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# Structure Plan

Lot 4422 Weld Road, Capel

February 2019

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PREPARED BY





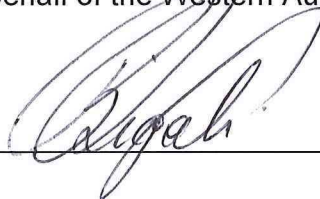
## Endorsement page

This Structure Plan is prepared under the provisions of the Shire of Capel Town Planning Scheme No.7

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

14 - FEBRUARY - 2019 Date

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, in the presence of:

Tayn Cox Witness

14 - FEBRUARY - 2019 Date

14 - FEB - 2029 Date of Expiry



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#### Table of amendments

Amendment No.	Summary of the Amendment	Amendment type	Date approved by Commission



# EXECUTIVE SUMMARY

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This Structure Plan has been prepared to guide the subdivision and development of land contained within Lot 4422 Weld Road, Capel.

The Structure Plan Area comprises 6.118 hectares and is located approximately 1.5km south east of the Capel town centre. It forms part of the Shire of Capel local government area and is identified under both the Local and Regional Planning Scheme's for future urban land use.

The landowner (Riverbeach Holdings Pty Ltd) intends seeks to subdivide the land with an approximate yield of 20 special residential lots based on the R5 density code, as generally supported by the relevant planning framework.

The consultant project team involved with the preparation of this Structure Plan is as follows:

- LB Planning - Town Planning and Design;
- Wood & Grieve Engineers - Engineering Servicing Assessment;
- Ecosystem Solutions – Environmental and Bushfire Assessment;
- Civil/Structural Consulting Pty Ltd – Water Table/Effluent Disposal Study & Geotechnical Investigation; and
- Shawmac - Transport Assessment.

The Structure Plan has been prepared to support residential land use and development of the site, based on larger lots to service the residential needs of Capel.

The key planning objectives that have been applied to formulate the plan are as follows:

- Recognise townsite expansion and specific residential living opportunities for future residents in the Shire of Capel, as envisaged by the Council's Land Use Strategy and Town Planning Scheme;
- Contribute to preserving the character and appeal of the surrounding locality;
- Acknowledge the environmental features of the site whilst supporting efficient use of the land for future housing by applying an appropriate residential density;
- Ensures that the existing character of the locality is maintained through the application of a vegetation buffer along weld road and the location of an internal road;
- The proposed layout will create greater efficiency in terms of developing land which is well serviced, is highly accessible and which will have minimum impact on the receiving community and environment; and
- Recognise surrounding land which has been identified for urban expansion and provide infrastructure which does not compromise future planning and development.

This Structure Plan has been prepared in accordance with the relevant planning framework and will provide appropriate guidance to future subdivision and development assessment of the land.



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<b>Appendix B</b>	<b>Geotechnical and Effluent Disposal Assessment</b>
<b>Appendix C</b>	<b>Engineering Servicing Assessment</b>
<b>Appendix D</b>	<b>Transport Assessment</b>
<b>Appendix E</b>	<b>Bushfire Management Plan</b>
<b>Appendix F</b>	<b>Certificate of Title</b>



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# Part One

## IMPLEMENTATION

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## **1 STRUCTURE PLAN AREA**

This Structure Plan shall apply to Lot 4422 Weld Road, Capel, being the land contained within the inner edge of the broken black line shown on the Structure Plan Map (**Plan 1**).

For the purposes of this report it is referred to as the *Structure Plan*.

## **2 OPERATION**

This Structure Plan commences operation on the date it is approved by the Western Australian Planning Commission and is valid for a period of ten years from such time. Due regard to its intent and specific provisions shall be given when considering future subdivision and development of the land

