

BROOKFIELD ESTATE STRUCTURE PLAN

Lot 9007 (211) Darch Road, Margaret River





BROOKFIELD ESTATE STRUCTURE PLAN

Document Status						
Version	Purpose of document	Authored by	Reviewed by	Approved by	Review date	
Draft A	Draft Structure Plan	M. Hunt	D. Drown			
Draft B	Draft Structure Plan	C.Hearn	M. Young		14th July 2015	
V1	Brookfield Estate Structure Plan	M. Hunt	D. Drown	Mark Hunt	16th July 2015	
V2	Brookfield Estate Structure Plan Version 2	L. McCaffrey	J. Cousins	Lachlan McCaffrey	23rd January 2019	
V3	Brookfield Estate Structure Plan Modifications	L. McCaffrey	J. Cousins	Lachlan McCaffrey	18th October 2019	

A	b	or	OV	ıal	for	iss	ue
	М	PI	•	C.		100	uc

Lachlan McCaffrey 2019-10-18

This report was prepared by RPS Australia East Pty Ltd ('RPS') within the terms of its engagement and in direct response to a scope of services. This report is strictly limited to the purpose and the facts and matters stated in it and does not apply directly or indirectly and must not be used for any other application, purpose, use or matter. In preparing the report, RPS may have relied upon information provided to it at the time by other parties. RPS accepts no responsibility as to the accuracy or completeness of information provided by those parties at the time of preparing the report. The report does not take into account any changes in information that may have occurred since the publication of the report. If the information relied upon is subsequently determined to be false, inaccurate or incomplete then it is possible that the observations and conclusions expressed in the report may have changed. RPS does not warrant the contents of this report and shall not assume any responsibility or liability for loss whatsoever to any third party caused by, related to or arising out of any use or reliance on the report howsoever. No part of this report, its attachments or appendices may be reproduced by any process without the written consent of RPS. All enquiries should be directed to RPS.

Prepared by: Prepared for:

RPS Australia East Pty Ltd Brookfield Estate Pty Ltd

Joanne Cousins
Office Manager - Planning and Development WA

Level 2, 27-31 Troode Street

9A Park Road,

West Perth WA 6005

Mount Pleasant, WA 6153

T (08) 9211 1111 T (08) 9316 4434 E joanne.cousins@rpsgroup.com.au E (08) 9316 4436

PR114537-2 | Brookfield Estate Structure Plan | V3 | October, 2019

www.rpsgroup.com Page ii



Endorsement Page

This structure plan is prepared under the provisions of the Shire of Augusta Margaret River Local Planning Scheme No. 1.

IT IS CERTIFIED THAT TH	IS STRUCTURE PLAN WAS APPRO	VED BY RESOLUTION OF THE
WESTERN AUSTRALIAN F	PLANNING COMMISSION ON:	
22 October 2019	Date	
Signed for and on behalf of	the Western Australian Planning Com	mission:
<u> </u>	Ligali'	
an officer of the Commissio	n duly authorised by the Commission	pursuant to section 16
of the Planning and Develo	oment Act 2005 for that purpose, in the	e presence of:
	ayın Cox	Witness
	22 October 2019	Date
22 October 2029	Date of Expiry	



Table of Amendments

Table 1 - Table of Amendments

Amendment No.	Summary of the Amendment	Amendment Type	Date Approved by the WAPC



Table of Density Plans

Table 2 - Table of Density Plans

Density Plan No.	Area of Density Plan Application	Date Approved by the WAPC



EXECUTIVE SUMMARY

Table 3 – Table of Executive Summary

Item	Data	Section number
		referenced in report
Total area covered by the Structure Plan	47.16 hectares	Part 2, Section 1.2.2
Area of each land use proposed:		
Residential	24.85 hectares	Part 2, Section 1.2.2
Industrial	0 hectares	
Commercial	0 hectares	
Estimated lot yield	404 lots	Part two, Section 3.4
Estimated number of dwellings	404 dwellings	Part two, Section 3.4
Estimated residential site density	16.1 dwellings per site	Part two, Section 3.4
	hectare	
Estimated population	1131 people	Part two, Section 3.4
Number of high schools	0 high schools	N/A
Number of primary schools	0 primary schools	N/A
Estimated commercial floor space (for activity	0 net lettable area	N/A
centres if appropriate)		
Public Open Space		Part two Section 3.2
Less – Remnant Vegetation Protection	5.15 ha	
- Landscape Buffer	1.23 ha	
- Drainage (Q100)	0.69 ha	
Total Deduction	7.07 ha	Part 2 Section 3.2
Total P.O.S provided (10.1%)	4.08 ha	



Table of Contents

	RSEMENT PAGE	
	OF AMENDMENTS	
TABLE	OF DENSITY PLANS	V
	JTIVE SUMMARY	
	CTURE PLAN CONTENT	
PART (ONE - IMPLEMENTATION	
1	STRUCTURE PLAN AREA	
2	OPERATION	
3	SUBDIVISION AND DEVELOPMENT REQUIREMENTS	
3.1	Subdivision and Development Requirements	
3.1.1	Subdivision	
4	OTHER REQUIREMENTS	
4.1	Sustainability Framework	
4.2	Development Contribution Plans	
5	ADDITIONAL INFORMATION	
	CHMENT A – STRUCTURE PLAN MAP	
	TWO – EXPLANATORY REPORT	
1	PLANNING BACKGROUND	
1.1	Introduction	
1.2	Land Description	
1.2.1	Location	
1.2.2	Area and land use	
1.2.3	Legal description and ownership	
2	PLANNING FRAMEWORK	
2.1	Zoning and reservations	
2.1.1	Shire of Augusta-Margaret River Town Planning Scheme No. 1	
2.1.2	Regional and sub-regional structure plan	
2.1.3	Planning strategies	
2.1.4	Planning policies	
3	SITE CONDITIONS AND CONTRAINTS	
3.1	Biodiversity and natural area assets	
3.1.1	Significant Fauna	
3.2	Landform and soils	
3.2.1	Acid Sulfate Soils	
3.2.2 3.3	Contaminated SitesGroundwater and surface water	
3.4	Bushfire hazard	
3.4 3.5		
3.5.1	HeritageAboriginal Heritage	
3.5.1 3.5.2	European Heritage	
3.5.∠ 3.6	Essential Infrastructure	
ა.ნ 4	PROPOSED STRUCTURE PLAN	
4 4.1	Vegetation Protection and Drainage Lines	
4.1 4.2	Public Open Space	
4.2 4.3	Access and Movement	
7.0	, toods and movement.	



