
Nash Drive Structure Plan

September 2021



This structure plan is prepared under the provisions of the City of Busselton Local Planning Scheme No. 21.

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

01 November 2010

In accordance with Schedule 2, Part 4, Clause 28 (2) and refer to Part 1, 2. (b) of the *Planning and Development (Local Planning Schemes) Regulations 2015*.

Date of Expiry: 18 October 2025

DISCLAIMER:

This document has been undertaken solely for the Nash Drive Structure Plan (the client). It is assumed that all information and documents relied upon to compile this document are complete, accurate and up-to-date. Where BSO development Consultants has obtained information from a government register or database, it assumes the information is accurate. No responsibility is accepted to any third party who may come into possession of this document in whatever manner and who may use or rely on the whole or any part of this document. Although care has been taken on the compilation of this document, BSO Development Consultants disclaims any responsibility for any errors or omissions. The right is reserved to change this document at any time. The information contained in this document has been compiled in good faith and liability is expressly disclaimed by BSO Development Consultants for any loss or damage which may be sustained by any persons and/or entity acting on this document.

COPYRIGHT:

The concepts and information contained in this document are the property of BSO development Consultants. Use or copying of this document in whole or in part without the written permission of LB Planning constitutes an infringement of copyright.

Amendment Table

Amendment No.	Summary of the Amendment	Amendment type	Date approved by Commission
1	Removal of Reticulated Deep Sewerage requirement (as per this document)	Minor	15 February 2022

Table of Contents

PART ONE - IMPLEMENTATION SECTION

1	<u>STRUCTURE PLAN AREA</u>	1
2	<u>OPERATION</u>	1
3	<u>STAGING</u>	1
4	<u>SUBDIVISION AND DEVELOPMENT REQUIREMENTS</u>	2

PART TWO - EXPLANATORY SECTION

1	<u>PLANNING BACKGROUND</u>	4
1.1	<u>INTRODUCTION AND PURPOSE</u>	4
2	<u>GOVERNMENT SEWERAGE POLICY (SEPTEMBER 2019)</u>	4
3	<u>COMPARATIVE COST ANALYSIS–DEEP SEWERAGE VS. AEROBIC TREATMENT UNITS</u>	5
3.1	<u>Sewer Construction Costings 3.5klm Pressure Main</u>	5
3.2	<u>Aerobic Treatment System (ATU) Costs</u>	5
4	<u>Conclusion</u>	6

LIST OF PLANS

Plan 1 – Nash Drive Structure Plan
Plan 2 – Location Plan

APPENDICES

Appendix 1: Endorsed Structure Plan
Appendix 2: Urban Water Management Plan (December 2016)
Appendix 3: Effluent Capability Assessment (September 2012)
Appendix 4: Cardno Engineering Deep Sewerage and Pressure Main Costing
Appendix 5: Fuji Clean ATU Costing Information and Servicing Agreement



PART ONE

IMPLEMENTATION



I STRUCTURE PLAN AREA

The Structure Plan Area is identified on the Nash Drive Structure Plan map (Plan 1).

The location of the Structure Plan Area is identified on the Location Plan (Plan 2).

Due to previous stages of subdivision and road dedication, the Structure Plan Area is comprised of ten existing lots described in the following table:

Lot Number & Survey	Certificate of Title	Lot Area
180 on P4918(1)	2609-772	3.3193Ha
781 on DP33085	2189-128	3.4614Ha
9507 on DP56807	2714-29	3.4584Ha
9508 on DP56807	2714-30	3.6761Ha
9505 on DP56807	2714-27	20.0896Ha
9509 on DP56807	2714-31	0.4419Ha
9506 on DP56807	2714-28	0.1519Ha
9504 on DP56807	2714-26	7.1877Ha
9510 on DP56807	2714-32	0.0942Ha
103 on DP46861	2635-358	1.8834Ha

Further detail to outline and explain particular elements of the Nash Drive Structure Plan is contained in Part Two of this report.

