Town Planning Consultants

SHIRE OF AUGUSTA MARGARET RIVER

STRUCTURE PLAN
Lots 1, 2, 3, 5, 6, 7, 10, 11 & 12
Matthews Road, Augusta

December 2016
Updated October 2018

Proposed Structure Plan

Lot 1, 2, 3, 5, 6, 7, 10, 11 & 12 Matthews Road, Augusta

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Version Control

Report version	Revision No.	Purpose	Author	Review date by officer	Date
Draft	1	Structure Plan	MH		1/12/16
Draft	2	SP	MH		6/12/16
Final Draft	3	SP	MH		14/12/16
Updated	4	SP	MH		18/10/18

Approval for Issue

Name	Signature	Date

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

IT IS CERTIFIED THAT THIS STRUCTURE PLAN AMENDMENT

WAS APPROVED BY

RESOLUTION OF THE WESTERN AUSTRALIAN PLANNING COMMISSION ON:

3 DECEMBER 2018

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

an officer of the Commission duly authorised by the Commission pursuant to section 16 of the Planning and Development Act 2005 for that purpose

TABLE OF AMENDMENTS

Amendment No.	Summary of Amendment	Amendment type	Date approved by the WAPC
1	Includes lots 1, 2, 6, 7 and 12	Expansion of area	3 December 2018

EXECUTIVE SUMMARY

This Structure Plan relates to Lots 1, 2, 3, 5, 6, 7, 10, 11 & 12 Matthews Road, Augusta. Previously a Structure Plan was endorsed for Lots 3, 5, 10 & 11 however this document calls in that previous Structure Plan, brings it into the new format and adds Lots 1, 2, 6, 7, & 12. New investigations have occurred with respect to those lots and the explanatory section will refer to the various documents that have been prepared. It should therefore be noted that any justification for the Structure Plan relevant to Lots 3, 5, 10 & 11 are essentially comment on an already endorsed structure plan and format.

The intention is that this Structure Plan will therefore be one that incorporates lots that have been further investigated for subdivision within Matthews Road given all lots with frontage to Matthews Road have been the subject of a Scheme Amendment to facilitate a minimum lot size of one hectare providing for consolidation of lots in accordance with relevant policy.

The location of the subject area is indicated at Figure 1 below.



Figure 1 - Location of Structure Plan Area

The land use proposed includes provision for closer subdivision of rural residential lots to a minimum lot size of one hectare therefore providing for additional rural residential development and particularly dwellings in designated building envelopes.

As stated previously the Structure Plan supersedes and incorporates another approved Structure Plan for the original Lots, 3, 5, 10 & 11. (Previously endorsed Structure Plan attached). The summary table below provides for specific information regarding the Structure Plan area.

EXECUTIVE SUMMARY TABLE

Item	Data	Structure Plan Ref. (section no.)
Total area covered by the Structure Plan	33.41 ha including Matthews Road	
Area of each land use proposed: Rural Residential	Between 1 ha and 2 ha	
Estimated number of dwellings	18 additional	
Estimated percentage of natural area	15%	

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PART 1 - OPERATIONAL SECTION

1.1 Implementation

As stated previously the relevant area has been the subject of a Scheme Amendment to provide for a minimum lot size of one hectare with subdivision and development to be generally in accordance with the adopted Structure Plan for the land. The Structure Plan is already operative for Lots 3, 5, 10 & 11. This Structure Plan essentially carries over that previously adopted framework. Further, the relevant notations on the Structure Plan are essentially unchanged other than for the purposes of making reference to the new lots and to deal with the issues that present.

The Structure Plan is included at Appendix A and this indicates the location of building envelopes thus protecting environmental features. Reference is made to the location of *Bossiaea disticha* which should also be protected. Buffers are provided about the creekline system and a setback from national park to the west is also indicated.

A density to a minimum lot size of one hectare is provided for on the Structure Plan.

The movement network to be utilised for subdivision is the existing road network which provides multiple connections to the broader road network and provision of some battleaxe access arrangements where cojoint access is proposed in a number of instances. This would be through reciprocal rights of access arrangements.

Given the low density nature of the area no specific commercial, open space, education or community sites are provided for or are necessary.

1.2 Structure Plan Area

The Structure Plan area is indicated in Figure 2 below and refers to Lots 1, 2, 3, 5, 6, 7, 10, 11 & 12 Matthews Road, Diana Road and Lukes Road, Augusta.





1.3 Operation

The Structure Plan comes into effect on the date that the Structure Plan is approved by the WAPC. It should be noted that the Structure Plan is already operative for Lots 3, 5, 10 & 11 and adoption of this Structure Plan by the Planning Commission will therefore bring into effect the operation relevant to Lots 1, 2, 6, 7 & 12.

