

**DRAFT**

**CITY OF KALAMUNDA**  
**LOCAL PLANNING SCHEME N<sup>o</sup> 3**  
**AMENDMENT N<sup>o</sup> XX**

**An Amendment to rezone Lot 33 (No.4) Orange Valley Road and Lot 32 (No.4) Kirkdale Road, Kalamunda from 'RESIDENTIAL R10' to 'RESIDENTIAL R10/30' and amend the Scheme Map accordingly.**

**PLANNING AND DEVELOPMENT ACT 2005**  
**RESOLUTION DECIDING TO ADOPT AMENDMENT LOCAL PLANNING SCHEME**  
**CITY OF KALAMUNDA**  
**LOCAL PLANNING SCHEME N<sup>o</sup> 3**  
**AMENDMENT N<sup>o</sup> XX**

Resolved that the Council, pursuant to section 75 of the Planning and Development Act, 2005 amend the above Local Planning Scheme by:

- i) Rezoning Lot 33 on Plan 6798 being No.4 Orange Valley Road, Kalamunda and Lot 32 on Plan 6798 being No.4 Kirkdale Road, Kalamunda from 'Residential R10' to 'Residential R10/30'; and
- ii) Amending the Scheme Map accordingly.

The Amendment is standard under the provisions of the Planning and Development (Local Planning Scheme) Regulations 2015 for the following reasons:

- i) The amendment would have minimal impact on land in the scheme area that is not the subject of the amendment; and
- ii) The amendment does not result in any significant environmental, social, economic or governance impacts on land in the scheme area.

## SCHEME AMENDMENT REPORT

- |    |   |   |  |
|----|---|---|--|
| 1. | <b>LOCAL AUTHORITY</b>                      | : | CITY OF KALAMUNDA  |
| 2. | <b>DESCRIPTION OF LOCAL PLANNING SCHEME</b> | : | LOCAL PLANNING SCHEME N <sup>o</sup> 3   |
| 3. | <b>TYPE OF SCHEME</b>                       | : | CITY ZONING SCHEME   |
| 4. | <b>SERIAL N<sup>o</sup> OF AMENDMENT</b>    | : | XX   |
| 5. | <b>PROPOSAL</b>                             | : | <ul style="list-style-type: none"> <li>i) REZONE LOT 33 ON PLAN 6798 BEING NO.4 ORANGE VALLEY ROAD, KALAMUNDA AND LOT 32 ON PLAN 6798 BEING NO.4 KIRKDALE ROAD, KALAMUNDA FROM 'RESIDENTIAL R10' TO 'RESIDENTIAL R10/30'; AND</li> <li>ii) AMENDING THE SCHEME MAP ACCORDINGLY.</li> </ul> |

## REPORT

### 1.0 INTRODUCTION

Lots 32 (1,007m<sup>2</sup>) and Lot 33 (1,002m<sup>2</sup>) on Plan 6798 (**the sites**) is residential land currently zoned 'Residential R10'. Lot 34 to the north is zoned commercial, lot 35 to the north is zoned 'Residential R10/30'. The land to the west is zoned 'Residential R10', to the south is Kirkdale Road and to the east is Orange Valley Road.

The City of Kalamunda Amendment 82 introduced dual density codes for area of Forrestfield, Maida Vale, High Wycombe and Kalamunda. The amendment outlined the requirements for the higher code to be applied, and this included that the development is able to be serviced by reticulated sewerage in accordance with the Government Sewerage Policy.

The Water Corporation gravity sewer line is located in Orange Valley Road directly to the west.

The amendment is to rezone lots 33 and 32 to a dual coding as they can be serviced by the reticulated sewerage. The dual coding provides the landowners the opportunity to develop at the higher coding providing they meet the criteria as outlined the Local Planning Scheme No.4 under clause 5.24

*"Clause 5.24 Dual Density Coded Areas 5.24.1 In considering development applications for development of land within the dual coded areas depicted on the Scheme Map, the local government will apply the lower density unless:*

- a) The minimum area of the total development site being not less than 1,000 square metres; or*
- b) The parent lot has two or more frontages to a public road; or*
- c) The parent lot is the only lot between two lots with two or more frontages to a public road; or*
- d) The parent lot is the only lot between two lots where on or both of the adjoining lots have been developed at the higher dual density code; or*

- e) The development is designed to accommodate a mixture of dwelling types and shall include two or more types of dwelling as defined by the R-Codes and at least one dwelling in the development is 2 storeys; and*
- f) The development is designed with due regard for any relevant Local Planning Policy or Design Guidelines for dual density coded areas; and*
- g) The development can be serviced by reticulated sewerage in accordance with the Government Sewerage Policy.*

*5.24.2 In considering subdivision applications for land within the dual coded areas depicted on the Scheme Map the local government will recommend that the lower density be applied unless:*

- a) The parent lot not less than 1,000 square metres; or*
- b) The parent lot has two or more frontages to a public road; or*
- c) The parent lot is the only lot between two lots with two or more frontages to a public road; or*
- d) The parent lot is the only lot between two lots where on or both of the adjoining lots have been developed at the higher dual density code; or*
- e) It is demonstrated that the subdivision is designed to facilitate future development which can accommodate a mixture of dwelling types and shall include two more types of dwelling as defined by the R-Codes and at least one dwelling in the development is 2 storeys; and*
- f) The subdivision is designed with due regard for any relevant Local Planning Policy or Design Guidelines for dual coded areas; and*
- g) The subdivisions can be serviced with reticulated sewerage in accordance with the Government Sewerage Policy.*

The lots can achieve the requirements of clause 5.24.

## **2.0 BACKGROUND**

### **2.1 Location**

Lot 32 is located on Kirkdale Road and Lot 33 which abuts, is located on the corner of Orange Valley Road and Kirkdale Road in Kalamunda.

### **2.2 Site Area**

Lot 32 is 1,007m<sup>2</sup> and Lot 33 is 1,002m<sup>2</sup> the two lots comprises a total area of 2,009m<sup>2</sup>

### **2.3 Ownership**

Lot 33 is owned by Brett Murray Curtis, Donna Fay Pearce and John William Pearce. Lot 32 is owned by Donna Fay Pearce.

### **2.4 Current & Surrounding Land Uses**

The land to the north and the east is within the dual coding area. Lot 34 to the north has previously been used as a convenience store, lot 35 to the north is used for a residential land use.

To the south is Kirkdale Road and the land uses in this direction are residential with a density coding of 'R10'.

To the west is lot 31 this is a residential land use and has a density coding of 'R10'.

To the east is Orange Valley Road the land uses in this direction are residential with a density coding of 'R10/30'.

### **3.0 Site Analysis**

#### **3.1 Physical Characteristics**

The subject sites are generally cleared with residential dwellings and associated outbuildings. The topography of the subject lots to be rezoned have a very gentle incline to the west, with a AHD of 279 on the eastern boundary and 277.23 on the north western boundary and 277.80 on the south western boundary.

#### **3.2 Infrastructure**

The sites have access to water, power, communication and gas. The sewer service is located in Orange Valley Road and can service the lots through an extension of the existing gravity main. Stormwater will be managed as per the requirements of the City of Kalamunda Stormwater design guidelines.

#### **3.3 Native vegetation**

The houses on the lots were built between 1965 and 1970 and as part of this process the land was completely cleared, the vegetation on the site is all planted gardens and there are no significant native trees on the lots. There is a native tree on the verge in the road reserve and this would not be impacted by the proposed amendment.

#### **3.4 Aboriginal and European Heritage**

A review of the relevant data bases has shown that there are no Aboriginal sites or other heritage places. There is no listing for the location with the Heritage Council or on the City of Kalamunda local heritage survey.

#### **3.5 Watercourses and Wetlands**

The site does not have any mapped watercourses or wetlands.