## **3 STAGING**

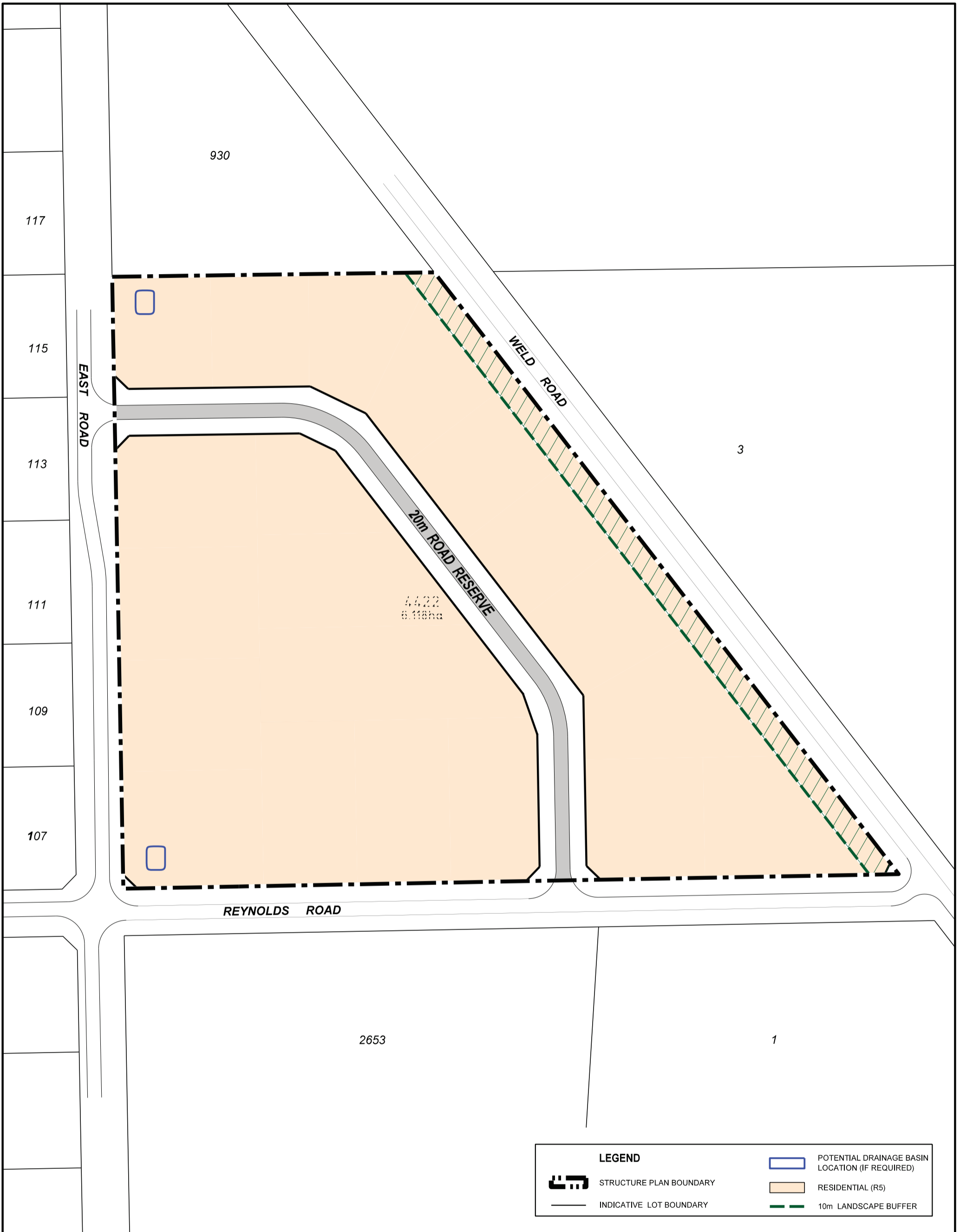
Given the subject land is relatively small in area, it is envisaged that its future subdivision will be undertaken in one single stage.

## **4 SUBDIVISION AND DEVELOPMENT REQUIREMENTS**

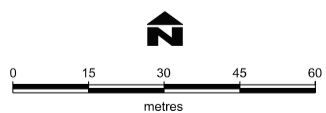
This Structure Plan provides a guide for the future subdivision and development of Lot 4422 Weld Road, Capel.

Although not limited to, issues in relation to bushfire management, acid sulphate soils, wastewater disposal and flora/fauna protection, shall be addressed at the subdivision implementation stage.