1.4 Staging

The staging of subdivision within the area will be dependent on choices made by individual landowners. There is no need to plan for staging of release of lots within Matthews Road. As the subdivision occurs within each lot, relevant requirements will be applied such as implementation of fire management requirements, construction of access, contributions towards upgrading of Matthews Road incrementally in accordance with the adopted strategy and the landscaping/revegetation. Such improvements are generally only required to service each particular subdivision. The subdivision of Lot 1 will require the installation of

an emergency access way through the eastern boundary of Lot 2 which is provided for within the Bushfire Management Plan.

1.5 Subdivision and Development Requirements

Subdivision shall be generally in accordance with the adopted Structure Plan providing for rural residential lots with a minimum lot size of one hectare. Appropriate notations are carried over from the previous adopted structure plan and minor additions made to address relevant issues for the new lots being introduced.

The following provisions apply within the structure plan area:

1. Subdivision and development shall be generally in accordance with the adopted Structure Plan for the land.

SUBDIVISION / DEVELOPMENT

- 2. Bushfire Management
- 2.1 This Structure Plan may be amended to provide for a suitable subdivision layout for lots 4, 8, and 9, subject to the requirements for Structure Plans being addressed.
- 2.2 At the time of subdivision, the endorsed Bushfire Management Plan shall be implemented to the satisfaction of the Local Government and the Department of Fire and Emergency Services
- 2.3 At the time of subdivision, a notification shall be placed on new titles advising of the requirement to comply with the endorsed Bushfire Management Plan.
- 2.4 To improve accessibility for fire tenders and the movement of wildlife, new lot owners are encouraged to fence building envelopes only. Fencing of new boundaries will require the planning approval of Council and the installation of gates to ensure accessibility.

2.5 All lots to have internal 3m perimeter firebreaks with fire service access gates between properties as detailed in the Bushfire Management Plan

3. Environmental Management

- 3.1. At the time of subdivision and development the recommendations of the relevant environmental assessment attached to the structure plan report shall be addressed. These include:
- a) Prior to development a site specific geotechnical report is to be undertaken to confirm the soil characteristics of each lot. Effluent disposal systems are to be of a type which is suitable for the spoil conditions as determined by the Local Government. Aerobic Treatment Units (ATU's) may be required in some circumstances.
- b) Suitable salt tolerant native vegetation is planted around the location of proposed disposal fields to improve evapotranspiration. Local native coastal species are recommended.
- c) The priority species Bossiaea disticha found on the road reserve near the subject site close to the intersection of Matthews Road and Diana Road is not to be disturbed/removed.
- d) All mature willow peppermints (diameter larger than 10cm) and Marri trees with an opening greater than 12cm in diameter (suitable for nesting) or 500mm trunk at breast height shall be retained where possible.
- 3.2 At the time of subdivision a landscaping / re-vegetation plan shall be prepared and implemented. The landscaping plan shall include details of rehabilitation (including species) and protection of the creekline.

4. General

4.1 Battleaxe legs and driveway cross-overs for all new lots shall be constructed to Council standards.

A strategy for the upgrading of Matthews Road shall be prepared in liaison with the Shire's Infrastructure

Department and shall be implemented in a staged approach at subdivision

Environmental features are protected by way of ensuring development is located within designated building envelopes generally provided in cleared areas. An environmental assessment has considered potential impacts and there are limited environmental features within the area given the subject site was previously predominantly cleared. An aerial photograph indicating the status of vegetation within the Structure Plan area in previous times (year 2000) is provided below.

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Figure 3 - Aerial Photo Year 2000

Some of the vegetation on the aerial above is already planted vegetation from occupation of lots. It is however evident that the majority of the area was devoid of vegetation at that time due to previous grazing activity.

Buffers and relevant hazard considerations include separation of new dwellings from the bushfire risk provided by the national park to the west, setbacks from the creekline system through the centre of the Structure Plan area and recognised buffers from adjoining properties by strategic location of building envelopes and consideration of vegetation between building envelopes and adjoining lots.

As stated previously, staging of subdivision will essentially be on a lot by lot basis with timing determined by individual landowners. This is common practice within areas recently subdivided for rural residential purposes.

As stated no commercial, public open space, community infrastructure or education requirements are applicable for the Structure Plan area.

The proposal will achieve better use of land already committed for rural residential which is an objective of the Local Planning Strategy and is also reflective of the higher order State Planning Policy LNRSPP. These broad strategic documents have recognised the underutilised nature of rural residential areas west of Augusta and promoted re-subdivision to a minimum lot size of one hectare.

Given the specific nature of the Structure Plan and the low density applied there is no need for Local Development Plans within this area.