2 OPERATION

This Structure Plan comes into effect on the date it was approved by the Western Australian Planning Commission.

3 STAGING

It is envisaged subdivision and development of the land will be undertaken in a number of stages depending on the provision of infrastructure and the individual requirements of the multiple land owners.

4 SUBDIVISION AND DEVELOPMENT REQUIREMENTS

The following requirements are to be addressed at the subdivision and/or development stage:

1. Subdivision

1.1 Further subdivision of the lots shown on this Structure Plan is prohibited.

1.2 Titles for Lots 367 - 375 will not be supported until a landscaped buffer is established adjacent to the bypass and maintained for at least one year.

Lot Size Range	Applicable R-Code or TPS Requirements	Front Setback (Primary Street)	Secondary Street Setbacks	Rear Setback	Side Setbacks
1,800 – 3,999m ²	R5	12m	6m	6m	3m
4,000 – 4,999m ²	R2.5	15m	7.5m	7.5m	7.5m
5,000 – 9999m ²	R2	20m	10m	10m	10m
1 ha and greater	Rural Residential zone provisions in TPS	20m	15m	20m	15m

2. General Site Requirements

2.1 The applicable site requirements and minimum setbacks are set out in the table above.

2.2 The minimum setback requirements outlined in the table above may be modified subject to the written consent of the City of Busselton.

2.3 All other site requirements are to be derived from the applicable R-Code or TPS provisions outlined in the table above.

2.4 No building envelopes apply to any of the lots, except those specifically shown on the Structure Plan map (Plan 1).

3. Servicing

3.1 Prior to issue of clearances, all lots must be connected to reticulated water to the satisfaction of the City of Busselton and Busselton Water.

3.2 On-site effluent disposal is to be via a secondary treatment and disposal system (Aerobic Treatment Unit), with nutrient removal capability as required by the relevant government policies/regulations.

3.3 As a condition of subdivision, a notification, pursuant to Section 70A of the Transfer of Land Act 1893 is to be placed on the certificate(s) of title of the proposed lot(s). The notification is to state as follows:

“A reticulated sewerage service is not available to the lot(s). As such, an on-site secondary treatment and disposal system for sewage, which includes nutrient removal, will be required. Therefore, the developable area of the lot is reduced. There are ongoing landowner obligations to ensure that the treatment and disposal system is regularly maintained in accordance with relevant health regulations. Contact the local government for further information.”

4. Fire Management

Prior to subdivision approval, a Bushfire Management Plan must be prepared that addresses fire management. The plan is to be prepared and implemented to the satisfaction of the City of Busselton and the Department of Fire & Emergency Services (DFES) of W.A.

5. Dust Management

Prior to any development or clearances of any subdivision of the land, a Dust Management Plan shall be prepared that addresses dust management at each and every stage of the development. The plan is to be prepared and implemented to the satisfaction of the City of Busselton ensuring that all policies of dust management endorsed by the City are met.

6. Traffic Noise Management

A Noise Management Plan is to be prepared and implemented as a condition of subdivision consistent with State Planning Policy 5.4.

7. Urban Water Management

Prior to subdivision approval, the proponent demonstrating to the satisfaction of the WAPC that drainage from the structure plan area can be adequately discharged into the drainage network in the broader locality and that any required easements and drainage works required in the broader locality will be provided.

8. Mosquito Management

8.1 A Mosquito Management Plan is to be prepared to the satisfaction of the City of Busselton and the Department of Health (Mosquito-Borne Disease Control Branch) and implemented prior to the issue of subdivision clearances.

8.2 A notification on the title of all lots stating that:

“The lot(s) herein, are within 5 kilometres of areas which are subject to mosquito activity at certain times of the year. In consequence, it is within the flight range of adult mosquitoes and there may be some potential for transmission of Ross River Virus and other mosquito-borne viral diseases. Further information may be obtained from the City of Busselton and the Health Department of Western Australia.”