### **4.0 LOCAL PLANNING CONTEXT**

#### **4.1 Perth and Peel @ 3.5 million**

The site is located on the North-East Sub-Regional Planning Framework area and this document builds on the principles of "Directions 2031 and Beyond".

*"The framework aims to ensure a comprehensive approach to planning is undertaken by:*

- providing opportunities for residential development and local employment;*
- facilitating good accessibility for all modes of transport;*
- ensuring the conservation of regionally- significant environmental attributes; and*
- protecting natural resources"*

The site is identified as “Urban” in the Metropolitan Region Scheme and the proposal would consolidate the urban form providing more efficient use of the existing infrastructure through urban infill, while minimizing the impacts on existing native vegetation areas.

#### **4.2 The City of Kalamunda Local Planning Strategy 2010**

The strategy has been prepared to align with the “Directions 2031” and has as one of its key strategic issues housing development, which is proposed to be undertaken to support employment growth and also the City biodiversity strategy.

The assumed projected population growth in this City by 2031 is 25,000 people and they will need to be accommodated in a range of residential densities. The provision of increased density in suitable locations was a strategy of the housing vision statement, with the provision of scheme amendments and policy initiatives to result in medium density infill development opportunities and for the preparation of a local housing strategy.

#### **4.3 City of Kalamunda Local Housing Strategy 2021**

The Local Housing Strategy (LHS) was gazetted in 2014 and identified areas in Kalamunda, Maida Vale, High Wycombe and Forrestfield for a dual density code. The dual density was implemented through amendment 82, which was gazetted in February 2018.

The LHS was recently reviewed, and the draft document was advertised for public comment in early to mid-2020. The outcomes of this consultation process have been considered by Council and the Final adoption by Council of the LHS occurred in July 2021.

Part 6 of the strategy outlines the criteria to access future applications for increased density and these are listed below

*“Strategic Framework – Whether the proposal is achieves the strategic intent of the North-East Sub-Regional Planning Framework and/or Local Planning Strategy;*

*Orderly and Proper Planning – Whether the scale and nature of the proposal is logical and orderly, consistent with the objectives set out in the City’s Local Planning Scheme, relevant policies, and strategic documents.*

*Proximity to Services and Public Open Space - Located within a walkable catchment of the Kalamunda, Forrestfield, or High Wycombe Activity Centres, or regional, district or neighbourhood level public open space;*

*Transport – the proposal is located close to high frequency public transport with consideration to the suitability of existing transport infrastructure;*

*Services – The capacity of existing services and infrastructure to support the proposal, including the mains sewer network;*

*Housing Diversity - Results in a diversity of lot size and mixture of dwelling types in appropriate locations. Eg; small sized housing or townhouse, multiple dwelling (apartments), aged or dependent persons dwellings;*

*Environmental – demonstrates protection of natural values such as wetlands, waterways, retention and regeneration of vegetation, and;*

*Bushfire – able to address the requirements of State Planning Policy 3.7: Planning in Bushfire Prone Areas.”*

The LHS acknowledges that the implementation of the strategy is a long-term process and sets out key actions for the next 15 years to support the achievement of the objectives and strategies for the policy. This list of proposed actions includes action 6 which is for the review of amendment 83 and the dual density areas, including “....the boundaries and impact of dual density on the character and streetscapes and built form and provide analysis of subdivisions which have occurred under the policy”.

The strategy provides a strategic basis for a proposed amendment.

## **5.0 PROPOSAL**

A standard scheme amendment for Lot 32 Kirkdale Road and Lot 33 Orange Valley Road to be rezoned to a residential density coding of R10/30. These two lots can with the extension of the sewer both be serviced by an existing gravity sewer network.

The topography of the land in the area does not allow any further lots to be rezoned as they cannot be serviced by sewer.

The land to the north and east of the site is currently zoned R10/30, this occurred as part of Amendment 83 when dual zoning was introduced to areas in the City able to be serviced by the gravity sewer as part of the Local Housing Strategy.

The future development potential for each 1,000+m<sup>2</sup> lot, if developed at a residential density coding of R30, would be to seek subdivision approval to create three lots that achieve the required average size of 300m<sup>2</sup> each. There are currently two 1,000+m<sup>2</sup> lots and the amendment would potentially, subject to approval, allow a total of six lots at the location.

## **5.1 Sewer Connection**

The provision of sewer is a key factor in the development of residential lots, the provision of sewer is required for the subdivision of lots to a residential density above R10.

Through engagement with the Water Corporation, by a suitable qualified engineer, it has been shown how the site could be serviced with reticulated sewer. This is through an extension of the current sewer main and the provision of a retaining wall and fill on the western portion of the site. The retaining wall height is less than 500mm. The prepared report (appendix 1) shows the length of the sewer and the fill required to provide service to the two lots.

## **5.2 Bushfire**

The site has been designated as bushfire prone through the “Map of Bush Fire Prone Areas”, under State Planning Policy 3.7. The Policy does however under clause 3.2 of the implementation guidelines acknowledge that through further investigation locations can be identified as “areas where there is no apparent hazard”. A site assessment of the sites has been undertaken by a

suitably qualified consultant, and this has determined that the sites achieve a BAL-LOW. The sites as per clause 3.2 therefore do not require the application of SPP 3.7 despite being in an area mapped as bushfire prone.

### 5.3 Dual Coding

Lots with a dual coding are required to be developed at the lower coding unless they can satisfy the requirements of clause 5.24 of LPS3.

*“ 5.24.1 In considering development applications for land within the dual coded areas depicted on the Scheme Map, the local government will apply the lower density unless:*

*a) the minimum area of the total development site being not less than 1,000 square metres; or*

*b) the parent lot has two or more frontages to a public road; or*

*c) the parent lot is the only lot between two lots with two or more frontages to a public road; or*

*d) the parent lot is the only lot between two lots where one or both of the adjoining lots have been developed at the higher dual density code; or*

*e) the development is designed to accommodate a mixture of dwelling types and shall include two or more types of dwelling as defined by the R-Codes and at least one dwelling in the development is two storeys; and*

*f) the development is designed with due regard for any relevant Local Planning Policy or Design Guidelines for dual density coded areas; and*

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*e) it is demonstrated that the subdivision is designed to facilitate future development which can accommodate a mixture of dwelling types and shall include two or more types of*



*dwelling as defined by the R-Codes and at least one dwelling in the development is two storeys; and*

*f) the subdivision is designed with due regard for any relevant Local Planning Policy or Design Guidelines for dual coded areas; and*

*g) the subdivision can be serviced with reticulated sewerage in accordance with the Government Sewerage Policy.”*

The lots proposed to be rezoned will through the undertaking of subdivision works achieve the requirements of clause 5.24 and be able to develop at the higher coding.