4.3.1	Main Site Entry / Boulevard	20
4.3.2	Residential Access Streets	20
4.3.3	Pedestrian and Cycle Movements	
4.4	Lot Sizes and Lot Yield	
5	TECHNICAL STUDIES	
5.1 5.2	Essential Servicing and Infrastructure	
5.2.1	Intersections of Bussell Highway with Brookfield Avenue and Rosa Brook Road	
5.3	Local Water Management Strategy	
5.4	Archaeological and Ethnographic Assessment	
5.5	Bushfire Management Plan	
6	CONCLUSION	
)	
APPEND	ICIES	34
Tables	;	
Table 1:	able of Amendments	IV
Table 2:	able of Density Plan	V
Table 3:	Table of Executive Summary	VI
Table 4:	Table of Additional Information	88
Table 5:	Table of TPS Schedule 15	12
	Table of Public Open Space	
Table 7:	Table of POS Declaration of Function	19
Figure	S	
Figure 1:	Location Plan	
Figure 2:	Aerial Photograph	
Figure 3:	Existing Zoning	
Figure 4:	Local Planning Strategy	
Appen	dices	
Appendix	A Certificate of Title	
Appendix	B Engineering Servicing Report	
Appendix	C Transport Assessment & Technical Note	
Appendix	D Environmental Assessment	



BROOKFIELD ESTATE STRUCTURE PLAN

Appendix E	Local Water Management Strategy
Appendix F	Archaelogical & Ethnographic Assessment
Appendix G	Bushfire Management Plan
Appendix H	Sustainability Framework
Appendix I	Landscaping Concept Plan



STRUCTURE PLAN CONTENT

This Structure Plan comprises:

Part One - Implementation

This section contains the Structure Plan Map, and outlines the purpose and intent of the Structure Plan.

Part Two - Explanatory Section

This section contains the explanatory component of the structure plan including background information, and an explanation of the structure plan including design methodology, relevance, and compliance with the applicable planning frameworks at the State and Local Government level.

This section also includes plans and maps in support of the structure plan.

Part Three - Appendices

This section contains all of the technical reports and studies in support of the structure plan, with the level of detail contained within these reports and studies being commensurate with the context and scale of the proposed structure plan.



PART ONE - IMPLEMENTATION

www.rpsgroup.com Page 2



1 STRUCTURE PLAN AREA

This Structure Plan is applicable to Lot 9007 (211) Darch Road, Margaret River (the Subject Site), which is bordered by Rapids Landing Estate to the north, Rosa Brook Road to the south, Darch Road to the east and the existing Brookfield Estate to the west."



2 OPERATION

The date the structure plan comes into effect is the date the structure plan is approved by the WAPC.



3 SUBDIVISION AND DEVELOPMENT REQUIREMENTS

The Brookfield East Structure Plan contained within Attachment A has been prepared to provide an appropriate level of information relevant to the site for the level of planning that has been undertaken. It shall provide a guide to future subdivision and zoning within the Structure Plan area.

3.1 Subdivision and Development Requirements

3.1.1 Subdivision

Prior to, or in conjunction with, the first subdivision application, the proponent will be required to:

 Prepare and provide a Traffic Impact Assessment outlining the impact of the proposed subdivision and structure plan on the intersections of Brookfield Avenue/Bussell Highway and Rosa Brook Road/Bussell Highway.

As a condition of subdivision, the proponent will be required to:

- Implement an approved Bushfire Management Plan;
- Implement all recommendations of the Sustainability Framework (see appendices);
- Undertake upgrades to the Brookfield Avenue/Bussell Highway and Rosa Brook Road/Bussell Highway intersections in accordance with an agreed Traffic Impact Assessment and to the satisfaction of the relevant road control authority.
- Undertake investigations into Acid Sulphate Soils (ASS) and include mitigation measures through the preparation of an ASS Management Plan;
- Prepare and implement a Foreshore Management Plan for existing drainage lines and the tributary of Darch Brook which ensures consistency with the outcomes of the Aboriginal heritage assessment;
- Prepare and implement a sediment and erosion management plan to mitigate against the impact of sediment on the Darch Brook;
- Prepare and implement a comprehensive Urban Water Management Plan;
- Design and implement the extension of the recycled water network to provide for irrigation of Public Open Space throughout the site;
- Cede and reserve land identified for Public Open Space and remnant vegetation protection free of cost:
- Prepare a detailed Landscape Plan for Public Open Space areas. Planting on the periphery of the site at the interface with the Darch trail / Rosa Brook Road is to be designed to screen future development;
- At the time of subdivision, where shown and required by the Bushfire Management Plan, Public Open Space is to be landscaped such that it does not generate higher than a Low bushfire hazard level.



- Ensure fill and earthwork programmes protect existing vegetation where possible;
- Prepare a compliance strategy for the provision of rainwater tanks to dwellings;
- Achieve a minimum width of 20m for all lots fronting Darch Trail; and
- Prepare and have approved by the local government a Local Development Plan, addressing, but not limited to the following issues:
 - Water tanks of 2000lt (min) are to be connected and plumbed to all dwellings.
 - Retaining walls of greater than 500mm are not permissible unless they have been installed by the subdivider as part of the subdivisional works.
 - All lots coded R15 are to have a minimum setback of 7.5m, with no further subdivision to that depicted on the Structure Plan permitted."



4 OTHER REQUIREMENTS

4.1 Sustainability Framework

A Sustainability Framework has been prepared for the structure plan area to guide sustainability outcomes with respect to the following elements, environmental, water, energy, bio diversity and social – refer Appendix I.

4.2 Development Contribution Plans

Amendment No.35 introduced Development Contribution Plans and Areas to the Shire of Augusta-Margaret River Local Planning Scheme No.1 for community infrastructure. Contributions in accordance with the scheme will need to be made at the time of subdivision clearance.

A requirement of the Shire of Augusta-Margaret River Local Planning Strategy is that no subdivision and development is permitted until such time as an "Implementation and Funding Policy" and "Development Contribution Plan" are formally endorsed and adopted under Local Planning Scheme No.1 relating to the delivery of the Margaret River Perimeter road and obtaining the appropriate contributions from the subdivider."

Amendment No.36 seeks to impose development contributions for the Margaret River Perimeter Road and John Archibald Drive. This amendment is under assessment by the Western Australian Planning Commission and contributions will be imposed at the time of subdivision clearance should the Minister grant approval to the amendment. The amendment fulfils the requirements of the Local Planning Strategy regarding the need for a Development Contribution Plan prior to subdivision and development."