9. Landscaping, Revegetation & Drainage

9.1 The preparation and implementation of a Landscaping, Rehabilitation and Maintenance Plan for the Revegetation Buffer, Reserve(s) for Drainage and Recreation, prior to issue of clearances. The plan shall also address weed management in these areas. The plan shall be to the satisfaction of the City of Busselton and the Department of Biodiversity, Conservation and Attractions.

9.2 Strategic revegetation linkages (to achieve visual relief and wildlife corridor function) are to be implemented prior to issue of clearances to the satisfaction of the Department of Biodiversity, Conservation and Attractions and City of Busselton. The linkages are to be thereafter maintained by the landowner to the satisfaction of the City of Busselton.

9.3 The preparation and implementation of a Wetland and Drainage Management Plan, to the satisfaction of the City of Busselton, Department of Biodiversity, Conservation and Attractions and the Department of Water and Environment Regulation, prior to subdivision clearances.

9.4 Prior to commencement of site works, any vegetation on site worthy of retention is to be identified and protected to the satisfaction of the City of Busselton.

9.5 Prior to commencement of any site works, any vegetation on-site worthy of retention is to be identified and protected to the satisfaction of the City of Busselton.

9.6 Road pavement shall be designed and aligned to avoid significant vegetation wherever possible within proposed road reserves to the satisfaction of the City of Busselton.

9.7 Rural fencing is to be installed by the subdivider prior to the issue of clearances to the satisfaction of the City of Busselton. The fencing must be appropriately co-ordinated with revegetation linkages that straddle boundaries.

10. Notification of Surrounding Agricultural Activity

A notification is to be placed on the Certificate of Title of all proposed lots to ensure that prospective purchasers are aware of the potential risks which may result from chemical spray drift, odour, dust, noise etc. that may emanate from the southern rural production lots and adjacent farmland from time to time.

