

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: Dawson Stage 6

Suburb: Vasse

State: WA

P/code: 6280

Local government area: City of Busselton

Description of the planning proposal: Subdivision Application

BMP Plan / Reference Number: 62536/144,621

Version: M01 Rev 2

Date of Issue: 19/09/2024

Client / Business Name: JV of Perron Developments P/L & Stawell P/L

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 type="checkbox"/>	<input checked="" 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 type 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.)?
N/A

Note: The decision maker (e.g. 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 Zac Cockerill	Accreditation Level Level 2	Accreditation No. BPAD37803	Accreditation Expiry 31/08/2025
Company JBS&G Australia Pty Ltd		Contact No. (08) 9792 4797	

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

Signature of Practitioner



Date 19/09/2024

62536 M01 Dawson Stage 6 Vasse BMP addendum (Rev 2)

Name: Alex Meares Date: 19 September 2024
Company: JV of Perron Developments P/L & Stawell Job/Doc. No.: 62536/144,621
P/L
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Bushfire Management Plan Addendum, Dawson Stage 6, Vasse (subdivision)

1.1 Purpose

Strategen-JBS&G (now JBS&G) prepared a comprehensive Bushfire Management Plan (BMP) in 2020 to support the Joint Venture (JV) of Perron Developments P/L and Stawell P/L in their application for the Vasse Structure Plan (VSP) amendment, located in the City of Busselton, WA. Proposed subdivision of Dawson Stage 6 (the project area), within the overall VSP area, will create 135 new residential lots along with two areas of Public Open Space (POS) and the internal public road layout (refer to Figure 1).

This BMP is an addendum to the original VSP amendment BMP (Strategen-JBS&G 2020) and provides an updated assessment specific to the proposed Dawson Stage 6 subdivision area. As such, this BMP addendum should be read in conjunction with the original VSP amendment BMP.

This addendum includes the following information:

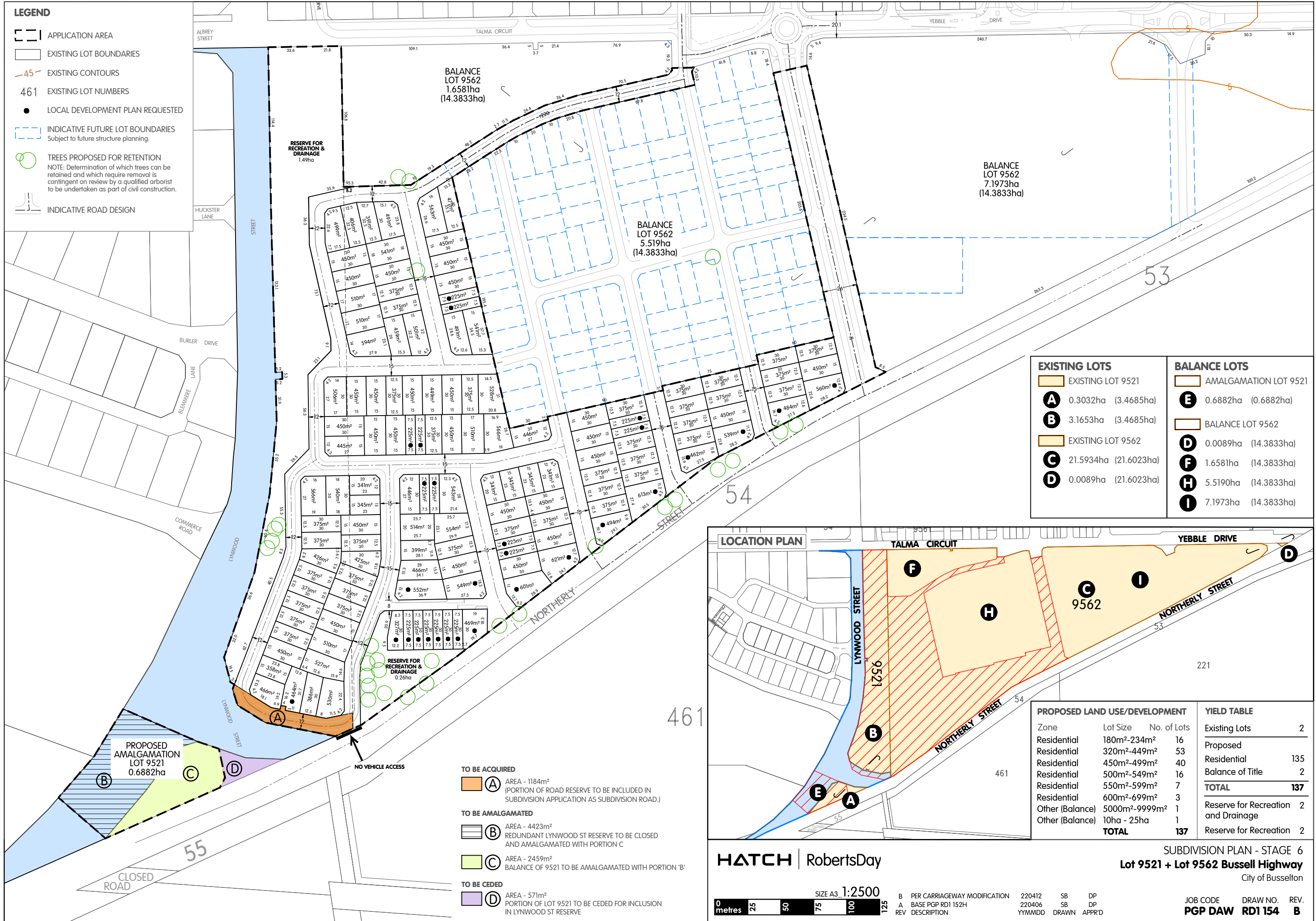
1. A revised bushfire assessment including:
 - a. an updated Vegetation Classification and Effective Slope map (depicting post-development vegetation classification/exclusion extents) specific to the Stage 6 subdivision area (Figure 2)
 - b. a revised BAL contour map specific to the Stage 6 subdivision area and vegetation conditions mapped from Item 1a above (Figure 3).
2. A revised assessment against the bushfire protection criteria including updated statements of assessment/compliance against the bushfire protection criteria of the Guidelines demonstrating compliance within the boundary of the subdivision site (Table 3).
3. A revised table outlining responsibilities for implementation and management of the bushfire measures specific to the proposed subdivision that can be conditioned as part of subdivision approval (Table 4).

This BMP addendum has been prepared to accompany subdivision application for Dawson Stage 6 and address requirements under Policy Measures 6.2 and 6.4 of *State Planning Policy 3.7 Planning in Bushfire-Prone Areas* (SPP 3.7; WAPC 2015) and *Guidelines for Planning in Bushfire-Prone Areas Version 1.4* (the Guidelines; WAPC 2021).

The project area is partially designated as bushfire prone on the Map of Bush Fire Prone Areas (depicted in Figure 2). As such, bushfire risk considerations and BAL assessment are required to inform subdivision design and application for Stage 6.

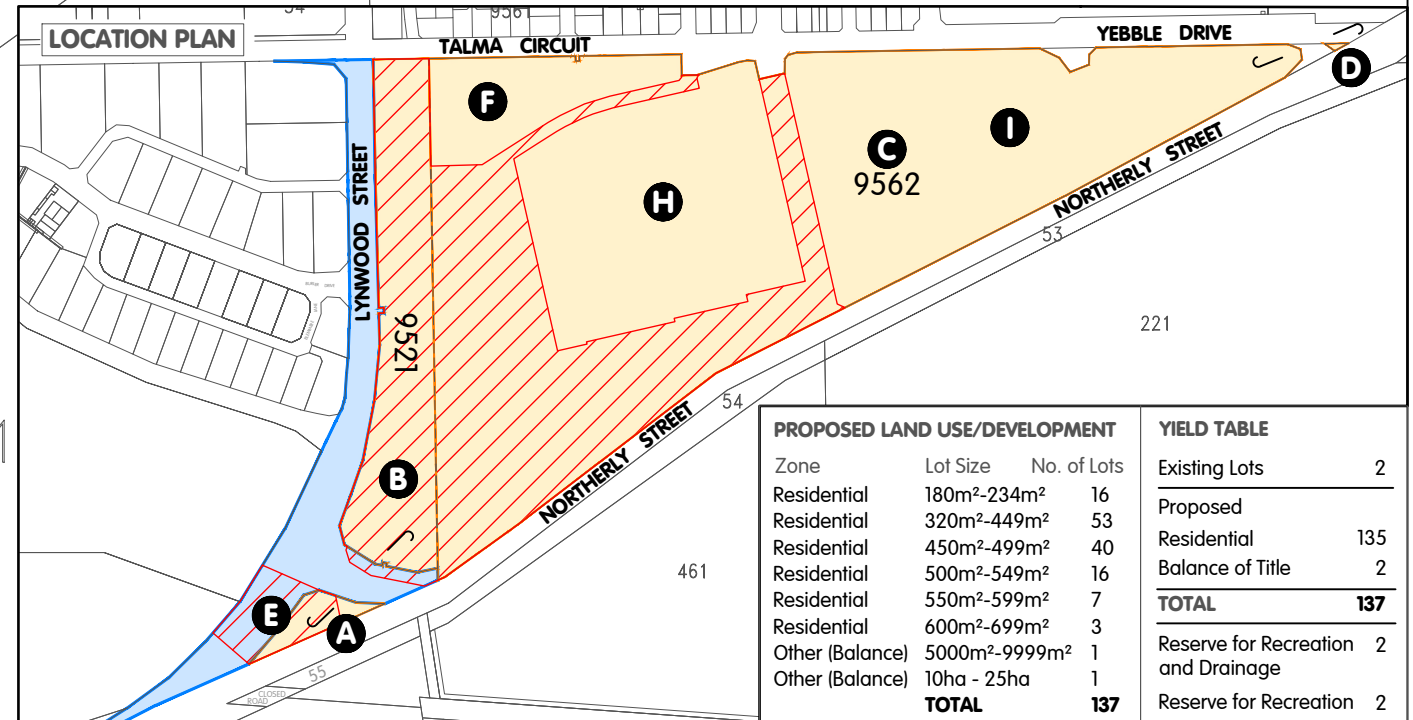
LEGEND

- APPLICATION AREA
- EXISTING LOT BOUNDARIES
- A5 EXISTING CONTOURS
- 461 EXISTING LOT NUMBERS
- LOCAL DEVELOPMENT PLAN REQUESTED
- INDICATIVE FUTURE LOT BOUNDARIES
Subject to future structure planning.
- TREES PROPOSED FOR RETENTION
NOTE: Determination of which trees can be retained and which require removal is contingent on review by a qualified arborist to be undertaken as part of civil construction.
- INDICATIVE ROAD DESIGN



- TO BE ACQUIRED**
- (A) AREA - 1184m²
(PORTION OF ROAD RESERVE TO BE INCLUDED IN SUBDIVISION APPLICATION AS SUBDIVISION ROAD.)
- TO BE AMALGAMATED**
- (B) AREA - 4423m²
REDUNDANT LYNWOOD ST RESERVE TO BE CLOSED AND AMALGAMATED WITH PORTION C
 - (C) AREA - 2459m²
BALANCE OF 9521 TO BE AMALGAMATED WITH PORTION 'B'
- TO BE CEDED**
- (D) AREA - 571m²
PORTION OF LOT 9521 TO BE CEDED FOR INCLUSION IN LYNWOOD ST RESERVE

EXISTING LOTS		BALANCE LOTS	
	EXISTING LOT 9521		AMALGAMATION LOT 9521
	0.3032ha (3.4685ha)		0.6882ha (0.6882ha)
	3.1653ha (3.4685ha)		BALANCE LOT 9562
	EXISTING LOT 9562		0.0089ha (14.3833ha)
	21.5934ha (21.6023ha)		1.6581ha (14.3833ha)
	0.0089ha (21.6023ha)		5.5190ha (14.3833ha)
			7.1973ha (14.3833ha)



PROPOSED LAND USE/DEVELOPMENT			YIELD TABLE	
Zone	Lot Size	No. of Lots	Existing Lots	2
Residential	180m ² -234m ²	16	Proposed	
Residential	320m ² -449m ²	53	Residential	135
Residential	450m ² -499m ²	40	Balance of Title	2
Residential	500m ² -549m ²	16	TOTAL	137
Residential	550m ² -599m ²	7	Reserve for Recreation and Drainage	2
Residential	600m ² -699m ²	3	Reserve for Recreation	2
Other (Balance)	5000m ² -9999m ²	1		
Other (Balance)	10ha - 25ha	1		
TOTAL		137		

HATCH | RobertsDay



B	PER CARRIAGEWAY MODIFICATION	220412	SB	DP
A	BASE PGP RD1 152H	220406	SB	DP
REV	DESCRIPTION	YYMMDD	DRAWN	APPRD

SUBDIVISION PLAN - STAGE 6
Lot 9521 + Lot 9562 Bussell Highway
City of Busselton

JOB CODE	DRAW NO.	REV.
PGP DAW	RD1 154	B

DISCLAIMER: ISSUED FOR DESIGN INTENT ONLY. ALL AREAS AND DIMENSIONS ARE SUBJECT TO DETAIL DESIGN AND SURVEY

1.2 Bushfire assessment results

1.3 Assessment inputs

1.3.1 Vegetation classification

Strategen-JBS&G assessed classified vegetation and exclusions within the 150 m assessment area as part of the original VSP amendment BMP (Strategen-JBS&G 2020) in accordance with *AS 3959-2018 Construction of Buildings in Bushfire-Prone Areas* (AS 3959; SA 2018) and the *Visual Guide for Bushfire Risk Assessment in Western Australia* (DoP 2016).