With respect to infrastructure, upgrading of Matthews Road is already identified as a necessary action and a strategy has already been developed for this. Contributions will be made to the widening of Matthews Road to 6 metres in width to Shire requirements. Some lots have alreadt been subdivided and made a contribution to this objective.

The Structure Plan also provides advice with respect to environmental management including specific information on particular effluent disposal systems, protection of mature peppermint trees, Marri trees and *Bossiaea disticha* and ensuring buffers from the creekline system.

PART 2 – EXPLANATORY REPORT

2.1 Planning Background

2.1.1 Introduction and Purpose

Halsall & Associates Town Planning Consultants originally prepared a Structure Plan for four lots within the Matthews Road area (Lots 3, 5, 10 & 11) and some of these lots have already been approved for subdivision and some subdivided. Additional landowners within the Matthews Road area have now approached Halsall & Associates with a view to extending the Structure Plan to incorporate their lots. This includes Lots 1, 2, 6, 7 and 12. The area has previously been the subject of a Scheme Amendment to permit a minimum lot size of one hectare subject to adoption of a Structure Plan.

The purpose of this Structure Plan is to bring forward into the new format the existing Structure Plan for Lots 3, 5, 10 and 11, but also justify the extension of the Structure Plan to include the additional lots.

2.2 Land Description

2.2.1 Location

The location of the site is identified at Figure 4 below. This indicates that the Structure Plan relates to most lots with frontage to Matthews Road situated approximately 2.75 km directly west, northwest of the Augusta town centre. This is therefore a short distance via both car and bicycle to the amenities provided in the town. An open road network provided access both south and north out of the subject area.

Figure 4 – Location Plan



2.2.2 Area and Land Use

The subject area has been developed for rural residential purposes however previously it was a grazing property under one farm holding. Currently each lot is generally occupied by one dwelling however Lots 3, 5, 10 and 11 have already been the subject of subdivision consideration and some dwellings may be developed in new building envelopes shortly.

The area has been considered for continued rural residential living with smaller lot sizes given and this is the subject of this Structure Plan. The Structure Plan area therefore incorporates nine existing rural residential lots varying between 3 ha and 5 ha in size.

2.2.3 Legal Description and Ownership

The subject lots are described as follows: Lots 1, 2 & 12 Diana Road, Lots 3, 5, 6, 10 & 11 Matthews Road and Lot 7 Lukes Road, Augusta. All lots are owned individually by separate landowners/families.

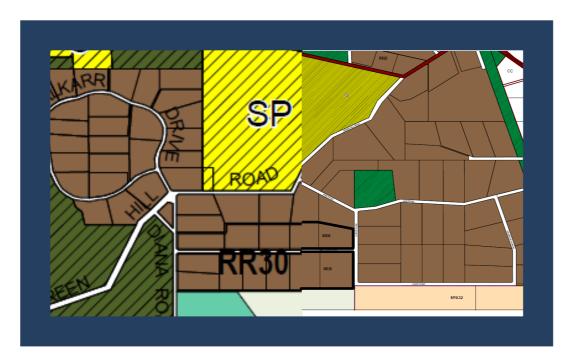
2.3 Planning Framework

2.3.1 Zoning and Reservations

The subject area is zoned Rural Residential under the Shire of Augusta Margaret River's Local Planning Scheme No.1. The area is also included within identified Rural Residential area RR30 which is referenced at Schedule 11 of the Scheme and includes provisions informing that subdivision and development shall be generally in accordance with the adopted Structure Plan for the land and that the minimum lot size should be one hectare.

A plan indicating the zoning of the relevant land is provided at Figure 5 below.

Figure 5 - Zoning Plan



Also evident on the zoning plan is the fact that land to the north, east and south is generally zoned similarly however to the west land is identified/reserved for National Park purposes and to the south west a portion of Lot 572 is zoned Leeuwin Ridge Landscape Amenity Zone and General Agriculture Zone. To the south east is an area of land identified for urban purposes.

2.3.2 Clause 1.3.2 – State Planning Policy

Under the State Planning Framework the subject area falls within the Leeuwin Naturaliste Ridge State Planning Policy (LNRSPP) area.

The subject site is situated within an area designated for Rural Residential in accordance with the Leeuwin Naturaliste Ridge State Planning Policy (LNRSPP), as provided in Figure 6 below. Policies of the LNRSPP provide that the better use of land already allocated for Rural Residential should be investigated. Specifically policy statements include:

- "LUS1.25 Subdivision and development design that facilitates better use land of land already committed for rural residential development will be encouraged. Assessments of proposals will address the following criteria:
 - provision for clustered settlement

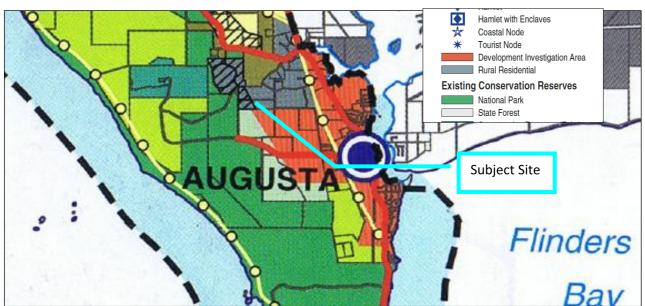
- provision of community based activities and services
- provision for walking, cycling and possible future public transport
- opportunities for local enterprise development such as limited small scale tourist
- development, including accommodation, attractions and cottage industries and
- suitability for small scale intensive agriculture."