11. Covenanted Setback Areas

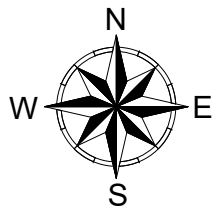
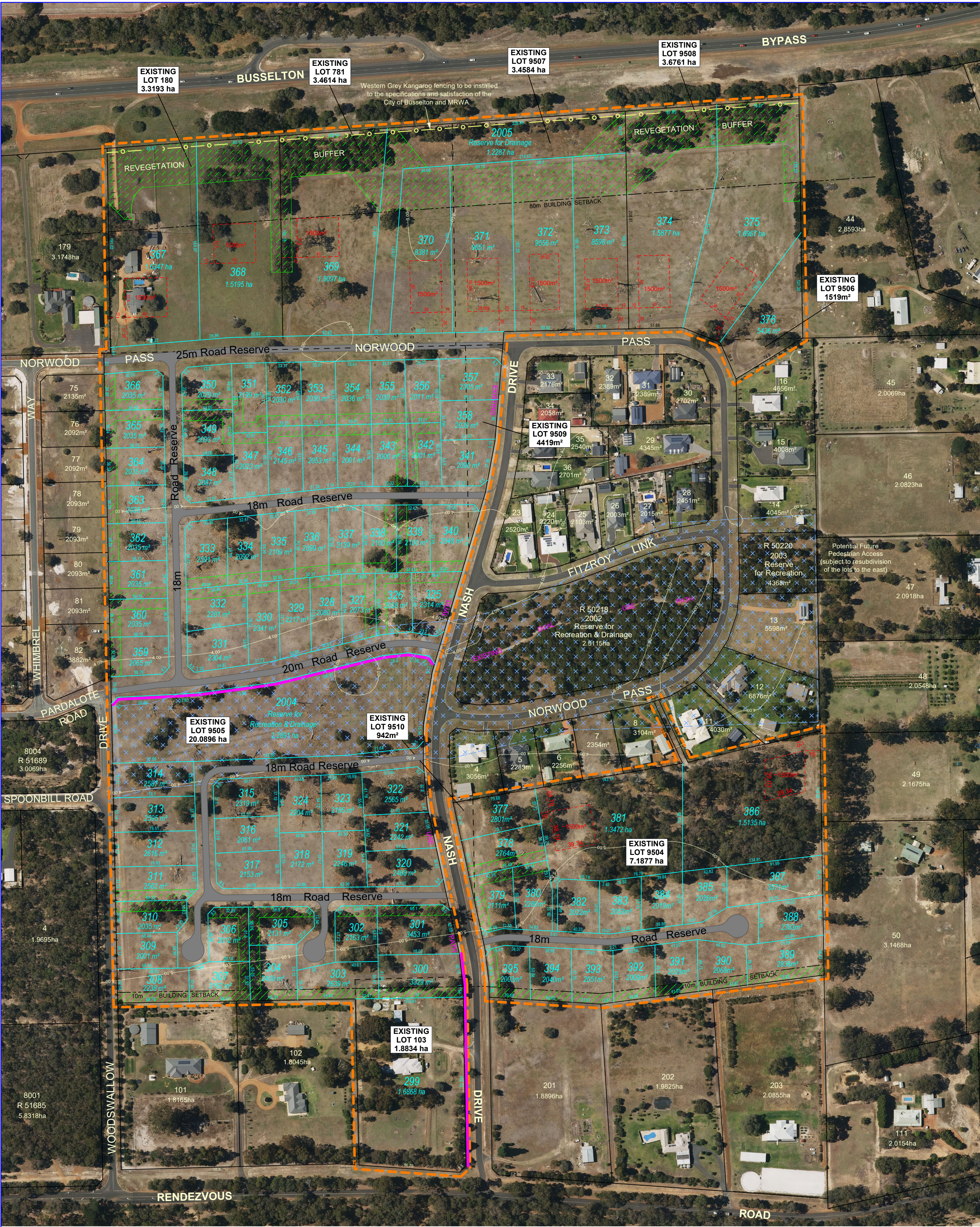
A restrictive covenant shall be placed on the Certificate of Title of proposed Lots 367 - 375 excluding development within the 80m setback from the Busselton Bypass reserve. The building setback line is 80 metres for all lots adjoining the bypass.

12. Restriction of Access to Bypass

A restrictive covenant is to be placed on the Certificate of Title of all proposed lots directly abutting the Busselton Bypass preventing access to this road.

13. Western Grey Kangaroo Management

Prior to subdivision clearances a Western Grey Kangaroo Management Plan must be prepared and implemented to the satisfaction of the City of Busselton and Department of Biodiversity, Conservation and Attractions.

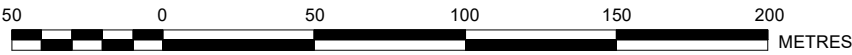


- LEGEND**
- Proposed Boundaries
 - Existing Boundaries
 - Structure Plan Area (Area = 43.7619ha)
 - Dual Use Path
 - Wetland Area (Pursuant to TPS)
 - Indicative Building Envelope (Maximum 1500m²)
 - Uniform Fencing
 - Indicative Road Alignment
 - Strategic Revegetation Linkages

- NOTES:**
- Landgate aerial imagery dated October 2020
 - Contours are AHD

AREA CALCULATIONS

Gross Land Area = 43.7619 ha (Comprising all of Lots 103, 180, 781 and Lots 9504 - 9510)	Net Area of Proposed Lots = 35.7145 ha Proposed Lot Yield = 97 Lots Proposed Average Lot Size = 3682m² Lot Range = 2000m² - 1.8097 ha
---	--



This drawing is the property of BSO Development Consultants and shall not be copied, displayed or reproduced in whole, or in part, for any other purpose than was originally intended unless written consent is given by BSO Development Consultants.