A review of on-ground conditions via Nearmap imagery (dated 2 April 2024) has determined that the extent of classified vegetation has not materially changed since the original 2019 site inspection conducted by Strategen-JBS&G. In this regard, a desktop assessment was deemed to be an appropriate means of re-validating vegetation against current conditions, which are summarised as follows:

- areas of revegetation constituting Class A Forest and Class D Scrub within and surrounding the drainage basin to the west opposite Lynwood Street
- a combination of Class B Woodland and Class G Grassland throughout pasture areas and roadside vegetation to the south opposite Northerly Street
- Class G Grassland throughout cleared pasture land to the southwest opposite Lynwood Street
- existing non vegetated areas (e.g. roads and buildings) and low threat managed land (e.g. urban road verge treatments, managed gardens, turf, slashed grass, etc) are excluded under Clauses 2.2.3.2 (e) and (f)
- proposed lots and roads within the project area and adjacent stages (5B) will be modified to a low threat state through proposed clearing, earthworks and construction and will ultimately be excluded under Clauses 2.2.3.2 (e) and (f)
- a portion of on-site POS in the northwest will be landscaped to achieve a non-vegetated/low threat vegetation state, excluded under Clauses 2.2.3.2 (e) and (f), throughout areas of proposed turf, small garden beds, footpaths, infrastructure, combined with retention of the current sparse assembly of peppermint trees for protection of Western Ringtail Possum habitat (as per Stage 5B BMP addendum)
- the balance portion of on-site POS in the northwest containing proposed drainage revegetation, as well as proposed drainage revegetation within on-site POS to the west parallel with Lynwood Street, will consist of classifiable vegetation comprising Class D scrub (species mixes containing predominant shrub coverage up to 6 m high); Class C shrubland (species mixes containing predominant shrub coverage up to 2 m high); and Class G grassland (species mixes containing predominant grasses, reeds and sedges greater than 100 mm high), as per the POS landscape plans contained in Appendix D. Landscaping plans for the drainage POS west of the project area have been modified in areas to reduce vegetation height where required to achieve a reduction from Class D scrub to Class C shrubland (i.e. resulting in Revegetation Mix 3a) in order to deliver compliant BAL ratings for the adjacent lots. In addition, the vegetation classifications applied reflect the predominant vegetation types for the various planting mixes, and are considered precautionary in the context of the small, narrow sections of proposed planting, moderated fire behaviour potential and broader urban context where there is a lack of broader landscape bushfire hazard. Whilst some of the planting mixes contain overstorey species that, in sufficient densities, would typically sit within a Class A forest classification (i.e. *Eucalyptus rudis*, *Eucalyptus marginata*), these are not considered to constitute the predominant vegetation within the proposed planting mixes

given they only make up approximately 5% of the overall planting mix density and as such, are not expected to result in a predominant continuous overstorey canopy. As per AS3959, the final vegetation classifications have been assigned based on the predominant vegetation of Class D scrub, Class C shrubland and Class G grassland species given their dominant species density and distribution throughout the revegetated fuel profile and expected primary influence on potential bushfire behaviour at maturity. Since detailed POS landscape plans have not yet been confirmed for Stage 6B, proposed POS drainage revegetation to the southwest of the project area and the corresponding vegetation classifications have currently been assessed based on a continuation of the general landscaping themes for Stage 6A. Drainage revegetation in this area will be confirmed as part of detailed design for Stage 6B.

- a 100 m wide on-site low threat staging buffer, excluded under Clause 2.2.3.2 (f), will be established where possible around the project area to manage temporary bushfire hazards on adjacent stages yet to be developed (this includes land within previously approved stages to the north and east such as Stage 5B, as well as land under control of the proponent opposite Northerly Street to the south captured under the original VSP amendment BMP (Strategen-JBS&G 2020)).

Site photos from the original 2019 site inspection representative of the above vegetation classifications/exclusions can be viewed in Appendix B of the VSP amendment BMP (Strategen-JBS&G 2020).

1.3.2 Effective slope

Effective slope under classified vegetation was assessed as part of the VSP amendment BMP (Strategen-JBS&G 2020) through on ground verification on 17 July 2019 in accordance with AS 3959. Results were cross referenced with DPIRD 2m contour data.

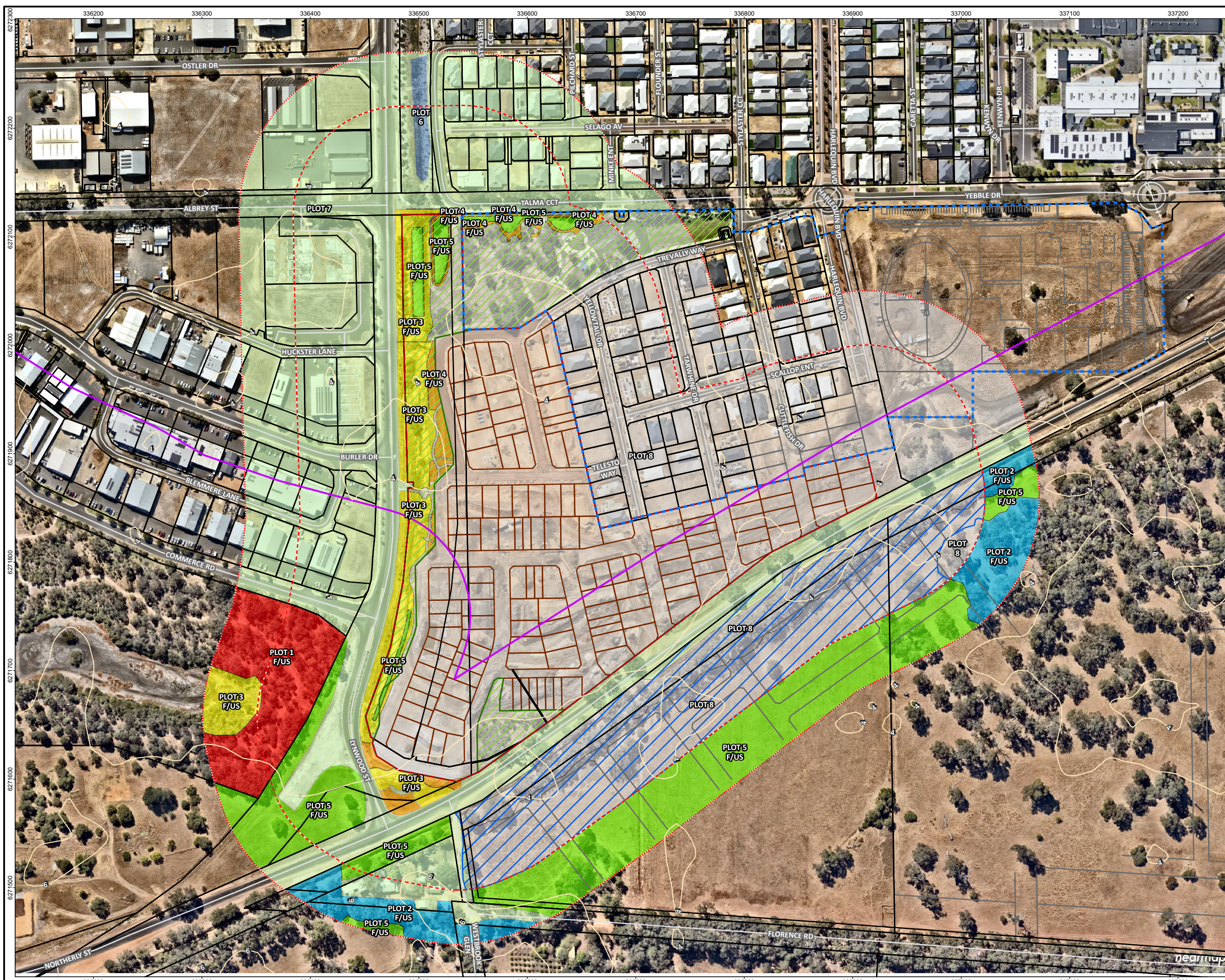
The topography is typical of the Vasse and Busselton locales, comprising flat and low-lying land, hence all land under classified vegetation has an effective slope of 0 degrees (i.e. flat/upslope).

1.3.3 Post-development inputs

Figure 2 illustrates the anticipated post-development vegetation classifications and exclusions following completion of subdivisional works, implementation of low threat and revegetated POS landscaping and establishment of low threat staging buffers. The post-development vegetation classifications, exclusions and effective slope are summarised in Table 1.

Table 1: Summary of post-development vegetation classifications, exclusions and effective slope

Vegetation plot	Vegetation classification	Effective slope	Comments
1	Class A Forest	Flat/upslope (0°)	Located opposite Lynwood Street to the west is forest vegetation dominated by eucalypts and melaleucas with an understorey that is currently being rehabilitated. It is anticipated that this vegetation at a mature state will form a structure typical of forest vegetation.
2	Class B Woodland	Flat/upslope (0°)	Located opposite Northerly Street to the south is woodland vegetation dominated by sparse eucalypts and peppermints with a grazed understorey.
3	Class D Scrub	Flat/upslope (0°)	Vegetation within existing and proposed POS drainage areas subject to revegetation and anticipated to be >2 m in height at maturity.
4	Class C Shrubland	Flat/upslope (0°)	Vegetation within proposed POS drainage areas subject to revegetation and anticipated to be <2 m in height at maturity.
5	Class G Grassland	Flat/upslope (0°)	Areas dominated by a fine fuel structure greater than 100 mm in height associated with grassland/pasture in various states of management adjacent to the project area, as well as vegetation within proposed POS drainage areas subject to revegetation and anticipated to be >100 mm in height at maturity.
6	Excluded – Clause 2.2.3.2 [d]	N/A	Strips of vegetation along a drainage line to the west/northwest that are less than 20 m in width and at least 20 m from proposed habitable development and any other areas of classified vegetation.
7	Excluded – Non-vegetated and Low threat (Clause 2.2.3.2 [e] and [f])	N/A	Existing non-vegetated/low threat areas including existing residential areas, roads, paths and managed portions of POS.
8	Excluded – Non-vegetated and Low threat (Clause 2.2.3.2 [e] and [f])	N/A	Areas to be modified and maintained to a non-vegetated/low threat managed state as part of proposed development.



- Legend**
- Project area
 - 100m assessment area
 - 150m assessment area
 - Cadastral boundary
 - Bushfire prone areas
 - Stage 5B boundary
 - Proposed POS
 - 100m wide low threat staging buffer
- Vegetation classification**
- Class A Forest
 - Class B Woodland
 - Class C Shrubland
 - Class D Scrub
 - Class G Grassland
 - Clause 2.2.3.2 (d)
 - Clause 2.2.3.2 (e) & (f)
 - Area to be modified to non-vegetated and low threat state
 - Proposed lots
 - Indicative future subdivisions on adjacent stages
 - Topographic contours (mAH)
 - Minor road



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 Client: JV Perron Developments & Stawell
 Version: A Date: 18-Sep-2024
 Drawn By: jcrute Checked By: ZC

Scale 1:3,200 at A3

Coord. Sys. GDA2020 MGA Zone 50

**Dawson Stage 6,
 Northerly Street,
 Vasse, WA**

**POST DEVELOPMENT
 VEGETATION CLASSIFICATION
 AND EFFECTIVE SLOPE**

FIGURE 2

1.3.4 Bushfire Attack Level (BAL) contour assessment

JBS&G has undertaken a BAL contour assessment for the project area in accordance with Method 1 of AS3959 (Figure 3). The Method 1 procedure incorporates the following factors:

- state-adopted FDI 80 rating
- vegetation classification
- effective slope
- distance maintained between proposed development areas and the classified vegetation.

The BAL rating gives an indication of the level of bushfire attack (i.e. the radiant heat flux) that may be received by proposed development and subsequently informs the standard of building construction and/or setbacks required for proposed habitable development to potentially withstand such impacts and deliver compliance with relevant bushfire protection criteria of the Guidelines.

