure Plan area has been designed to service future subdivision and development at densities of R20 over the subject land.

The anticipated change to the total daily traffic volume associated with the Local Structure Plan Amendment is minimal. Given the additional residential area, created by this proposed amendment, equates to 4,632m² an additional 10 lots will be created by this proposal (based on an average R20 lot size of 450m²). The WAPC's Transport Impact Assessment Guidelines Volume 3 – Subdivision, suggest that average peak hour movements from a standard residential dwelling equate to 0.8 vehicles an hour. Accordingly, it is estimated that this proposal will only generate an addition 8 vehicle movements during peak hours. On that basis, it is concluded that the proposed road network has the capacity to accommodate the anticipated traffic generated by subdivision and development within the Structure Plan Amendment area with no adverse impact on traffic operations.

3.5 Stormwater Management

Given the fact the large majority of the Structure Plan area has already been developed in accordance with previous drainage strategies and Urban Water Management Plans (UWMP), a detailed stormwater management plan and analysis has not occurred as a part of this process. It is considered that this is a relatively minor amendment that will not create additional drainage that cannot be managed by the current network. Furthermore, a UWMP will be required as a condition of any future subdivision approval.

3.6 Staging

It is not envisaged that any staging of development on the subject site.

3.7 Developer Contribution Arrangements

Under the Schedule 11 of the City of Kalamunda Local Planning Scheme No. 3, development within this Structure Plan area is required to provide monetary contributions on the basis of the “Wattle Grove Cell 9 – Schedule 11 Part 1 Infrastructure Sharing Agreement”. It is expected that future subdivision approvals will include conditions related to the contributions required by this scheme, which acts in a similar manner to Development Contribution Schemes.

3.8 Implementation

The proposed Structure Plan Amendment has been prepared in accordance with the requirements of the *Planning and Development (Local Planning Schemes) Regulations 2015*.

The *Planning and Development (Local Planning Schemes) Regulations 2015* stipulates the manner by which the Structure Plan Amendment will be processed by the City of Kalamunda and thereafter, the Western Australian Planning Commission to enable final approval.

Following adoption of the Local Structure Plan, subdivision applications and development applications can be considered and approved where they comply with the Amended Structure Plan.

APPENDICES INDEX

Appendix	Nature of Document
A	Certificate of Title
B	Bushfire Management Plan
C	Conceptual Plan of Subdivision
D	Original POS Contribution Plan

APPENDIX A

Certificate of Title

	
WESTERN AUSTRALIA	
RECORD OF CERTIFICATE OF TITLE UNDER THE TRANSFER OF LAND ACT 1893	
REGISTER NUMBER 26/P3217	
DUPLICATE EDITION 1	DATE DUPLICATE ISSUED 9/2/2018
VOLUME 740	FOLIO 20

The person described in the first schedule is the registered proprietor of an estate in fee simple in the land described below subject to the reservations, conditions and depth limit contained in the original grant (if a grant issued) and to the limitations, interests, encumbrances and notifications shown in the second schedule.

BGRoberts
REGISTRAR OF TITLES



LAND DESCRIPTION:

LOT 26 ON PLAN 3217

REGISTERED PROPRIETOR: (FIRST SCHEDULE)

GWENYTH BETTY FULLER OF 44 ST JOHN ROAD WATTLE GROVE WA 6107
(ND N813605) REGISTERED 22/1/2018

LIMITATIONS, INTERESTS, ENCUMBRANCES AND NOTIFICATIONS: (SECOND SCHEDULE)

Warning: A current search of the sketch of the land should be obtained where detail of position, dimensions or area of the lot is required.
* Any entries preceded by an asterisk may not appear on the current edition of the duplicate certificate of title.
Lot as described in the land description may be a lot or location.

-----END OF CERTIFICATE OF TITLE-----

STATEMENTS:

The statements set out below are not intended to be nor should they be relied on as substitutes for inspection of the land and the relevant documents or for local government, legal, surveying or other professional advice.

SKETCH OF LAND: 740-20 (26/P3217)
PREVIOUS TITLE: 674-5
PROPERTY STREET ADDRESS: 44 ST JOHN RD, WATTLE GROVE.
LOCAL GOVERNMENT AUTHORITY: CITY OF KALAMUNDA

APPENDIX B

Bushfire Management Plan



Bushfire Management Plan

Cell 9 Wattle Grove

Outline Development Plan - amendment



Ref: 210605
Version: C
Jun 2021



Fire Protection
Association Australia
Life. Property. Environment.



Bushfire Management Plan Coversheet

This Coversheet and accompanying Bushfire Management Plan has been prepared and issued by a person accredited by Fire Protection Association Australia under the Bushfire Planning and Design (BPAD) Accreditation Scheme.

Bushfire Management Plan and Site Details

Site Address / Plan Reference:	No.44 [Lot 26 P3217] St John Road			
Suburb:	Wattle Grove	State:	WA	P/code: 6107
Local government area:	Kalamunda			
Description of the planning proposal:	Amendment to Outline Development Plan			
BMP Plan / Reference Number:	210605	Version:	C	Date of Issue: 1 Jul 2021
Client / Business Name:	Harley Dykstra			

Reason for referral to DFES

	Yes	No
Has the BAL been calculated by a method other than method 1 as outlined in AS3959 (tick no if AS3959 method 1 has been used to calculate the BAL)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Have any of the bushfire protection criteria elements been addressed through the use of a performance principle (tick no if only acceptable solutions have been used to address all of the BPC elements)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Is the proposal any of the following special development types (see SPP 3.7 for definitions)?

Unavoidable development (in BAL-40 or BAL-FZ)	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Strategic planning proposal (including rezoning applications)	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Minor development (in BAL-40 or BAL-FZ)	<input type="checkbox"/>	<input checked="" type="checkbox"/>
High risk land-use	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Vulnerable land-use	<input type="checkbox"/>	<input checked="" type="checkbox"/>

If the development is a special development as listed above, explain why the proposal is considered to be one of the above listed classifications (E.g. considered vulnerable land-use as the development is for accommodation of the elderly, etc.)?

Amendment to structure plan.

Note: The decision maker (e.g. the local government or the WAPC) should only refer the proposal to DFES for comment if one (or more) of the above answers are ticked "Yes".

BPAD Accredited Practitioner Details and Declaration

Name	Accreditation Level	Accreditation No.	Accreditation Expiry
Jeremy Durston	Level 3	BPAD-36525	April 2022
Company		Contact No.	
Bushfire West Pty Ltd		0403 328 835	

I declare that the information provided in this bushfire management plan is to the best of my knowledge true and correct.

Signature of Practitioner

Date

1 Jul 2021

Bushfire Management Plan
Cell 9 Wattle Grove – ODP Amendment

REPORT DETAILS

Subject Land

Lot No	Plan	Development Site
26	P3217	44 St John Road
Locality		Wattle Grove (6107)
LPS Zone		Urban Development
Land area		3.0857 ha
Local Government		Kalamunda
Proposal description		Amendment to Cell 9 Wattle Grove ODP
Site assessment date		12 June 2021

Document Reference

Project ref.210605	Date	Purpose
A	23 Jun 2021	Issued for planning consultation.
B	25 Jun 2021	Issued for ODP amendment.
C	1 Jul 2021	Text changes to clarify the assessment is based on the 'preferred future subdivision layout'.

Author

Practitioner	Accreditation Level	Accreditation No.
Jeremy Durston	Level 3	BPAD-36525

Report Limitations

Bushfire and weather conditions can be extremely dangerous and unpredictable. The management of bushfire risk will depend on, among other things, the actions of property owners and/or occupiers over which the author has no control.

All surveys, forecasts, projections and recommendations made in this report are made in good faith on the basis of information available at the time. All maps included herein are indicative in nature and are not to be used for accurate calculations.

Notwithstanding anything contained therein, the author will not, except as the law may require, be liable for any loss or other consequences arising out of the services provided.