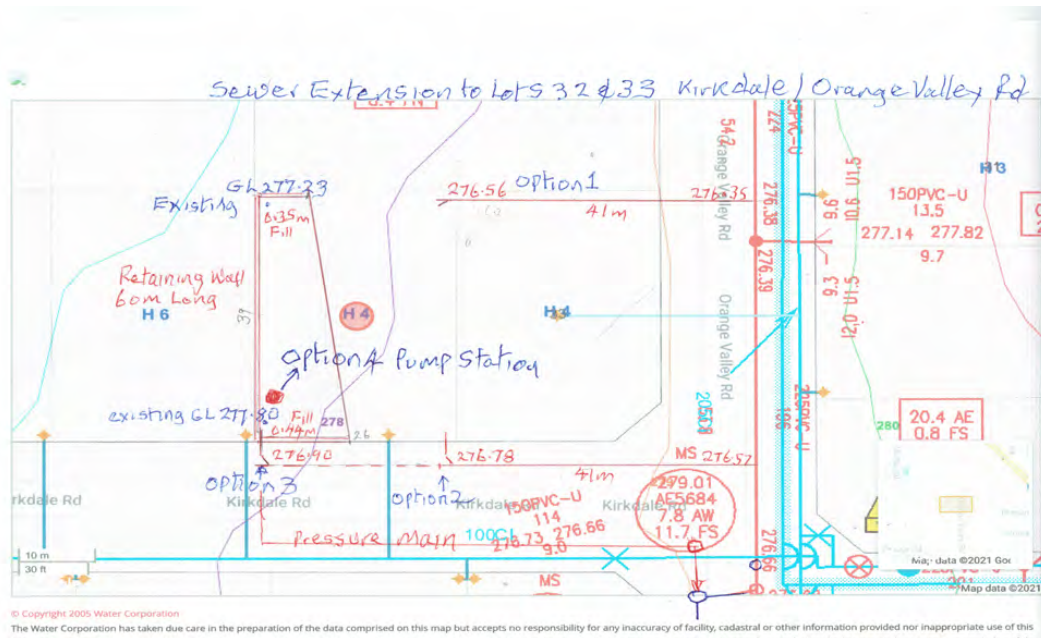
## **6. CONCLUSION**

The proposed Amendment will allow the opportunity for the lots to be developed at a higher density with the provision of sewer. The land is capable of development at a higher density as it is not bushfire prone (see 5.2 above) and has been previously cleared and developed for a residential use. The proposed coding of R10/30 will match the residential density of the land to the north and east and achieves the intent of the Local Housing Strategy.

APPENDICES:

1. Engineering servicing report
2. BAL Contour Plan

## SEWER EXTENSION TO LOTS 32 & 33 KIRKDALE/ORANGE VALLEY RD KALAMUNDA SKETCH OF OPTIONS



### OPTION 1:

This involves a 41m extension to 1m inside Lot 32 and the filling of an average of 10m wide strip to 0.35m in the NW corner and 0.44m in the SW corner along the western boundary. This would require retaining using limestone blocks or similar. The impact of this on a future subdivision would be to site an access crossover away from the South West corner of Lot 32.

### OPTION 2:

A similar length of sewer extension but running in the verge of Kirkdale Road to the South East corner of Lot 32. This would require filling the western strip of Lot 32 up to 0.8m

### OPTION 3:

An extension to Option 2 of 25m to the SW corner of Lot 32. Again this would require more fill than Option 1.

The option of installing a sewer pump station (Option 4) to avoid filling and retaining walls is not considered as this would cost significantly more than the others.

## ESTIMATE OF COSTS:

Clearly, Option 1 will be the cheapest and a summary of costs is as follows:

Construction Estimate ( Sewer Extension)	\$40,000
Construction Estimate ( Fill and Retaining Wall))	\$6,000
Water Corporation Connection Charge (can vary)	\$2,000
Water Corporation Infrastructure Contribution Charge (assuming 6 survey strata lots)	\$20,094
Engineering (Design of drawings, obtain approvals, supervision and handover to Corporation)	\$3,000
TOTAL	\$71,094
GST	\$7,109
GRAND TOTAL	\$78,203



Local Government Use:

# BAL Assessment Report

(AS 3959:2018 Bushfire Attack Level Methodology)

## PROPERTY LOCATION DETAILS

Lot 32 & 33 # 4 Orange Valley and Kirkdale Roads  
 Kalamunda WA 6076  
 City of Kalamunda

## PROPOSED WORKS (BUILDING) OR USE

**Planning Stage:** Strategic Proposal - Local Planning Scheme and Amendment

**Main BCA Class:** Class 1      **Use(s):** Residential Dwellings      **Lot Size:** Lot 32: 1007 m<sup>2</sup>  
 Lot 33: 1002 m<sup>2</sup>

**Description:** Rezoning application of two existing lots from R10 to R10/30 Existing residential dwellings

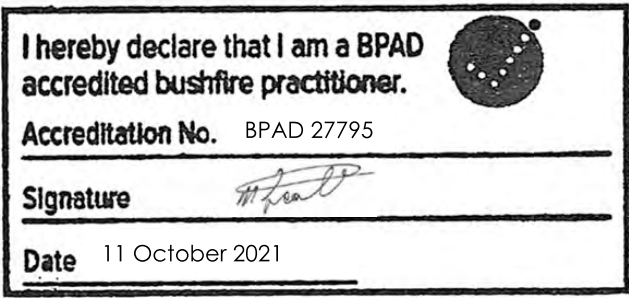
## REPORT DETAILS

**Job Reference Number:** 210883

**Report Version:** V1.0

**Assessment Date:** 1 October 2021

**Report Date:** 11 October 2021

BUSHFIRE PLANNING AND DESIGN (BPAD) ACCREDITED PRACTITIONER DETAILS	
<p><b>Name:</b> Mike Scott</p> <p><b>Company Details:</b> BPP Group Pty Ltd t/a Bushfire Prone Planning ACN: 39 166 551 784   ABN: 39 166 551 784 Level 1, 159-161 James Street Guildford WA 6055 PO Box 388 Guildford WA 6935 08 6477 1144   admin@bushfireprone.com.au</p>	 <p><i>Authorised Practitioner Stamp</i></p>
<p>This report has been prepared by an Accredited BPAD Practitioner using the Simplified Procedure (Method 1) as detailed in Section 2 of AS 3959:2018.</p> <p>Fire Protection Association Australia as the accrediting body for BPAD accreditation, makes no warranties as to the accuracy of the information provided in the report. All enquiries related to the information and conclusions presented in this report must be made to the practitioner who prepared this report.</p> <div style="border: 1px solid red; padding: 5px; margin: 10px 0;"> <p><i>Reliance on the assessment and determination of the Bushfire Attack Level contained in this report should not extend beyond a period of 12 months from the date of issue of the report. If this report was issued more than 12 months ago, it is recommended that the validity of the determination be confirmed with the Accredited Practitioner and where required an updated report and/or BAL Certificate issued.</i></p> </div> <p><b>Limitation of Liability:</b> The measures contained in this Report, are considered to be minimum requirements and they do not guarantee that a building will not be damaged in a bushfire, persons injured, or fatalities occur either on the subject site or off the site while evacuating. This is substantially due to the unpredictable nature and behaviour of fire and fire weather conditions. Additionally, the correct implementation of the required bushfire protection measures will depend upon, among other things, the ongoing actions of the landowners and/or operators over which Bushfire Prone Planning has no control.</p> <p>All surveys, forecasts, projections and recommendations made in this report associated with the proposed development are made in good faith based on information available to Bushfire Prone Planning at the time. All maps included herein are indicative in nature and are not to be used for accurate calculations.</p> <p>Notwithstanding anything contained therein, Bushfire Prone Planning will not, except as the law may require, be liable for any loss or other consequences whether or not due to the negligence of their consultants, their servants or agents, arising out of the services provided by their consultants.</p>	
BAL (Master) Template v12.3	
LANDOWNER RESPONSIBILITIES	
<p><b>Construction Requirements:</b> The bushfire construction standard to be applied to the assessed building works must be that which corresponds to the determined BAL in this assessment report and are established by AS 3959:2018 or the NASH Standard (refer to additional landowner information at the end of this report).</p> <p><b>Comply with the Landowner Responsibilities Established by the Bushfire Management Plan (BMP):</b> If the property (lot) is subject to an approved BMP (refer to the land title), all responsibilities created must be complied with. This will include the management of vegetation within the lot to a minimal fuel, low threat state to create an asset protection zone (APZ). The required dimensions of the APZ are established by either those corresponding to the determined BAL established by this BAL Assessment Report or those established by the Firebreak and Fuel Load Notice, whichever is greater (refer to additional landowner information at the end of this report).</p> <p><b>Comply with the Local Government Firebreak &amp; Fuel Load Notice:</b> The requirement exists to comply with the relevant local government's Firebreak &amp; Fuel Load Notice created under Section 33 of the Bushfires Act 1954 and issued annually to landowners (and available on their website).</p>	