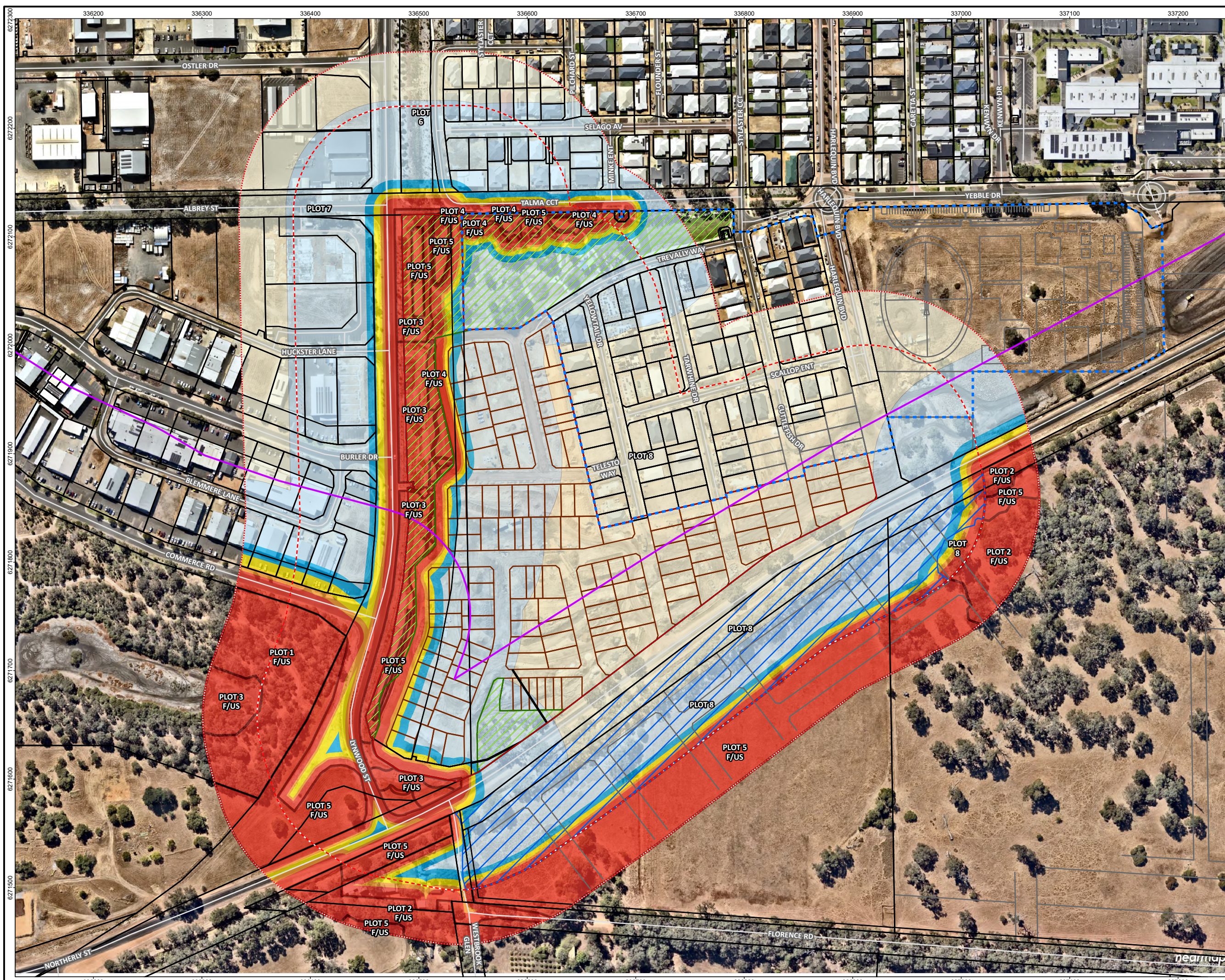
The BAL contours are based on:

- the vegetation classifications and effective slope observed during the original 2019 site inspection and updated desktop review of current site conditions
- consideration of the proposed on-site clearing extent, proposed low threat and revegetated POS, staging buffers and resultant separation distances achieved in line with the subdivision plan.

Results of the BAL contour assessment are detailed in Table 2 and illustrated in Figure 3. The determined worst case BAL impact to the project area is BAL-29.

Table 2: BAL contour assessment results

Method 1 BAL determination				
Vegetation plot	Vegetation classification	Effective slope	Separation distance	Highest BAL
1	Class A Forest	Flat/upslope (0°)	70 m	BAL-12.5
2	Class B Woodland	Flat/upslope (0°)	>100 m	BAL-Low
3	Class D Scrub	Flat/upslope (0°)	13 m	BAL-29
4	Class C Shrubland	Flat/upslope (0°)	12 m	BAL-29
5	Class G Grassland	Flat/upslope (0°)	16 m	BAL-19
6	Excluded – Clause 2.2.3.2 [d]	N/A	N/A	N/A
7	Excluded – Non-vegetated and Low threat (Clause 2.2.3.2 [e] and [f])	N/A	N/A	N/A
8	Excluded – Non-vegetated and Low threat (Clause 2.2.3.2 [e] and [f])	N/A	N/A	N/A



- Legend**
- Project area
 - 100m assessment area
 - 150m assessment area
 - Cadastral boundary
 - Bushfire prone areas
 - Stage 5B boundary
 - Proposed POS
 - 100m wide low threat staging buffer
 - Classified vegetation
- BAL contours**
- BAL FZ
 - BAL 40
 - BAL 29
 - BAL 19
 - BAL 12.5
 - BAL Low
 - Proposed lots
 - Indicative future subdivisions on adjacent stages
 - Minor road



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Scale 1:3,200 at A3

Coord. Sys. GDA2020 MGA Zone 50

**Dawson Stage 6,
 Northerly Street,
 Vasse, WA**

BAL CONTOUR MAP

FIGURE 3

1.4 Assessment against bushfire protection criteria

1.4.1 Compliance with Elements 1-4

Compliance with Elements 1-4 of the bushfire protection criteria of the Guidelines (Version 1.4) is demonstrated by meeting the acceptable solutions, as detailed in Table 3.

Table 3: Compliance with the bushfire protection criteria of the Guidelines (Elements 1-4)

Bushfire protection criteria	Performance Principle	Method of compliance	Statement of development compliance	Compliance achieved
		Acceptable solutions		
Element 1: Location	Performance Principle P1 The strategic planning proposal, subdivision and development application is located in an area where the bushfire hazard assessment is or will, on completion, be moderate or low, or a BAL-29 or below, and the risk can be managed. For unavoidable development in areas where BAL-40 or BAL-FZ applies, demonstrating that the risk can be managed to the satisfaction of the decision-maker.	A1.1 Development location The strategic planning proposal, subdivision and development application is located in an area that is or will, on completion, be subject to either a moderate or low bushfire hazard level, or BAL-29 or below.	The BAL contour assessment (see Figure 3 and Table 2) demonstrates that all future habitable development will be located in areas of BAL-29 or lower.	✓
Element 2: Siting and design	Performance Principle P2 The siting and design of the strategic planning proposal, subdivision or development application, including roads, paths and landscaping, is appropriate to the level of bushfire threat that applies to the site. The proposal incorporates a defensible space and significantly reduces the heat intensities at the building surface thereby minimising the bushfire risk to people, property and infrastructure, including compliance with AS 3959 if appropriate.	A2.1 Asset Protection Zone Every habitable building is surrounded by, and every proposed lot can achieve, an APZ depicted on submitted plans, which meets the requirements set out in Schedule 1.	No formal Asset Protection Zones are required to deliver BAL-29 or lower given the extent of low threat roads and staging buffers proposed around the project area. Any land to be modified to a low threat state as part of proposed development (e.g. on-site development footprint, staging buffers, etc) is to comply with Schedule 1 APZ standards of the Guidelines (refer to Appendix A).	✓
Element 3: Vehicular access	Performance Principle P3i The design and capacity of vehicular access and egress is to provide for the community to evacuate to a suitable destination before a bushfire arrives at the site, allowing emergency services personnel to attend the site and/or hazard vegetation.	A3.1 Public roads <i>The minimum requirements under this acceptable solution are applicable to all proposed and existing public roads.</i> Public roads are to meet the minimum technical requirements in Table 6, Column 1. The trafficable (carriageway/pavement) width is to be in accordance with the relevant class of road in the Local Government Guidelines for Subdivisional Development (IPWEA Subdivision Guidelines), Liveable Neighbourhoods, Austroad standards and/or any applicable standards for the local government area.	All public roads will be constructed to the minimum technical requirements of the Guidelines (see Appendix B) and in accordance with relevant federal, State and local government requirements.	✓
		A3.2a Multiple access routes Public road access is to be provided in two different directions to at least two different suitable destinations with an all-weather surface (two-way access). If the public road access to the subject site is via a no-through road which cannot be avoided due to demonstrated site constraints, the road access is to be a maximum of 200 metres from the subject lot(s) boundary to an intersection where two-way access is provided. The no-through road may exceed 200 metres if it is demonstrated that an alternative access, including an emergency access way, cannot be provided due to site constraints and the following requirements are met: <ul style="list-style-type: none"> the no-through road travels towards a suitable destination; and the balance of the no-through road, that is greater than 200 metres from the subject site, is wholly within BAL-LOW, or is within a residential built-out area – Figure 23. 	The project area will be provided with public road access in two different directions to at least two different suitable destinations. The internal access network provides connections with Northerly Street in the south and Yebble Drive in the north, which lead to further connections with Bussell Highway/Vasse Bypass and Caves Road. Proposed subdivision design does not provide for any no-through-roads.	✓

Bushfire protection criteria	Performance Principle	Method of compliance	Statement of development compliance	Compliance achieved
		Acceptable solutions		
		<p>A3.2b Emergency access way</p> <p><i>Where it is demonstrated that A3.2a cannot be achieved due to site constraints, or where an alternative design option does not exist, an emergency access way can be considered as an acceptable solution.</i></p> <p>An emergency access way is to meet all the following requirements:</p> <ul style="list-style-type: none"> requirements in Table 6, Column 2; provides a through connection to a public road; be no more than 500 metres in length; and must be signposted and if gated, gates must open the whole trafficable width and remain unlocked. 	<p>The proposed subdivision design complies with Acceptable Solution A3.2 by providing access in two different directions to at least two different suitable destinations. Emergency Access Ways (EAWs) are not required to provide through access to a public road. Any temporary emergency access ways required as part of internal staging will be constructed to comply with relevant Guidelines requirements, as per Appendix B.</p>	N/A
		<p>A3.3 Through-roads</p> <p>All public roads should be through-roads. No-through roads should be avoided and should only be considered as an acceptable solution where:</p> <ul style="list-style-type: none"> it is demonstrated that no alternative road layout exists due to site constraints; and the no-through road is a maximum length of 200 metres to an intersection providing two-way access, unless it satisfies the exemption provisions in A3.2a of this table. <p>A no-through road is to meet all the following requirements:</p> <ul style="list-style-type: none"> requirements of a public road (Table 6, Column 1); and turn-around area as shown in Figure 24. 	<p>Given this is a staged development, Stage 5B to the north and east of the project area will be constructed and developed prior to Stage 6. Therefore, the development of Stage 5B will allow all roads within the project area to be constructed as through-roads. Any temporary no-through-roads required as part of internal staging will be constructed to comply with relevant Guidelines requirements, as per Appendix B.</p>	✓
	<p>Performance Principle P3ii</p> <p>The design of vehicular access and egress provides:</p> <ul style="list-style-type: none"> access and egress for emergency service vehicles while allowing the community to evacuate; a defensible space for emergency services personnel on the interface between classified vegetation and development site; and hazard separation between classified vegetation and the subject site to reduce the potential radiant heat that may impact a lot(s). 	<p>A3.4a Perimeter roads</p> <p>A perimeter road is a public road and should be provided for greenfield or infill development where 10 or more lots are being proposed (including as part of a staged subdivision) with the aim of:</p> <ul style="list-style-type: none"> separating areas of classified vegetation under AS3959, which adjoin the subject site, from the proposed lot(s); and removing the need for battle-axe lots that back onto areas of classified vegetation. <p>A perimeter road is to meet the requirements contained in Table 6, Column 1.</p> <p>A perimeter road may not be required where:</p> <ul style="list-style-type: none"> the adjoining classified vegetation is Class G Grassland; lots are zoned for rural living or equivalent; it is demonstrated that it cannot be provided due to site constraints; or all lots have frontage to an existing public road. 	<p>Perimeter roads have been provided at all permanent external development interfaces to provide separation between adjoining classified vegetation hazards and a defensible space for firefighting activities.</p>	✓
	<p>Performance Principle P3iii</p> <p>Vehicular access is provided which allows:</p> <ul style="list-style-type: none"> access and egress for emergency service vehicles; defensible space for emergency services 	<p>A3.4b Fire service access route</p> <p><i>Where proposed lots adjoin classified vegetation under AS3959, and a perimeter road is not required in accordance with A3.4a, a fire service access route can be considered as an acceptable solution to provide firefighter access, where access is not available, to the classified vegetation.</i></p>	<p>As discussed under A3.4a, the subdivision design includes perimeter roads at all permanent external boundaries of the subdivision area. In this regard, fire service access routes (FSARs) are not considered to be required for the proposed development.</p>	N/A

Bushfire protection criteria	Performance Principle	Method of compliance	Statement of development compliance	Compliance achieved
		Acceptable solutions		
	<ul style="list-style-type: none"> personnel on the interface between classified vegetation and development; and hazard separation between classified vegetation and the site to reduce the potential radiant heat that may impact a lot(s). 	<p>A fire service access route is to meet all the following requirements:</p> <ul style="list-style-type: none"> requirements in Table 6, Column 3; be through-routes with no dead-ends; linked to the internal road system at regular intervals, every 500 metres; must be signposted; no further than 500 metres from a public road; if gated, gates must open the required horizontal clearance and can be locked by the local government and/or emergency services, if keys are provided for each gate; and turn-around areas designed to accommodate type 3.4 fire appliances and to enable them to turn around safely every 500 metres. 		
	<p>Performance Principle P3iv</p> <p>Vehicular access is provided which allows emergency service vehicles to directly access all habitable buildings and water supplies and exit the lot without entrapment.</p>	<p>A3.5 Battle-axe access legs</p> <p><i>Where it is demonstrated that a battle-axe cannot be avoided due to site constraints, it can be considered as an acceptable solution.</i></p> <p>There are no battle-axe technical requirements where the point the battle-axe access leg joins the effective area of the lot, is less than 50 metres from a public road in a reticulated area.</p> <p>In circumstances where the above condition is not met, or the battle-axe is in a non-reticulated water area, the battle-axe is to meet all the following requirements:</p> <ul style="list-style-type: none"> requirements in Table 6, Column 4; and passing bays every 200 metres with a minimum length of 20 metres and a minimum additional trafficable width of two metres (i.e. the combined trafficable width of the passing bay and constructed private driveway to be a minimum six metres). 	<p>No battle-axe lots are proposed as part of the subdivision and the project area is not serviced by an existing battle-axe.</p>	N/A
		<p>A3.6 Private driveways</p> <p>There are no private driveway technical requirements where the private driveway is:</p> <ul style="list-style-type: none"> within a lot serviced by reticulated water; no greater than 70 metres in length between the most distant external part of the development site and the public road measured as a hose lay; and accessed by a public road where the road speed limit is not greater than 70 km/h. <p>In circumstances where all of the above conditions are not met, or the private driveway is in a non-reticulated water area, the private driveway is to meet all the following requirements:</p> <ul style="list-style-type: none"> requirements in Table 6, Column 4; passing bays every 200 metres with a minimum length of 20 metres and a minimum additional trafficable width of two metres (i.e. the combined trafficable width of the passing bay and constructed private driveway to be a minimum six metres); and turn-around area as shown in Figure 28 and within 30 metres of the habitable building. 	<p>The proposed subdivision is located within a reticulated area where roads speeds will be lower than 70 km/hr and proposed lots are of size where all future habitable development will be located within 70 m of a public road. In this regard, there are no private driveway compliance requirements for future landowners of the subdivided lots.</p>	N/A