Jeremy Durston
jeremy@Bushfire West.com.au
Bushfire West Pty Ltd



Bushfire Management Plan
Cell 9 Wattle Grove – ODP Amendment

Contents

1. Proposal Details	4
1.1 Background & Purpose of Report	4
1.2 Subject Site & Existing Conditions	4
1.3 Proposal Description	4
2. Environmental Considerations	8
2.1 Vegetation Clearing	8
2.2 Re-vegetation & Landscaping	8
3. Bushfire Assessment Inputs	9
3.1 Effective Slopes	9
3.2 Bushfire Fuels	9
4. Bushfire Assessment Outputs	12
5. Bushfire Hazard Issues	13
6. Assessment against the Bushfire Protection Criteria	17
6.1 Compliance	17
6.2 Additional management strategies	18
7. Implementation and management	20
Appendix 1 – Vegetation Classification Photos	21

List of Figures

Figure 1: Site Overview	5
Figure 2: Bushfire Prone Areas	6
Figure 3: Subdivision Layout	7
Figure 4: Vegetation Classifications, pre-development	10
Figure 5: Vegetation Classifications, post-development	11
Figure 6: BAL Contour Map	14
Figure 7: BAL Contour Map – site view	15
Figure 8: BAL Contour Map – southern site corner	14
Figure 9: Bushfire Protection Measures	19

List of Tables

Table 1: Areas of classified vegetation and exclusions	9
Table 2: BAL Rating variables	12
Table 3: BAL Ratings & applicable BAL Setbacks, post-development	12
Table 4: Assessment against the Bushfire Protection Criteria	17
Table 5: Implementation & Management Schedules	20

Bushfire Management Plan
Cell 9 Wattle Grove – ODP Amendment

1. Proposal Details

1.1 Background & Purpose of Report

This Bushfire Management Plan (BMP) is for an amendment to the Cell 9 Wattle Grove Outline Development Plan (ODP). The amendment is proposed to align with the subdivision layout review for 44 (Lot 26) St John Road, Wattle Grove.

This report assesses the strategic planning proposal against *State Planning Policy 3.7 Planning in Bushfire Prone Areas* (SPP 3.7) and the associated *Guidelines for Planning in Bushfire Prone Areas v1.3* (the Guidelines).

The primary purpose of this report is to provide the required bushfire planning information to inform the assessment process for the proposal. Guidance is provided for the bushfire protection measures required at relevant planning stages in accordance with the Guidelines.

1.2 Subject Site & Existing Conditions

The area of Cell 9 Wattle Grove ODP is generally bound by Roe Highway, Welshpool Road East and Tonkin Highway. No. 44 (Lot 26) St John Road, Wattle Grove (the subject land) is located in the northern section of the ODP area (Figure 1).

The subject land is a rectangular area currently developed with a homestead, stock enclosures and associated structures which may be cleared if subdivided in the future. St John Road provides primary access to the site with multiple connecting roads linking with Hale Road, which in turn provides connections to Tonkin Highway and Welshpool Road East. The site is currently serviced by a reticulated water supply.

The land is bound by St John Road to the south-east, existing urban development and Krypton Lane to the north-east, public open space to the north-west and by Tomah Road to the south-west. The Tomah Road reserve is currently developed with a gravel road, drainage channel and power transmission lines, and otherwise contains native vegetation.

Areas to the north, east and south of the site generally comprise existing urban development. To the south of Tomah Road is a Bush Forever Area (Bush Forever Site 292) with wetland vegetation recorded as comprising closed scrub and fringing low forest. Accordingly, the subject land is within a bushfire prone area designated by the *Western Australia State Map of Bush Fire Prone Areas* (Figure 2).

1.3 Proposal Description

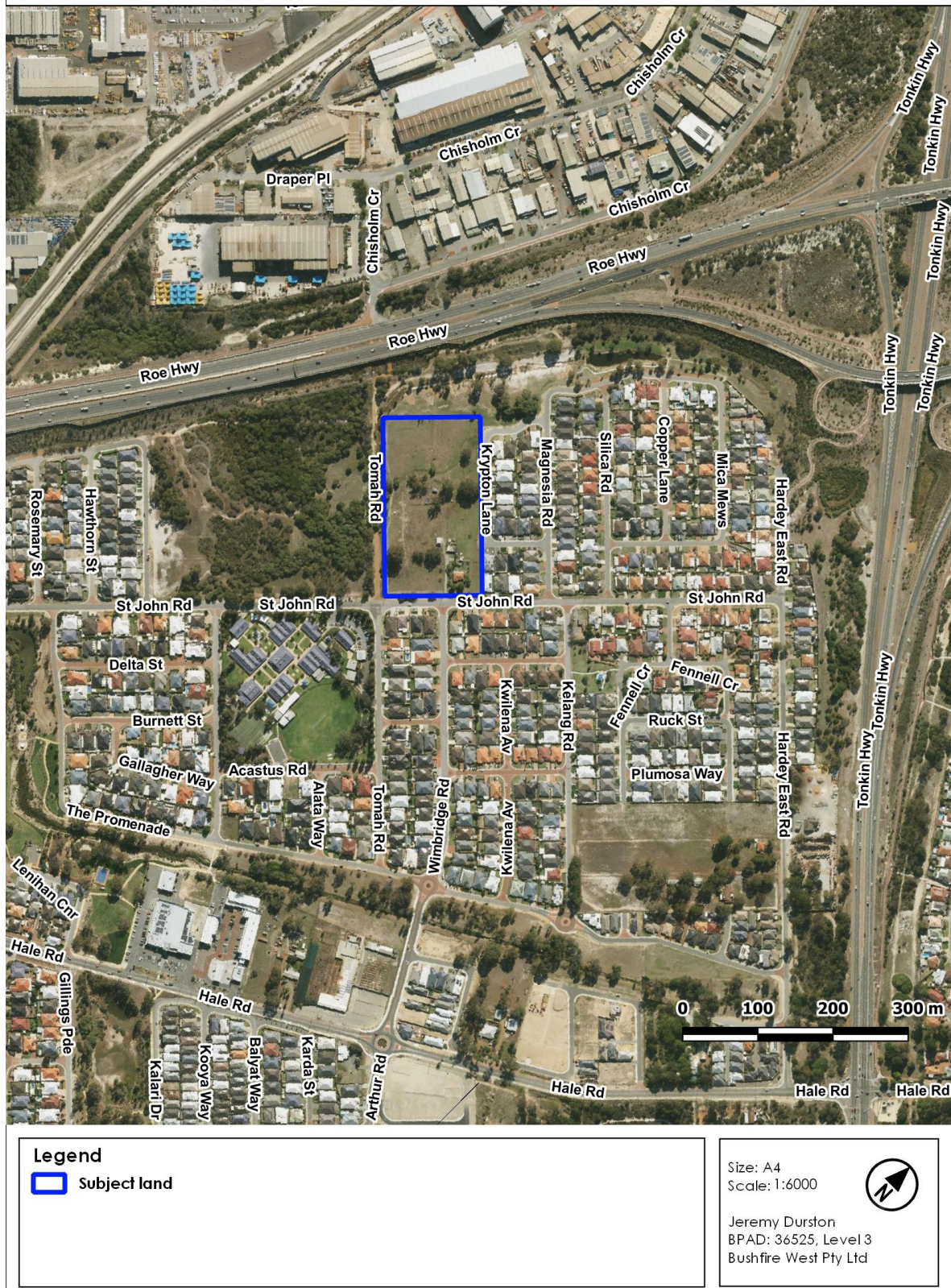
To align with the preferred future subdivision layout, the primary changes to the ODP are a reduction in public open space with associated changes to the road layout. A redundant section of Tomah Road located to the west of the subject land may be assimilated into the adjoining POS.

In conjunction with the existing St John Road and Krypton Lane, the proposed extension to the 13m wide Olivine Gardens reserve to connect with the 20m wide Tomah Road reserve will create perimeter access. Two 15m wide road reserves are proposed to provide two-way, internal access.

Figure 3 depicts the preferred future subdivision layout.