COPYRIGHT ©



Licensed Surveyors
Project Managers
Town Planning
Residential/Commercial Projects

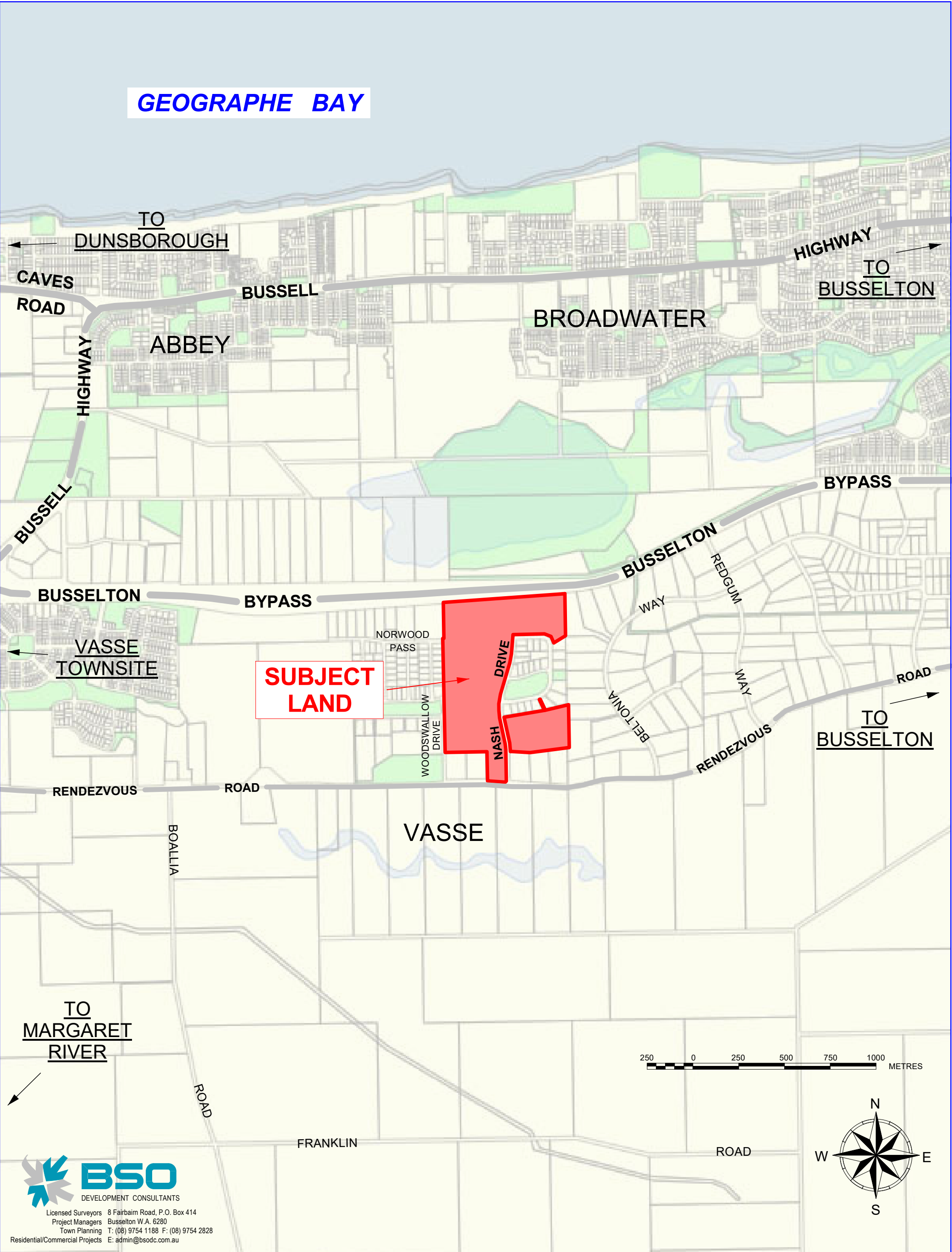
8 Fairbairn Road, P.O. Box 414
Busseton W.A. 6280
T: (08) 9754 1188 F: (08) 9754 2828
E: admin@bsodc.com.au