Further, LUS1.28 provides guidance specific to rural residential surrounding Augusta as follows:

• "LUS1.28 the consolidation of existing and committed rural residential land use surrounding Augusta will be permitted where there is not detrimental impact on the Leeuwin Naturaliste Ridge National Park".

Figure 6 - Excerpt LNRSPP mapping

Source: WAPC



The LNRSPP provides scope for better use of land in the area consistent with its key objectives. The following section demonstrates that the proposal meets the objective of the LNRSPP.

The proposed amendment and future subdivision of the twelve lots –

- intends to cluster settlement through the application of building envelopes as shown on the structure plan.
- does not require upgrading of walking or cycling facilities.

• will local enterprise and small scale intensive agricultural activities to continue in accordance with the provisions of LPS No. 1.

It is noted that community based activities or services do not appear to be present.

The land use strategy map also indicates that the western extent of the subject site is within the National Park influence area. This area is guided by policy statement LUS3.17. The policy statement recognises that the underlying land use designation (Rural Residential) applies. Land uses will need to be compatible with the conservation and landscape values of the ridge. Remnant vegetation should be retained where possible other than for approved building envelopes. The proposed structure plan is consistent with this policy statement and new dwellings facilitated will be situated further from the National Park than existing dwellings.

In addition, it is also recognised that the inter-relationship between development and the National Park needs to be embody "good neighbour principles" to avoid potential impacts both ways. It is noted that no 'new' development is proposed within a 100 metre setback to the National Park.

Fire hazard considerations have been considered through the preparation of a Bushfire Management Plan, refer to Appendix D. Further detail relating to the fire assessment is provided in Section 2.5.4.

Three of the lots the subject of this proposal are opposite the National Park. The proposal applies building envelopes to existing development (within 100 metres of the National Park) and ensures that future lots contain building envelopes greater than 100 metres of the National park. Under LPS No 1, uses require approval and can be assessed in relation to potential impact on the National Park.

The Leeuwin Naturaliste Ridge State Planning Policy provides that re-subdivision of the subject site should be encouraged providing relevant issues are addressed. It is considered that all relevant considerations of the LNRSPP have been addressed.

2.3.3 Local Planning Strategy

The Local Planning Strategy carries over the objectives of the Leeuwin Naturaliste Ridge State Planning Policy. This promotes better use of land already committed for rural residential with clustered forms of development encouraged to minimise the environmental footprint and to provide for proper bushfire management planning taking into account retention of landscape values and allowing rural pursuits where possible.

The strategy outlines that a typical density of one lot per hectare will be considered and subject to environmental, landscape and amenity considerations regard will be given to the consolidation of existing rural residential areas subject to appropriate investigation and amendment to any Scheme provisions and any associated Structure Plan.

The strategy outlines the importance of landscape assessment and indicates that the subject site is within both Visual Management Areas A and C. Both Areas A and C encourage development or a change of use in a similar form, scale and pattern to existing landscapes. The proposed building envelopes in the majority are secluded and low down in the landscape. It is only within the western extents of the parent Lots 1, 2 and 12 Matthews Road where a rising contour may indicate visibility of buildings. A Visual Assessment has been prepared in support of the originally proposed Scheme Amendment and Structure plan but extended across the entire area. In brief the Visual Assessment concludes that the proposed amendment, and subdivision layout (as provided in the appended Structure Plan), protects the recognised landscape values and complies with the relevant visual management policies. Section 5.2.3 provides further detail of the Visual Assessment.

Bushfire management planning is considered important in keeping with the typical requirements of the WAPC Planning for Bushfire Protection. A BMP has been previously approved for Lots 3, 5, 10 and 11 and now fire planning has been prepared for Lots 1, 2 6, 7 and 12. The key fire management requirements documented in the Bushfire Management Plan referred to in a later section.

The proposal is consistent with the objectives of the Local Planning Strategy as it is an opportunity to consolidate existing land use identified for Rural Residential without impacting on environmental quality, visual amenity and with appropriate fire management methodology incorporated. Further, a clustered

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approach to development has been employed for some of the building envelopes and this assists in ensuring that development is sited appropriately. The area has also already been zoned for this objective.