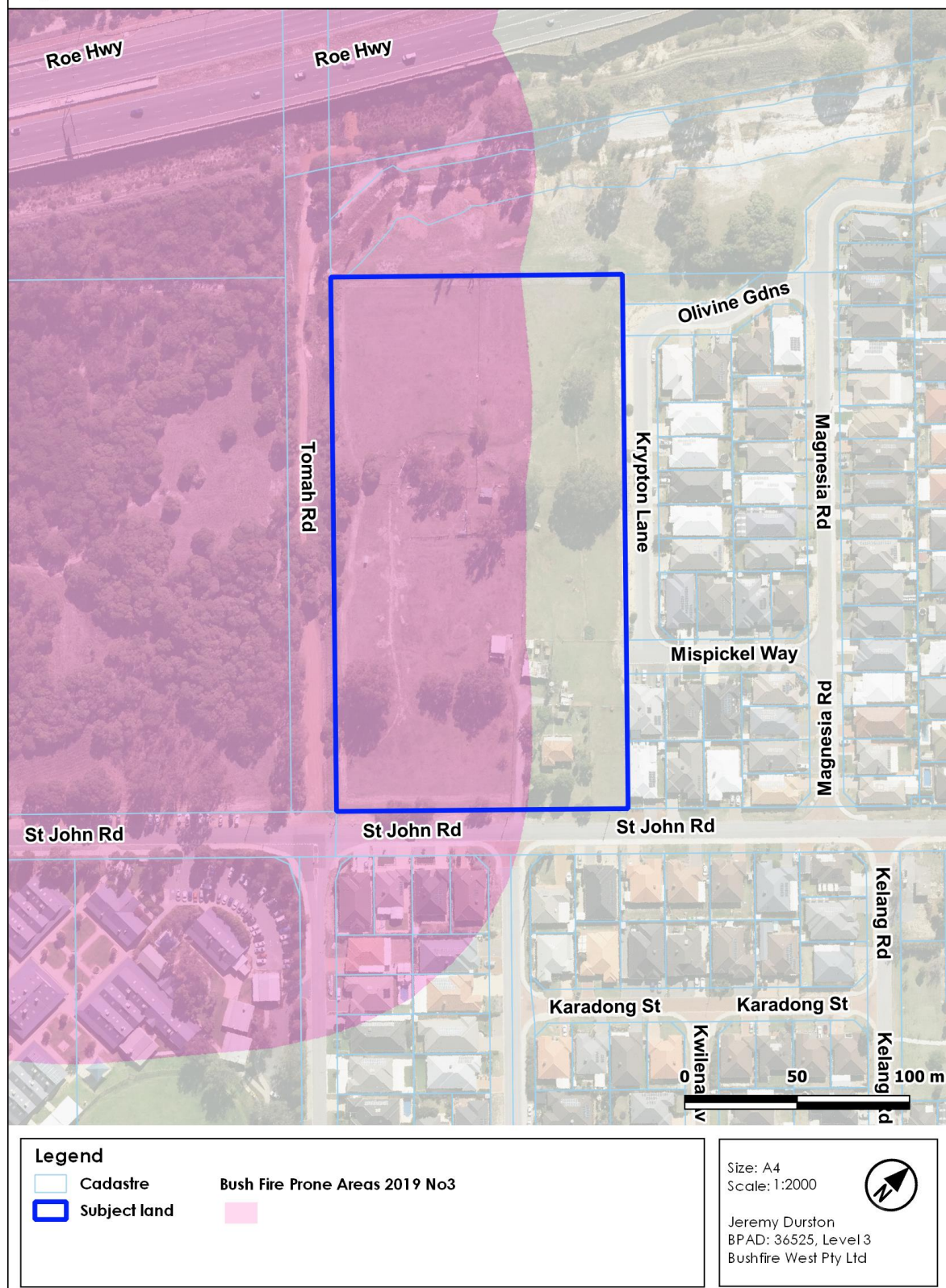
Bushfire Management Plan
Cell 9 Wattle Grove – ODP Amendment

Figure 1. Site Overview

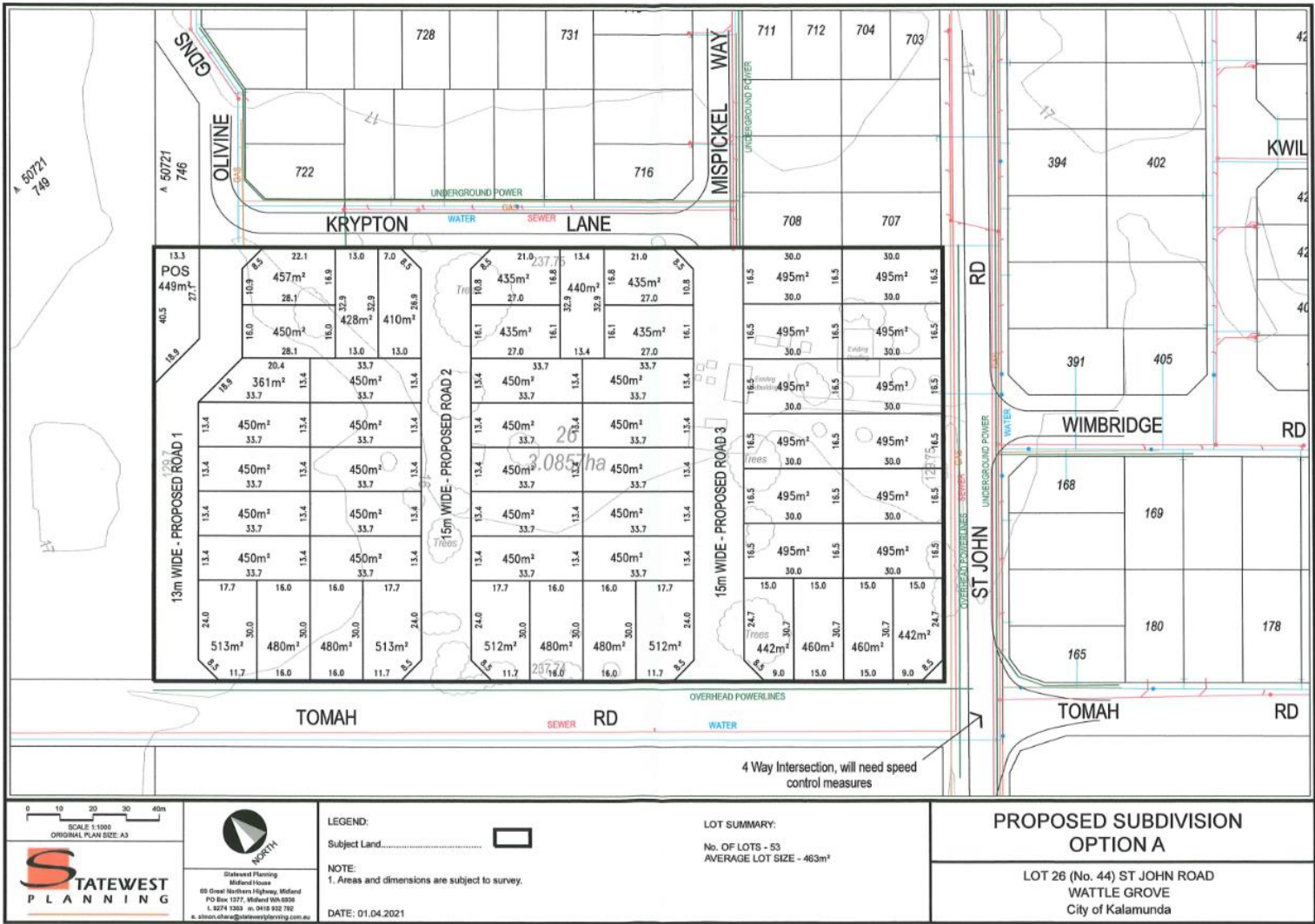


Bushfire Management Plan
Cell 9 Wattle Grove – ODP Amendment

Figure 2. Bushfire Prone Areas



Bushfire Management Plan
Cell 9 Wattle Grove – ODP Amendment



Bushfire Management Plan
Cell 9 Wattle Grove – ODP Amendment

2. Environmental Considerations

2.1 Vegetation Clearing

The subject land is currently parkland cleared and comprises pasture grass with isolated trees and shrubs. No significant native vegetation has been identified. It is anticipated that any remnant native vegetation is required to be removed at future planning stages.

2.2 Re-vegetation & Landscaping

The proposal incorporates a POS area of 449m², which is adjacent to the existing POS located to the north of the site. The area designated as POS currently comprises grass and no revegetation is anticipated at this stage. It is assumed the future subdivision stage will require the grassed POS area within the site to be managed for low threat in accordance with AS3959 clause 2.2.3.2(f).

Bushfire Management Plan
Cell 9 Wattle Grove – ODP Amendment

3. Bushfire Assessment Inputs

3.1 Effective Slopes

Effective slopes for each vegetation were measured in accordance with AS 3959-2018 and cross referenced with Landgate elevation data. The 150m assessment extent was found to be predominately flat with some minor, local slopes upward towards the Roe Highway. The effective slope for each vegetation area is detailed in the following section.

3.2 Bushfire Fuels

The location and extent of AS 3959-2018 vegetation structures and low threat exclusions within 150 metres of the site are depicted in Appendix 1. All bushfire structures and fuel loads are assessed in their mature states, including degraded areas of Bush Forever Site 292 that are anticipated to fully regenerate. The classified vegetation and excluded areas are summarised in Table 1, including both the pre-development and post-development conditions.

Table 1 Areas of classified vegetation and exclusions:

Vegetation Area	Effective Slope	Pre-development Classification	Post-development Classification
Area 1	Flat	Class A Forest	Class A Forest
Area 2	Flat	Class D Scrub	Class D Scrub
Area 3	Flat	Class D Scrub and Class A Forest within Tomah Road Reserve	To be modified for low threat Exclusions 2.2.3.2 (e)&(f)
Area 4	Upslope	Class G Grassland	Class G Grassland
Area 5	Upslope	Class G Grassland	Class G Grassland
Area 6	Upslope	Class B Woodland	Class B Woodland
Area 7	Upslope	Class D Scrub	Class D Scrub
Area 8	Flat	Class A Forest	Class A Forest
Area 9	n/a	Exclusions 2.2.3.2 (e)&(f)	Exclusions 2.2.3.2 (e)&(f)
Area 10	n/a	Exclusions 2.2.3.2 (e)&(f)	Exclusions 2.2.3.2 (e)&(f)
Area 11	n/a	Exclusions 2.2.3.2 (e)&(f)	Exclusions 2.2.3.2 (e)&(f)
Area 12	n/a	Exclusions 2.2.3.2 (e)&(f)	Exclusions 2.2.3.2 (e)&(f)
Area 13	Flat	Class G Grassland within subject land	To be modified for low threat Exclusions 2.2.3.2 (e)&(f)

The areas of classified vegetation and exclusions are mapped in Figure 4 (pre-development) and Figure 5 (post-development).