LEGEND	
	STRUCTURE PLAN BOUNDARY
	INDICATIVE LOT BOUNDARY
	POTENTIAL DRAINAGE BASIN LOCATION (IF REQUIRED)
	RESIDENTIAL (R5)
	10m LANDSCAPE BUFFER



**NOTES**

Base data supplied by Landgate  
 Projection - GDA94  
 Areas and dimensions shown are subject to final survey calculations.  
 All carriageways are shown for illustrative purposes only and are subject to detailed engineering design.  
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**PLAN 1**

SCALE : 1:1,500 @ A3  
 DATE : 5 February 2019  
 PLAN No : 4422 Capel LSP\_V1.0\_20180321  
 REVISION : A  
 PLANNER : SLB  
 DRAWN : BL

**STRUCTURE PLAN**  
 Lot 4422 Weld Road, CAPEL



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# Part Two

## EXPLANATORY SECTION

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## 1 INTRODUCTION

LB Planning has been appointed by the owner of Lot 4422 Weld Road, Capel (the site) to prepare a Structure Plan in respect of the site (**Plan 1**).

The land is zoned “Urban Development” zone under the Shire of Capel Town Planning Scheme No. 7 (the Scheme) which requires an approved Structure Plan prior to development and / or subdivision of the land.

The site also falls within “Development Precinct No. 4 – Weld Road” and while it only forms part of the precinct area, Council and Department of Planning, Lands and Heritage (DPLH) officers have confirmed acceptance to considering a Structure Plan for the subject site only.

This position is based on the landowner’s intent to progress subdivision of the land at a density of R5 which will facilitate an approximate yield of 20 special residential allotments.

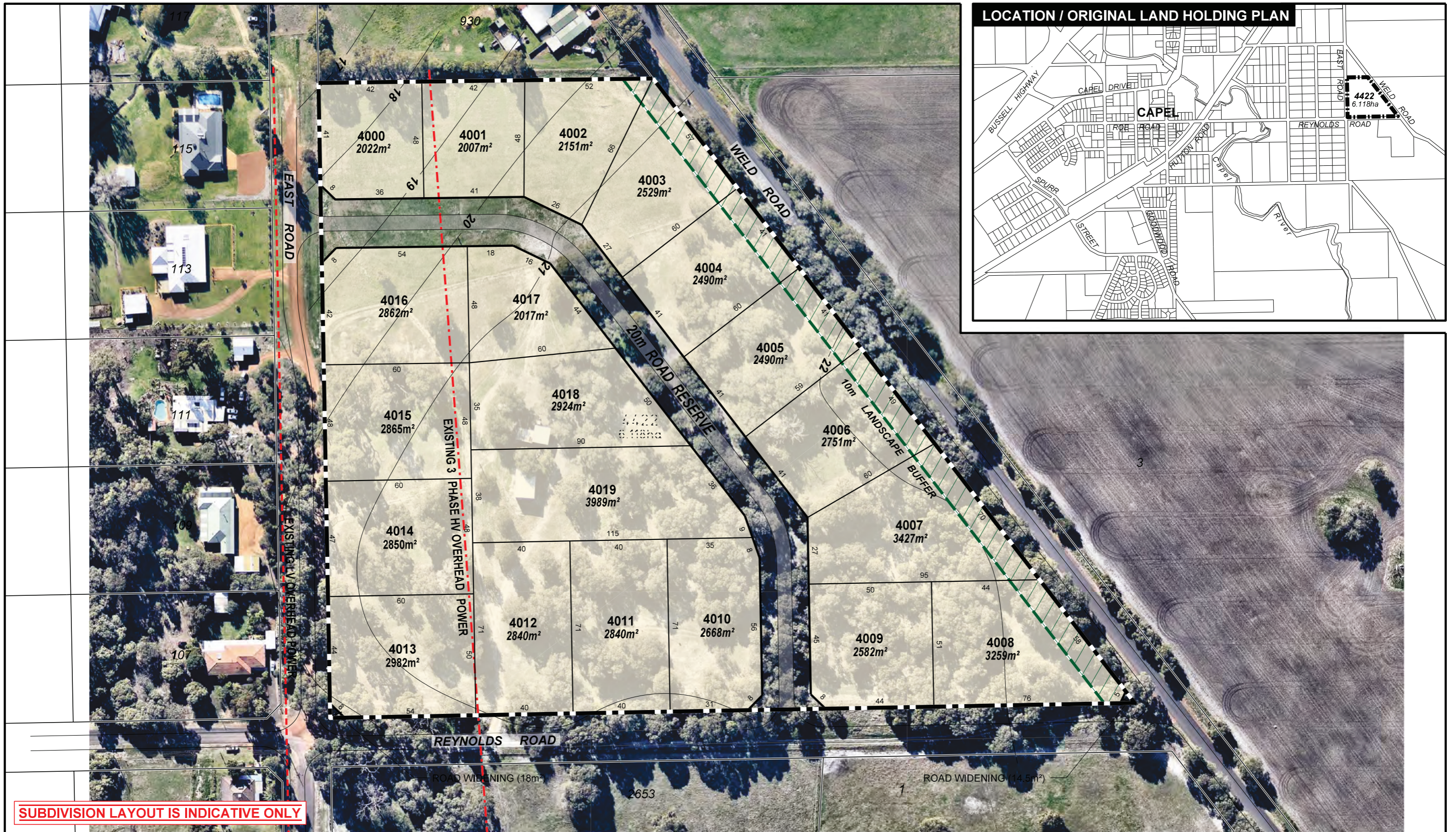
In this regard, a subdivision concept plan has been prepared to illustrate the intended subdivision layout (**Plan 2**) and the proposed Structure Plan will provide the necessary strategic planning framework for the future residential subdivision and development of the land.