NASH DRIVE STRUCTURE PLAN

LOT 103 on DP46861, LOT 180 on P4918,
LOT 781 on DP33085 and
LOTS 9504 - 9510 on DP56807, VASSE

CITY OF BUSSETON

CLIENT	BAMBIL PTY LTD / COTTON HOLDINGS PTY LTD			
DRAWN BY	C. MILLER	DATE 15-6-2021		Rev
SCALE (A2)	1:2500	MAGNET JOB 1896_SP_A.mjo	PLOT	1896_STRUCT
DATUM	MGA94 / AHD	FILE 1896/1897		0



BSO
DEVELOPMENT CONSULTANTS
Licensed Surveyors 8 Fairbairn Road, P.O. Box 414
Project Managers Busseilton W.A. 6280
Town Planning T: (08) 9754 1188 F: (08) 9754 2828
Residential/Commercial Projects E: admin@bsodc.com.au

This drawing is the property of BSO Development Consultants and shall not be copied, displayed or reproduced in whole, or in part, for any other purpose than was originally intended unless written consent is given by BSO Development Consultants.
COPYRIGHT ©

LOCATION PLAN
NASH DRIVE,
VASSE

DP56807, DP46861, DP33085 & P4918

CITY OF BUSSELTON

CLIENT	BAMBIL PTY LTD / COTTON HOLDINGS PTY LTD			
DRAWN BY	C. MILLER		DATE	23-6-2021
SCALE (A3)	1 : 20,000	MAGNET JOB 1896_Location.mjo	DRAWING	Rev
DATUM	MGA94	FILE 1896/1897	1896_LOCAT	0



Part Two

EXPLANATORY SECTION



I PLANNING BACKGROUND

I.1 INTRODUCTION AND PURPOSE

The endorsed Structure Plan is the guiding document for future subdivision and development of the site. A copy of the current endorsed Structure Plan is contained in **Appendix 1** of this report.

The Nash Drive Structure Plan (Plan 1) is virtually identical to the endorsed Structure Plan, and is therefore compliant with the City of Busselton's Local Planning Scheme No. 21. The lot yield between Norword Pass and the Busselton Bypass has been reduced, recognising that this is a sewerage sensitive area due to the proximity of wetlands to the north side of the Busselton Bypass. It will allow for the rural residential development to proceed without connection to deep sewerage rather, all lots will be serviced with on-site effluent disposal via a secondary treatment and disposal system (Aerobic Treatment Unit) with nutrient removal capability, as per the adjoining rural residential subdivision immediately to the west.

Further details regarding the proposal for on-site effluent disposal and a comparison with the provision of reticulated deep sewerage is outlined later in this report.

2 GOVERNMENT SEWERAGE POLICY (SEPTEMBER 2019)

There is a general requirement for subdivision and development to be connected to deep sewerage in Western Australia. In some instances, on site effluent disposal may be considered, provided the requirements outlined by Schedule 2 of the Government Sewerage Policy can be achieved.

The Effluent Capability Assessment contained at Appendix 3 has previously been accepted by the governing bodies, and it has determined that secondary treatment Aerobic Treatment Units (ATUs) can be utilised within the site in fact, these have been successfully installed in the earlier stages of this development and also on the adjoining rural residential development to the west.

At the subdivision stage, it will be a requirement for the implementation of the Urban Water Management Plan contained at Appendix 2, and this may require some soil importation for the ATU irrigation areas on some lots to ensure the 0.6 metre separation to maximum groundwater levels – this has been successful on the existing developments in this locality.