5 ADDITIONAL INFORMATION

At the time of subdivision (or imposed as a condition of approval), the following management plans are to be prepared, as applicable, to the satisfaction of the relevant authority:

Table 4 - Additional Information

Additional Information	Approval Stage	Consultant Required
Urban Water Management Plan (UWMP)	Prior to Subdivision	Shire of Augusta Margaret River
	Application	Department of Water and
		Environmental Regulation (DWER)
		Department of Health (DoH)
Bushfire Management Plan (BMP)	For Each Stage of	Shire of Augusta Margaret River
	Development	Department of Fire and
		Emergency Services (DFES)
Environmental Management Plan (EMP)	Condition of Subdivision	Shire of Augusta Margaret River
		Department of Water and
		Environmental Regulation (DWER)
Landscape Concept Plan	Condition of Subdivision	Shire of Augusta-Margaret River



ATTACHMENT A - STRUCTURE PLAN MAP

www.rpsgroup.com Page 9



Estate Boundary

Structure Plan Boundary

R15 Lots R20 Lots

R25 Lots

R30 Lots

Landscape Buffer / Linear POS

Parks and Recreation Reserve * Indicative Drainage Basin Locations

Existing Vegetation to be Retained

Darch Road Pedestrian Network Neighbourhood Connector B (20/22m wide road)

Access Street B (18m wide road)

Access Street D (15m wide road)

Laneway (6m wide)

Drainage Line / Existing Water Body

•••• Dual Use Footpath

PUBLIC OPEN SPACE PROVISION			
Total Structure Plan Area	47.16 ha		
Less - Remnant Vegetation Protection	5.15 ha		
- Landscape Buffer	1.23 ha		
- Drainage (Q100)	0.69 ha		
Total Deduction	7.07 ha		
Net Subdivisible Area	40.09 ha		
10% P.O.S. Requirement	4.01 ha		
Total P.O.S. Provided (10%)	4.08 ha		

All Lot Numbers, Dimensions and Areas are approximate only, and are subject to survey and Council approval.

Dimensions have been rounded to the nearest 0.1 metres.

Areas have been rounded down to the nearest 5m².

The boundaries shown on this plan should not be used for final detailed engineers design.



BROOKFIELD RESIDENTIAL ESTATE BROOKFIELD EAST STRUCTURE PLAN LOT 9007 BROOKFIELD AVENUE, MARGARET RIVER





PART TWO – EXPLANATORY REPORT

www.rpsgroup.com Page 10



1 PLANNING BACKGROUND

1.1 Introduction

Lot 9007 Darch Road, Margaret River is owned by Brookfield Estate Pty Ltd and represents the balance of the existing Brookfield Estate. The Estate has been progressively developed over the past 15 years and is approximately 50% completed.

This Structure Plan will provide the basis for the progression of future stages of development for the undeveloped eastern portion of the Estate, guiding future subdivision/development for the undeveloped portion of the Estate east to Darch Road and south to Rosa Brook Road.

1.2 Land Description

1.2.1 Location

Lot 9007 lies to the north of Rosa Brook Road and east of the existing Brookfield Estate (refer Figure 1 – Location Plan). Its eastern margin is formed by the Darch Road reserve. To the north of the site lies the existing Rapids Landing Residential Estate.

1.2.2 Area and land use

The developable portion of the site is predominately cleared with only scattered paddock trees remaining in several locations. An area of consolidated vegetation exists in the northern portion of the site adjacent to a man-made soak and drainage line feeding into the Darch Brook, which lies to the north (refer Figure 2 – Aerial Photograph). The existing drainage line has been predominately cleared and affected by grazing and clearing during the use of the land for agricultural purposes.

The site has gentle undulations that provide a good outlook for future residential allotments across the site.

There are no un-manageable constraints arising from the topographic, environmental, geophysical or cultural characteristics that would impede development of the subject site.

The land surrounding the site to the south, east and north east is zoned 'General Agriculture', with the land to the south east being subject to a Structure Planning process for a future industrial area. To the west of the subject site is the already constructed portion of Brookfield Estate, to which the subject site is an extension.

1.2.3 Legal description and ownership

The legal description and ownership details as stated on the current Certificate of Title (as enclosed in Appendix A), are as follows:

Lot 9007 on Deposited Plan 57387 – Brookfield Estate Pty Ltd



PLANNING FRAMEWORK 2

2.1 **Zoning and reservations**

2.1.1 Shire of Augusta-Margaret River Town Planning Scheme No. 1

The Shire of Augusta-Margaret River Town Planning Scheme No. 1 included Lot 9007 within the "Future Development" zone (refer Figure 3 – Existing Zoning). The Scheme also designates the land within 'Structure Plan Area No. 5' pursuant to Schedule 11 of the Scheme as follows:

Table 5 - TPS 1 Schedule 11

Area No.	Description of Land	Land Use Expectation	Matters to be Addressed in Structure Plan (in addition to clause 6.2.4)	Associated Provisions
5	East Marga River	ret Townsite Expansion	Generally, in accordance with the East Margaret River Structure Plan and Guiding Document endorsed 19/5/2005 or a subsequent Structure Plan endorsed by the local government and the Western Australian Planning Commission in accordance with the process set out in Part 6.2 of the Scheme.	Land Use and development in accordance with the endorsed Structure Plan.

Clause 16 of the Deemed Provisions for Local Planning Schemes (included in the Planning and Development (Local Planning Schemes) Regulations 2015 sets out the various information that a Structure Plan needs to address. In order to address these requirements, the Structure Plan process initiated by the proponent has included the commissioning of sub-consultant studies as follows:

- Environment and Urban Water Analysis RPS
 - Flora and vegetation, fauna, contaminated land, Acid Sulfate Soils, wetland/ foreshore management and mosquito management.
 - Local Water Management Strategy.

- Essential Infrastructure and Drainage Wood & Grieve Engineers
 - Essential infrastructure items i.e. water supply, sewer, electricity, gas, earthworks/ fill, stormwater and geotechnical aspects.
- Traffic assessment Transcore
 - Traffic access/ movement, volumes, road hierarchy, intersection analysis, public transport and pedestrian/ cycle opportunities.
- Cultural Heritage RPS
 - Archaeological and ethnographic investigations and on-site 'ground-truthing' with local aboriginal groups.
- **Bushfire Management Plan**



The above sub-consultant reports are included as a technical appendix to this report. Commentary on the requirements of Local Planning Scheme No. 1 as they relate to the proposed Structure Plan, are reflected in section 4 of this report.

2.1.2 Regional and sub-regional structure plan

2.1.2.1 Shire of Augusta-Margaret River East Margaret River Structure Plan (EMRSP)

The East Margaret River Structure Plan (approved 2005 by the WAPC) (EMRSP) guided the preparation of more detailed structure plans and subsequent subdivision and development of east Margaret River. It primarily relates to the area already developed for Brookfield Estate and has been largely superseded by the East Margaret River District Structure Plan (EMRDSP).

2.1.2.2 Shire of Augusta-Margaret River East Margaret River District Structure Plan (EMRDSP)

The East Margaret River District Structure Plan (approved October 2017 by the WAPC) (EMRDSP) guides the preparation of more detailed structure plans and subsequent subdivision and development of east Margaret River, in addition to that which has already occurred under the EMRSP. The EMRDSP provides recognition of the key constraints and opportunities for the land, providing residential development with due consideration for environment, services, infrastructure, movement networks and linkages/buffers.

2.1.3 Planning strategies

2.1.3.1 Shire of Augusta-Margaret River Local Planning Strategy (LPS)

The subject land is included within the "Future Development" land use category of the Local Planning Strategy (refer Figure 4 – Local Planning Strategy). The LPS identifies this land as "FDAM3c" in the townsite development summary table, which is designated to accommodate future urban development and requires the preparation of comprehensive and detailed structure planning prior to subsequent subdivision and development.