Bushfire Management Plan
Cell 9 Wattle Grove – ODP Amendment

Figure 4. Vegetation Classifications - pre-development



Bushfire Management Plan
Cell 9 Wattle Grove – ODP Amendment

Figure 5. Vegetation Classifications - post-development



Legend

- Cadastre
- Subject land
- 150m assessment extent
- Contours (2m)

- Assessment areas
- AS3959 classifications:**
- To be Modified Low Threat
- Exclusions 2.2.3.2 (e)&(f)

- Forest
- Woodland
- Scrub
- Grassland

Size: A4
 Scale: 1:2500



Jeremy Durston
 BPAD: 36525, Level 3
 Bushfire West Pty Ltd

Bushfire Management Plan
Cell 9 Wattle Grove – ODP Amendment

4. Bushfire Assessment Outputs

Analysis was undertaken in accordance with AS 3959 Method 1 to determine the potential worst-case radiant heat impacts to the proposal. The resulting post-development BAL ratings are summarised in the following tables and depicted in the BAL Contour Maps (Figures 6, 7 & 8) prepared in accordance with the Guidelines for Planning in Bushfire Prone Areas.

Table 2: BAL Rating variables (AS3959 Method 1):

Vegetation Classification	Slope	BAL-FZ	BAL-40	BAL-29	BAL-19	BAL-12.5
Class A Forest	0°	<16m	16 to<21m	21 to<31m	31 to<42m	42 to<100m
Class B Woodland	0°	<10m	10 to<14m	14 to<20m	20 to<29m	29 to<100m
Class D Scrub	0°	<10m	10 to<13m	13 to<19m	19 to<27m	27 to<100m
Class G Grassland	0°	<6m	6 to<8m	8 to<12m	12 to<17m	17 to<50m
Exclusion cl.2.2.3.2	n/a	n/a	n/a	n/a	n/a	n/a

Accordingly, the lots within the proposed subdivision layout fall into the following BAL rating categories:

Table 3: BAL Ratings & applicable BAL Setbacks, post-development (AS3959 Method 1):

No. of Proposed Lots	Maximum BAL Rating	Required Development Setback	Achievable BAL Rating
6 lots	BAL-40	1m boundary setback from Tomah Road	BAL-29
1 lot	BAL-29	n/a	
11 lots	BAL-19	n/a	
21 lots	BAL-12.5	n/a	
14 lots	BAL-LOW	n/a	

With respect to policy measure 5.3.2 of *Position Statement: Planning in bushfire prone areas – Demonstrating Element 1: Location and Element 2: Siting and design*, the proposed subdivision layout is acceptable due to the potential bushfire impacts above BAL-29 being limited to the extent of 1m contained within the primary and/or secondary street development setbacks, as prescribed by the Residential Design Codes.

The indicative BAL ratings for each lot are to be confirmed for the future subdivision application.

Bushfire Management Plan
Cell 9 Wattle Grove – ODP Amendment

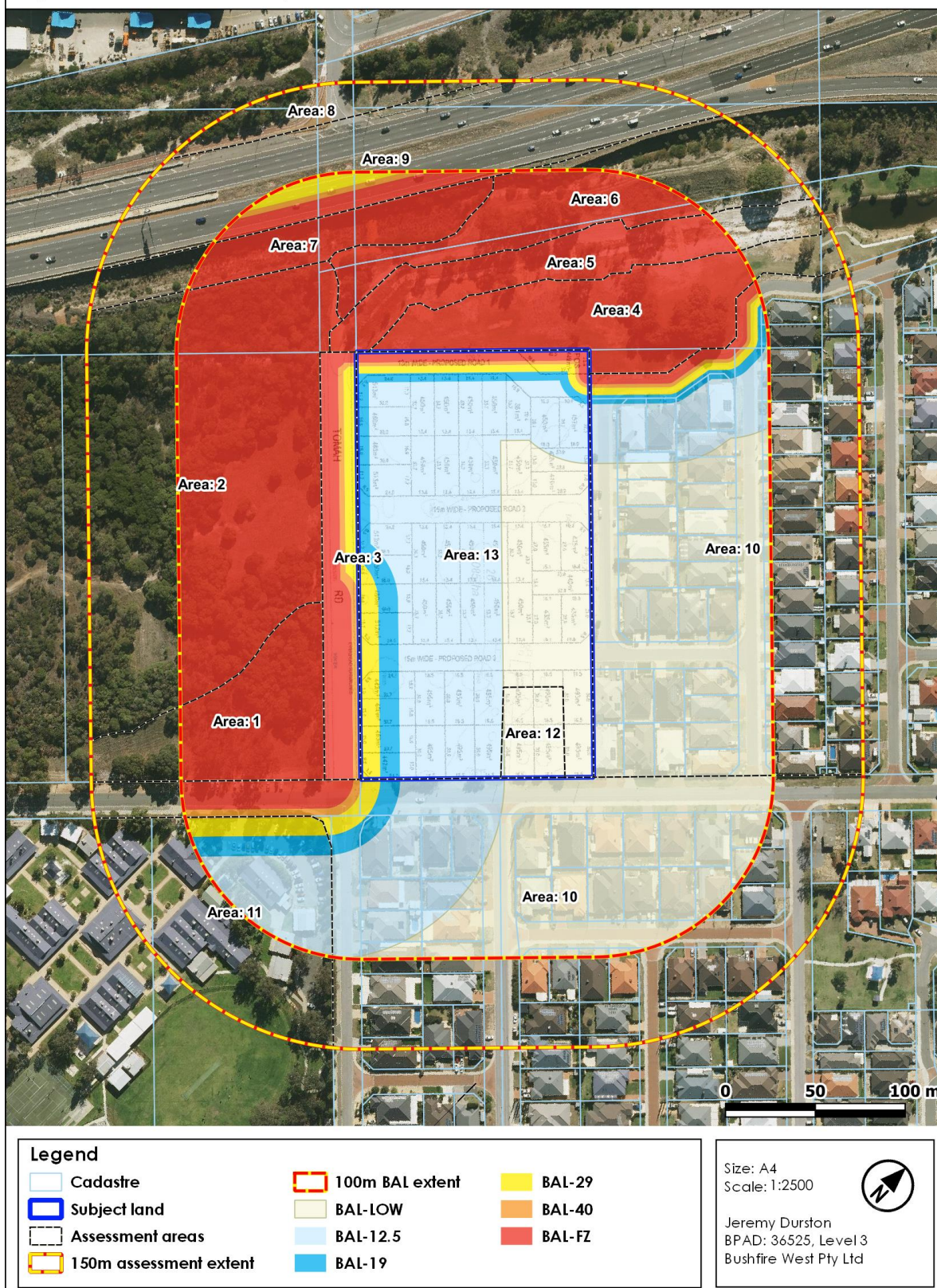
5. Bushfire Hazard Issues

The bushfire impact analysis has identified the following hazard issues:

- The future development of the subject land will form an expansion to the existing developed urban area that has multiple access alternatives and a reticulated water supply.
- The major hazard is the Bush Forever Area to the south of Tomah Road. This hazard is anticipated to continue in perpetuity.
- Additional hazards are represented by the vegetation in the POS to the north of the site, which may contribute to the intensity and spread of a bushfire (while it is acknowledged that areas of the POS currently show evidence of ongoing maintenance).
- At the subdivision stage, the internal areas of the subject land including proposed lots, road reserves and POS are all required to be modified and maintained for low threat.
- Hazard separation for the future subdivision is required to be established by the proposed perimeter roads, including Tomah Road, which are to be developed and maintained in low threat condition at the subdivision stage.
- All proposed lots are assessed as capable of achieving ratings of BAL-29 or lower. Where applicable, some lots with Tomah Road frontage will achieve the rating of BAL-29 through R-Code development setbacks.