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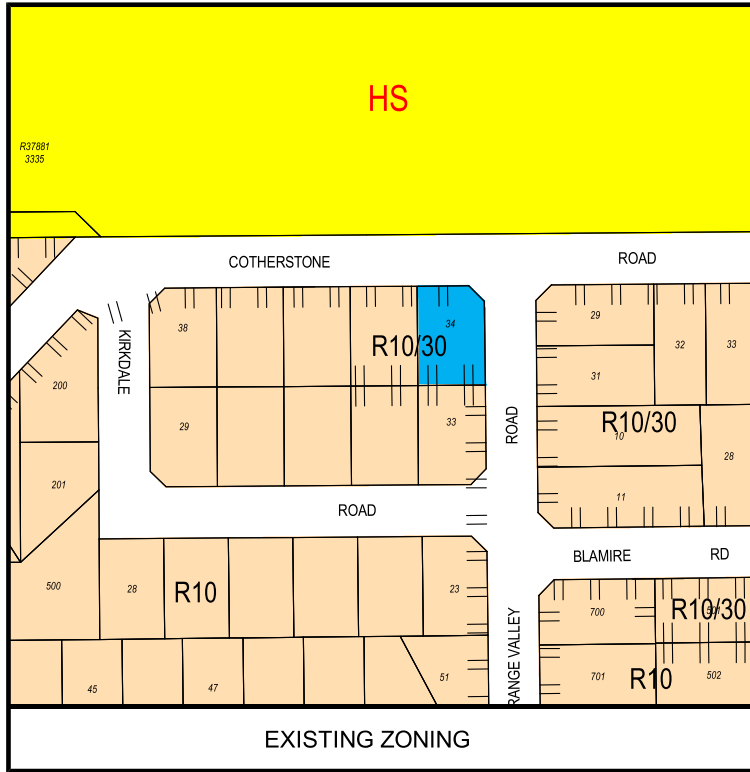
**LIST OF FIGURES**

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**CITY OF KALAMUNDA  
LOCAL PLANNING SCHEME No. 3**

Planning and Development Act 2005



**LEGEND**

REGION SCHEME RESERVES (MRS)

**HS** PUBLIC PURPOSES - HIGH SCHOOL

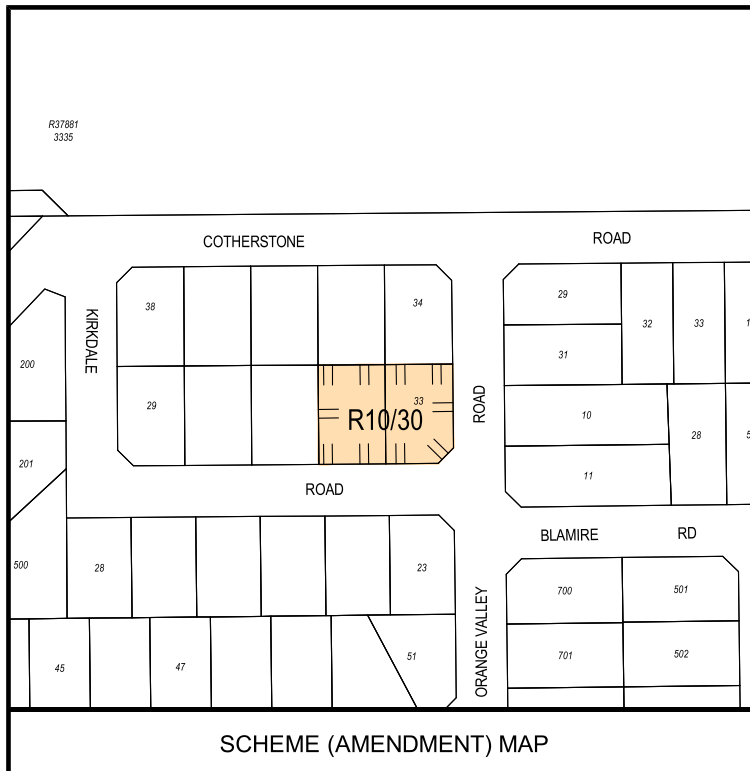
LOCAL SCHEME ZONES

**COMMERCIAL**

**RESIDENTIAL**

OTHER CATEGORIES

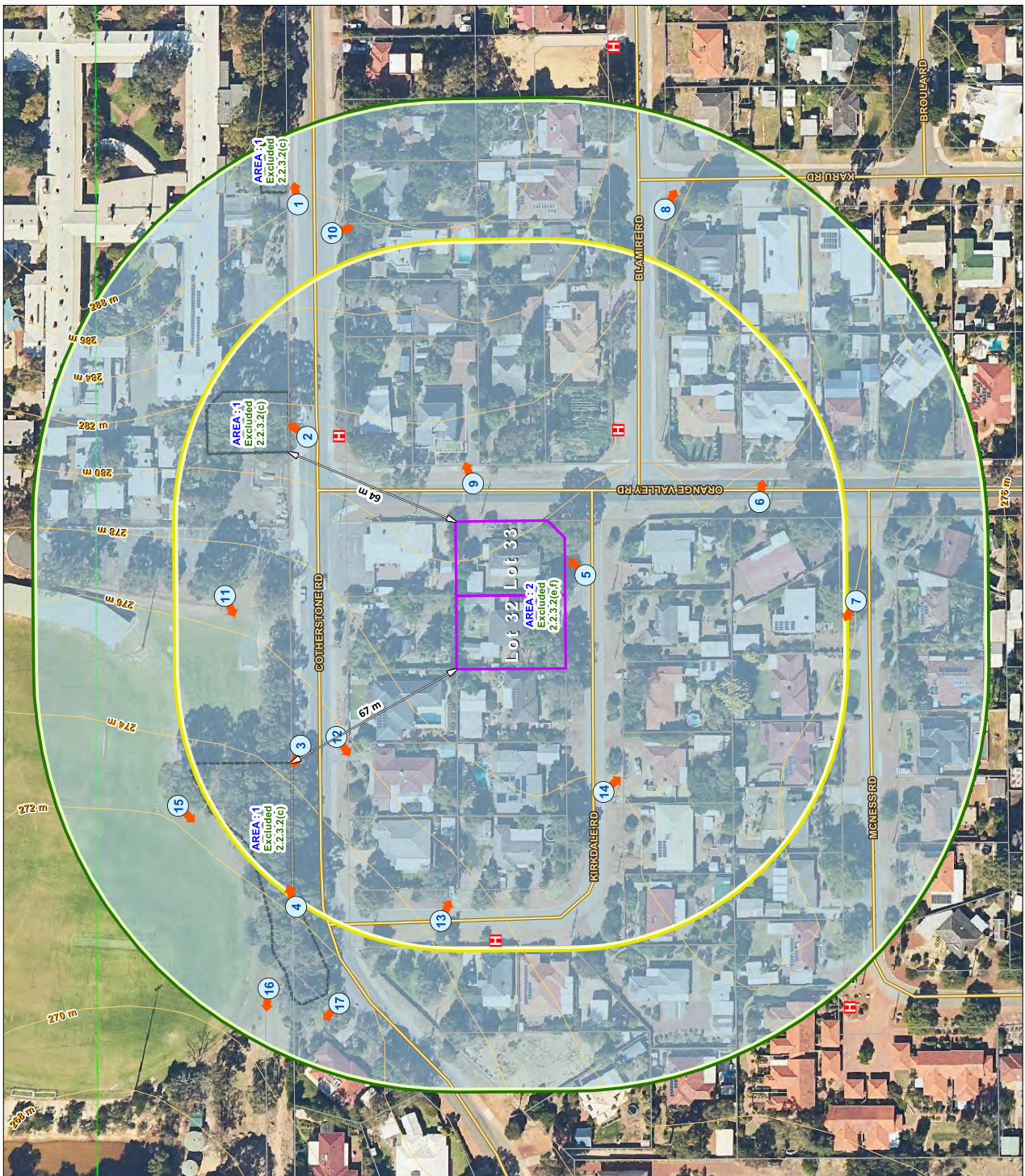
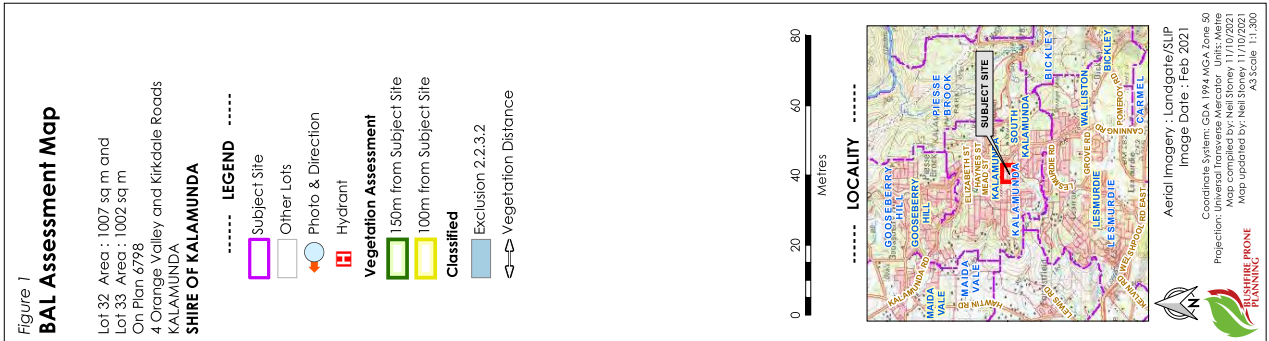
**R10** R CODES