Whilst this land forms part of the short-term priority urban development areas in the Shire where preference is given to the substantial subdivision of these areas before considering the rezoning of any new 'greenfield' areas, the East Margaret River Structure Plan (EMRSP) identifies this area for a density of R2.5-R5. By adopting an average of 3000sqm, "FDA M3c" provides for approximately 92 lots. However, it should be noted that this modest yield is a reflection of when the future perimeter bypass road was originally intended to go through the Brookfield Estate, which is no longer relevant to the extension of the Estate given the adoption of the alignment further to the east of the subject land , as was reflected in the EMRDSP.

The yield contemplated in the LPS represents an inefficient use of the land as it relates to the existing developed portions of the Estate and the capacity of the site to accommodate far greater yield to facilitate the future residential growth that will take place in the Margaret River townsite over time. This is more in line with the Margaret River SuperTown – Townsite Growth Plan (2012).



The balance land of the Estate is strategically placed at the southern edge of the Margaret River development front and has long been earmarked by the Shire of Augusta-Margaret River as one of the logical southern expansion areas to absorb the expected urban growth in the future and alleviate the development pressures being placed on other areas of the townsite.

The development of the balance land is a natural extension of the existing Estate. Furthermore, it represents an opportunity to consolidate and build upon the existing community has been recognised by the proponent to maximise the existing character and lifestyle qualities that the Margaret River townsite currently enjoys.

Therefore, the consideration of this Structure Plan to facilitate future urban development is consistent with the Shire's LPS.

2.1.4 Planning policies

2.1.4.1 State Planning Policy No. 6.1 Leeuwin-Naturaliste Ridge Policy

The WAPC's Leeuwin-Naturaliste Ridge Policy Land Use Strategy Plan (2003) identifies the proposed development area falling within the Margaret River Development Investigation Area. The Policy states that Development Investigation Areas 'are a guide to potential development but requires detailed investigation prior to subdivision and development, including form, function and design. In the vicinity of Principal Centres, these may comprise urban development, but other sites designated Development Investigation Area will need to conform with policies relevant to their particular location.'

The consideration of this proposed Structure Plan to facilitate future urban development is therefore consistent with SPP No. 6.1, providing residential development consistent with the identified development investigation area.



3 SITE CONDITIONS AND CONTRAINTS

3.1 Biodiversity and natural area assets

Based on desktop and site investigations, the main environmental constraints identified on site include:

- Potential black cockatoo habitat;
- Potential acid sulfate soils on a portion of the site;
- Surface water management;
- Surrounding land uses
- Bushfire management; and
- Aboriginal heritage.

3.1.1 Significant Fauna

A Significant Fauna Assessment was undertaken on the site by Ecosystem Solutions (2013). During the site surveys, the only significant fauna species identified utilising the site were black cockatoo species, with the following recorded during the surveys:

- In total, 62 potential habitat trees were surveyed, 43 of which occur within the site boundary and 33 of which (76%) will be retained within POS on site;
- Signs of foraging in both the cleared area on site and the remnant vegetation; and
- A small flock of black cockatoos flying over the site.

RPS undertook a significant impact assessment for black cockatoos based on the referral guidelines for the three threatened black cockatoo species (DSEWPC 2012) which provides guidance for when one or more "habitat impacts" may trigger the need to refer an "action". This assessment identified that potential impacts are low as only ten of the trees on site are proposed to be cleared and there is a large amount of habitat protected in reserves within 10 km of the site. Consequently, an EPBC referral is unlikely to be required.

3.2 Landform and soils

3.2.1 Acid Sulfate Soils

The Department of Environment Regulation (DER) Acid Sulfate Soil (ASS) risk mapping shows there to be an area of "moderate to low" risk of encountering ASS within depths greater than three metres along the eastern boundary and an area to the north of the site. There is no risk of encountering ASS over the remainder of the site.

It is recommended that ASS investigations be undertaken prior to any soil or groundwater disturbance if disturbance to the soil or dewatering in the immediate area of the "moderate to low" risk soils is required.



3.2.2 Contaminated Sites

The subject site is not reflected in the Department of Environmental Regulation's Contaminated Sites database and is therefore not constrained from more intensive development in this regard.

3.3 Groundwater and surface water

A Local Water Management Strategy (LWMS) has been prepared for the site to address stormwater and groundwater management – refer Appendix E.

The 500m buffer from the Stella Bella vineyard to the east of the site intersects with a small portion of the eastern corner of the site. This buffer is the minimum recommended by the Environmental Protection Authority's Guidance for the Assessment of Environmental Factors – Separation Distances between Industrial and Sensitive Land Uses. However, the proposed development is setback in excess of 300m from the neighbouring viticulture operation as set out in the Department of Health's Guidelines for Separation of Agricultural and Residential Land Uses. Given the discrepancy between the two documents and the vegetative buffer provided by Darch Brook, it is not recommended that the physical setback be imposed."

3.4 Bushfire hazard

A Bushfire Management Plan (BMP) has been prepared for the site to address all applicable legislation, policy, standards and guidelines including the four elements of the Bushfire Protection Criteria of location, siting and design, vehicular access and firefighting water supply – refer Appendix G.

The development site of approximately 25 hectares (405 proposed lots) is within a designated bushfire prone area and seeks to retain native vegetation within public open space, visual landscape buffers and drainage basins. The proposal requires the application of State Planning Policy No. 3.7: Planning in Bushfire Prone Areas (SPP 3.7).

3.5 Heritage

3.5.1 Aboriginal Heritage

One previously recorded Aboriginal Heritage site has been identified during a search of the Department of Aboriginal Affairs Aboriginal Heritage Inquiry System (DAA AHIS) database (DAA AHIS 4495-Margaret River). The ethnographic assessment confirmed that the small tributary that protrudes into the Project Area (referred to as the Darch Brook tributary) is of mythological significance to the Aboriginal stakeholders because it is regarded as part of the main feeders to the Wagyl (Rainbow Serpent). The archaeological assessment revealed that the Project Area has been previously modified due to land clearance of woodland trees for pastoral purposes. Evidence of recent disturbance was also identified in the north-western extent of the Project Area.

The detailed findings of the Environmental Assessment Report (EAR) are enclosed as Appendix D.



3.5.2 European Heritage

There are no sites of European heritage significance listed for the subject site under the Commonwealth Heritage Lists, Heritage Council of WA or Shire of Augusta-Margaret River Municipal Heritage Inventory. As such the subject site is not constrained from development in this regard.

3.6 Essential Infrastructure

The existing Brookfield Estate is currently serviced with all essential services including reticulated water and sewer, stormwater, power and telecommunications. The proposed structure plan area will benefit from an extension of these services for the development of future residential stages as necessary.



4 PROPOSED STRUCTURE PLAN

4.1 Vegetation Protection and Drainage Lines

Associated with the public open space network, areas of consolidated existing vegetation (predominantly adjacent to the north western drainage line) and freestanding vegetated locations have been retained within public open space areas for the principal purpose of vegetation protection. In some instances, the vegetation will be enhanced by further planting of understorey species in association with passive recreation access.