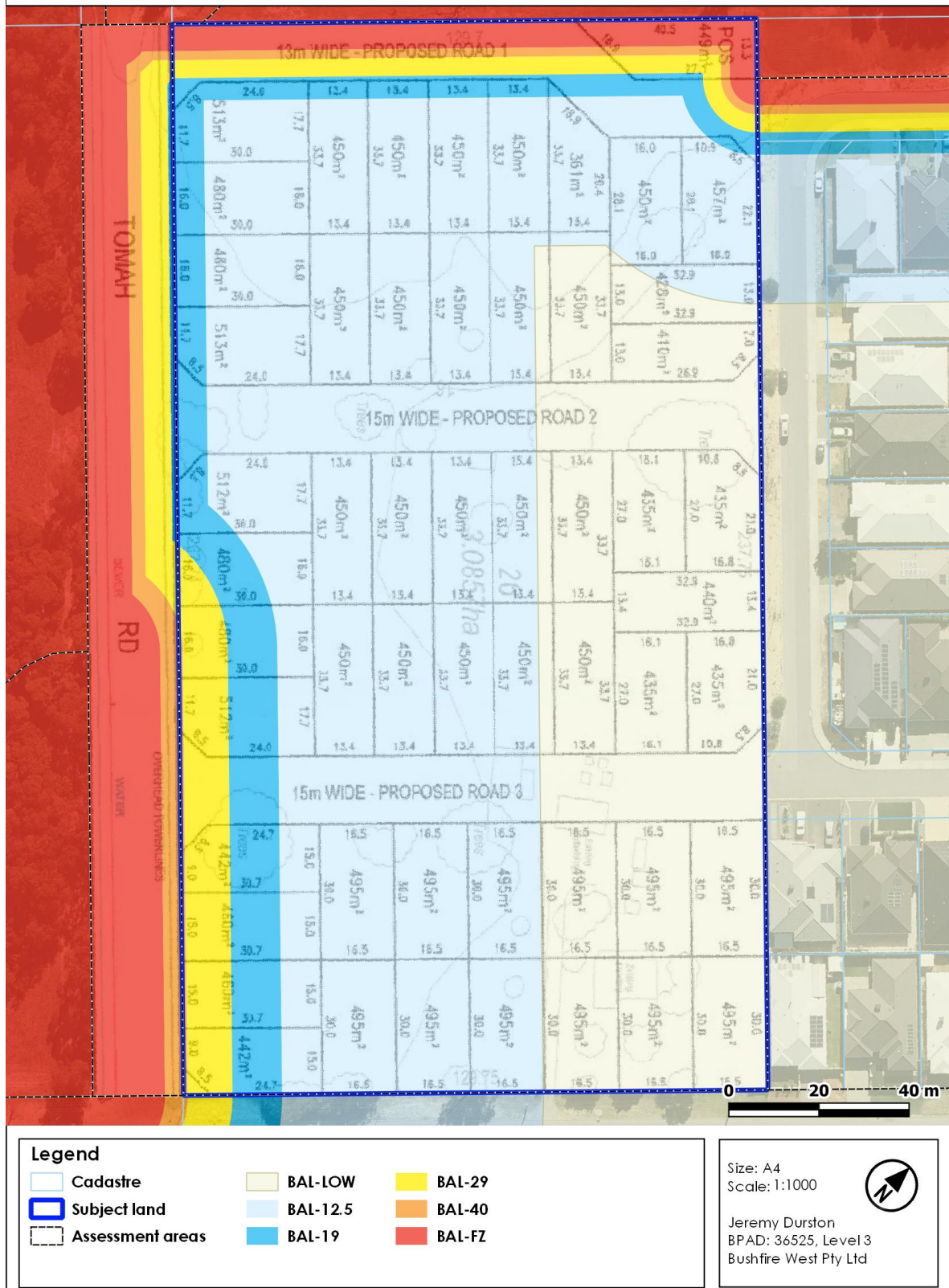
Bushfire Management Plan
Cell 9 Wattle Grove – ODP Amendment

Figure 6. BAL Contour Map



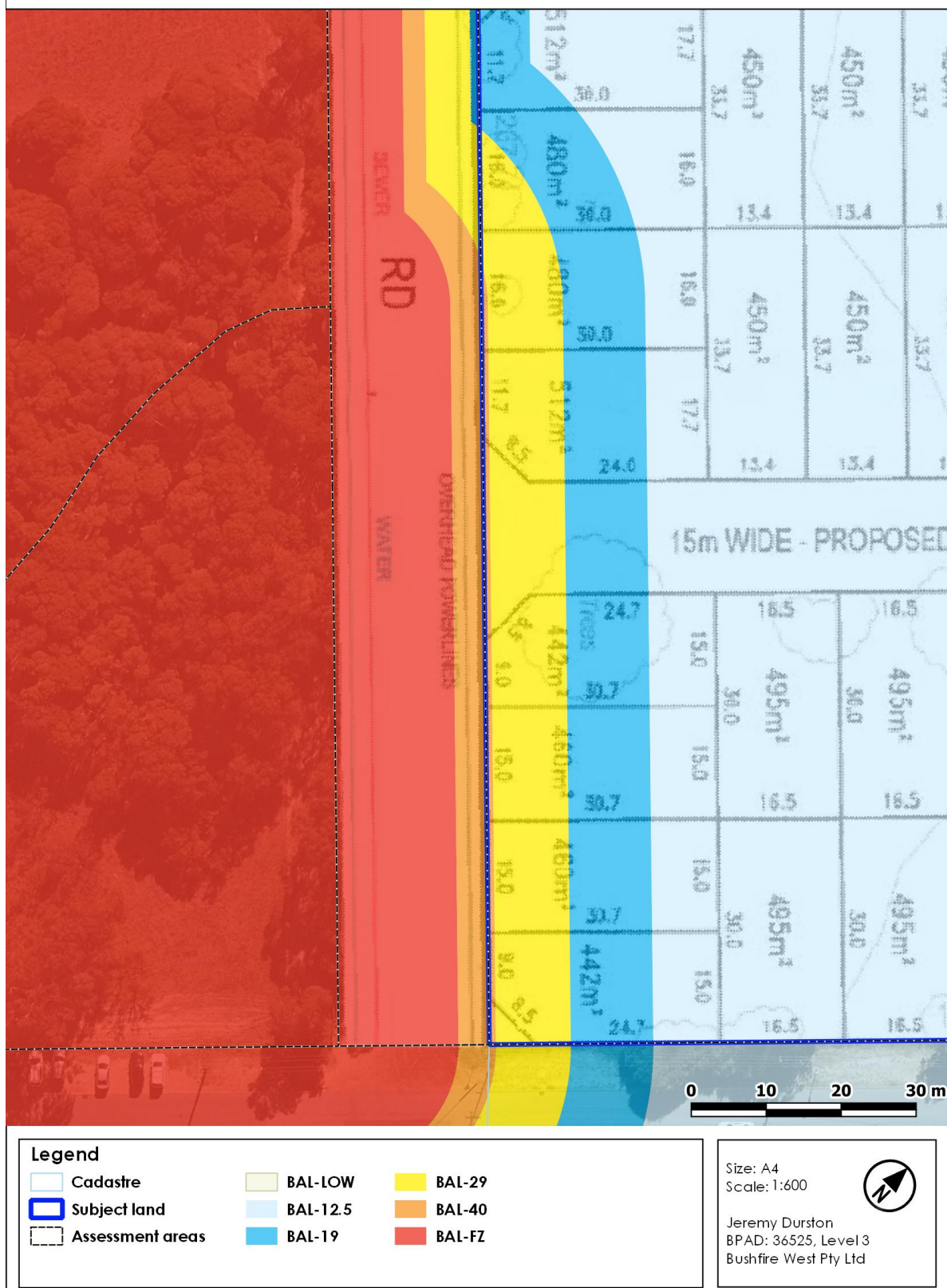
Bushfire Management Plan
Cell 9 Wattle Grove – ODP Amendment

Figure 7. BAL Contour Map - site view



Bushfire Management Plan
Cell 9 Wattle Grove – ODP Amendment

Figure 8. BAL Contour Map - Southern Site Corner



Bushfire Management Plan
Cell 9 Wattle Grove – ODP Amendment

6. Assessment against the Bushfire Protection Criteria

6.1 Compliance

Following is an assessment against the bushfire protection criteria detailed in Appendix 4 of the Guidelines, including the applicable Acceptable Solutions for each element. Figure 9 depicts the relevant bushfire protection measures.