N  
SCALE: 1:2500  
DATE: 23.09.2021

Amendment No.









Disclaimer: This map has been prepared for bushfire management planning purposes only. All depicted areas, contours and any dimensions shown are subject to survey. Bushfire Phone Planning does not guarantee that this map is without flow of any kind and disclaims all liability for any errors, omissions or other consequences arising from relying on any information depicted.

Map Document Path / Name: K:\Projects\Jobs\_2021\10883 - 4 Orange Valley and Kirkdale Road Kalamunda (BAL) Mapping\MXD\10883\_SAM\_4\_Orange\_Valley\_Kirkdale\_Kalamunda.mxd











AS 3959:2018 BAL Assessment Report

VEGETATION ASSESSMENT AND CLASSIFICATION	
<p>In accordance with AS 3959:2018 Clause 2.2.3, all vegetation within 100 metres of the site ("the part of the allotment of land on which a building stands or is to be erected") is assessed and classified, with the influence of vegetation more than 100m from the site being considered in those assessments. Classification will be guided by the Visual Guide for Bushfire Risk Assessment in WA (DoP February 2016) and any FPA Australia practice notes.</p>	
AREA 1	
<b>AS 3959:2018 Vegetation Classification Applied:</b>	Excluded as per Section 2.2.3.2 (c) Multi Areas <0.25 ha
<b>Vegetation Types Present:</b>	Open forest A-03                      Woodland B-05
<b>Description/Justification:</b>	Native vegetation of various demographics and fuel loads in the local area. Each section is small (<1500m <sup>2</sup> ) and fragmented from other sections.
 <p style="font-size: small; text-align: center;">4 Orange Valley and Kirkdale Roads -31.97879, 116.05754, 276.5m, 81° 01/10/2021 16:28:59</p>	 <p style="font-size: small; text-align: center;">4 Orange Valley and Kirkdale Roads -31.97873, 116.0567, 276.8m, 42° 01/10/2021 16:30:31</p>
Photo ID: 1	Photo ID: 2
 <p style="font-size: small; text-align: center;">4 Orange Valley and Kirkdale Roads -31.97873, 116.05588, 275.9m, 289° 01/10/2021 16:33:52</p>	 <p style="font-size: small; text-align: center;">4 Orange Valley and Kirkdale Roads -31.97879, 116.05484, 270.4m, 71° 01/10/2021 16:34:51</p>
Photo ID: 3	Photo ID: 4



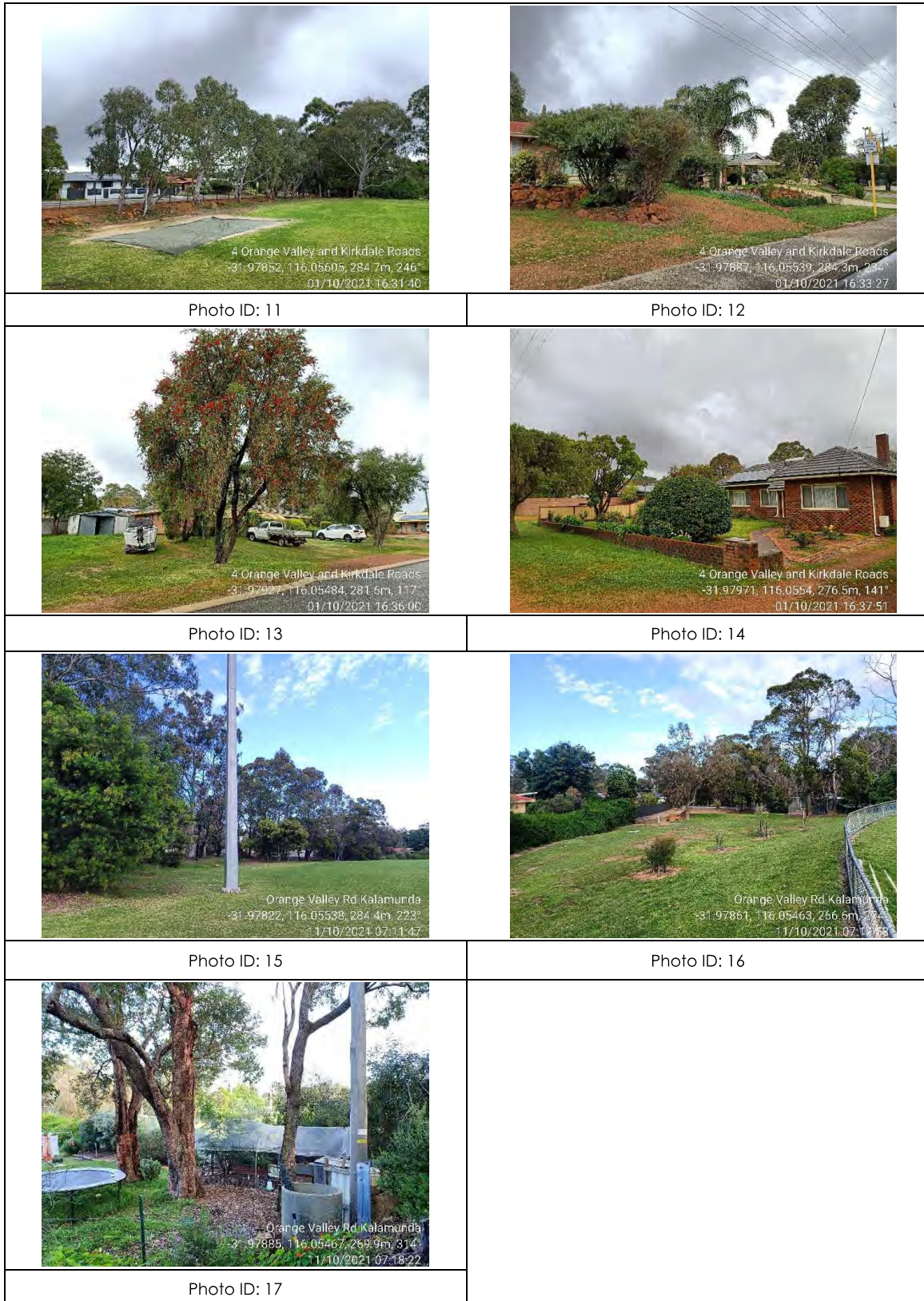


AS 3959:2018 BAL Assessment Report

<b>AREA 2</b>	
<b>AS 3959:2018 Vegetation Classification Applied:</b>	Excluded as per Section 2.2.3.2 (f) Low Threat Vegetation
<b>Description/Justification:</b>	Gardens, lawns, public spaces, and vegetation maintained in a minimal fuel, low threat condition.
 <p>Photo ID: 5</p>	 <p>Photo ID: 6</p>
 <p>Photo ID: 7</p>	 <p>Photo ID: 8</p>
 <p>Photo ID: 9</p>	 <p>Photo ID: 10</p>