Drainage lines have been placed in a reserve system, which serves as a linear movement network for pedestrian and wildlife. Links from the residential areas will be provided through landscaped corridors utilising roadway systems linking to the formal passive recreation areas. The design approach enables rehabilitation opportunities for the existing drainage line to be developed as part of the ongoing development of the site.

The environmental qualities of Darch Brook will be maintained through a drainage design that will incorporate Water Sensitive Urban Design (WSUD) techniques and best management practices to ensure the risk of stormwater flooding is managed and water quality is not detrimentally impacted post-development.

4.2 Public Open Space

In accordance with Liveable Neighbourhoods, a minimum of 10% of public open space has been provided over the structure plan area. The public open space calculation is illustrated on the Structure Plan as per the table below and demonstrates that a total of 4.08ha or 10.1% of the net subdivisible area is to be provided. This is based on the net subdivisible area of 40.09ha – deductions being made for remnant vegetation protection, landscape buffer and drainage requirements. In this regard, the drainage line on Lot 9007 will be subject to rehabilitation and landscape enhancement and will be available for passive recreation purposes. Table 7 provides a detailed breakdown of the public open space gross area which is inclusive of 0.69ha of drainage.

Table 6 - Public Open Space Schedule

Public Open Space Schedule		
Total Structure Plan Area	47.16 ha	
Deductions		
Remnant Vegetation Protection	5.15 ha	
Landscape Buffer	1.23 ha	
Drainage (Q100)	0.69 ha	
Total Deductions	7.07 ha	
Net Site Area		40.09 ha
Gross Subdividable Area		40.09 ha
Required Public Open		4.01 ha
Space Contribution (10%)		
Breakdown of POS Provided		



Restricted Public Open Space		
Conservation Category Wetland Buffer (up to 50m)	0.00	
Resource Enhancement, multiple use wetland or	0.00	
similar and associated buffers (up to 30m)		
Reserved land encumbered by easements	0.00	
Total Restricted POS Credited	0.00 ha	0.00 ha
Unrestricted Public Open Space: by function		
Sport	0.00 ha	
Recreation	0.00 ha	
Nature	4.08 ha	
Total Unrestricted POS Credited	4.08 ha	4.08 ha
Total POS		4.08 ha
POS Provision as Percentage of Gross		10%
Subdivisible Area		

Table 7 - POS Declaration of Function

POS No.	Gross Area (ha)	Net Area (ha)	Category	Function
1	2.890 ha	2.890 ha	Neighbourhood	Nature - drainage basin with native vegetation, footpath trail and landscaped open space.
2	1.084 ha	1.084 ha	Local	Nature - drainage basin with native vegetation, footpath trail and landscaped open space.
3	0.646 ha	0.646 ha	Small	Nature - drainage basin with native vegetation, footpath trail and landscaped open space.
4	0.145 ha	0.145 ha	Small	Recreation - landscaped open space
Total POS (ha)	4.765 ha	4.765 ha		

The vision for the public open space consists of formal recreation areas surrounded by conventional residential living, passive recreation links utilising the drainage lines traversing the site, passive recreation adjacent to the Darch Road reserve and further passive recreation opportunities central to the site containing a large stand of paddock trees.

The detailed design of the public open space is enclosed as Appendix I.

4.3 Access and Movement

The key focus of the proposed Structure Plan was to plan and design a street network that is legible and would facilitate ease of movement throughout the development - a system that is highly interconnected with the surrounding existing community and surrounding road network. Other key traffic management and movement objectives for the proposed Structure Plan are as follows: -

Reduce local travel distances;



- The provision a road hierarchy that will distribute traffic evenly and fulfil the functional traffic requirements required;
- Designed to incorporate a user-friendly network for pedestrian and cyclists; and
- Designed to provide an integral part of a more sustainable urban water management system.

The key movement elements of the proposed Structure Plan are as follows: -

4.3.1 Main Site Entry / Boulevard

The main entry to the undeveloped portion of the Estate will be achieved via an extension of Brookfield Avenue that will connect to an alternative site entry via Rosa Brook Road. Brookfield Avenue and the eastern neighbourhood connector will also serve as a district link to the "Cooper" land to the east to improve traffic movement and facilitate further development in the EMRSP area.

The road reserve width will be approximately 22m to maintain consistency with the existing road reserve width of Brookfield Avenue, and deliberate breaks in the residential structure will create view sheds down streets towards Darch Brook, which forms the eastern boundary of the structure plan area.

The key entry roads will adopt high landscaping standards and will take on a typical south west landscape character by adopting indigenous vegetation types to improve upon the site's existing environmental qualities. Street trees will be planted and will serve to provide character, shade, interest and improve visual amenity of the Estate.

4.3.2 Residential Access Streets

The intention is to create 'streets' not 'roads' within the new development. Most streets will have generous footpaths and shade trees to promote walkability. Where appropriate, the intention is to reduce road reserve widths to help slow traffic and contribute to the character of the residential precincts. The local road network contains a mix of north-south/ east-west oriented roads to implement a suitable stormwater management solution to the site's drainage patterns.

4.3.3 Pedestrian and Cycle Movements

Opportunities for residents to walk and cycle throughout the development have been an important consideration in the design of the proposed structure plan. The interconnected street network will form the main walking and cycling networks. In addition, there will be walking and cycle paths through open space, parkland and drainage areas providing direct links to the residential precincts and adjacent 'rails to trails' pedestrian network along Darch Road along with a connection to the existing developed areas of the Brookfield Estate.

A 10m wide landscape buffer has also been integrated into the proposed structure plan to serve as a landscape and vegetation screen to Rosa Brook Road. The width of this design feature may vary along this frontage to incorporate existing vegetation species. It also has the potential to include walking and cycle paths and informal passive recreation areas that will connect with the broader Estate and the Darch Road "Rails to Trails" network.



Page 21

4.4 Lot Sizes and Lot Yield

The structure plan proposes lot sizes ranging from "R15" for lots abutting Darch Road reserve (being the eastern boundary of the structure plan area) up to "R40" for specific precincts associated with open space and formal recreation reserves. The predominant density across the Structure Plan area will be "R20".

The approximate yield for the undeveloped portion of the Estate is envisaged to be in the order of 390 lots however, this will be confirmed through the subdivision design phase to follow.

The demographic mix for the balance of the Estate is likely to be a range of population consisting of first homebuyers, investors, second home buyers and retirees. Based on a household population of 2.5 persons, the population yield is therefore likely to be in the order of 950 – 1000 additional people.

The existing Darch Road trail network and the drainage line and vegetation of Darch Brook (located on the adjacent 'Cooper' landholding) provide a significant natural barrier to the proposed extension of the Estate. It also provides for a logical density transition from the higher and conventional densities (R20 – R40) proposed by the structure plan to the rural 'hamlet' character envisaged for the 'Development Investigation Areas' within east Margaret River.