Table 4: Assessment against the Bushfire Protection Criteria of the Guidelines

Element	Acceptable Solution (A)	Compliance	Notes
1. Location	A1.1 Development location	Yes	The proposal is assessed as capable of achieving acceptable ratings of BAL-29 or lower for future development on all lots. The proposed subdivision layout achieves sufficient hazard separation through perimeter roads in conjunction with R-Code development setbacks where applicable.
2. Siting of Development	A2.1 Asset Protection Zone (APZ)	Yes	The proposed lots cannot contain individual APZs. The subdivision layout achieves an effective APZ through adjoining lots and road reserves to be managed in a low-fuel state on an ongoing basis.
3. Vehicular Access	A3.1 Two access routes	Yes	The proposed subdivision layout includes public roads providing the required two different access and egress routes.
	A3.2 Public roads	Yes	Public roads are to be in accordance with the Local Government Guidelines for Subdivisional Development, which comply with Table. 6 column 1 of the Guidelines.
	A3.3 Cul-de-sac	n/a	No culs-de-sac are proposed.
	A3.4 Battle-axe	n/a	No battle-axe lots are proposed.
	A3.5 Private driveways longer than 50m	n/a	No driveways will be longer than 50m.
	A3.6 Emergency access way	n/a	No EAW is proposed or required.
	A3.7 Fire service access routes	n/a	No FSAR is proposed or required.
	A3.8 Firebreaks	Yes	At applicable stages, compliance is required with the City of Kalamunda annual Fire Hazard Reduction Notice.
4. Water	A4.1 Reticulated areas	Yes	A plan of fire hydrants is to be submitted to Council and DFES for subdivision clearance.
	A4.2 Non-reticulated areas	n/a	
	A4.3 Individual lots within non-reticulated areas	n/a	

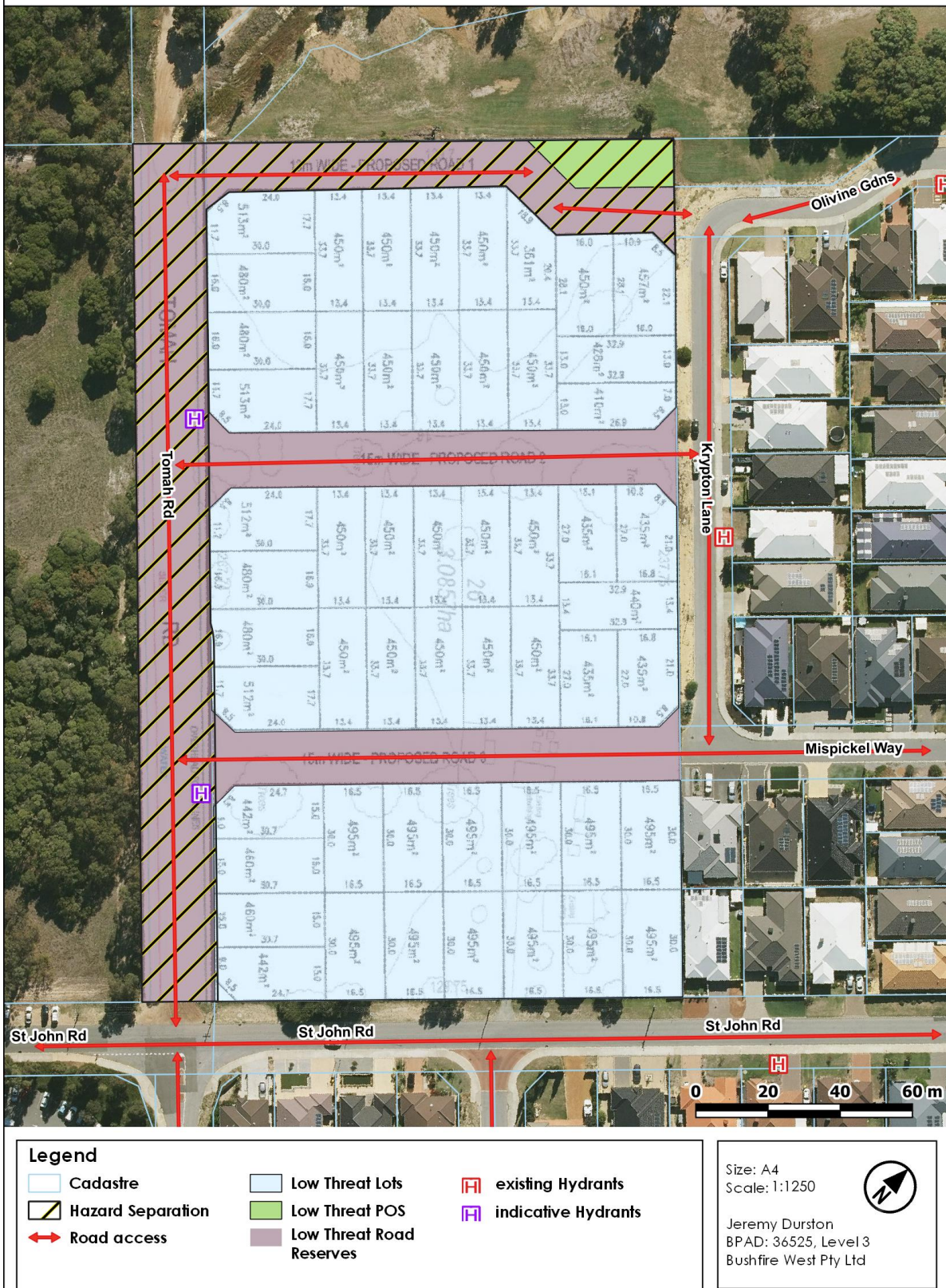
Bushfire Management Plan
Cell 9 Wattle Grove – ODP Amendment

6.2 Additional management strategies

Full compliance with the requirements of SPP 3.7 and the Guidelines may depend on the coordination of planning and development of the subject land and access roads. Updated bushfire assessments may be required for future planning and/or staged subdivision.

Bushfire Management Plan
Cell 9 Wattle Grove – ODP Amendment

Figure 9. Bushfire Protection Measures



Bushfire Management Plan
Cell 9 Wattle Grove – ODP Amendment

7. Implementation and management

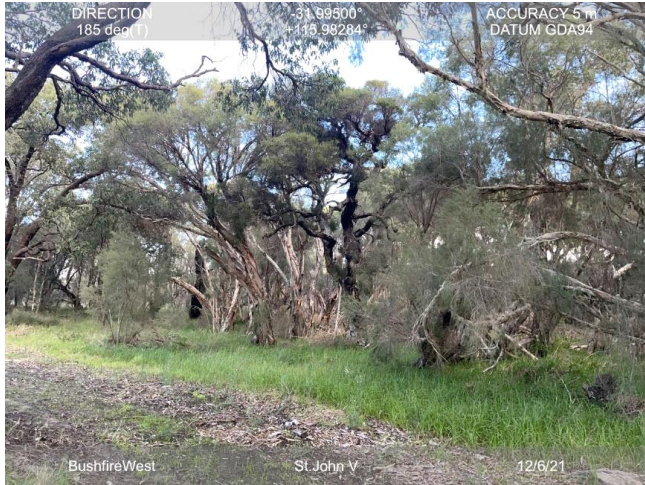

The management of bushfire risk is a shared responsibility for landowners, industry and Local Government. The measures summarised in Table 5 are to be implemented and maintained on an ongoing basis.