With all lots proposed on the structure plan greater than 2,000 square metres in area to adequately accommodate the requirements of secondary treatment ATUs, the structure plan addresses the site requirements outlined in Schedule 2 of the Policy.

3 COMPARATIVE COST ANALYSIS – DEEP SEWERAGE VS. AEROBIC TREATMENT UNITS

3.1 Sewer Construction Costings 3.5klm Pressure Main

Cardno Engineers prepared a detailed costing estimate for the provision of deep sewerage to the structure plan area which is contained as Appendix 4. It includes a 3.5 kilometre pressure main and pump station to evacuate sewerage to the Water Corporation treatment plant located on Queen Elizabeth Drive. It is not possible to link in to nearby sewer pressure mains as they are operating at capacity.

The costing estimate amounts to \$5,482,727.25 including a 30% contingency, or **\$56,523.00 per lot** for the 97 lots contained on the structure plan. While this is a significant sum, the costing was reviewed by the Water Corporation and was considered a minimum figure, given the high potential for additional costs associated with dewatering, rock removal, increases in materials cost and significant traffic management requirements within the adjoining road systems.

The ongoing costs associated with running the sewerage system will also be significant in fact, they will be greater than the revenue raised from the collection of sewer rates from the 97 lots being serviced. For example, the power costs alone to run the sewer pump station will be more than \$100,000.00 per annum. Furthermore, much of the sewer infrastructure will be at maximum depths allowable by the Water Corporation, placing added pressure on the same and there is a high likelihood that ongoing maintenance and repair will be required to prevent any leakage from the system into the ground water, with these costs ultimately the responsibility of the Agency.

3.2 Aerobic Treatment System (ATU) Costs

Appendix 5 contains a current costing and example of the Servicing Agreement for the Fuji Clean system which has been utilised extensively in this locality, including the rural residential subdivision immediately to the west (The Woods Estate).

Currently, the Fuji Clean Secondary Treatment ATU system can be installed for **\$14,150.00 per lot**, with an additional provisional sum of \$2,600.00 for dewatering at the installation, depending on the time of year that this takes place. The Agreement requires that the ATU be serviced quarterly, for an annual fee of \$520.00, with annual power costs to run the ATU estimated at approximately \$150.00.

The annual fees to operate and maintain the Fuji Clean ATU are therefore far less than the equivalent annual fees charged by the Water Corporation, for provision of deep sewerage. This will be a financial benefit to landowners and importantly, the Water Corporation will not be running a sewerage system at a financial loss in perpetuity.

The Fuji Clean ATU is extremely reliable and industry proven in fact, it is seen as an environmentally and economically sustainable system for effluent disposal throughout Western Australia and is approved for use by the Department of Health.

4 CONCLUSION

The proposed amendment to the current endorsed Structure Plan has generally been prepared in accordance with the WAPC's "Structure Plan Framework" pursuant to *The Planning and Development (Local Planning Scheme) Regulations 2015*.

It specifically relates to the entire Structure Plan Area, accessed via Nash Drive and provides an opportunity to develop a low density lot configuration which has been previously approved, albeit with a reduced lot yield in the northern portion in acknowledgement of the wetland areas which exist to the north of the Busselton Bypass. On site treatment of sewerage via industry leading Fuji Clean Secondary Treatment ATU systems approved by the Department of Health is an economically and environmentally responsible solution for the location, and is consistent with the adjacent residential developments to the east and west.

The Subdivision and Development Guidelines outlined by the Structure Plan will provide appropriate guidance for future subdivision and development assessment over the site.



APPENDICES INDEX

Appendix 1: Endorsed Structure Plan

Appendix 2: Urban Water Management Plan (December 2016)

Appendix 3: Effluent Capability Assessment (September 2012)

Appendix 4: Cardno Engineering Deep Sewerage and Pressure Main Costing

Appendix 5: Fuji Clean ATU Costing Information and Servicing Agreement