2.3.4 Planning Policies – Policy PE6 Visual Management – Shire of Augusta Margaret River

An assessment of the requirements of this policy is necessary such that it can be demonstrated that future development will comply with requirements relating to visual amenity particularly when viewed from public areas.

A Visual Landscape Assessment Report (Visual Assessment) has been prepared by William James Landscape Architect and is appended to this report. The Visual Landscape Assessment applies to the entirety of the subject area.

In accordance with Policy PE6 Visual Management, the subject site is partly located in Visual Management Zones A and C.

The Visual Quality Objective for Zone A is that,

"Developments or changes in land use should result in inevident visual alteration to the landscape. This is not to say that changes cannot occur, but rather that the development or change in land use should be of similar form, scale and pattern to the existing landscape."

The Visual Quality Objective for Zone C is that,

"Developments and changes of use may be visually dominant, however should borrow from the naturally established form, line, colour and texture to be compatible with the existing landscape."

The Visual Assessment concludes that the proposed amendment, and subdivision layout (as provided in the appended Structure Plan), protects the recognised landscape values and complies with the relevant visual management policies. This conclusion is based on the following:

- The development will not be visible from any significant viewing locations.
- The degree of change to landscape values is very low when viewed from neighbouring local roads.
- There will be moderate visual impact on neighbours in the short term (three years) and low impact in the medium to long term.

- The visual impact of one additional dwelling satisfies Visual Management Objectives for Landscape
 Character, Landscape Significance, Wilderness Quality and Views.
- The visual impact of the proposed development will not detract from the landscape values.
- The proposed development will comply with the relevant local and state government landscape protection policies.

2.4 Other Approvals or Decisions

As stated previously, a Structure Plan has already been endorsed for Lots 3, 5, 10 and 11 and a copy of this original Structure Plan is provided at Appendix B. This document provides the justification for planning objectives to within those lots.

2.5 Site Conditions and Constraints

2.5.1 Biodiversity and Natural Area Assets

To assess the attributes of the area a report has been prepared (Environmental Assessment) by Environmental and Landscape Management (Sean Smith). A copy of this report is included at Appendix C. It should be noted that a previous assessment was also undertaken relevant to Lots 3, 5, 10 and 11 and that is included at Appendix 2. The Environmental Assessment considers the physical environment assesses the biological environment and conservation status of flora, vegetation and habitat and also reviews ground characteristics for effluent disposal. Black Cockatoo and Western Ring Tailed Possum habitat is also considered.

Most of the vegetation found on the overall site consists of introduced species either growing as pastures, screening or garden plants. No rare species were identified during the field survey and a list of native species found across the site is provided in the report. Some *Bossiaea disticha* was observed in the road reserve generally adjacent to the intersection of Diana Road and Matthews Road. It is noted that this has now been de-listed as a priority species however given the location of these plants they need not be affected by the proposal given dwellings already exist adjacent to these plants.

There are some areas of established grass trees and groves of willow peppermint and these are situated near building envelopes but are not likely to be affected by building activity. The streamline contains some

Cowaramup valleys (CW1) vegetation association however this is within the previous Structure Plan area.

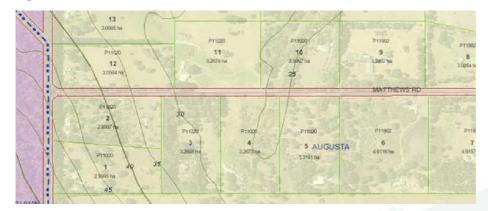
Discussion with respect to the characteristics of the area from an environmental perspective confirm that there are no declared or rare flora and that *Bossiaea disticha* can be protected which is already noted under the previous Structure Plan. The vegetation across the area is generally introduced however there are some native species of grass tree within Lot 6. Given the highly disturbed condition of vegetation it is not considered there are any significant remnants within the subdivision area.

With respect to Black Cockatoo habitat, trees that can provide opportunities for breeding (generally Marri trees over 500mm diameter at breast height) should be protected. All building envelopes should generally be located to avoid such habitat trees. There are a number of willow peppermints throughout the area which can provide habitat for Western Ring Tail Possums. Most of such trees can be protected and additional planting can enhance habitat by utilising peppermint trees. It is considered that the overall review of the vegetation of flora characteristics of the area results in limited implications for the objectives of the Structure Plan given the building envelopes have selectively been chosen predominantly in cleared areas or where notable environmental features can predominantly be avoided.

2.5.2 Landform and Soils

The Structure Plan area falls within an area of land at the base of the Leeuwin Naturaliste Ridge (forming the lower eastern slopes). The western parts of the Structure Plan area rise up in contour and a low point is around the centre of the Structure Plan area where there is an intermittent creekline. The contours of the site are evident in Figure 7 below.