Bushfire protection criteria	Performance Principle	Method of compliance	Statement of development compliance	Compliance achieved
		Acceptable solutions		
Element 4: Water	No performance principle applies	<p>A4.1 Identification of future water supply</p> <p>Evidence that a reticulated or sufficient non-reticulated water supply for bushfire fighting can be provided at the subdivision and/or development application stage, in accordance with the specifications of the relevant water supply authority or the requirements of Schedule 2.</p> <p>Where the provision of a strategic water tank(s) is required a suitable area within a road reserve or a dedicated lot the location should be identified, should be identified on the structure plan, to the satisfaction of the local government.</p>	A4.1 is applicable to strategic planning applications only.	N/A
	<p>Performance Principle P4</p> <p>Provide a permanent water supply that is:</p> <ul style="list-style-type: none"> • sufficient and available for firefighting purposes; • constructed from non-combustible materials (e.g. steel), or able to maintain its integrity throughout a bushfire; and • accessible, with legal access for maintenance and re-filling by tankers and emergency service vehicles. 	<p>A4.2 Provision of water for firefighting purposes</p> <p>Where a reticulated water supply is existing or proposed, hydrant connection(s) should be provided in accordance with the specifications of the relevant water supply authority. Where these specifications cannot be met, then the following applies:</p> <ul style="list-style-type: none"> • The provision of a water tank(s), in accordance with the requirements of Schedule 2; and • Where the provision of a strategic water tank(s) is applicable, then the following requirements apply: <ul style="list-style-type: none"> – land to be ceded free of cost to the local government for the placement of the tank(s); – the lot or road reserve where the tank is to be located is identified on the plan of subdivision; – tank capacity, construction, and fittings, provided in accordance with the requirements of Schedule 2; and – a strategic water tank is to be located no more than 10 minutes from the subject site (at legal road speeds). <p>Where a subdivision includes an existing habitable building(s) that is to be retained, a water supply should be provided to this existing habitable building(s), in accordance with the requirements listed above.</p>	The proposed development will be connected to reticulated water supply via extension of services from adjacent development in accordance with Water Corporations Design Standard 63 requirements. Existing water hydrants are located at 200 m intervals along the public road network immediately west of the project area as shown in Figure 3.	✓

1.5 Responsibilities for implementation and management of the bushfire measures

Implementation of the BMP applies to the developer and prospective landowners to ensure bushfire management measures are adopted and implemented on an ongoing basis. A bushfire responsibilities table is provided in Table 4 to drive implementation of all relevant bushfire management works associated with the Strategen-JBS&G (2020) BMP and this addendum.

Table 4: Responsibilities for implementation and management of the bushfire measures

Implementation/management table	
Developer – prior to issue of titles	
No.	Implementation action
1	Construct (or have works bonded) the public roads (including any temporary no-through-roads/emergency access ways) and reticulated water supply to the standards stated in this BMP addendum.
2	Prepare a detailed POS landscaping plan that demonstrates the expected vegetation classifications/exclusions within on-site POS in accordance with this BMP addendum.
3	Establish on-site POS in accordance with the expected vegetation classifications/exclusions documented in this BMP addendum.
4	Establish the project area and low threat staging buffers to a non-vegetated/low threat state in accordance with the requirements of this BMP addendum.
5	Comply with the relevant requirements of the City of Busselton annual firebreak notice (refer to Appendix C).
6	Prepare a BMP compliance report to demonstrate the relevant bushfire management measures have been implemented to deliver compliance in accordance with this BMP addendum.
Developer – until sale/transfer of lots	
No.	Implementation action
1	Maintain the project area and low threat staging buffers to a non-vegetated/low threat state in accordance with the requirements of this BMP addendum.
2	Comply with the relevant requirements of the City of Busselton annual firebreak notice (Appendix C).
3	If lot creation is staged, maintain on-site staging buffers to achieve exclusion Clause 2.2.3.2 (f) of AS 3959, including slashing/mowing of grassland and weeds to height of less than 100 mm.
Landowner/occupier – prior to building construction and ongoing	
No.	Implementation action
1	Comply with the relevant requirements of the City of Busselton annual firebreak notice (Appendix C), including maintenance of cleared/vacant lots in a low threat state.
2	If required by the City, undertake individual lot BAL assessment prior to issuing of building permit.

1.6 References

Department of Planning (DoP) 2016, *Visual guide for bushfire risk assessment in Western Australia*, Department of Planning, Perth.

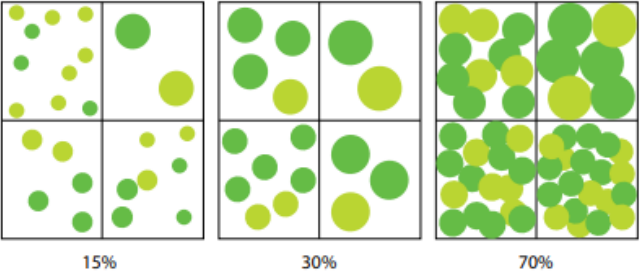
Standards Australia (SA) 2018, *Australian Standard AS 3959–2018 Construction of Buildings in Bushfire-prone Areas*, Standards Australia, Sydney.

Strategen JBS&G 2020, *Bushfire Management Plan (Structure Plan), Vasse Structure Plan, Vasse*, Strategen JBS&G, Bunbury.

Western Australian Planning Commission (WAPC) 2015, *State Planning Policy 3.7 Planning in Bushfire Prone Areas*, Western Australian Planning Commission, Perth.

Western Australian Planning Commission (WAPC) 2021, *Guidelines for Planning in Bushfire Prone Areas*, Version 1.4 December 2021, Western Australian Planning Commission, Perth.

Appendix A APZ standards (Schedule 1 of the Guidelines)

Schedule 1: Standards for Asset Protection Zones	
Object	Requirement
Fences within the APZ	<ul style="list-style-type: none"> Should be constructed from non-combustible materials (for example, iron, brick, limestone, metal post and wire, or bushfire-resisting timber referenced in Appendix F of AS 3959).
Fine fuel load (Combustible, dead vegetation matter <6 millimetres in thickness)	<ul style="list-style-type: none"> Should be managed and removed on a regular basis to maintain a low threat state. Should be maintained at <2 tonnes per hectare (on average). Mulches should be non-combustible such as stone, gravel or crushed mineral earth or wood mulch >6 millimetres in thickness.
Trees* (>6 metres in height)	<ul style="list-style-type: none"> Trunks at maturity should be a minimum distance of six metres from all elevations of the building. Branches at maturity should not touch or overhang a building or powerline. Lower branches and loose bark should be removed to a height of two metres above the ground and/or surface vegetation. Canopy cover within the APZ should be <15 per cent of the total APZ area. Tree canopies at maturity should be at least five metres apart to avoid forming a continuous canopy. Stands of existing mature trees with interlocking canopies may be treated as an individual canopy provided that the total canopy cover within the APZ will not exceed 15 per cent and are not connected to the tree canopy outside the APZ. <p>Figure 19: Tree canopy cover – ranging from 15 to 70 per cent at maturity</p> 
Shrub* and scrub* (0.5 metres to six metres in height). Shrub and scrub >6 metres in height are to be treated as trees.	<ul style="list-style-type: none"> Should not be located under trees or within three metres of buildings. Should not be planted in clumps >5 square metres in area. Clumps should be separated from each other and any exposed window or door by at least 10 metres.
Ground covers* (<0.5 metres in height. Ground covers >0.5 metres in height are to be treated as shrubs)	<ul style="list-style-type: none"> Can be planted under trees but must be maintained to remove dead plant material, as prescribed in 'Fine fuel load' above. Can be located within two metres of a structure, but three metres from windows or doors if >100 millimetres in height.
Grass	<ul style="list-style-type: none"> Grass should be maintained at a height of 100 millimetres or less, at all times. Wherever possible, perennial grasses should be used and well-hydrated with regular application of wetting agents and efficient irrigation.

Schedule 1: Standards for Asset Protection Zones	
Defendable space	Within three metres of each wall or supporting post of a habitable building, the area is kept free from vegetation, but can include ground covers, grass and non-combustible mulches as prescribed above.
LP Gas Cylinders	<ul style="list-style-type: none"> • Should be located on the side of a building furthest from the likely direction of a bushfire or on the side of a building where surrounding classified vegetation is upslope, at least one metre from vulnerable parts of a building. • The pressure relief valve should point away from the house. • No flammable material within six metres from the front of the valve. • Must sit on a firm, level and non-combustible base and be secured to a solid structure.

Source: *Guidelines for Planning in Bushfire Prone Areas (WAPC 2021)*

Element 2 Explanatory Notes
<p>E2 Landscaping and design of an Asset Protection Zone</p> <p>Landscaping, design, and maintenance of an APZ in a bushfire prone area can significantly improve the bushfire resilience of a building. An APZ should not be seen as an area entirely cleared of vegetation, but as a strategically designed space that gives holistic consideration to how existing or proposed vegetation or non-combustible features interact with, or affect the building's bushfire resilience.</p> <p>A well designed APZ provides a greater level of vegetation management within the first few metres of a building with, for example, less vegetation or inclusion of non-combustible materials. The vegetation within the remainder of an APZ can increase further away from the building with carefully considered plant selection and landscaping techniques.</p> <p>Strategic landscaping measures can be applied, such as replacing weeds with low flammability vegetation (refer to E2 Plant Flammability) to create horizontal and vertical separations between the retained vegetation. The accumulation of fine fuel load from different plants is an important consideration for ongoing maintenance in accordance with Schedule 1. For example, when planting ground covers under deciduous trees within an APZ, the total fine fuel load prescribed in Schedule 1 will include any dead plant material from ground covers and leaf litter from the trees.</p> <p>Plant density and final structure and form of mature vegetation should be considered in the initial landscaping stages. For example, clumps of sapling shrubs planted at a density without consideration of future growth, may increase the bushfire risk as a clump will quickly grow to exceed 5m². It should be noted that in some cases, a single shrub in a mature state may be so dense as to fill a 5m² clump alone.</p> <p>The location of plants within an APZ is a key design technique. Separation of garden beds with areas of low fuel or non-combustible material, will break up fuel continuity and reduce the likelihood of a bushfire running through an APZ and subjecting a dwelling to radiant heat or direct flame contact. It is important to note, where mature trees are separated from a building by six metres, but the canopy has grown to extend or overhang a building, maintenance and pruning to remove the overhanging branches should be undertaken without the entirety of the tree being removed.</p> <p>Mulches used within the APZ should be non-combustible. The use of stone, gravel, rock and crushed mineral earth is encouraged. Wood mulch >6mm in thickness may be used, however it is recommended that it is used in garden beds or areas where the moisture level is higher by regular irrigation. These materials could be sourced from non-toxic construction and demolition waste giving the added benefit of reducing the environmental impact of any 'hard landscaping' actions.</p> <p>Combustible objects, plants, garden supplies such as mulches, fences made from combustible material, should be avoided within 10 metres of a building. Vines or climbing plants on pergolas, posts or beams, should be located away from vulnerable parts of the building, such as windows and doors. Non-flammable features can be used to provide hazard separation from classified vegetation, such as tennis courts, pools, lawns and driveways or paths that use inorganic mulches (gravel or crushed rock). Consider locating firewood stacks away from trees and habitable buildings.</p> <p>Incorporation of landscaping features, such as masonry feature walls can provide habitable buildings with barriers to wind, radiant heat and embers. These features can include noise walls or wind breaks. Use of Appendix F of AS 3959</p>

Element 2 Explanatory Notes

for bushfire resistant timber selection within areas of 29kW/m² (BAL-29) or below, or the use of non-combustible fencing materials such as iron, brick, limestone, metal post and wire is encouraged.

In addition to regular maintenance of an APZ, further bushfire protection can be provided at any time by:

- ensuring gutters are free from vegetation;
- installing gutter guards or plugs;
- regular cleaning of underfloor spaces, or enclosing them to prevent gaps;
- trimming and removing dead plants or leaf litter;
- pruning climbing vegetation (such as vines) on a trellis, to ensure it does not connect to a building, particularly near windows and doors;
- removing vegetation in close proximity to a water tank to ensure it is not touching the sides of a tank; and/or
- following the requirements of the relevant local government section 33 fire break notice, which may include additional provisions such as locating wood piles more than 10 metres from a building.

Preparation of a property prior to the bushfire season and/or in anticipation of a bushfire is beneficial even if your plan is to evacuate. As embers can travel up to several kilometres from a bushfire and fall into small spaces and crevices or land against the external walls of a building, best practice recommends that objects within the APZ are moved away from the building prior to any bushfire event. Objects may include, but are not limited to:

- door mats;
- outdoor furniture;
- potted plants;
- shade sails or umbrellas;
- plastic garbage bins;
- firewood stacks;
- flammable sculptures; and/or
- playground equipment and children's toys.