The Shire’s Townsite Strategy identifies the site for short term urban development with a range of residential densities. However, it is also recognised that the site is covered with peppermint trees, which is known habitat for the Western Ringtail Possum and immediately abuts an existing residential area based on the R2.5 density code.

Accordingly, the Structure Plan and its design philosophy is based on an average lot size of approximately 2787m<sup>2</sup> (i.e. R5 density) which is also compatible with the density of the surrounding established residential land to the west of the site.

Various preliminary and technical investigations have also been carried out in support of the proposal including environmental, engineering / servicing, land capability, traffic assessment and fire management. The outcomes and findings of each of these investigations are appended at the rear of this report.

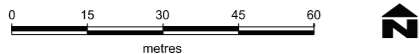
It should also be noted that while the supporting appendices refer to Lot 4422 East Road, Capel the site address is in fact Lot 4422 Weld Road, Capel.



**SUBDIVISION LAYOUT IS INDICATIVE ONLY**

**NOTES**

Base data supplied by Landgate  
 Aerial Photography Date - August 2012  
 Areas and dimensions shown are subject to final survey calculations.  
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**PLAN 2**

- LEGEND**
- SUBJECT LAND
  - PROPOSED BOUNDARY
  - 10m WIDE LANDSCAPE BUFFER
  - POWER INFRASTRUCTURE

Size	LOT YIELD		LOT AREA		
	No. Lots	% Total Lots	Average Size	% of Total Area	Area
2000m <sup>2</sup> - 2500m <sup>2</sup>	6	30.00%	2196m <sup>2</sup>	24.16%	13177m <sup>2</sup>
2501m <sup>2</sup> - 3000m <sup>2</sup>	11	55.00%	2790m <sup>2</sup>	56.27%	30693m <sup>2</sup>
3001m <sup>2</sup> - 3500m <sup>2</sup>	2	10.00%	3343m <sup>2</sup>	12.26%	6686m <sup>2</sup>
3501m <sup>2</sup> - 4000m <sup>2</sup>	1	5.00%	3989m <sup>2</sup>	7.31%	3989m <sup>2</sup>
<b>Total Number of Lots</b>	<b>20</b>				

Minimum Lot Size 2007m<sup>2</sup> Average Lot Size 2727m<sup>2</sup>  
 Maximum Lot Size 3989m<sup>2</sup> Total Lot Area 54545m<sup>2</sup>

CLIENT : -  
 SCALE : 1:1,500 @ A3  
 DATE : 5 February 2019  
 PLAN No : 4422-1-001  
 REVISION : D  
 PLANNER : SLB  
 DRAWN : BL

**SUBDIVISION CONCEPT PLAN**  
 Lot 4422 Weld Road, CAPEL





## 2 SITE OVERVIEW

### 2.1 Location

The site is located approximately 1.5 kilometres south east of the Capel town centre and is bound by existing roads including Weld Road to the north, East Road to the west and Reynolds Road to the south east. Reynolds Road is presently unconstructed.