Table 5: Implementation & Management Schedules

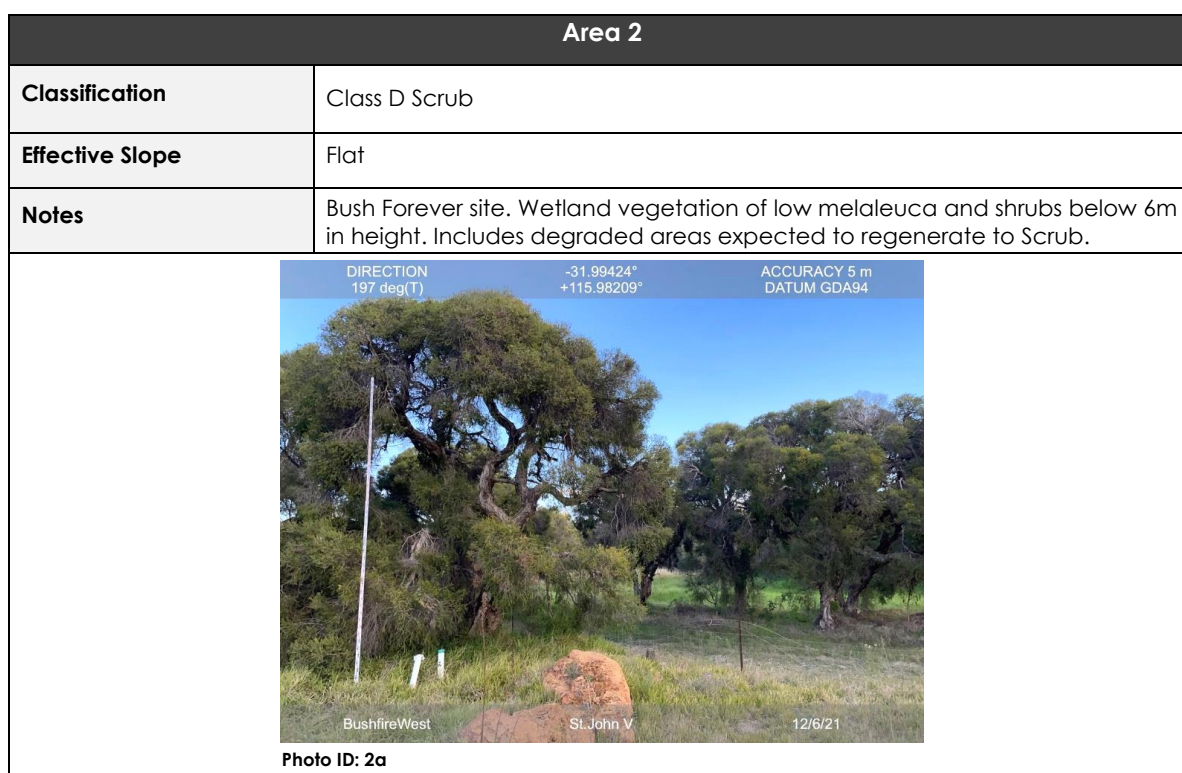
1.0	Subdivider prior to issue of titles
1.1	Construct subdivision access roads to compliant standards.
1.2	Submit a plan to Council and DFES of fire hydrants to be installed.
1.3	Comply with the relevant requirements of the Local Government annual Fire Hazard Reduction Notice.
1.4	Prepare a notification to be included on the certificates of title for lots having a rating of BAL-12.5 or higher notifying the land is subject to a Bushfire Management Plan.
1.5	Provide a plan of interim bushfire protection measures required for staging of subdivision if applicable.
2.0	Subdivider prior to sale of lots
2.1	Maintain vacant lots, road reserves and POS for low threat in accordance with AS3959 clause 2.2.3.2 (e)&(f).
2.2	Provide prospective landowners with access to the BMP.
2.3	Comply with the relevant requirements of the Local Government annual Fire Hazard Reduction Notice.
3.0	Landowners Prior to Occupancy
3.1	Ensure any application for a building permit for a dwelling is to include a valid BAL assessment.
4.0	Landowners Ongoing
4.1	Maintain titled lots for low threat in accordance with AS3959 clause 2.2.3.2 (e)&(f).
4.2	Comply with relevant requirements of the Local Government annual Fire Hazard Reduction Notice.
5.0	Local Government Ongoing
5.1	Ensure building permit applications and development applications are compliant with the building and land use planning provisions.
5.2	Ensure road reserves and POS are maintained for low threat in accordance with AS3959 clause 2.2.3.2 (e)&(f).
5.3	Issue and enforce the annual Fire Hazard Reduction Notice.

Bushfire Management Plan
Cell 9 Wattle Grove – ODP Amendment

Appendix 1 – Vegetation Classification Photos

Area 1	
Classification	Class A Forest
Effective Slope	Flat
Notes	Bush Forever site. Fringing wetland vegetation of eucalypts and tall melaleuca with foliage cover exceeding 30% and with multi-layered understories. Includes degraded areas expected to regenerate to Forest.
 <p>Photo ID: 1a</p>	
 <p>Photo ID: 1b</p>	

Bushfire Management Plan
Cell 9 Wattle Grove – ODP Amendment




Bushfire Management Plan
Cell 9 Wattle Grove – ODP Amendment



Bushfire Management Plan
Cell 9 Wattle Grove – ODP Amendment



Area 3	
Classification pre-development	Class D Scrub & Class A Forest
Classification post-development	To be modified to low threat Exclusions 2.2.3.2 (e) & (f)
Effective Slope	Flat
Notes	Tomah Road reserve. Vegetation required to be removed or modified for low threat at the time of development of the road to service the subdivision. The road reserve currently contains encroaching Scrub and Forest vegetation.
<div><div><div>DIRECTION 97 deg(T)</div><div>-31.99436° +115.98223°</div><div>ACCURACY 5 m DATUM GDA94</div></div><div></div><div><div>BushfireWest</div><div>St John T</div><div>12/6/21</div></div></div> <div>Photo ID: 3a</div>	

Bushfire Management Plan
Cell 9 Wattle Grove – ODP Amendment

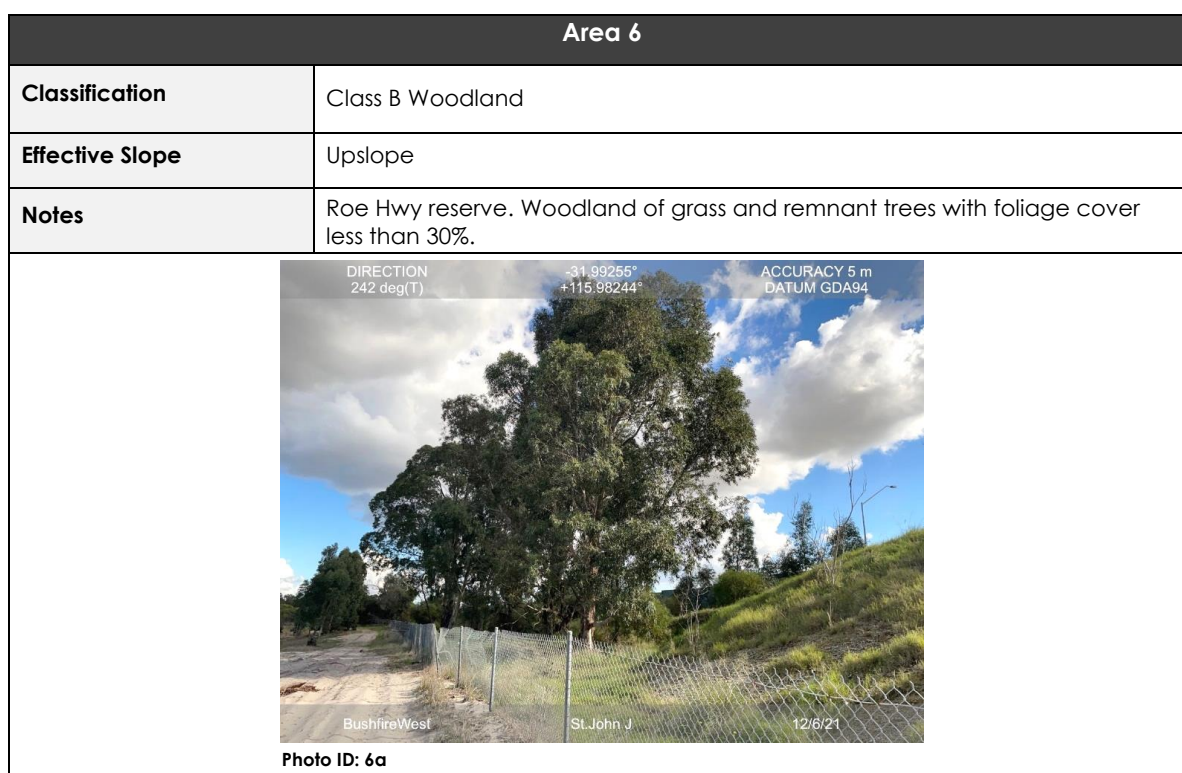


Area 4	
Classification	Class G Grassland
Effective Slope	Flat
Notes	Existing POS comprising Open Woodland of grass and remnant trees with foliage cover less than 10%. While there is evidence of ongoing management, this area may be a potential hazard in future.
	<p>Photo ID: 4a</p>

Bushfire Management Plan
Cell 9 Wattle Grove – ODP Amendment




Bushfire Management Plan
Cell 9 Wattle Grove – ODP Amendment




Bushfire Management Plan
Cell 9 Wattle Grove – ODP Amendment





Bushfire Management Plan
Cell 9 Wattle Grove – ODP Amendment

Area 8	
Classification	Class A Forest
Effective Slope	Flat
Notes	Pocket of Forest to the north of Roe Hwy.
<div style="text-align: center;"> <div> DIRECTION 119 deg(T) -31.99274° +115.98053° ACCURACY 5 m DATUM GDA94 </div>  <div> BushfireWest St. John Y 12/6/21 </div> </div> <p>Photo ID: 8a</p>	

Area 9	
Classification	Exclusions 2.2.3.2 (e)&(f)
Effective Slope	n/a
Notes	Low threat areas of Roe Hwy reserve.
<div style="text-align: center;"> <div> DIRECTION 86 deg(T) -31.99333° +115.98073° ACCURACY 5 m DATUM GDA94 </div>  <div> BushfireWest St. John Y 12/6/21 </div> </div> <p>Photo ID: 9a</p>	

Bushfire Management Plan
Cell 9 Wattle Grove – ODP Amendment

Area 10	
Classification	Exclusions 2.2.3.2 (e)&(f)
Effective Slope	n/a
Notes	Existing areas of developed residential properties and road verges all in low threat condition.
 <p>Photo ID: 10a</p>	
 <p>Photo ID: 10b</p>	