In keeping with the objectives of consolidating and delivery sustainable forms of development, the structure plan illustrates a response to site opportunities and constraints that provide a stronger core of density in appropriate locations, enabling the creation of larger lots adjacent to Darch Road/ Brook providing appropriate buffering and transitioning to existing adjoining rural/ viticulture activities and the future perimeter road to the east. An additional buffer strip 5m wide has also been provided adjacent to the Darch Road reserve at the request of the Shire to provide additional vegetation screening.

The proposed structure plan layout achieves a viable development outcome through the delivery of an immediate supply of land to the market reinforced by access to services and infrastructure currently available in the developed portions of the Estate.



5 TECHNICAL STUDIES

5.1 Essential Servicing and Infrastructure

Wood and Grieve Engineers was commissioned to undertake a preliminary engineering servicing assessment of the proposed development within the Brookfield Estate.

Preliminary investigations indicate that from an Engineering perspective the site can be serviced with sewer, stormwater, roads, water, underground power and gas (Kleenheat if deemed economically viable by the developer).

The Water Corporation has advised that the ultimate configuration for the sewer reticulation is to construct the gravity trunk main through the adjacent Rapids Landing development north of the site to connect to existing infrastructure. However, as the trunk main has not been constructed at the time of this report, this issue will need further detailed investigation, cost estimating, and timing consideration. and negotiation with the developers of Rapids Landing estate.

A review of the water 'as-constructed' information from the Water Corporation indicates that there is water infrastructure adjacent to the proposed development and within existing road reserves of the previously developed portions of Brookfield Estate. The 'as-constructed' information shows there are two 100mm dia. pipes, two 150mm dia. pipes and two 200mm dia. pipes within existing road reserves of the Brookfield development available to supply the development from the western boundary.

Water Pressure to the Brookfield development is currently achieved by a temporary water booster station and only has a limited supply. The Water Corporation has advised that the existing water booster station is currently operating beyond its capacity and it will not be possible for the proposed eastern portion of the Brookfield development to be serviced from this facility.

In order to service the development, the options are:

- Water Corporation has currently planned for the development to be serviced through a
 distribution connection that is planned to come through the Rapids Landing development to the
 immediate north. However, due to market demand dictating development rate, it is unknown
 when Rapids Landing will be developed and therefore when supply will be available.
 Negotiation with the Rapids Landing developer may be necessary to facilitate the timely
 extension of this main.
- Construct a water main through Lot 15 (east side of Darch Road) by negotiation or skirting the northern development as a temporary measure through to the distribution connection.
- Construct a temporary water booster pump station to service the initial stages of the development
- Constructing a main from east of Margaret River of the new town supply down to Rosa Brook Road. This option has not been investigated by Water Corporation in terms of pipe size required but it may avoid delay with other Development timing and could allow full servicing of Brookfield and negate the need for a temporary booster station.

NBN Co will service the structure plan area in accordance with its cable to the node approach.



Due to the lack of existing gas infrastructure, it will not be economically feasible to service the site with natural reticulated gas at the time of preparing this report. However, Kleenheat may be potentially able to service the site if it is deemed economically viable by the developer.

The detailed findings of the Engineering Servicing Assessment are enclosed as Appendix B.

5.2 Traffic and Transport Analysis

Transcore was commissioned to undertake a traffic analysis of the proposed structure plan to assist with the implementation of the development over the undeveloped portions of the Estate. A summary of the investigation's findings are as follows:

- The Structure Plan area is estimated to generate traffic flows of approximately 3,232 vehicles per day;
- The level of projected traffic on internal and external roads is not expected to be very high. A
 basic priority T-intersection on Rosa Brook Road is expected to accommodate the traffic
 movements at the access intersection into the structure plan area;
- Traffic modelling and analysis undertaken indicates that the intersections of Rosa Brook Road/ Bussell Highway and Brookfield Ave/ Bussell Highway would work satisfactorily in year 2031 with the existing layouts of these intersections;
- The road network has been planned in accordance with WAPC Liveable Neighbourhoods guidelines to accommodate the estimated future traffic volumes on the internal and external roads;
- Roundabouts are proposed for all the major 4-way intersections within the Structure Plan area;
- Currently the demand for public transport is not sufficient to provide services in this area; and
- Shared pedestrian and cycle paths are in place along the major roads within the developed sections of the Estate. These will be extended along the major road network within the structure plan area connecting centres of attraction and providing good pedestrian links with Darch Road.

The detailed findings of the Transport Assessment are enclosed as Appendix C.

Given the time between the preparation of the analysis and the approval of the structure plan, it is required that an updated Traffic Impact Assessment is provided prior to any subdivision application being made for the land. This will take into consideration the opening of the Margaret River Perimeter Road and will be assessed through the subdivision process by the relevant authority. Any upgrades required by the road authority to the intersections of Brookfield Avenue/Bussell Highway and Rosa Brook Road/Bussell Highway can then be implemented through a condition of subdivision at the cost of the applicant.

5.2.1 Intersections of Bussell Highway with Brookfield Avenue and Rosa Brook Road

In December 2015, Transcore prepared a Revised Transport Assessment (TA) Report (t13.005.mr.r01c) for Lot 9007 Brookfield Estate in Margaret River. The analysis undertaken in the revised TA report did not



clarify when the potential upgrades should be implemented at these intersections. The purpose of the technical note is to investigate the timing of the potential upgrades at these intersections.

A summary of the investigation's findings are as follows:

- Intersection analysis undertaken indicates that the intersection of Brookfield Avenue/ Bussell Highway would operate satisfactorily with ample spare capacity in 2019.
- If a splitter island is constructed for the existing left turn slip lane at Brookfield Avenue/ Bussell Highway intersection in 2019, then no further upgrades would be required at this intersection.
- Intersection of Rosa Brook Road/ Bussell Highway would not require any upgrades by 2019, and after 2019 with the opening of the Perimeter Road, the traffic on Bussell Highway would be reduced and therefore no upgrades would be required. This is largely due to Rosa Brook Road not linking directly to the new perimeter road. It is effectively now a cul-de-sac.
- The function of Bussell Highway in the vicinity of the Brookfield Estate would no longer be a regional distributor despite its classification, due to urbanisation of this area and construction of the Margaret River Perimeter Road.
- It is recommended that the speed limit on Bussell Highway should be reduced to 60km/hr from Perimeter Road to John Archibald Drive.

The detailed findings of the Technical Note Transport Assessment are enclosed as Appendix C.

5.3 Local Water Management Strategy

RPS were commissioned to undertake a Local Water Management Strategy (LWMS) to support the proposed Structure Plan by demonstrating that suitable water sensitive urban design and best management practices for the sustainable use of water resources will be implemented on site to ensure the risk of stormwater flooding is managed and water quality is not detrimentally impacted post-development.