AS 3959:2018 BAL Assessment Report





RELEVANT FIRE DANGER INDEX			
<p>The fire danger index (FDI) for this site has been determined in accordance with AS 3959:2018 Table 2.1 or otherwise determined in accordance with a jurisdictional variation applicable to the site.</p> <p>The vegetation separation distances that will correspond to each Bushfire Attack Level (BAL) when Method 1 BAL determination methodology is applied, are established in Tables 2.4 to 2.7 (as associated with each FDI).</p>			
FDI 40 (Table 2.7) <input type="checkbox"/>	FDI 50 (Table 2.6) <input type="checkbox"/>	FDI 80 (Table 2.5) <input checked="" type="checkbox"/>	FDI 100 (Table 2.4) <input type="checkbox"/>



AS 3959:2018 BAL Assessment Report

POTENTIAL BUSHFIRE IMPACTS –SUMMARY CALCULATION INPUT DATA (AS 3959:2018 METHOD 1 AND METHOD 2) AND BUSHFIRE ATTACK LEVELS (BAL)													
Existing/Proposed Building (Works) and/or Use	Vegetation Area	Method 1 and 2				Method 1			Method 2				
		Vegetation Classification	Separation Distance (metres)	Effective Slope Under Classified Vegetation		Applied (degree range)	Applied (degrees)	Site Slope (degrees)	EOR (metres)	Flame Width (metres)	Flame Temp deg K	Calculated Bushfire Attack Level	
				Measured (degrees)	Applied (degrees)								
Lot 32: Entire Land Area	1	Excluded AS3959:2018 2.2.3.2 (c)	67	N/A	N/A	-	-	-	-	-	-	BAL-LOW	
	2	Excluded AS3959:2018 2.2.3.2 (f)	N/A	N/A	N/A	-	-	-	-	-	-	BAL-LOW	
Lot 33: Entire Land Area	1	Excluded AS3959:2018 2.2.3.2 (c)	64	N/A	N/A	-	-	-	-	-	-	BAL-LOW	
	2	Excluded AS3959:2018 2.2.3.2 (f)	N/A	N/A	N/A	-	-	-	-	-	-	BAL-LOW	

210883 - 4 Orange Valley and Kirkdale Road Kalamunda (BAL)



AS 3959:2018 BAL Assessment Report

**ASSESSMENT RESULT - THE BUSHFIRE ATTACK LEVEL ESTABLISHING BUSHFIRE CONSTRUCTION REQUIREMENTS**

In accordance with clause 2.2.6 of AS 3959:2018 and the application of the above BAL analysis, the highest assessed BAL will apply to each entire building works - excepting where an elevation is considered to be shielded (see below).

The BAL will be considered as **'Determined'**, and a BAL Certificate can be issued, if the design and position of the proposed building works on the lot is known and there is no requirement for additional vegetation to be modified or cleared – as this establishes the vegetation separation distance that will exist in perpetuity.

The BAL will be considered as **'Indicative'** (conditional) if the above condition cannot be met. The proposed building works and/or use will be subject to meeting certain conditions (established below if applicable) before the BAL can be considered determined and a BAL Certificate issued. The single exception to this condition is when the proposed works of any dimension can be positioned anywhere on a proposed lot (within R-Code building setbacks) or within a defined building envelope, and always remain subject to the same BAL, regardless of the ongoing existence of existing classified vegetation either onsite or offsite.

Existing/Proposed Building (Works) and/or Use	Lot 32: Entire Land Area	DETERMINED BUSHFIRE ATTACK LEVEL	<b>BAL-LOW</b>
Existing/Proposed Building (Works) and/or Use	Lot 33: Entire Land Area	DETERMINED BUSHFIRE ATTACK LEVEL	<b>BAL-LOW</b>



AS 3959:2018 BAL Assessment Report

ADDITIONAL LANDOWNER INFORMATION: EXPLANATION OF BUSHFIRE ATTACK LEVELS AND REFERENCES FOR CONSTRUCTION REQUIREMENTS			
Bushfire Attack Level	Explanation of BAL Levels	References for Construction Requirements	
		AS 3959:2018 Construction of Buildings in Bushfire Prone Areas	The Nash Standard – Steel Framed Construction in Bushfire Areas
AS 3959:2018 Construction of buildings in bushfire prone areas, defines a Bushfire Attack Level (BAL) as a "means of measuring the severity of a building's potential exposure to ember attack, radiant heat and direct flame contact, using increments of radiant heat flux expressed in kW/m <sup>2</sup> , and is the basis for establishing the requirements for construction to improve protection of building elements from attack by bushfire."			
<b>BAL – LOW</b>	There is insufficient risk to warrant specific construction requirements but there is still some risk. <i>(Note: DFES recommend that ember attack protection features be incorporated in the design where practicable).</i>	Section 4. No Requirements	No Requirements
<b>BAL – 12.5</b>	There is a risk of ember attack. Construction elements are expected to be exposed to heat flux not greater than 12.5 kW/m <sup>2</sup>	Sections 3 & 5.	All construction requirements for BAL-12.5 to BAL-40 are the same except for windows and external doors, which must comply with AS 3959.
<b>BAL – 19</b>	There is a risk of ember attack and burning debris ignited by windborne embers and a likelihood of exposure to radiant heat. The construction elements are expected to be exposed to a heat flux not greater than 19 kW/m <sup>2</sup> .	Sections 3 & 6	The construction requirements are set out as essentially non-combustible construction systems for each of the following building elements:
<b>BAL – 29</b>	There is an increased risk of ember attack and burning debris ignited by windborne embers and a likelihood of exposure to an increased level radiant heat. The construction elements are expected to be exposed to a heat flux not greater than 29 kW/m <sup>2</sup> .	Sections 3 & 7.	Section 1.4: General Requirements Section 2: Roof and Ceiling System Section 3: External Wall System Section 4: Floor System Section 5: Carports Verandahs and Decks.
<b>BAL – 40</b>	There is a much increased risk of ember attack and burning debris ignited by windborne embers, a likelihood of exposure to a high level of radiant heat and some likelihood of direct exposure to flames from the fire front. The construction elements are expected to be exposed to a heat flux not greater than 40kW/m <sup>2</sup> .	Sections 3 & 8.	
<b>BAL – FZ (Flame Zone)</b>	There is an extremely high risk of ember attack and burning debris ignited by windborne embers, and a likelihood of exposure to an extreme level of radiant heat and direct exposure to flames from the fire front. The construction elements are expected to be exposed to a heat flux greater than 40 kW/m <sup>2</sup> .	Sections 3 & 9.	The construction requirements are set out in Sections 1-5 and differ from the requirements for all other BAL ratings.