E2 Plant flammability

There are certain plant characteristics that are known to influence flammability, such as moisture or oil content and the presence and type of bark. Plants with lower flammability properties may still burn during a bushfire event, but may be more resistant to burning and some may regenerate faster post-bushfire.

There are many terms for plant flammability that should not be confused, including:

- Fire resistant – plant species that survive being burnt and will regrow after a bushfire and therefore may be highly flammable and inappropriate for a garden in areas of high bushfire risk.
- Fire retardant – plants that may not burn readily or may slow the passage of a bushfire.
- Fire wise – plants that have been identified and selected based on their flammability properties and linked to maintenance advice and planting location within a garden.

Although not a requirement of these Guidelines, local governments may develop their own list of fire wise or fire retardant plant species that suit the environmental characteristics of an area. When developing a recommended plant species list, local governments should consult with ecologists, land care officers or environmental authorities to ensure the plants do not present a risk to endangered ecological communities, threatened, or endangered species or their habitat.

When selecting plants, private landholders and developers should aim for plants within the APZ that have the following characteristics:

- grow in a predicted structure, shape and height;
- are open and loose branching with leaves that are thinly spread;
- have a coarse texture and low surface-area-to-volume ratio;
- will not drop large amounts of leaves or limbs, that require regular maintenance;
- have wide, flat, and thick or succulent leaves;
- trees that have bark attached tightly to their trunk or have smooth bark;
- have low amounts of oils, waxes, and resins (which will often have a strong scent when crushed);
- do not produce or hold large amounts of fine dead material in their crowns; and/or
- will not become a weed in the area.

Element 2 Explanatory Notes

Refer to the WAPC Bushfire and Vegetation Fact Sheet for further information on clearing and vegetation management and APZ landscaping, design and plant selection reference material.

Source: *Guidelines for Planning in Bushfire Prone Areas (WAPC 2021)*

Appendix B Vehicular access technical standards of the Guidelines

Acceptable Solution A3.1 – Public Roads

Explanatory Note E3.1

These Guidelines do not prescribe values for the trafficable (carriageway/pavement) width of public roads as they should be in accordance with the class of road as specified in the IPWEA Subdivision Guidelines, Liveable Neighbourhoods, Austroad Standards and/or any applicable standard in the local government area.

The IPWEA Subdivision Guidelines, Liveable Neighbourhoods, Austroad Standards do not prescribe a horizontal clearance. However, it is recommended that a traversable verge is provided to allow for emergency services vehicles to stop and operate on the side of the public road, specifically where the public road may traverse large areas of classified vegetation.

Where local government roads are proposed to be widened by the proponent, they must obtain approval from the local government.

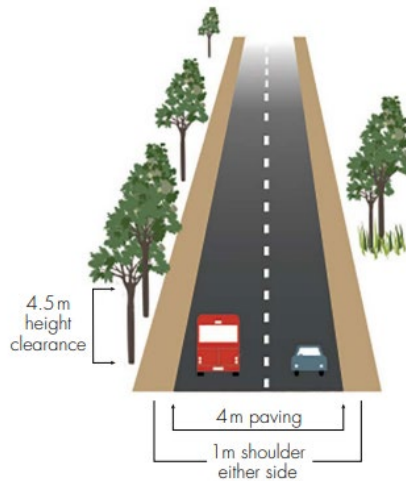


Figure 20: Example of a public road

Source: *Guidelines for Planning in Bushfire Prone Areas (WAPC 2021)*

Table 6: Vehicular access technical requirements

TECHNICAL REQUIREMENTS	1 Public roads	2 Emergency access way¹	3 Fire service access route¹	4 Battle-axe and private driveways²
Minimum trafficable surface (metres)	In accordance with A3.1	6	6	4
Minimum horizontal clearance (metres)	N/A	6	6	6
Minimum vertical clearance (metres)	4.5			
Minimum weight capacity (tonnes)	15			
Maximum grade unsealed road ³	As outlined in the IPWEA Subdivision Guidelines	1:10 (10%)		
Maximum grade sealed road ³		1:7 (14.3%)		
Maximum average grade sealed road		1:10 (10%)		
Minimum inner radius of road curves (metres)		8.5		

Notes:

¹ To have crossfalls between 3 and 6%.

² Where driveways and battle-axe legs are not required to comply with the widths in A3.5 or A3.6, they are to comply with the Residential Design Codes and Development Control Policy 2.2 Residential Subdivision.

³ Dips must have no more than a 1 in 8 (12.5% -7.1 degree) entry and exit angle.

Acceptable Solution A3.2a – Multiple access routes

Explanatory Note E3.2a

Two-way public road access is public road access from a lot in at least two different directions to two suitable destinations, and provides residents and the community, as well as emergency services, with access and egress from

both the subdivision and individual habitable buildings/development in the event of a bushfire emergency. A single road provides no alternative route if the access becomes congested or is unable to be traversed due to smoke and/or fallen trees during a bushfire.

Two-way public road access applies to access/egress routes leading into a subdivision, as well as those within a subdivision. A road that loops back onto itself does not constitute the option of two different directions.

Two-way public road access should always be the first option. Where the site is not able to achieve two-way access within 200 metres of the lot boundary, due to demonstrated site or environmental constraints, the proponent should identify options for an emergency access way from the subject site to a suitable destination. Where an emergency

access way cannot be provided, the proponent should demonstrate compliance with the performance principle.

Subject sites or proposed lots greater than 200 metres from an intersection, which provides two-way access, do not satisfy the requirement for two-way access unless they meet the provisions which allow for no-through roads greater than 200 metres in A3.2a.

To demonstrate compliance with the performance principle for two-way access, the bushfire planning practitioner may have regard to:

- the extent of the bushfire hazard, location and vegetation classification, the likelihood, potential severity and impact of bushfire to the subject site and the road network;
- time between fire detection and the onset of conditions in comparison to travel time for the community to evacuate to a suitable destination;
- available access route(s) travelling towards a suitable destination; and
- turn-around area for a fire appliance for no-through roads.

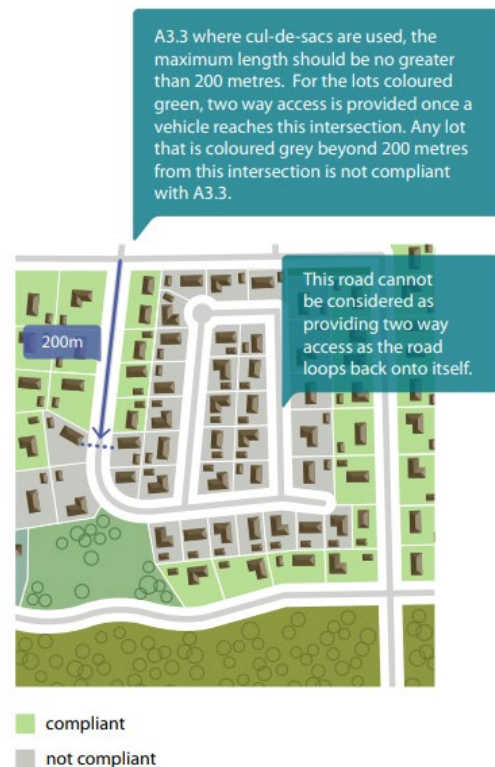


Figure 21: Example of compliant and non-compliant two-way

Source: *Guidelines for Planning in Bushfire Prone Areas* (WAPC 2021)

Acceptable Solution A3.3 – Through roads

Explanatory Note E3.3

In bushfire prone areas, a proposed structure plan or subdivision that incorporates no-through roads should be avoided because they do not provide a connected and legible design that allows for easy access and egress by the community, residents and emergency services in the event of a bushfire. No-through roads also reduce the options available for access and egress in the event of a bushfire emergency.

There will however be situations where a subject site is accessed via an existing or proposed no-through road and alternative access cannot be provided. In these situations, the proponent should demonstrate to the decision-maker, that all efforts have been made with the local government and/or adjoining landowners to secure alternative public road access or an emergency access way and that a redesign has been explored. The bushfire planning practitioner may need to develop a performance principle-based solution or address the non-compliance and demonstrate to the decisionmaker why discretion should be exercised in accordance with section 2.6 of these Guidelines.

No-through roads will only be considered an acceptable solution where it is demonstrated by the proponent, to the satisfaction of the decision maker, that a no through-road cannot be avoided due to site constraints. For example, the internal road design of a structure plan or subdivision where site constraints, such as a water body or Bush Forever, prevent the ability to create a through-road and a no through road may be a more appropriate road layout.

No-through roads should be a maximum of 200 metres from the lot(s) boundary to an intersection where two-way access is provided and may only exceed 200 metres if it meets the provisions which allow for no-through roads greater than 200 metres in A3.2a.

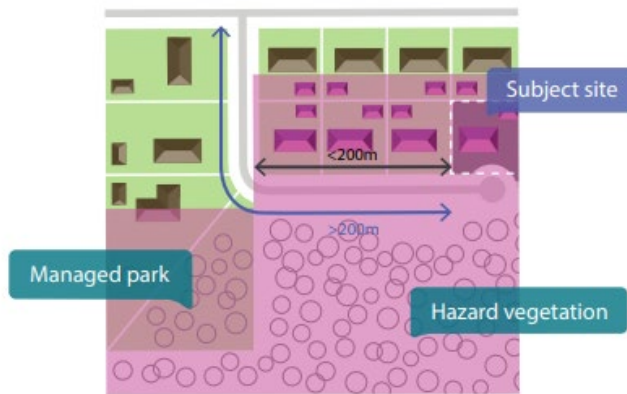


Figure 23: Example of a site on a no-through road greater than 200 metres from the intersection, but within 200 metres of BAL-LOW

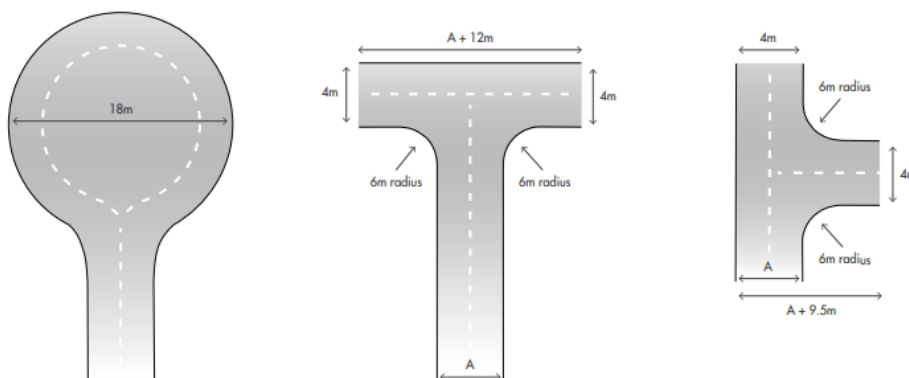


Figure 24: Turn-around area dimensions for a no-through road

Source: Guidelines for Planning in Bushfire Prone Areas (WAPC 2021)

Acceptable Solution A3.4a – Perimeter roads

Explanatory Note E3.4a

Where a planning proposal includes the creation of 10 or more lots adjacent to each other, which adjoin classified vegetation under AS 3959 with the exception of Class G Grassland, as part of a greenfield development or large urban infill site, hazard separation and defendable space should be provided in the form of a perimeter road. Greenfield is ‘undeveloped or minimally developed areas that have been identified for urban development’; and urban infill is ‘the redevelopment of existing urban areas at a higher density than currently exists’. The creation of 10 or more lots includes cumulative subdivision applications where the subdivision application may be part of a staged subdivision.

A perimeter road should be in accordance with the class of road as specified in the IPWEA Subdivision Guidelines, Liveable Neighbourhoods, Austroad Standards and/or any applicable standard in the local government area as per the requirements of a public road in Table 6, Column 1.

As the road is likely to function as a key neighbourhood distributor, or similar, consideration should be given to the provision of additional width to allow for emergency services vehicles to stop and operate on the side of the perimeter road, whilst simultaneously providing for the evacuation of the community (Figure 20).

When designing a strategic planning proposal and/or subdivision, creating a large setback between classified vegetation and proposed lots with a perimeter road, and orientating habitable buildings to front onto (rather than back onto) areas of vegetation has many benefits, including:

- passive surveillance;
- defendable space for firefighting and emergency management purposes;
- reducing the potential radiant heat that may impact a habitable building in a bushfire event;
- reducing the need for battle-axe lots; and
- unconstrained public access/egress for the community in the event of a bushfire.

In developments where no perimeter road exists, property defence in a bushfire event is difficult and can be impossible. Where proposed lots have frontage to an existing public road and abut the hazard at the rear or side, it may be an undesirable planning outcome to create lots which front the existing public road and back onto a perimeter road. In this instance, consideration should be given to a fire service access route. Refer to E3.4b.



Figure 25: Example of a perimeter road

Source: *Guidelines for Planning in Bushfire Prone Areas* (WAPC 2021)

E3.2b Emergency access way

An emergency access way is not a preferred alternative to through public road access and should only be considered acceptable where it has been demonstrated that it will provide the safety and performance needs of emergency services and the community, including consideration for future needs, and that public road access to satisfy A3.2a cannot be achieved due to site constraints, such as an established road network with no opportunity to provide a public road for secondary access. Acceptance of an emergency access way should also consider the ability to accommodate reasonable worst-case vehicle volumes.

The principle function of the emergency access way is to provide a contingency (second) community evacuation route and simultaneously provide access for emergency services, in the event of a bushfire emergency. Where an emergency access way traverses classified vegetation, which has the potential to create a bushfire hazard, an emergency access way performs the secondary function of providing access by emergency services to this vegetation.