The site is located at the urban rural fringe of Capel whereby land use to the west is predominantly residential with a mixture of lot sizes ranging from 1,000m<sup>2</sup> to 4,000m<sup>2</sup> (**Plan 3**).

The remaining area of land to the north and east are predominantly rural and used for general farming purposes.

The land directly to the north (Lot 930) and south (Lots 930, 1, 2563 and 21) are also contained within "Development Precinct No. 4" (**Plan 4**). Accordingly, a structure plan is also required for these lots prior to the consideration of any subdivision or development and will be considered at such time those landowners wish to progress development of their land, as an extension to the proposed Structure Plan, being the subject of this application.

Access to the site is currently obtained from East Road, which has been constructed to a bitumen standard.

The site is currently vacant with improvements comprising outbuildings and rural fencing.

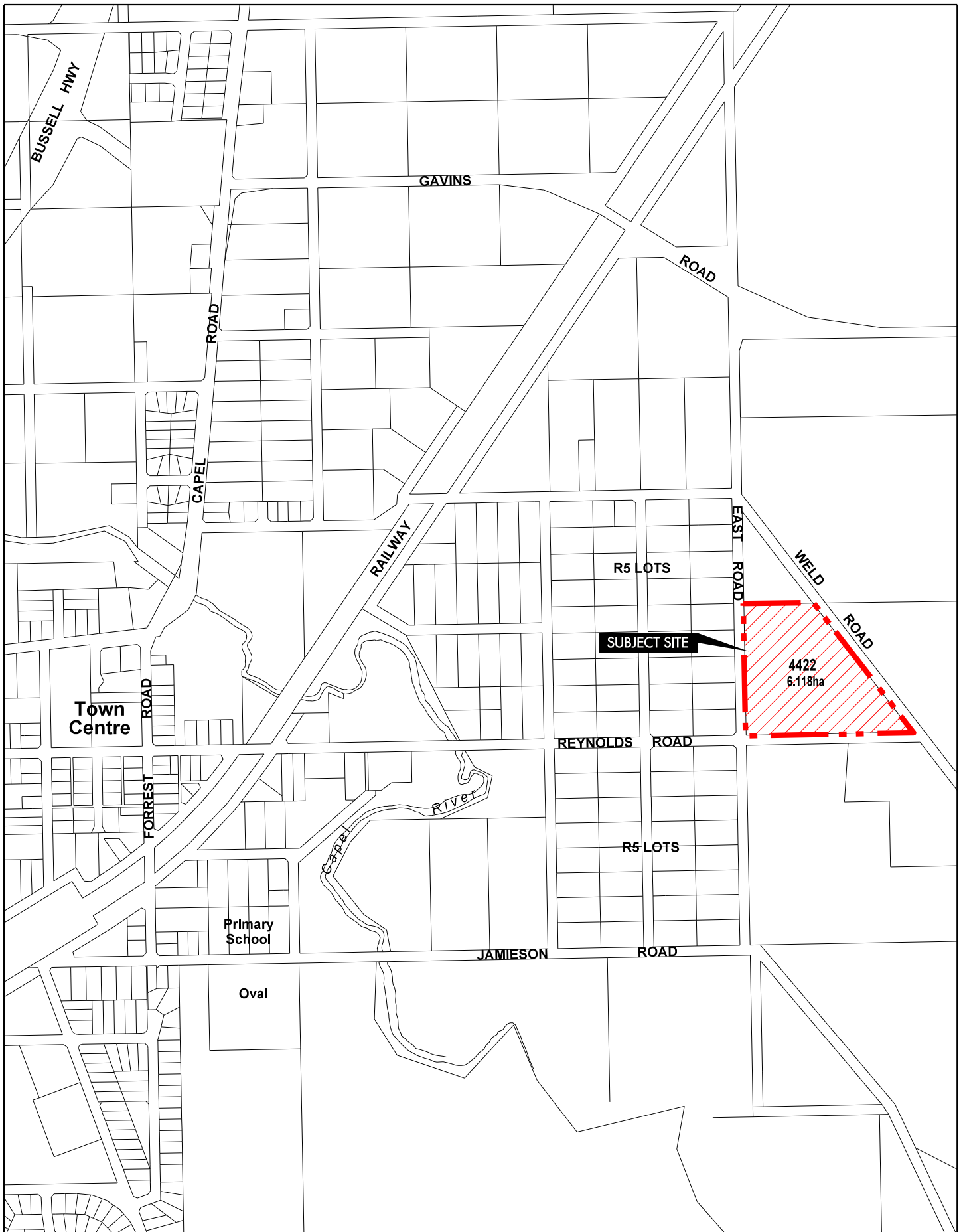
### 2.2 Site Ownership, Topography and Vegetation