210883 - 4 Orange Valley and Kirkdale Road Kalamunda (BAL)





### ADDITIONAL LANDOWNER INFORMATION: MAINTAINING THE ASSET PROTECTION ZONE (APZ)

The determined BAL for the subject building works and/or use (or the Conditional BAL if the conditions are met and it is applied), establishes the bushfire construction requirements that will be applied to the proposed building works and/or use.

Consequently, it is important that the required minimum standards and dimensions of the APZ are maintained into the future to ensure the proposed building works or use remains subject to the BAL to which the building is constructed (so that it will continue to better withstand the potential bushfire impact). The minimum dimensions (vegetation separation distances) are stated below. These may differ from the distances that currently exist (i.e. existing distances may exceed the minimum required).

The minimum distances may also differ from those established by the Firebreak and Fuel Load Notice issued by the local government. Refer to the relevant information on the following pages as to the implications.

The required dimensions of the APZ are depicted on the Site Assessment Map (and the Bushfire Management Statement if included in this report).

#### MINIMUM VEGETATION SEPARATION DISTANCES REQUIRED TO ENSURE THE BUILDING WORKS AND/OR USE REMAIN SUBJECT TO THE ASSESSED BAL (DETERMINED OR CONDITIONAL)

Existing / Proposed Building (Works)	Vegetation Area	Vegetation Classification	Assessed Bushfire Attack Level	Minimum Required Vegetation Separation Distance (metres)
Lot 32: Entire Land Area	1	Excluded AS3959:2018 2.2.3.2 (c)	The Determined BAL BAL-LOW	20
	2	Excluded AS3959:2018 2.2.3.2 (f)		N/A
Lot 33: Entire Land Area	1	Excluded AS3959:2018 2.2.3.2 (c)	The Determined BAL BAL-LOW	20
	2	Excluded AS3959:2018 2.2.3.2 (f)		N/A

Comments: The entire land area has been assessed for the purposes of the rezoning application. A building positioned anywhere on Lots 32 and 33 is subject to a determined BAL-LOW.

## REQUIREMENTS ESTABLISHED BY THE GUIDELINES – THE APZ

(Source: Guidelines for Planning in Bushfire Prone Areas - WAPC 2017 v1.3 Appendix 4, Element 2, Schedule 1 and Explanatory Note E2.1)

### DEFINING THE ASSET PROTECTION ZONE (APZ)

**Description:** An APZ is an area surrounding a building that is managed to reduce the bushfire hazard to an acceptable level (by reducing fuel loads). The width of the required APZ varies with slope and vegetation and varies corresponding to the BAL rating determined for a building (lower BAL = greater dimensioned APZ).

For planning applications, the minimum sized acceptable APZ is that which is of sufficient size to ensure the potential radiant heat impact of a fire does not exceed 29kW/m<sup>2</sup> (BAL-29). It will be site specific.

For subdivision planning, design elements and excluded/low threat vegetation adjacent to the lot(s) can be utilised to achieve the required vegetation separation distances and therefore reduce the required dimensions of the APZ within the lot(s).

**Defendable Space:** The APZ includes a defendable space which is an area adjoining the asset within which firefighting operations can be undertaken to defend the structure. Vegetation within the defendable space should be kept at an absolute minimum and the area should be free from combustible items and obstructions. The width of the defendable space is dependent on the space, which is available on the property, but as a minimum should be 3 metres.

**Establishment:** The APZ should be contained solely within the boundaries of the lot on which the building is situated, except in instances where the neighbouring lot or lots will be managed in a low-fuel state on an ongoing basis, in perpetuity.

The APZ may include public roads, waterways, footpaths, buildings, rocky outcrops, golf courses, maintained parkland as well as cultivated gardens in an urban context, but does not include grassland or vegetation on a neighbouring rural lot, farmland, wetland reserves and unmanaged public reserves.

*[Note: Regardless of whether an Asset Protection Zone exists in accordance with the acceptable solutions and is appropriately maintained, fire fighters are not obliged to protect an asset if they think the separation distance between the dwelling and vegetation that can be involved in a bushfire, is unsafe.]*

### Schedule 1: Standards for APZ

**Fences:** within the APZ are constructed from non-combustible materials (e.g. iron, brick, limestone, metal post and wire). It is recommended that solid or slatted non-combustible perimeter fences are used.

**Objects:** within 10 metres of a building, combustible objects must not be located close to the vulnerable parts of the building i.e. windows and doors.

**Fine Fuel Load:** combustible dead vegetation matter less than 6 mm in thickness reduced to and maintained at an average of two tonnes per hectare (example below).



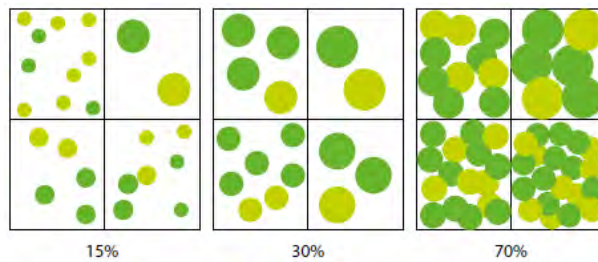
Example: Fine fuel load of 2 t/ha

(Image source: Shire of Augusta Margaret River's Firebreak and Fuel Reduction Hazard Notice)



**Trees (> 5 metres in height):** trunks at maturity should be a minimum distance of 6 metres from all elevations of the building, branches at maturity should not touch or overhang the building, lower branches should be removed to a height of 2 metres above the ground and or surface vegetation, canopy cover should be less than 15% with tree canopies at maturity well spread to at least 5 metres apart as to not form a continuous canopy. Diagram below represents tree canopy cover at maturity.

Tree canopy cover – ranging from 15 to 70 per cent at maturity



(Source: Guidelines for Planning in Bushfire Prone Areas 2017, Appendix 4)

**Shrubs (0.5 metres to 5 metres in height):** should not be located under trees or within 3 metres of buildings, should not be planted in clumps greater than 5m<sup>2</sup> in area, clumps of shrubs should be separated from each other and any exposed window or door by at least 10 metres. Shrubs greater than 5 metres in height are to be treated as trees.

**Ground covers (<0.5 metres in height):** can be planted under trees but must be properly maintained to remove dead plant material and any parts within 2 metres of a structure, but 3 metres from windows or doors if greater than 100 mm in height. Ground covers greater than 0.5 metres in height are to be treated as shrubs.

**Grass:** should be managed to maintain a height of 100 mm or less.

The following example diagrams illustrate how the required dimensions of the APZ will be determined by the type and location of the vegetation.





## REQUIREMENTS ESTABLISHED BY THE LOCAL GOVERNMENT – THE FIREBREAK NOTICE

The relevant local government's current Firebreak Notice is available on their website, at their offices and is distributed as ratepayer's information. It must be complied with.

These requirements are established by the relevant local government's Firebreak Notice created under s33 of the Bushfires Act 1954 and issued annually (potentially with revisions). The Firebreak Notice may include additional components directed at managing fuel loads, accessibility and general property management with respect to limiting potential bushfire impact.

If Asset Protection Zone (APZ) specifications are defined in the Firebreak Notice, these may differ from the Standards established by the Guideline's, with the intent to better satisfy local conditions. When these are more stringent than those created by the Guidelines, or less stringent and endorsed by the WAPC and DFES, they must be complied with.

The APZ dimensions to be physically established and maintained, will be based on which of the following establishes the larger APZ dimension:

- The dimensions corresponding to the determined BAL of a building; or
- The APZ dimensions established by the local government's Firebreak Notice.

## REQUIREMENTS RECOMMENDED BY DFES – PROPERTY PROTECTION CHECKLISTS

Further guidance regarding ongoing/lasting property protection (from potential bushfire impact) is presented in the publication 'DFES – Fire Chat – Your Bushfire Protection Toolkit'. It is available from the Department of Fire and Emergency Services (DFES) website.