Emergency access ways should connect to a public road to allow alternative two-way through access. An emergency access way should not exceed 500 metres in length as they may not be as safe for road-use due to not being designed or constructed to the full requirements of a public road and may present uncertainties to emergency service personnel and the public as they are not part of the daily road network and not identified on Maps.

Permanent public emergency access way

An emergency access way can be provided as either a public easement in gross or a right-of-way. In both approaches, the management of the emergency access way is by the local government as the grantee of the easement or management body of the right-of-way. The proponent must obtain written consent from the local government that the local government will accept care, control and management of the easement or right-of-way; this must be provided to the decision-maker prior to granting planning approval. The approach taken is at the discretion of the decision-maker and/or the local government and is also dependent on whether the land is to remain in private ownership or be ceded to the Crown. Consultation with Land Use Management at the Department of Planning, Lands and Heritage should also be considered if the land is to be ceded to the Crown or if the local government is uncertain of which approach to take.

If the emergency access way is provided as an easement, it should be provided as a public easement in gross under sections 195 and 196 of the *Land Administration Act 1997* in favour of the local government and/or public authority, to ensure accessibility for emergency services and the public at all times. To be provided as a right-of-way the emergency access way should be vested in the Crown under section 152 of the *Planning and Development Act 2005* as a right-of-way and such land to be ceded free of cost and without any payment or compensation by the Crown. If gates are used to control traffic flow during non-emergency periods, these will be managed by the local government and must not be locked. Gates should be double gates wide enough to access the full pavement width and accommodate Type 3.4 fire appliances with the design and construction to be approved by the relevant local government.

Temporary public emergency access way

A temporary emergency access way may be proposed to facilitate the staging arrangements of a subdivision. The provision of two public roads may not be possible in the first stage of the subdivision and an emergency access way can be provided as an interim access route until the second public road is developed and gazetted in a subsequent stage of the subdivision (see figure 22). The emergency access way should be provided in the same manner as a permanent emergency access way, but it should be removed from the certificate of title once the public road is developed and gazetted. Where an emergency access way is proposed as an alternative to a public road, the Bushfire Management Plan should provide thorough justification for its use.

Restricted public emergency access way

There may be some instances where a restricted emergency access way is proposed as a performance principle-based solution where access is only available to the public in the event of a bushfire emergency. This option can only be considered where the local government or Main Roads WA have advised that vehicular access on the emergency access way is not allowed during non-emergency periods, as it provides an additional thoroughfare and entry point on a local or State road. In this scenario, the emergency access way can be provided as an easement under section 195 of the *Land Administration Act 1997*, as public access in the event of a bushfire emergency or vested in the Crown as a reserve under section 152 of the *Planning and Development Act 2005*. Such land is to be ceded free of cost without any payment or compensation by the Crown. The proponent must obtain written consent from the local government that

EXPLANATORY NOTES

the local government will accept care, control and management of the proposed reserve and agree to the terms of the Management Order Conditions (if applicable); this must be provided to the decision-maker prior to granting planning approval.

The purpose of the reserve should be for a public purpose specified in the condition related to the subdivision, for example for emergency access only, or for emergency access and recreation. A reserve for emergency access and recreation can optimise the land-use as a dual purpose where it provides vehicular access in the event of a bushfire emergency, but can be accessed by the public (on foot) on a day-to-day basis as a recreation link. Appropriate signage can ensure the general public is aware of the purpose of the reserve. The approach taken is at the discretion of the decision-maker and/or local government.

Right-of-carriageway emergency access way

There may be some instances where a right-of-carriageway easement is proposed as a performance principle-based solution. This may be where particular landowner(s) and emergency services, but not the public, require access over a neighbouring lot(s). A right-of-carriageway easement should be provided under section 195 of the *Land Administration Act 1997*. The easement is to provide alternative access for the particular landowner(s) in the event of a bushfire emergency and not for use by the public. In this scenario, support will be necessary from the adjoining lot owner(s). The easement is to be granted to the local government and it is to agree with the landowner on the arrangements of the management of the easement area by deed. These management arrangements will be at the discretion of the local government. If gated, the easement area can be locked to restrict day-to-day vehicular access.

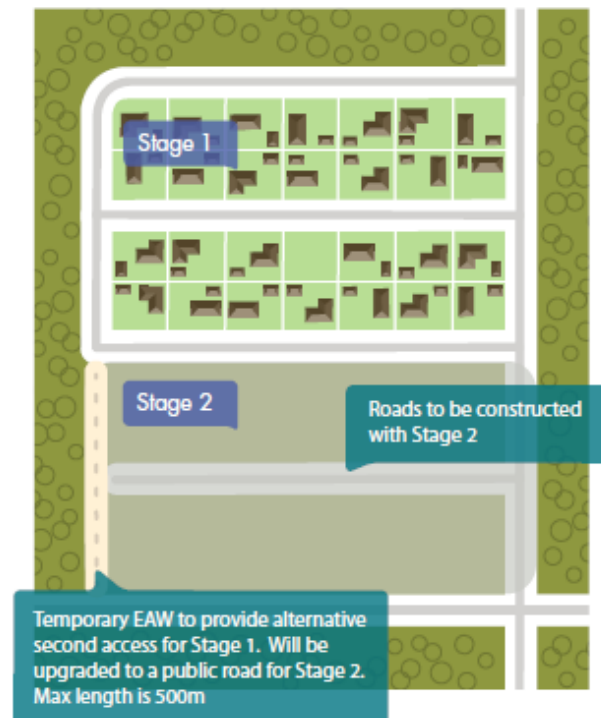


Figure 22: Example of an emergency access way

Appendix C City of Busselton Firebreak Notice

City of Busselton.

BUSHFIRE RISK REDUCTION NOTICE 2024-2025

BUSH FIRES ACT 1954

The following Notice is hereby given to all owners and/or occupiers of land within the District of the City of Busselton.

The majority of land within the District of the City of Busselton has been designated by the State as **Bushfire Prone** and has the potential to be subject, or likely to be subject to be impacted by bushfires.

Pursuant to the powers contained in Section 33 of the *Bush Fires Act 1954* notice is hereby given to all owners and occupiers of land within the District of City of Busselton, you are required and therefore ordered by the local government to carry out fire prevention work in accordance with the requirements of this Notice, on or before 15 November 2024, and maintain the requirements up to and including 30 April 2025 or within 14 days of becoming an owner or occupier of land if after that date, to comply with the requirements set out in this notice.

Definitions of terms referred to this Notice:

Authorised officer means a person appointed by the City as a Bush Fire Control Officer pursuant to the powers conferred in s38 of the *Bush fires Act 1954*

Bushfire Prone Area (BPA) means all land designated within the Map of Bushfire Prone areas as identified by the Fire and Emergency Services Commissioner under s18P of the *Fire and Emergency Services Act 1998*.

Current Bushfire Management Plan a plan prepared specifically for a property or subdivision as a condition of subdivision or development approval and endorsed by the Western Australian Planning Commission or the City after 7 December 2015.

Driveway/access way means the access route from a public or private road to a habitable building. With:

- a 3-metre-wide trafficable surface.
- vegetation maintained to provide a 0.5m clearance each side of the trafficable surface; however isolated trees and significant plants need not be removed.
- a 4-metre vertical clearance is to be installed and maintained.

Firebreak means a 3m wide area of land cleared and maintained totally clear of all vegetation material (living or dead), with a trafficable surface over which any overhanging vegetation is no less than 4m above ground level, for the primary purpose of access for firefighting appliances.

Flammable material means accumulated fuel such as dry grass, leaf litter, twigs, branches, trash, bush, dead trees, firewood, stored fuels and scrub that can be easily ignited or is likely to catch fire and burn. It includes any other thing deemed by an Authorised Officer to be likely to catch fire but excludes living standing trees, growing bushes and plants in gardens and/or lawn areas under cultivation.

Habitable building means any single or two-family residence, garage, building, structure, trailer, vehicle or portion thereof where persons dwell, reside, are employed, or congregate and which is occupied in part or whole on a permanent or temporary basis.

Land means freehold land or leasehold Crown land.

Lot means an allotment of freehold land or leasehold Crown land and includes contiguous land parcels in common ownership.

Managed Fuel Area means an area of land within 20 metres of a habitable dwelling from the outermost point of the building wall or to the lot boundary (whichever is smaller). Within the Managed Fuel area:

- Trees must be pruned 2m away from buildings with vertical clearance of 5 metres above the top of the external roof.
- Gutters to be kept free of dead suspended matters such as twigs, leaves, and bark.
- Vegetation must be reticulated and/or maintained or there must be a low fuel understory with no **Flammable Material** present.
- **Flammable material** to be managed or moved 5 metres away from buildings.
- Unless **Managed Vegetation**, available **Surface Fine Fuel** loads must be reduced and maintained at an average compressed depth of 15mm, by **Passive Fuel Reduction** methods that do not permanently remove or reduce the quantity or occurrence of the native plants, shrubs, and trees within the subject area.

Managed Vegetation includes actively managed and maintained and/or reticulated low-threat vegetation gardens, orchards, vegetable gardens, living standing trees, growing bushes and plants in gardens and/or lawn areas under cultivation.

Passive Fuel Reduction means lowering the amount of available fuel that will burn under prevailing conditions by means that will not permanently reduce or modify the structure or life cycle of plant, shrub, scrub, or tree communities within a treated area. This may be achieved by undertaking a cool, controlled burn of an area during cooler, damper months, or by physical removal through raking, pruning, weed management, or by any other method, of built-up leaf litter, dead materials, weeds and slashing long dry grasses without damaging live native plants within the area.

Special Work Order means a property specific notice served by the City on an owner pursuant to Section 33 of the *Bush Fires Act 1954*, to act as and when specified in the notice with respect to anything which is upon the land, and which in the opinion of the local government or its duly authorised officer, is or is likely to be conducive to the outbreak of a bush fire or the spread or extension of a bush fire.

Surface Fine Fuel means the leaf litter on the ground, including leaves, twigs (up to 6mm in diameter) and bark which is easily scratched away and not starting to decompose.

Trafficable surface a firm and stable surface, unhindered and without any obstruction suitable to support a 4x4 fire appliance.

Turnaround area means an area of trafficable surface that allows a large fire appliance vehicle to turn around. The turnaround area must:

- be kept clear of encroaching vegetation and overhanging branches to a height of 4 metres.
- Be within 30 metre proximity to the habitable building.
- Turn around can be a loop with a minimum 10 metre radius or a trafficable bay sufficient to support a three-point turn by an 8.3m fire appliance.

Variation means an individual specific Firebreak Notice served by the City on an owner under s33(2) of the *Bush Fires Act 1954*

Category 1 – All Lots 1,100m² or less:

- a) **Grasses to be maintained** – slashed/mowed to less than 10cm in height and removed from the land and disposed of in an appropriate manner;
- b) **Flammable material** to be managed or moved 5 metres away from buildings;
- c) **Gutters** to be kept free of dead suspended matters such as twigs, leaves and bark.

Category 2 –All lots greater than 1,100m² but less than 5ha:

- a) **Grasses to be maintained** – slashed/mowed/grazed to less than 10cm in height unless actively grazed. If land is actively grazed, grasses shall be maintained to less than 20cm in height.
- b) **Category 2 properties with a habitable building:**
 - i. **Establish and maintain a Managed Fuel Area;**
 - ii. **Driveway/access way** – If the habitable building is, at its closest point, more than 20 metres from the carriageway of a public or private road, the driveway/accessway must be installed and maintained as defined in this Notice;
 - iii. **Turnaround area** - If the habitable building is, at its closest point, more than 50 metres from the point of access from the carriageway of a public or private road, a turnaround area is to be installed and maintained.

Category 3 – All lots 5ha or greater:

- a) **Grasses to be maintained** – slashed/mowed to less than 10cm in height unless actively grazed or farmed;
- b) **Firebreak** – A 3-metre-wide firebreak shall be maintained as close as practicable within 100m of all property boundaries. Where land is actively grazed, or maintained to less than 10cm in height the firebreak may be reduced to 2 metres width. Where the land area exceeds 120 hectares, an additional firebreak must divide land into areas of not more than 120 hectares with each part completely surrounded by a firebreak within 100m of the boundary of that part;
- c) **Category 3 properties with a habitable building:**
 - i. **Establish and maintain a Managed Fuel Area;**

- ii. **Driveway/access way** – If the habitable building is, at its closest point, more than 20 metres from the carriageway of a public or private road, the driveway/accessway must be installed and maintained as defined in this Notice;
- iii. **Turnaround area** - If the habitable building is, at its closest point, more than 50 metres from the point of access from the carriageway of a public or private road, a turnaround area is to be installed and maintained.

Current Bushfire Management Plan – Properties subject to a **Current Bushfire Management Plan** must comply with the requirements of their **Current Bushfire Management Plan** in addition to the requirements of this Notice.

Variations to the requirements of this Notice: To request a **Variation** to the requirements of this Notice, you may apply in writing to the City of Busselton for a Variation to the Notice. Variations will be considered where compliance is not practicable due to site-specific constraints such as topography, gradients, or waterways or due to environmental constraints. A submission for a variation is required annually.

Applications for Variations must be completed on the approved form, available from the City's website and must provide alternative means of meeting the objectives of the notice.

Take notice if permission is not granted in writing you must comply with the requirements of this notice.

Additional works: The City retains the ability to issue **Special Work Orders** pursuant to Section 33 of the Bush Fires Act 1954, to individual landowners should additional works be necessary for a potential fire hazard that may exist on a property. These can be issued at any time during the year.