The site is owned by Riverbeach Holdings Pty Ltd.

The site is 6.118 hectares and its topography is moderately flat at approximately 21metres AHD. There is however a slight decline in the north-west corner of the site where it drops to 17 – 18 metres AHD (**Plan 5**). The topography falls generally from the east-southeast toward the north-west, the west and the south-west of the site. The south, east and central portions of the site fall at approximately 1m in 100m, the western and north-western third of the site fall at approximately 4m over 60m.

In 2013 a similar structure plan proposal over the land was submitted to the Shire of Capel for its consideration however it was not progressed due to conflicting views held by shire planning staff at the time and the application was withdrawn by the landowner. As part of the original proposal an environmental assessment was undertaken by Ecosystem Solutions, which is still relevant to the site in the context of this structure plan proposal. The assessment is contained in **Appendix A** of this report and includes a spring flora survey, fauna assessment, a preliminary acid sulphate investigation and vegetation survey. In relation to existing site vegetation, it concluded the following:

The northern most section of the site is open paddock with other cleared areas in the southern section. Agonis/Marri Vegetation - Low woodland of Agonis flexuosa and Corymbia calophylla, over grassland of Romulea rosea (Guildford Grass), Arctotheca calendula (Capeweed) and annual grasses.




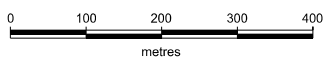
**PLAN 3: LOCATION PLAN**

Lot 4422 Weld Road, CAPEL

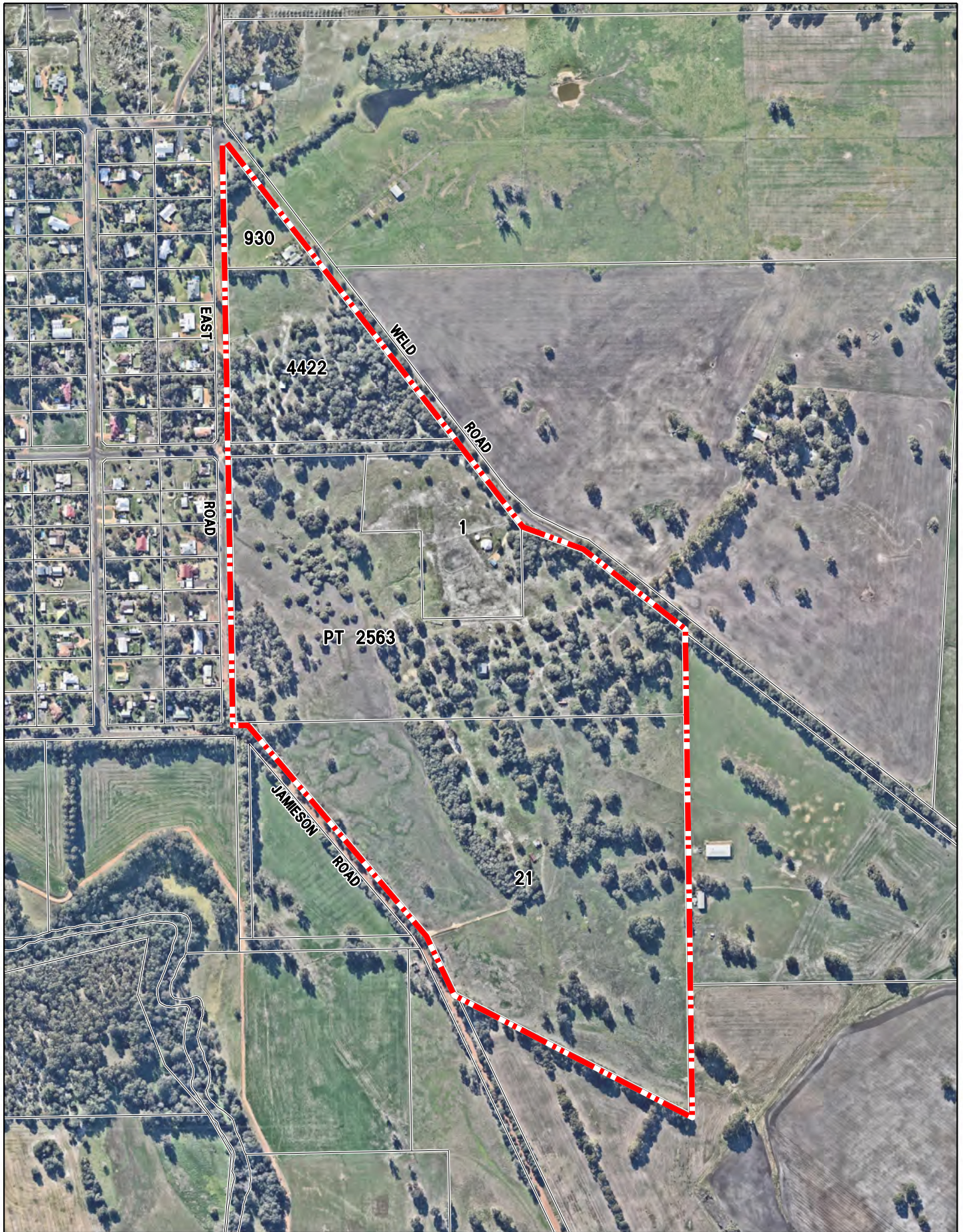
CLIENT : -  
 SCALE : 1:10,000  
 DATE : 5 February 2019  
 PLAN No : 4422-5-001.dgn  
 REVISION : A  
 PLANNER : SLB  
 DRAWN : BL

**LEGEND**

 SUBJECT SITE



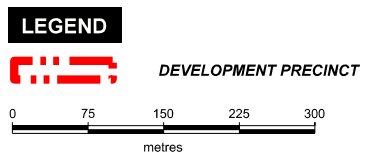
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 P (08) 9750 5925 W www.lbplanning.com.au



**PLAN 4: DEVELOPMENT PRECINCT No. 4**

Lot 4422 Weld Road, CAPEL

CLIENT : -  
 SCALE : 1:7,500  
 DATE : 5 February 2019  
 PLAN No : 4422-5-003.dgn  
 REVISION : A  
 PLANNER : SLB  
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**PLAN 5: SITE AERIAL PLAN**

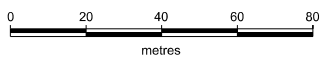
Lot 4422 Weld Road, CAPEL

CLIENT : -  
 SCALE : 1:2,000  
 DATE : 5 February 2019  
 PLAN No : 4422-5-002.dgn  
 REVISION : A  
 PLANNER : SLB  
 DRAWN : BL

**LEGEND**



**SUBJECT SITE**



AERIAL PHOTOGRAPHY - MAY 2017



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Kunzia, Melaleuca & Agonis Vegetation – Low woodland of Melaleuca raphiophylla and Agonis flexuosa, over tall shrubland of Kunzia ericifolia over grassland of Romulea rosea (Guildford Grass), Arctotheca calendula (Capeweed) and annual grasses.

Utilising the scale of condition developed by Keighery (1994), areas with tree cover (49% of the site) would be classified as degraded as there is no structure within the vegetation and the cleared or open areas (51%) are classified as Completely Degraded.