Figure 7 - Contour Plan



The soils of the area were analysed by Tille and Lantzke in 1990 and documented in their study on behalf of Agriculture WA. An excerpt from the diagram is provided in that report and it is included at Figure 8 below.

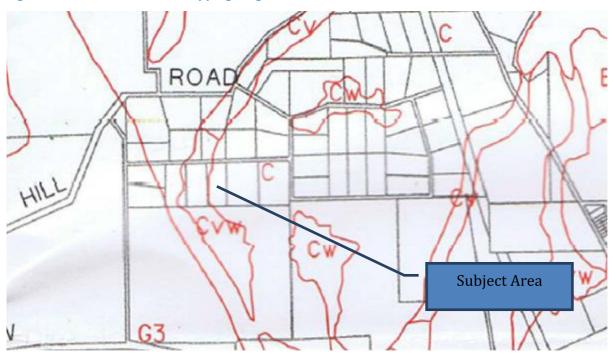


Figure 8 - Tille and Lantzke Mapping - AgWA 1990

As evident in the figure above it is noted that the soils within the central parts are of the Cowaramup Upland system with Cowaramup Wetvales/Cowaramup Vales along the creekline system and Cowaramup Flats either side. A small section of soils of the Gracetown Ridgeland system exist within Lots 2 and 12 and predominantly in the western parts of these lots. These soils are of the Gracetown Low Slopes classification.

Characteristics of the soils are similar to those that are predominant within the rural residential areas west of Augusta and also west of Margaret River.

2.5.3 Ground Water and Surface Water

A detailed effluent disposal assessment was undertaken and this is included at Appendix C. This involved the digging of a number of test pits across the area to a depth of 2 metres to observe ground conditions and suitability for onsite effluent disposal. A benefit of such testing is also that depth to ground water can

be observed. It was noted that generally the ground water table within test pits dug within Lots 1, 2, 6, 7 and 12 were either at 1.9 metres or deeper. The assessment of ground conditions as provided in the report was undertaken in October 2016 which was generally a wet winter and as such results probably exhibit end of winter high ground water levels. Ground water depths are also indicated in the report that supplemented the Structure Plan document for Lots 3, 5, 10 and 11 which is closer to the creekline system. Ground water levels were generally acceptable for onsite effluent disposal in the building envelopes identified in those areas. Recommendations are made for onsite effluent disposal methods and these are included as notations on the Structure Plan.

Generally the above ground water sources are limited the creekline system when it is flowing and small excavated dams which are evident when in the Structure Plan.

2.5.4 Bushfire Hazard

The subject area falls within a bushfire prone area as identified by DFES. The area is already the subject of a Bushfire Management Plan prepared to support the original Structure Plan relevant to Lots 3, 5, 10 and 11. An additional Bushfire Management Plan has been prepared to cover the previous the additional lots now being incorporated into the Structure Plan including Lots 1, 2, 6, 7 and 12. The Bushfire Management Plan is included at Appendix D.

In summary, the Bushfire Management Plan addresses the State Planning Policy 3.7 – Planning in Bushfire Prone Areas. This includes consideration of Bushfire Attack Levels, water supply, access, fire breaks, asset protection zones and addresses the relevant requirements of policy ultimately in forming the Structure Plan proposal. The principles embodied within the Bushfire Management Plan are similar to those recently endorsed for existing lots within Matthews Road.

A benefit of the proposal is that dwellings already exist adjacent to the area of the most significant risk (national park to the west) and all new lots proposed are situated further from the national park with access to Matthews Road either directly or via emergency access way. This provides that no new dwelling sites are being provided within immediate proximity of the national park and alternate means of access is provided away from this area of risk.

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It is considered that the Bushfire Management Plan provides justification for the Structure Plan expansion relevant to Lots 1, 2, 6, 7 and 12.

2.5.5 Heritage

There are no known indigenous or western heritage sites within the Structure Plan area.

2.5.6 Coast and Foreshores

The foreshores of the creekline system are identified on the Structure Plan with a 20 metre landscape protection zone implemented consistent with scheme provisions relevant to this.