Inspections, appointments, education and compliance: Landowners/occupiers who would like an early inspection by appointment, for reasons, including dangerous animals, biosecurity, locked gates, or for an explanation on the requirements of this Notice, should contact Rangers by **1 October 2024**. Where inspections by appointment are not requested, **Authorised officers** will be inspecting properties for compliance, without further notice from **15 November 2024**.

Clearing permits and exemptions: Owners/Occupiers must attempt to minimise environmental impacts as much as possible and should contact the City prior to undertaking works if clearing is likely to impact any protected flora, fauna or fauna habitat, or their property is within an Environmentally Sensitive Area. In most circumstances, Owners/Occupiers that clear vegetation in compliance with this Notice will be exempt from the requirement to seek approvals or permits under State law.

Federal environmental approval may be required, if the requirements of this Notice are likely to have a significant impact on a nationally protected matter. Western Ringtail Possums or black cockatoos may be disturbed through the clearing of vegetation need, licenced wildlife handlers must be present when the clearing takes place.

Owners/Occupiers who clear beyond the requirements of this Notice without approvals may be subject to prosecution.

Landowners/occupiers who do not comply with this Notice or a Variation to this Notice may be issued with an infringement notice (\$250) or prosecuted with a penalty up to \$5,000. A person in default is also liable, whether prosecuted or not, to pay the costs of performing the work directed by this Notice if it is not carried out by the owner and/or occupier by the date required by this Notice.

Right of appeal: Where the City has issued a person with an Infringement Notice, there is a right of appeal. If a person genuinely believes that there are grounds as to why the Infringement should be withdrawn, then they are encouraged to detail those reasons in writing to the CEO of the City of Busselton seeking a review of the matter within 14 days of the date of issue.

Appendix D POS landscape plans



LEGEND

- EXTENT OF WORKS
- MIX 1 / MIX 2 / MIX 5 / MIX 7 / MIX 8 / MIX 10-1-2 / MIX 11 - PROPOSED SHRUB PLANTING
- MIX 3 - WETLAND PLANTING
- MIX 4 - SWALE BANKING PLANTING
- MIX 6 / MIX 6A - WILDFLOWER PLANTING (TUBES & SEED)
- MIX 9 - REVEGETATION PLANTING
- MULCH ONLY
- TURF
- PROPOSED TREES
- EXISTING TREE TO BE RETAINED AND PROTECTED

- NOTE:**
- WILDFLOWER PLANTING BEDS TO CONTAIN BOTH MIX 6 (TUBESTOCK) & MIX 6A (SEED) TO ALL WILDFLOWER PLANTING BEDS
 - ALL TREES TO THIS AREA TO BE TUBESTOCK

REFER DRAWING VAS-65-502 FOR PLANT SCHEDULES

- STANDARD NOTES**
- SET OUT & DIMENSIONS:** THE CONTRACTOR SHALL SET OUT ALL POINTS, WALLS, SURFACES AND ELEMENTS EITHER ON OR OFF SITE PRIOR TO CONSTRUCTION AND SHALL OBTAIN THE SUPERINTENDENT'S SET OUT APPROVAL PRIOR TO WORKS COMMENCING. WRITTEN DIMENSIONS SHALL TAKE PRECEDENCE OVER SCALE. CHECK ALL DRAWING SCALES IN CONSULTATION WITH DRAWING SIZE.
 - SERVICES & SITE ASSETS:** THE CONTRACTOR SHALL INVESTIGATE THE NATURE AND LOCATION OF ALL EXISTING SERVICES AND THE TOLERANCE SITE ASSETS AFFECTED BY THEIR WORKS. FAILURE TO TAKE DUE CARE SHALL NOT LIMIT THE CONTRACTOR'S LIABILITIES.
 - REFERENCE:** THE CONTRACTOR SHALL REFER TO ALL CONTRACT DOCUMENTS, THE SPECIFICATION AND DRAWINGS PRIOR TO AND DURING THE WORKS.
 - DISCREPANCIES:** NOTIFY SUPERINTENDENT OF ANY SUSPECTED ALL PROBLEMS AND WORKS IN ACCORDANCE WITH CURRENT INDUSTRY BEST PRACTICE AND ALL RELEVANT AUSTRALIAN STANDARDS.
 - RELEVANT STANDARDS:** THE CONTRACTOR SHALL UNDERTAKE ALL PROBLEMS AND WORKS IN ACCORDANCE WITH CURRENT INDUSTRY BEST PRACTICE AND ALL RELEVANT AUSTRALIAN STANDARDS.
 - SERVICE LOCATOR:** THE CONTRACTOR SHALL UNDERTAKE A DIAL BEFORE YOU DIG PROCESS PRIOR TO COMMENCING WORKS. THE CONTRACTOR SHALL ENGAGE A SERVICE LOCATOR TO MAP THE SPECIFIC LOCATIONS AND DEPTHS OF ALL SERVICES AND ADVISE ALL RELEVANT STAFF AND SUBCONTRACTORS IN WRITING PRIOR TO COMMENCING WORKS ON SITE.

REV	DATE	BY	ISSUE OR AMENDMENT
D	01.02.22	JY	ISSUE FOR PRICING
C	31.01.22	JY	ISSUE FOR APPROVAL
B	18.10.21	PB	ISSUE FOR APPROVAL
A	23.08.21	PB	ISSUE FOR TENDER

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 THE DESIGNER HAS APPROVED THIS DRAWING WITHOUT BEING INTERNALLY REVIEWED AND ENDORSED BY:
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INTERNAL PRETENDER REVIEW
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 EMERGE DIRECTOR DATE

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emerge ASSOCIATES
 Integrated Science & Design
 PERTH (08) 9380 4988 • MARGARET RIVER (08) 9758 8159

PROJECT
 DAWSON STAGE 5 - POS VASSE, WA
 STAGE OR PHASE

DRAWING TITLE
 PLANTING PLAN 01

CLIENT
 PERRON DEVELOPMENTS & STAWELL JOINT VENTURE

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DESIGNED BY CE **PRELIM DESIGN REVIEWED BY** CE
DRAWN BY BM **PRELIM DRAWING REVIEWED BY** CE

DATE INITIALLY DRAWN 21.05.18

SCALE 1:250 @ A1

DRAWING NUMBER VAS-65-501 **REV** D

WILDFLOWER PLANTING:
 PLANTING BEDS TO CONTAIN BOTH MIX 6 (TUBESTOCK) & MIX 6A (SEED) TO ALL WILDFLOWER PLANTING BEDS
 NOTE: ALL TREES TO THIS AREA TO BE TUBESTOCK



LEGEND

- ELECTRICITY DOME - BY CIVIL
- STORMWATER
- WATER
- POWER
- SUBSOIL
- SEWER
- GAS
- NBN
- EXISTING STREET LIGHTS
- STREET LIGHTS BY OTHERS

NOTES

- ALL STREET TREES SHALL HAVE A STRATAGREEN ROOT DIRECTOR BARRIER INSTALLED EXCEPT FOR WHERE LINEAR BARRIER IS SPECIFIED AND NOTED ON THE DRAWINGS
- STREET TREES SHALL BE LOCATED 1.5M FROM ALL SERVICE PITS, SIDE ENTRY PITS AND HYDRANTS

LEGEND

- EXTENT OF WORKS
- PROPOSED CONCRETE PATH
- CONCRETE PATH BY CIVIL
- PROPOSED ROCK PITCHING
- CONCRETE MOW KERB
- ROCK PITCHING - BY CIVIL
- MULCH ONLY / PLANTING IN PREVIOUS STAGES
- MULCH ONLY
- BLUE METAL GRAVEL
- DRAINAGE SWALE PLANTING
- REVEGETATION PLANTING
- VERGE PLANTING
- SEWER EASEMENT
- SWALE PLANTING WITH BIOFILTER MEDIA
- EXISTING TREE TO BE RETAINED AND PROTECTED
- PROPOSED TREES
- STRATAGREEN ROOT DIRECTOR RD1000

STANDARD NOTES

- SET OUT & DIMENSIONS:** THE CONTRACTOR SHALL SET OUT ALL PATHS, WALLS, HARD SURFACES AND ELEMENTS EITHER ON OR OFF SITE PRIOR TO CONSTRUCTION AND SHALL OBTAIN THE SUPERINTENDENT'S SET OUT APPROVAL PRIOR TO WORKS COMMENCING. WRITTEN DIMENSIONS SHALL TAKE PRECEDENCE OVER SCALE. CHECK ALL DRAWING SCALES IN CONJUNCTION WITH DRAWING SIZE.
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REV	DATE	BY	ISSUE OR AMENDMENT
F	22.05.24	JY	RE-ISSUE FOR APPROVAL
E	22.04.24	JY	ISSUE FOR APPROVAL
D	15.02.24	JY	ISSUE FOR APPROVAL
C	03.11.23	JY	ISSUE FOR APPROVAL
B	25.07.23	JY	ISSUE FOR APPROVAL
A	17.05.23	JY	ISSUE FOR COORDINATION

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emerge ASSOCIATES
Integrated Science & Design
PERTH (08) 9380 4988 - MARGARET RIVER (08) 9758 8159

PROJECT
VASSE ESTATE
VASSE, WA
STAGE 6A BUFFER & STREETSCAPES

DRAWING TITLE
LANDSCAPE PLAN 1

CLIENT
PERRON DEVELOPMENTS & STAWELL JOINT VENTURE

DESIGNED BY EC PRELIM DESIGN REVIEWED BY EC
DRAWN BY JY PRELIM DWG REVIEWED BY EC
DATE INITIALLY DRAWN 01.12.2022

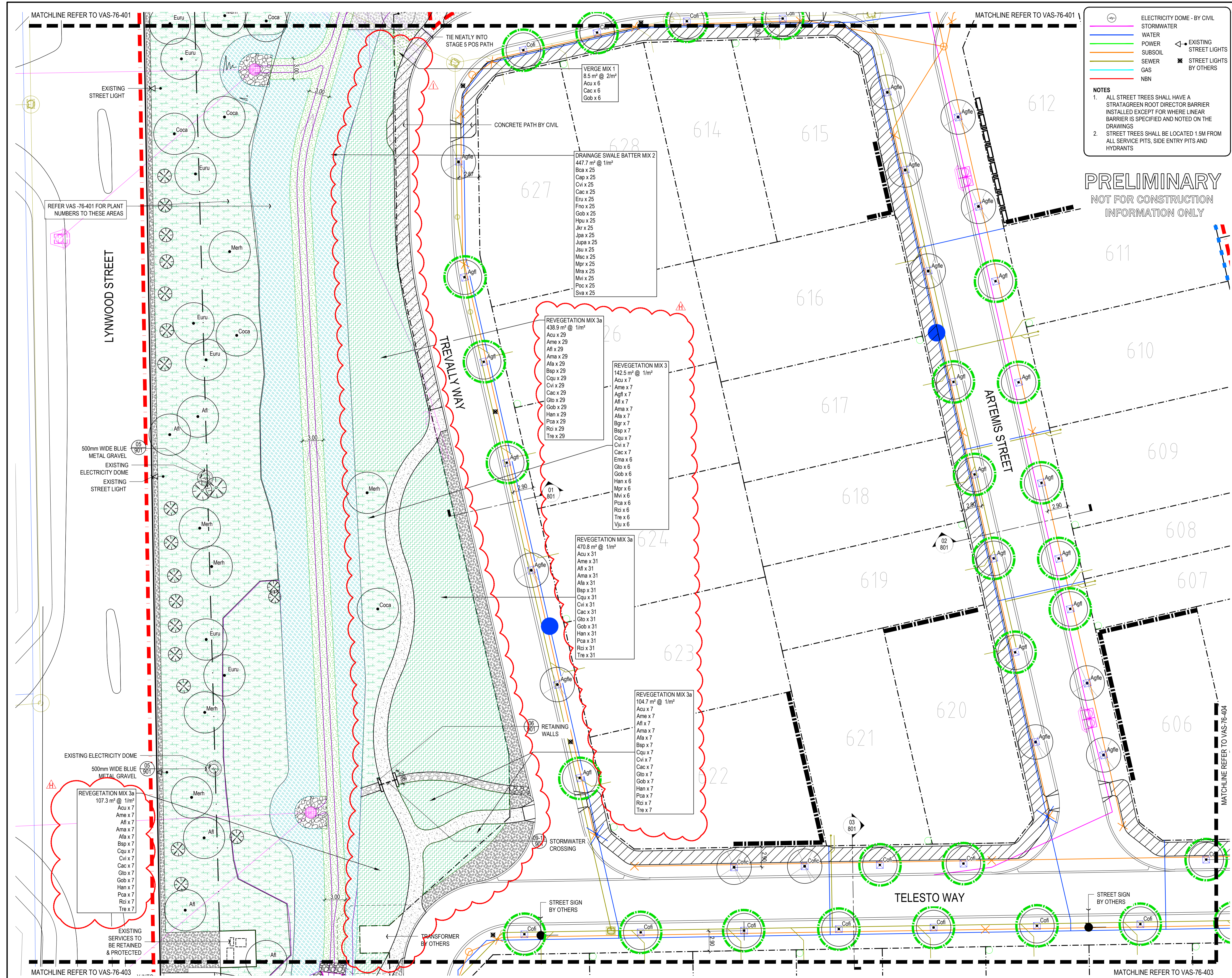
SCALE
1:250 @ A1 METRES

DRAWING NUMBER
VAS-76-401

REV
F

PRELIMINARY
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INFORMATION ONLY

MATCHLINE REFER TO VAS-76-402



LEGEND

- Electricity Dome - by Civil
- Stormwater
- Water
- Power
- Subsoil
- Sewer
- Gas
- NBN
- Existing Street Lights
- Street Lights by Others