The drainage design and construction standards proposed are in accordance with the *Stormwater Management Manual for Western Australia (DoW 2004–2007) and* the AMRSC's *Standards and Specifications for Subdivisions and Developments.*

The drainage design proposes to achieve the following objectives:

- Maintain existing hydrological regimes post development by restricting post development peak flows relative to pre-development conditions;
- Improve stormwater quality, as compared to a development that does not actively manage stormwater;
- Rainfall from 1 year ARI (Annual Recurrence Interval) events will be retained as close to the source where possible. A combination of rainwater tanks and/or underground stormwater retention devices will be used within lot boundaries, with swales and potentially tree pits integrated in the streetscape design to provide treatment of the first flush events; and
- Large rainfall events (5 ARI to 100 ARI) will be conveyed through a network of roads and attenuated in drainage basins and a "living stream", with outflow to Darch Brook at predevelopment flow rates.



A conceptual drainage strategy for the site (1, 5 and 100 year ARI events) has been developed by Wood and Grieve Engineers, with the surface water modelling undertaken by RPS using XPSWMM modelling software.

The drainage design includes a "treatment train" approach whereby stormwater higher in the catchment is directed through a series of basins/swales before it is discharged to Darch Brook at one of three outlet points. This approach will ensure that stormwater is detained on site for a sufficient amount of time, maximising opportunities for stormwater treatment whilst maintaining post development peak flows relative to pre-development conditions.

The detailed findings of the LWMS are enclosed as Appendix E.

5.4 Archaeological and Ethnographic Assessment

The Aboriginal Site Identification assessment consisted of an archaeological and ethnographic assessment, which was completed on the 19 June 2013 by an RPS Senior Cultural Heritage Consultant with the participation of Aboriginal spokespersons nominated by the South West Aboriginal Land and Sea Council (SWALSC). One previously recorded site was identified during a search of the DAA AHIS database (DAA AHIS 4495-Margaret River). The ethnographic assessment confirmed that the small tributary that protrudes into the Project Area - referred to as the Darch Brook tributary in this report is of mythological significance to the Aboriginal stakeholders because it is regarded as part of the main feeders to the Wagyl (Rainbow Serpent). The archaeological assessment revealed that the Project Area has been previously modified due to land clearance of woodland trees for pastoral purposes. Evidence of recent disturbance was also identified in the north-western extent of the Project Area.

Consultation with the Aboriginal stakeholders has revealed that they approve of the proposed development and would support a Section 18 application to disturb the Darch Brook tributary as required to establish the future subdivision. With those requirements noted the following recommendations are made:

Recommendation 1

A Section 18 application must be sought and approved by the Minister of Aboriginal Affairs before any landscaping activity is to be undertaken on the Darch Brook tributary.

Design Response: Recommendation noted and will be implemented/ actioned at the appropriate time.

Recommendation 2

A copy of this Site Identification report is provided to the South West Aboriginal Land and Sea Council (SWALSC) for review and comment prior to the completion of the final report. A copy of the final report should be submitted to the Department of Aboriginal Affairs (DAA).

Design Response: A copy of the draft report has been provided to the South West Aboriginal Land and Sea Council (SWALSC) and approval has been given to finalise the archaeological and ethnographic assessment to support the structure plan and facilitate lodgement with the DAA.

Recommendation 3

A 30m buffer boundary is to be established around the Darch Brook tributary as a "no-build" zone to ensure that the natural flow of water and health of the tributary is not harmed.



However, supplementary planting and landscape works may be permitted provided the qualities and function of the tributary are not compromised and in keeping with native vegetation of the region.

Design Response: The proposed structure plan has provided the required separation to development to ensure the environmental qualities are maintained.

Recommendation 4

The water quality of the Darch Brook tributary is not to be harmed from pollution and artificial run-off from the residential estate.

Design Response: A LWMS has been prepared to demonstrate that WSUD and best practice management methods will be adopted for the sustainable use of water resources on site to ensure the risk of stormwater flooding is managed and water quality is not detrimentally impacted post-development.

Recommendation 5

Revegetation activity should only include native species from the local region.

Design Response: The proposed structure plan includes a requirement to prepare a detailed Landscape/ Revegetation Plan for the POS areas, existing drainage lines, road reserves, interface with Darch Road pedestrian network and buffer to Rosa Brook Road (including any acoustic bunding) as a condition of subdivision. Native species from the local region will be incorporated into the landscape outcomes on site.

Recommendation 6

In the event that additional Aboriginal sites are identified during onsite construction works, it is recommended that work stop immediately in the vicinity of the site until such time that the South West Aboriginal Land and Sea Council (SWALSC) and a suitably qualified cultural heritage consultant has been notified for further instructions.

Design Response: Recommendation is noted and contractors will be advised of their responsibilities as required by the Aboriginal Heritage Act (1972) WA (AHA Act 1972).

The detailed findings of the Archaeological and Ethnographic assessment is enclosed as Appendix F.

5.5 Bushfire Management Plan

The development site of approximately 25 hectares (405 proposed lots) is within a designated bushfire prone area and the proposal requires the application of State Planning Policy No. 3.7: Planning in Bushfire Prone Areas (SPP 3.7).

The assessed bushfire risk is considered to be manageable and will be achieved by the identified stakeholders implementing and maintaining the bushfire risk management measures that are presented in the plan.

The Proposal, as set out in the Plan, has addressed all applicable legislation, policy, standards and guidelines including the four elements of the Bushfire Protection Criteria of location, siting and design, vehicular access and firefighting water supply. The determination is that the Proposal can meet all the requirements. Against the Bushfire Protection Criteria, the decision maker's assessment of this Proposal



is to be on the basis of it being able to meet the acceptable solutions for all four elements once construction and landscaping is complete.

Indicative BAL ratings of BAL-29 or less can be achieved on all of the proposed lots. Future buildings within 100 metres of classified vegetation will be constructed to standards which correspond to the determined BAL's, as required by AS 3959-2009 Construction of buildings in bushfire prone areas. As this proposal does not identify the actual location of building works within each lot, there will be a requirement to determine the BAL ratings for individual building works once a building site has been identified.

With respect to this Proposal, the relevant decision maker (DPLH or local government), may condition any application approval with a requirement for the landowner/proponent to place a notification onto the certificate(s) of title and a notice of the notification onto the diagram or plan of survey (deposited plan). This will be done pursuant to Section 165 of the Planning and Development Act 2005 and applies to lots with determined BAL rating of BAL-12.5 or above.

The detailed findings of the Bushfire Management Plan (BMP) are enclosed as Appendix G.



6 CONCLUSION

The proposed Structure Plan is consistent with the Shire's strategic planning framework where it forms part of the short-term priority urban development areas in the Shire.

The structure plan aims to deliver a development outcome that adopts 'best practice' urban design methods and innovative design ideas to achieve a liveable neighbourhood for the future residents of the Estate.

The structure plan recognises the importance and responsibility of ensuring the most efficient use of land for urban purposes, whilst respecting the ecological, environmental and conservation values of the site. Furthermore, it responds appropriately to the site's key constraints and opportunities to promote an urban structure based on walkable neighbourhoods with a strong connection to the existing Estate and the future Development Investigation Areas to the south and east of the site.