## REQUIREMENTS ESTABLISHED BY AS 3959:2018 – 'MINIMAL FUEL CONDITION'

This information is provided for reference purposes. It identifies what is required for an area of land to be excluded from classification as a potential bushfire threat.

*"Australian Standard - AS 3959:2018 Section 2.2.3.2: Exclusions - Low threat vegetation and non-vegetated areas:*

*The Bushfire Attack Level shall be classified BAL-LOW where the vegetation is one or a combination of the following:*

- a) *Vegetation of any type that is more than 100m from the site.*
- b) *Single areas of vegetation less than 1ha in area and not within 100m of other areas of vegetation being classified vegetation.*
- c) *Multiple area of vegetation less than 0.25ha in area and not within 20m of the site or each other or other areas of vegetation being classified vegetation.*
- d) *Strips of vegetation less than 20m in width (measured perpendicular to the elevation exposed to the strip of vegetation) regardless of length and not within 20m of the site or each other, or other areas of vegetation being classified vegetation.*
- e) *Non-vegetated areas, that is, areas permanently cleared of vegetation, including waterways, exposed beaches, roads, footpaths, buildings and rocky outcrops.*
- f) *Vegetation regarded as low threat due to factors such as flammability, moisture content or fuel load. This includes grassland managed in a **minimal fuel condition**, (means insufficient fuel available to significantly increase the severity of a bushfire attack – for example, recognisable as short cropped grass to a nominal height of 100mm), mangroves and other saline wetlands, maintained lawns, golf courses (such as playing areas and fairways), maintained public reserves and parklands, sporting fields, vineyards, orchards, banana plantations, market gardens (and other non-curing crops), cultivated gardens, commercial nurseries, nature strips and windbreaks (single row of trees)."*

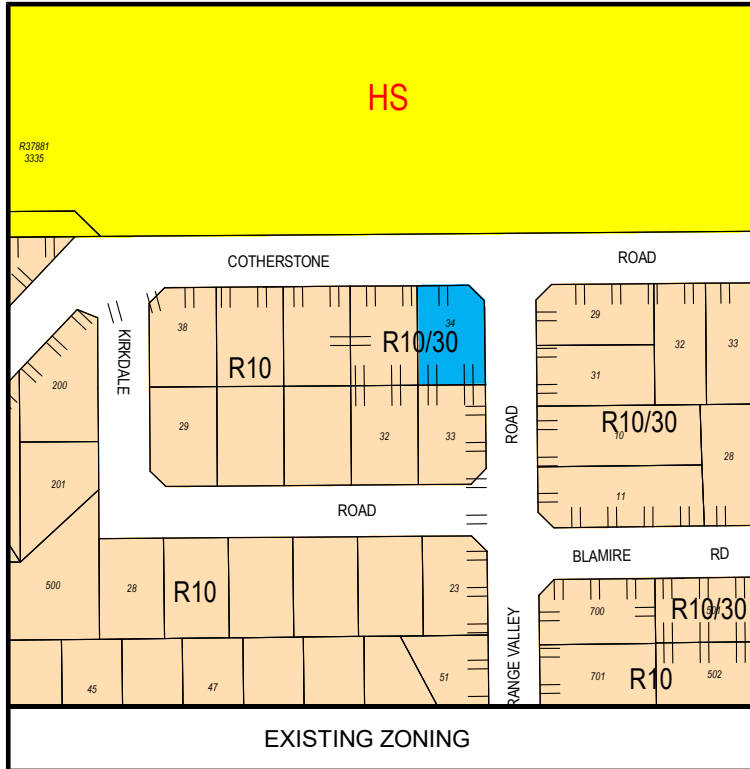
**PLANNING AND DEVELOPMENT ACT 2005**  
**RESOLUTION TO AMEND LOCAL PLANNING SCHEME**  
**CITY OF KALAMUNDA**  
**LOCAL PLANNING SCHEME N<sup>o</sup> 3**  
**AMENDMENT N<sup>o</sup> XX**

Resolved that the Council, pursuant to section 75 of the Planning and Development Act, 2005 amend the above Local Planning Scheme by:

- i) Rezoning Lot 33 on Plan 6798 being No.4 Orange Valley Road, Kalamunda and Lot 32 on Plan 6798 being No.4 Kirkdale Road, Kalamunda from 'Residential R10' to 'Residential R10/30'; and
- ii) Amending the Scheme Map accordingly.

**CITY OF KALAMUNDA  
LOCAL PLANNING SCHEME No. 3**

Planning and Development Act 2005



**LEGEND**

REGION SCHEME RESERVES (MRS)

**HS** PUBLIC PURPOSES - HIGH SCHOOL

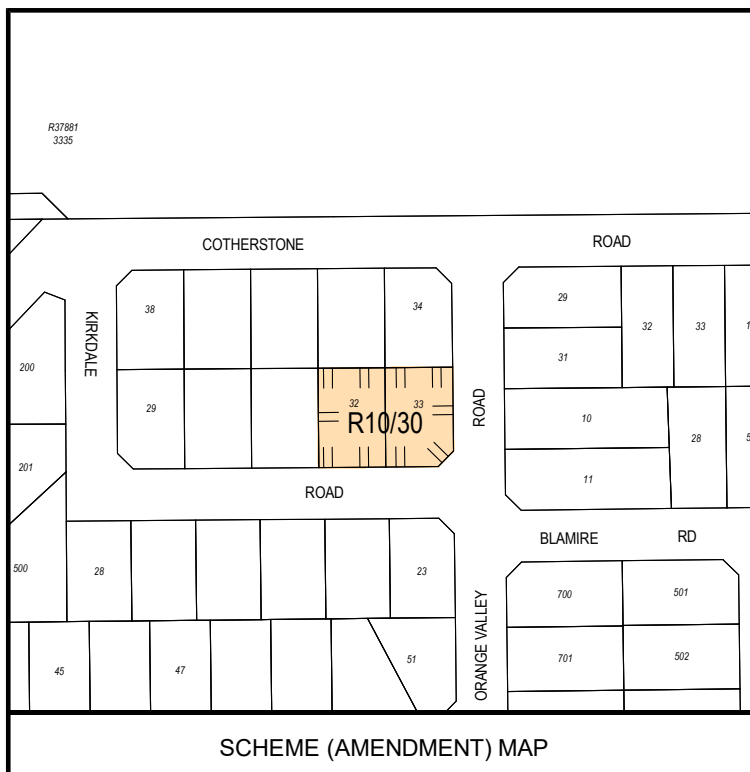
LOCAL SCHEME ZONES

**COMMERCIAL**

**RESIDENTIAL**

OTHER CATEGORIES

**R10** R CODES



N  
SCALE: 1:2500  
DATE: 23.09.2021

Amendment No.

**ADOPTION**

This Standard Amendment was adopted by resolution of the Council of the City of Kalamunda at the Ordinary Meeting of the Council held on the      day of      20

\_\_\_\_\_  
**MAYOR**

\_\_\_\_\_  
**CHIEF EXECUTIVE OFFICER**

**COUNCIL RECOMMENDATION**

This Amendment is recommended for approval by resolution of the City of Kalamunda at the Ordinary Meeting of the Council held on the      day of      20      and the Common Seal of the City of Kalamunda was hereunto affixed by the authority of a resolution of the Council in the presence of:

\_\_\_\_\_  
**MAYOR**

\_\_\_\_\_  
**CHIEF EXECUTIVE OFFICER**

**WAPC ENDORSEMENT (r.63)**

\_\_\_\_\_  
**DELEGATED UNDER S.16 OF  
THE P&D ACT 2005**

\_\_\_\_\_  
**DATE**

**APPROVAL GRANTED**

\_\_\_\_\_  
**MINISTER FOR PLANNING**

\_\_\_\_\_  
**DATE**



Landgate image 1965





Landgate image 1970



Landgate image 2021