NOTES

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- STREET TREES SHALL BE LOCATED 1.5M FROM ALL SERVICE PITS, SIDE ENTRY PITS AND HYDRANTS

LEGEND

- Extent of Works
- Proposed Concrete Path
- Concrete Path by Civil
- Proposed Rock Pitching
- Concrete Mow Kerb
- Rock Pitching - by Civil
- Mulch Only / Planting in Previous Stages
- Mulch Only
- Blue Metal Gravel
- Drainage Swale Planting
- Revegetation Planting
- Verge Planting
- Sewer Easement
- Swale Planting with Biofilter Media
- Existing Tree to be Retained and Protected
- Proposed Trees
- Stratagreen Root Director RD1000

PRELIMINARY
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STANDARD NOTES

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REV	DATE	BY	ISSUE OR AMENDMENT
I	13.09.24	JY	REISSUE FOR CITY APPROVAL
H	12.09.24	JY	REISSUE FOR CITY APPROVAL
G	01.08.24	JY	ISSUE FOR TENDER
F	19.06.24	JY	RE-ISSUE FOR APPROVAL
E	22.05.24	JY	RE-ISSUE FOR APPROVAL
D	22.04.24	JY	ISSUE FOR APPROVAL
C	15.02.24	JY	ISSUE FOR APPROVAL
B	03.11.23	JY	ISSUE FOR APPROVAL
A	25.07.23	JY	ISSUE FOR APPROVAL

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PROJECT
VASSE ESTATE
VASSE, WA
STAGE 6A BUFFER & STREETSCAPES

DRAWING TITLE
LANDSCAPE PLAN 2

CLIENT
PERRON DEVELOPMENTS & STAWELL JOINT VENTURE

DESIGNED BY AN PRELIM DESIGN REVIEWED BY EC
DRAWN BY AN PRELIM DWG REVIEWED BY EC

DATE INITIALLY DRAWN 15.06.2023

SCALE 1:250 @ A1 METRES

DRAWING NUMBER
VAS-76-402

VERGE MIX 1
8.5 m² @ 2/m²
Acu x 6
Cac x 6
Gob x 6

DRAINAGE SWALE BATTER MIX 2
447.7 m² @ 1/m²
Bca x 25
Cap x 25
Cvi x 25
Cac x 25
Eru x 25
Fho x 25
Gob x 25
Hpu x 25
Jir x 25
Jpa x 25
Jupa x 25
Jsu x 25
Msc x 25
Mpr x 25
Mra x 25
Mvi x 25
Poc x 25
Sva x 25

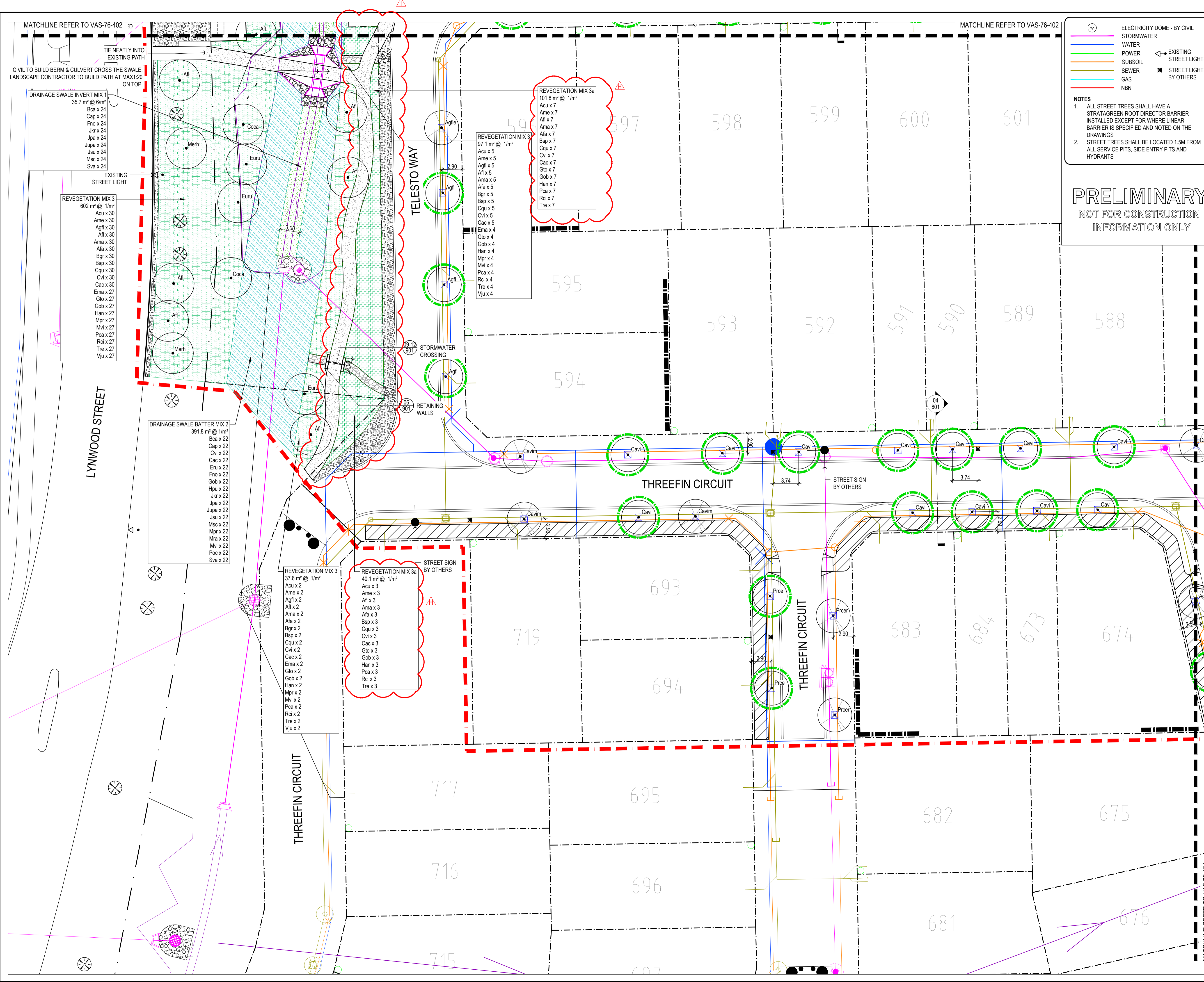
REVEGETATION MIX 3a
438.9 m² @ 1/m²
Acu x 29
Ame x 29
Afi x 29
Ama x 29
Afa x 29
Bsp x 29
Cqu x 29
Cvi x 29
Cac x 29
Glo x 29
Han x 29
Pca x 29
Rci x 29
Tre x 29

REVEGETATION MIX 3
142.5 m² @ 1/m²
Acu x 7
Ame x 7
Afi x 7
Afa x 7
Ama x 7
Bgr x 7
Bsp x 7
Cqu x 7
Cvi x 7
Cac x 7
Ema x 6
Glo x 6
Gob x 6
Han x 6
Mpr x 6
Mvi x 6
Pca x 6
Rci x 6
Tre x 6
Vju x 6

REVEGETATION MIX 3a
470.9 m² @ 1/m²
Acu x 31
Ame x 31
Afi x 31
Ama x 31
Afa x 31
Bsp x 31
Cqu x 31
Cvi x 31
Cac x 31
Glo x 31
Han x 31
Pca x 31
Rci x 31
Tre x 31

REVEGETATION MIX 3a
104.7 m² @ 1/m²
Acu x 7
Ame x 7
Afi x 7
Afa x 7
Ama x 7
Bsp x 7
Cqu x 7
Cvi x 7
Cac x 7
Glo x 7
Gob x 7
Han x 7
Pca x 7
Rci x 7
Tre x 7

REVEGETATION MIX 3a
107.3 m² @ 1/m²
Acu x 7
Ame x 7
Afi x 7
Afa x 7
Ama x 7
Bsp x 7
Cqu x 7
Cvi x 7
Cac x 7
Glo x 7
Gob x 7
Han x 7
Pca x 7
Rci x 7
Tre x 7



LEGEND

- Electricity Dome - by Civil
- Stormwater
- Water
- Power
- Subsoil
- Sewer
- Gas
- NBN
- Existing Street Lights
- Street Lights by Others

NOTES

- ALL STREET TREES SHALL HAVE A STRATAGREEN ROOT DIRECTOR BARRIER INSTALLED EXCEPT FOR WHERE LINEAR BARRIER IS SPECIFIED AND NOTED ON THE DRAWINGS
- STREET TREES SHALL BE LOCATED 1.5M FROM ALL SERVICE PITS, SIDE ENTRY PITS AND HYDRANTS

PRELIMINARY
NOT FOR CONSTRUCTION
INFORMATION ONLY

LEGEND

- Extent of Works
- Proposed Concrete Path
- Concrete Path by Civil
- Proposed Rock Pitching
- Concrete Mow Kerb
- Rock Pitching - by Civil
- Mulch Only / Planting in Previous Stages
- Mulch Only
- Blue Metal Gravel
- Drainage Swale Planting
- Revegetation Planting
- Verge Planting
- Sewer Easement
- Swale Planting with Biofilter Media
- Existing Tree to be Retained and Protected
- Proposed Trees
- Stratagreen Root Director RD1000

STANDARD NOTES

- SET OUT & DIMENSIONS.** THE CONTRACTOR SHALL SET OUT ALL PITS, WALLS, CURBS, SERVICES AND ELEMENTS EITHER ON OR OFF SITE PRIOR TO CONSTRUCTION AND SHALL OBTAIN THE SUPERINTENDENT'S SET OUT APPROVAL PRIOR TO COMMENCING WORKS. WRITTEN DIMENSIONS SHALL TAKE PRECEDENCE OVER SCALE. CHECK ALL DRAWING SCALES IN CONJUNCTION WITH DRAWING SIZE.
- SERVICES & SITE ASSETS.** THE CONTRACTOR SHALL INVESTIGATE THE NATURE AND LOCATION OF ALL EXISTING SERVICES AND SITE ASSETS AFFECTED BY THEIR WORKS. FAILURE TO TAKE DUE CARE SHALL NOT LIMIT THE CONTRACTOR'S LIABILITIES.
- REFERENCE.** THE CONTRACTOR SHALL REFER TO ALL CONTRACT DOCUMENTS, THE SPECIFICATION AND DRAWINGS PRIOR TO AND DURING THE WORKS.
- DISCREPANCIES.** NOTIFY SUPERINTENDENT OF ANY SUSPECTED DISCREPANCIES OR ERRORS PRIOR TO THE ORDERING OF AFFECTED MATERIALS AND OR CONSTRUCTION OF AFFECTED WORKS.
- RELEVANT STANDARDS.** THE CONTRACTOR SHALL UNDERTAKE ALL PRICING AND WORKS IN ACCORDANCE WITH CURRENT INDUSTRY BEST PRACTICE AND ALL RELEVANT AUSTRALIAN STANDARDS.
- SERVICE LOCATOR.** THE CONTRACTOR SHALL UNDERTAKE A DIAL BEFORE YOU DIG PROCESS PRIOR TO COMMENCING WORKS ON SITE. THE CONTRACTOR SHALL ENGAGE A SERVICE LOCATOR TO MAP THE SPECIFIC LOCATIONS AND DEPTHS OF ALL SERVICES AND ADVISE ALL RELEVANT STAFF AND SUBCONTRACTORS IN WRITING PRIOR TO COMMENCING WORKS ON SITE.

REV	DATE	BY	ISSUE OR AMENDMENT
I	13.09.24	JY	REISSUE FOR CITY APPROVAL
H	12.09.24	JY	REISSUE FOR CITY APPROVAL
G	01.08.24	JY	ISSUE FOR TENDER
F	19.06.24	JY	RE-ISSUE FOR APPROVAL
E	22.05.24	JY	RE-ISSUE FOR APPROVAL
D	22.04.24	JY	ISSUE FOR APPROVAL
C	15.02.24	JY	ISSUE FOR APPROVAL
B	03.11.23	JY	ISSUE FOR APPROVAL
A	25.07.23	AN	ISSUE FOR APPROVAL

THIS IS AN UNCONTROLLED DOCUMENT ISSUED FOR INFORMATION ONLY UNLESS SIGNED BELOW AT EACH RELEVANT STAGE.

INTERNAL DESIGN REVIEW
THIS DESIGN HAS BEEN REVIEWED AND APPROVED BY:
REVIEWED AND APPROVED HERE: _____ EMERGE DIRECTOR DATE: _____

INTERNAL PRETENDER REVIEW
THIS DRAWING IS NOT AUTHORISED FOR TENDER WITHOUT BEING INTERNALLY REVIEWED AND APPROVED HERE: _____ EMERGE DIRECTOR DATE: _____

AUTHORISED FOR CONSTRUCTION
THIS DRAWING IS NOT AUTHORISED FOR CONSTRUCTION UNLESS IT IS MARKED 'REV' OR 'REVISED' AND IS SIGNED HERE: _____ EMERGE DIRECTOR DATE: _____

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PROJECT
VASSE ESTATE
VASSE, WA
STAGE 6A BUFFER & STREETSCAPES

DRAWING TITLE
LANDSCAPE PLAN 3

CLIENT
PERRON DEVELOPMENTS & STAWELL JOINT VENTURE

DESIGNED BY: AN PRELIM DESIGN REVIEWED BY: EC
DRAWN BY: AN PRELIM DWG REVIEWED BY: EC
DATE INITIALLY DRAWN: 15.06.2023
SCALE: 1:250 @ A1 METRES
DRAWING NUMBER: VAS-76-403