FIGURES

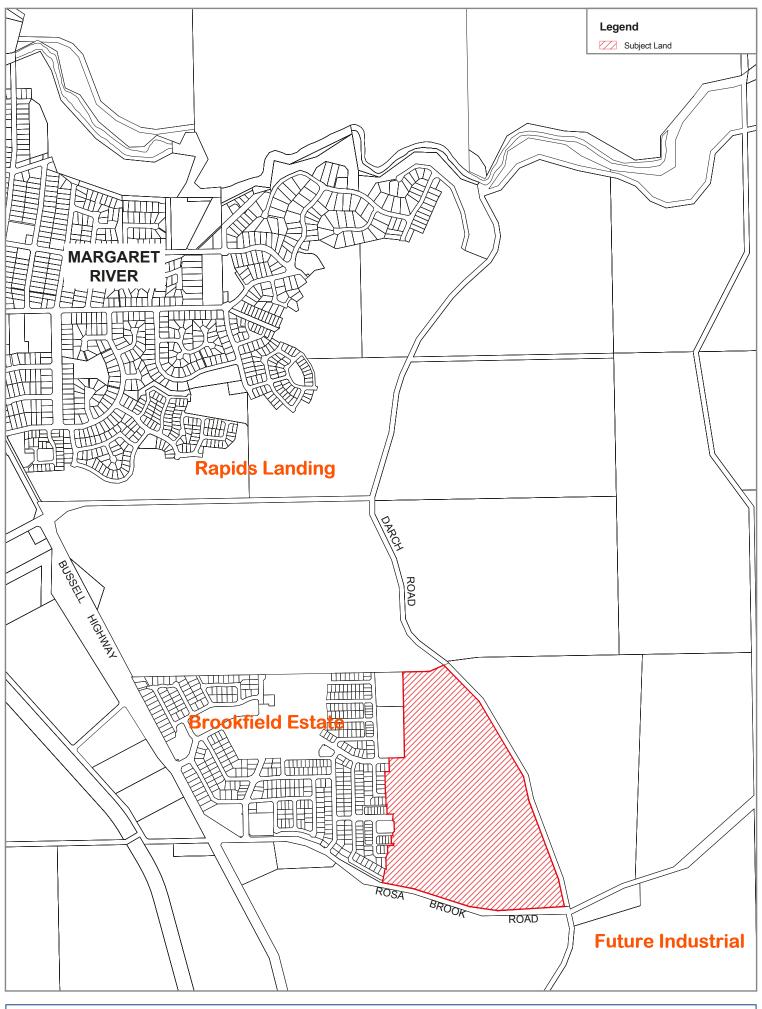
www.rpsgroup.com Page 29



Figure 1

Location Plan

www.rpsgroup.com Page 30





Brookfield Residential Estate, Brookfield Figure 1 - Location Plan

Disclaimer

The contents of this plan are conceptual only, for discussion purposes All areas and dimensions are approximate only subject to relevant studies, Survey, Engineering and Council approval.



RPS Australia East Pty Ltd ACN 140 292 762 ABN 44 140 292 762

T +61 8 9211 1111 F +61 8 9211 1122 W rosgroup com au



Figure 2

Aerial Photography

www.rpsgroup.com Page 31





Disclaimer

The contents of this plan are conceptual only, for discussion purposes. All areas and dimensions are approximate only subject to relevant studies, Survey, Engineering and Council approval.



RPS Australia East Pty Ltd ACN 140 292 762 ABN 44 140 292 762

38 Station Street Subiaco WA 6008 N T +61 8 9211 1111 F +61 8 9211 1122



Figure 3

Existing Zoning

www.rpsgroup.com Page 32





Disclaimer

The contents of this plan are conceptual only, for discussion purposes. All areas and dimensions are approximate only subject to relevant studies, Survey, Engineering and Council approval.



RPS Australia East Pty Ltd ACN 140 292 762 ABN 44 140 292 762

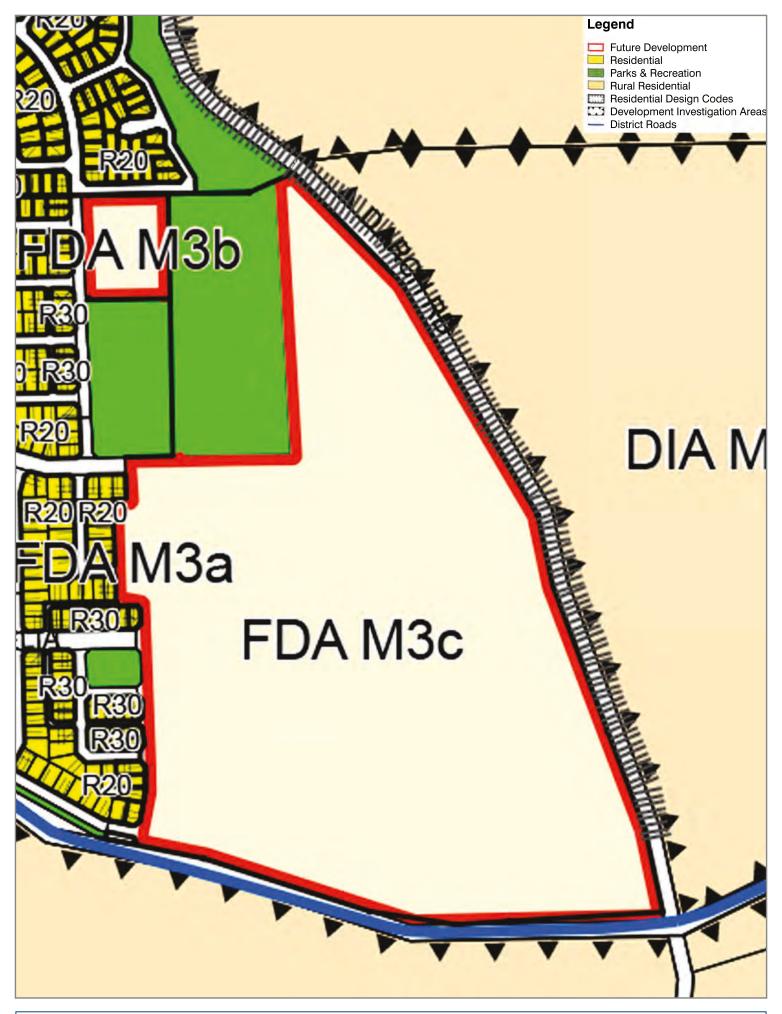
38 Station Street Subiaco WA 6008 HT PROTECTS THIS PLAN T +61 8 9211 1111



Figure 4

Local Planning Strategy

www.rpsgroup.com Page 33





Disclaimer

The contents of this plan are conceptual only, for discussion purposes All areas and dimensions are approximate only subject to relevant studies, Survey, Engineering and Council approval.



RPS Australia East Pty Ltd ACN 140 292 762 ABN 44 140 292 762

38 Station Street Subiaco WA 6008 IN T +61 8 9211 1111 ent F +61 8 9211 1122