2.5.7 Effluent Disposal Capability

To demonstrate effluent disposal capability a report was prepared was by Sean Smith of Environmental and Landscape Management and this is included at Appendix C. This involved digging of test pits across the lots to be included in the Structure Plan area with a total of 11 pits excavated. Tests were undertaken with respect to depth to ground water, phosphorus retention index, proximity to streams and water bodies, position relevant to flood hazard area, permeability, slope, stone content, dispersible clays and depth to rock. As a result of such investigations an overall assessment was conducted with relevant wastewater recommendations made. Recommendations included the following:

- Septic tank and effluent disposal systems are approved for use on proposed new Lots 102, 103, 105, 106, 121 and 123.
- The septic tank and effluent disposal systems are approved for proposed new Lots 116, 119 and 120 with inverted leach drains and soil amendments to increase PRI where appropriate.
- Aerobic treatment units are approved for effluent disposal for proposed new Lots 117 and 132.
- A suitable soil amendment is added to the disposal fields to increase the phosphorus binding capacities of the soils to increase the PRI above 20 with there the soil PRI is lower for soils on Lots 106, 116, 117, 119 and 132.
- Suitable soil tolerant native vegetation is to be planted around the location of proposal fields to improve evapotranspiraton, local and native species are ideal for this purpose.

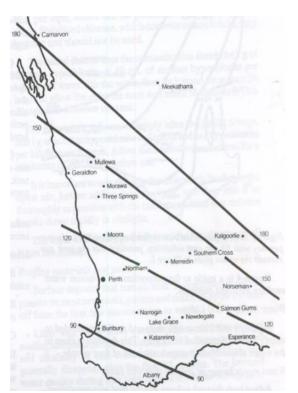
To address the recommendations of the effluent disposal report modifications have been made to the

notation on the Structure Plan to provide such guidance.

2.5.8 Servicing

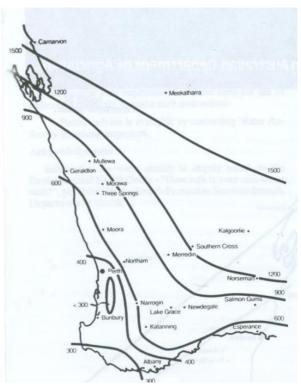
- The subject site is currently provided with an overhead power supply located in Matthews Road.
 Underground power connections can be extended to new lots with pillars installed at appropriate locations. Similarly Telstra supply the area and this service can be extended.
- Water supply is provided to each dwelling by a water tank. It is noted that under Clause 4.21.6(f) of LPS No. 1 'each dwelling within the Rural Residential zone must have a water storage tank in accordance with Clause 5.22'. This is so that a dwelling is provided with a minimum capacity of 120,000 litres of potable supply and for fire fighting services additional supplies are required up to a capacity of 135,000 litres. Further 'a roof catchment area of no less than 200 m² inclusive of any outbuildings is to be provided unless connection to reticulated scheme water is provided'.
- In additional to the above Scheme requirement an analysis of advice from the Western Australian Department of Agriculture has also been undertaken.
- Farm Note 84/90 advises that typical house water needs determined following a detailed survey showed that the average daily in-house water use was 150 litres per person per day. Average daily use during February was also generally 20% more than in August. For water supply design purposes, a water demand can be assumed to be within the range of 110 to 180 litres per person per day. The study also indicated that the water use per person decreased as the number of people in the household increased.
- The information indicates that in order to provide 600 litres per day for the Augusta area approximately 300m² of roof catchment is required to supply 90,000 litres of water tank volume in order to have 98% reliability. Given the Scheme requires 135,000 litre water tank a 200m² catchment as required by the Scheme must have therefore been considered acceptable. Diagrams from Farm Note 84/90 illustrating tank sizes and roof catchment as provided at Figure 9 below for information purposes.