Bushfire Management Plan
Cell 9 Wattle Grove – ODP Amendment

Area 10



Photo ID: 10c

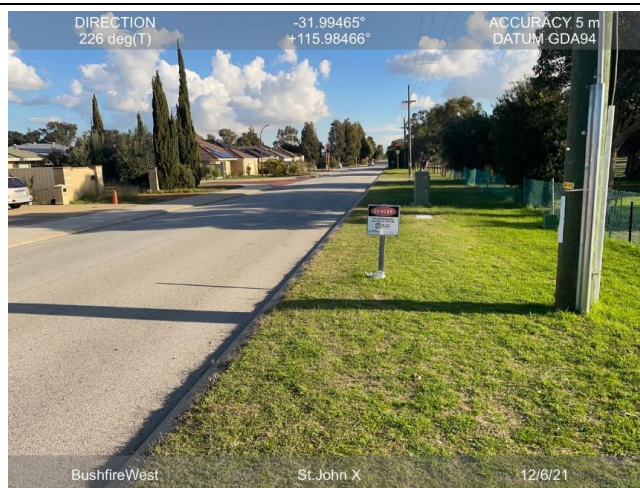



Photo ID: 10d



Photo ID: 10e

Bushfire Management Plan
Cell 9 Wattle Grove – ODP Amendment

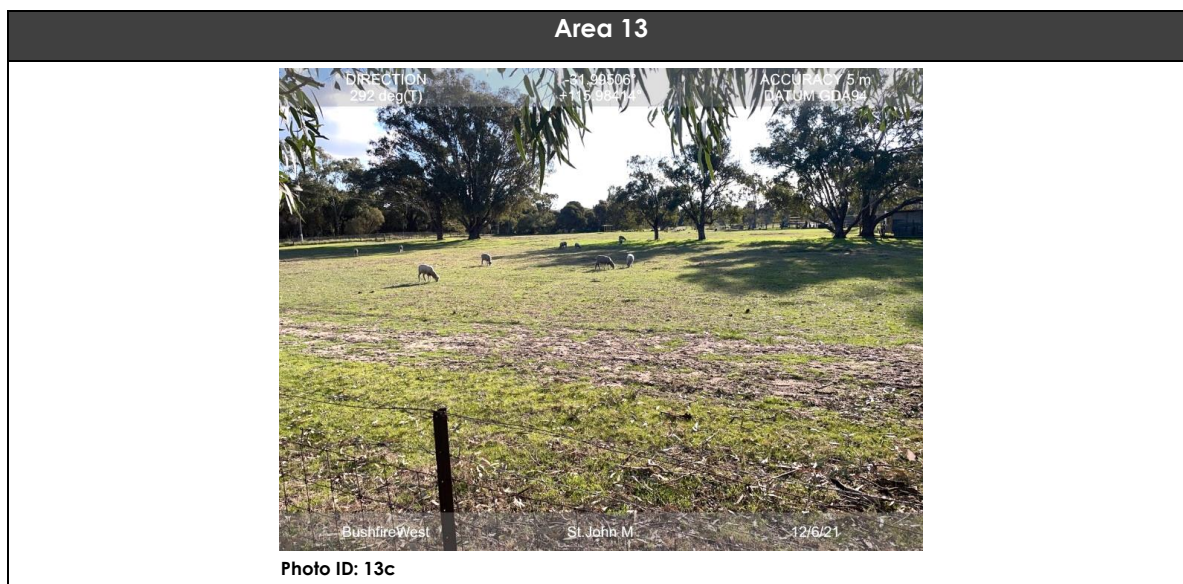
Area 11	
Classification	Exclusions 2.2.3.2 (e)&(f)
Effective Slope	n/a
Notes	School grounds in low threat condition.
 <p>Photo ID: 11a</p>	

Area 12	
Classification	Exclusions 2.2.3.2 (e)&(f)
Effective Slope	n/a
Notes	Subject land. Existing residence and gardens in low threat condition. To be cleared for subdivision.
 <p>Photo ID: 12a</p>	

Bushfire Management Plan
Cell 9 Wattle Grove – ODP Amendment

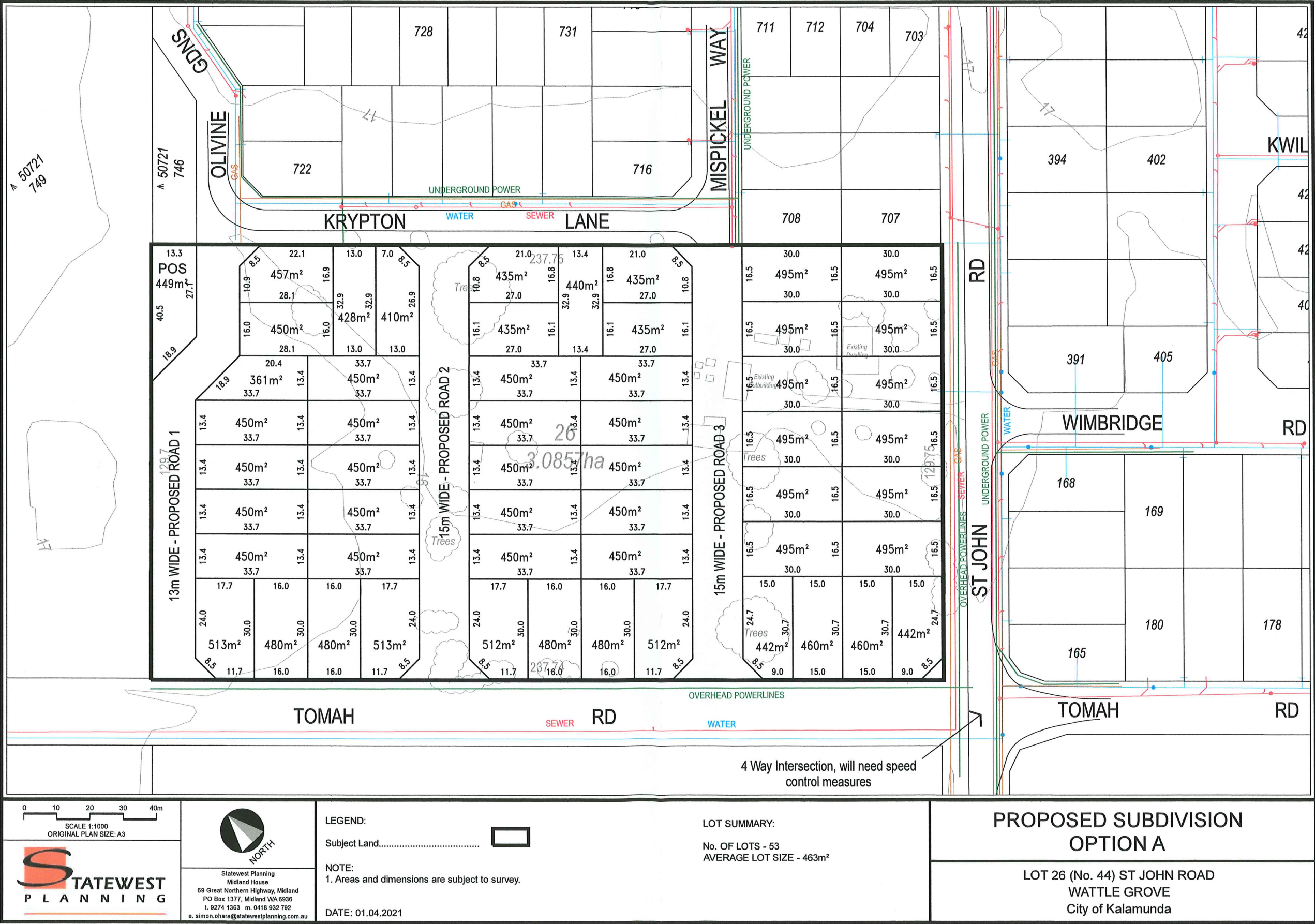
Area 13	
Classification pre-development	Class G Grassland
Classification post-development	To be modified to low threat Exclusions 2.2.3.2 (e)&(f)
Effective Slope	Flat
Notes	Subject land. Open Woodland of grass pasture and remnant trees with foliage cover less than 10%. All onsite areas require vegetation to be removed or modified for low threat at the time of future subdivision.
 <p style="text-align: center;">DIRECTION -31.99385° ACCURACY 5 m 114 deg(T) +115.98196° DATUM GDA94</p> <p style="text-align: center;">BushfireWest St John M 12/6/21</p> <p>Photo ID: 13a</p>	
 <p style="text-align: center;">DIRECTION -31.99384° ACCURACY 5 m 201 deg(T) +115.98375° DATUM GDA94</p> <p style="text-align: center;">BushfireWest St John N 12/6/21</p> <p>Photo ID: 13b</p>	

Bushfire Management Plan
Cell 9 Wattle Grove – ODP Amendment



APPENDIX C

Conceptual Plan of Subdivision



APPENDIX D

Original Public Open Space Plan