Figure 9 – Water Tank Supply Information



Indicates water tank size requirements for household. 90,000 - 180,000litres

Source : AgWA

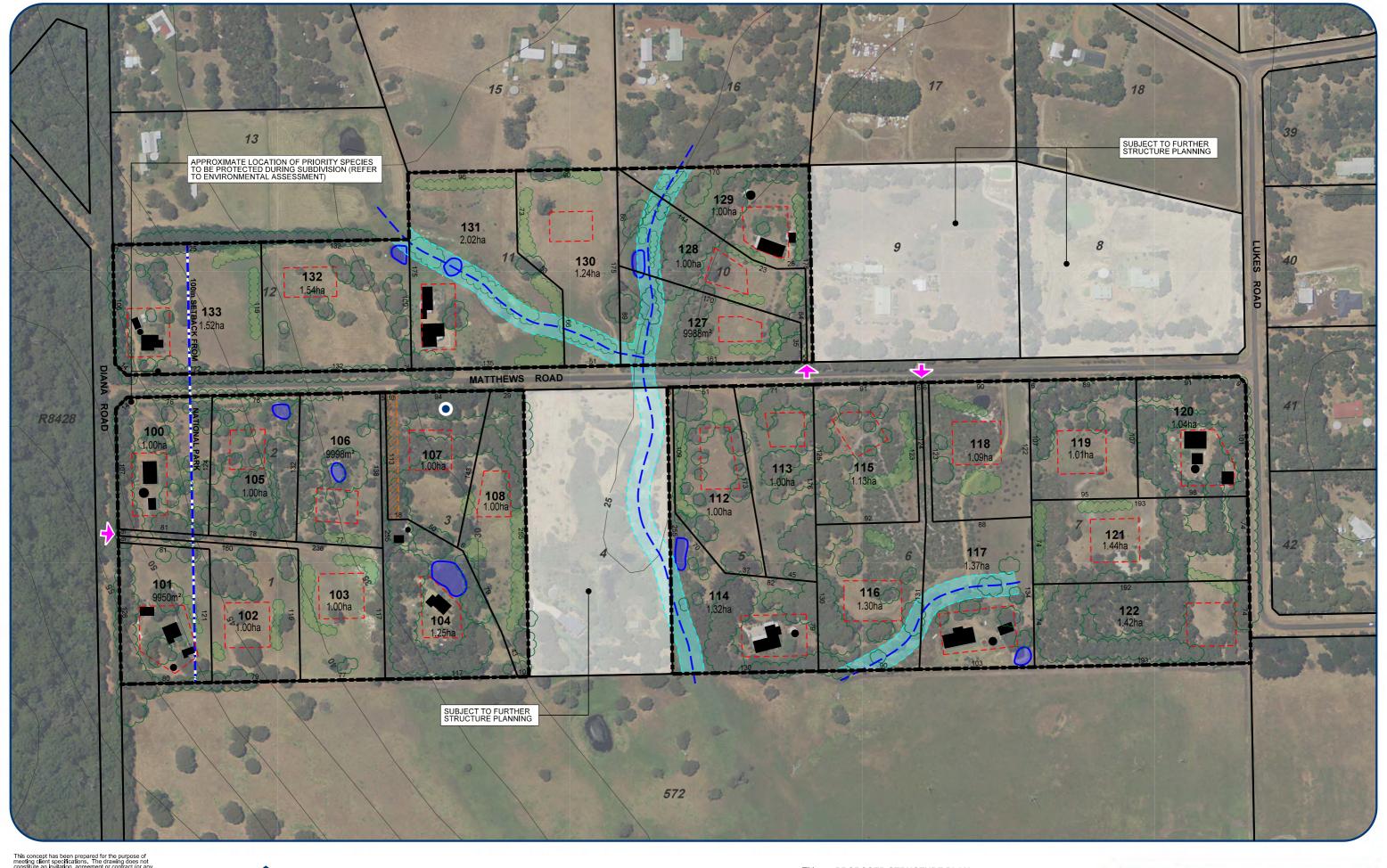


Indicates necessary roof catchment typical in square metres to supply tank

- The above information and that contained within the Scheme demonstrates that on site water supply can be sufficient in such situations. It is also noted that the Scheme considers provision of additional water tank volume for fire fighting purposes.
- Recent decisions by the Shire and the WAPC have permitted re-subdivision of Rural Residential without the expansion of reticulated water supply. A notable example of this is at Heron Drive, Margaret River. There are probably two reasons for this flexibility being exercised and the first would be in the interests of sustainability and the second would be due to the fact that the Scheme and available information demonstrates that adequate on site supplies can be obtained from water tanks and roof catchment given the average rainfall of the area.
- Servicing of the area as outlined above can be considered acceptable and generally consistent with recent decisions of the Shire and the Western Australian Planning Commission.

TECHNICAL APPENDICES INDEX

Appendix No.	Document Title	Date of Document
Α	Structure Plan	December 2016 Rev R
В	Original Structure Plan for Lots 3, 5, 10 & 11	February 2015
С	Environmental Assessment/Effluent Disposal	October 2016
	Report	
D	Bushfire Management Plan	Version 1.2
1	Original Visual Assessment	July 2013
2	Original Environmental Assessment	August 2013



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All areas and dimensions shown on this drawing are subject to final survey.

Aerlal Photograph date - 12/2013

metres LEIGHTON bleighton@we STRUCTURE PLAN AREA LOT BOUNDARY

PROPOSED BUILDING ENVELOPE EXISTING BUILDING / STRUCTURE ACCESS EASEMENT

INDICATIVE LANDSCAPING AND REHABILITATION > EXISTING VEGETATION

CREEK WITH 20m LANDSCAPE PROTECTION ZONE EXISTING DAM

■ ■ NATIONAL PARK SETBACK



RECIPRICOL USE CO-JOINT BATTLEAXE LEGS BLUEGUMS TO BE REMOVED

•••••• STANDS OF GRASS TREE

PROPOSED STRUCTURE PLAN -

LOTS 1, 2, 3, 5, 6, 7, 10, 11 & 12 MATTHEWS ROAD, AUGUSTA.

Date: October 2018

Scale: 1:3,000@A3 Revision No: R