## 2.3 Ground Conditions and Land Capability

According to the Department of Agriculture's land capability assessment of the Shire of Capel (Agmaps Profiler, 2003), the site is located within the Bassendean Land System.

The identified sub system which covers the majority of the site is Bassendean B1 which is described as extremely low to very low relief dunes, undulating sand plain and discrete sand rises.

A small area in the south east corner of the site is characterised by the Bassendean B6 sub system which is described as imperfectly drained sand plain and broad extremely low rises with deep or very deep grey siliceous sands.

In order to confirm suitability of the soil for construction and use of on-site effluent disposal systems, an effluent disposal and geotechnical investigation has been carried out. The investigation was undertaken by Civil/Structural Consulting Pty Ltd and a copy of the final report is attached at **Appendix B**.

In summary, the investigation concluded that:

- Ground conditions consist of dry sandy surface to a depth of 1.8m over lateritic gravel over clay
- The water table was perched above the gravel/clay layer at 0.7m and 1.2m below the surface.
- The site is classified generally as a Class A for the footing design of future residential structures; and.
- Appropriately designed on site waste water treatment and disposal systems are considered suitable for use in this area.

For further information regarding geotechnical and effluent disposal capabilities, refer to **Appendix B** at the rear of this report.

## 2.4 Drainage

While the site is generally flat, it does tend to slope in the north-west corner whereby downstream drainage facilities include a small creek flowing east – west, located parallel to, and south of Weld Road. Direct runoff from the site into this creek is expected to be low, due to the high sandy soils limiting runoff to a very small proportion of rainfall, likely to be in the order of 10% - 15%. Lower land immediately south and west of the site drain via what appears to be a man-made channel through the existing residential properties to intersect with the above referred creek between East Road and



Payne Road. This channel accepts flows from a significant upstream catchment east of Jamieson Road and prior studies have raised concerns with its capacity. Future drainage of Lot 4422 is therefore intended not to contribute flows into this system.

When the site was rezoned to “Urban Development (Development Precinct 4)” under the Town Planning Scheme No 7 a Stormwater Management Strategy was developed for the whole of Development Precinct No. 4. The Strategy provided a preliminary assessment of the drainage infrastructure required within and downstream of the proposed subdivision in order that storm water could be managed to acceptable engineering standards in a fashion consistent with the principles of sensitive storm water disposal.

In the context of this proposal the Strategy did not however include comprehensive subdivision design or detailed drainage infrastructure requirements. Therefore in order to support this proposal further details have now been included in a revised Stormwater Management Strategy which forms part of an overall Engineering Servicing Report (**Appendix C**).



### 3 TOWN PLANNING FRAMEWORK

#### 3.1 Shire of Capel Town Planning Scheme No. 7

The site is zoned 'Urban Development' by the Shire of Capel Town Planning Scheme No.7 and is also contained within "Development Precinct No. 4 – Weld Road" under Appendix 16 of the Scheme text (refer Figure 3).

Clause 5.10 of the Scheme sets out the objectives and requirements of the Urban Development Zone, as stated below:

##### *Clause 5.10.1 Objective*

*The Urban Development Zone is in interim zoning for land. Council's objective is to provide for future urban development after comprehensive planning by means of preparation of an outline development plan. It is intended that land in this zone shall be progressively developed for residential purposes and for commercial, community and other use normally associated with residential estates. The zone is designed to be flexible in nature so as to overcome the inherent problems associated with detailed zoning of land prior to lot boundaries being established by subdivision.*

##### *Clause 5.10.2 Objectives for Urban Design in the Urban Development Zone*

- a) To provide for the development of a functional and cohesive community consistent with the orderly and proper planning and in the interest of the amenity of the Urban Development Zone,*
- b) To provide an approximate mixture of lot sizes and dwelling types in order to promote a diverse community in an attractive built environment,*
- c) To establish the need for public open space provision and the form in which it should be provided, being active or passive, and giving due regard to the opportunity to incorporate remnant vegetation and other natural land form features,*
- d) To implement a clearly defined road hierarchy and pedestrian movement system which provides high levels of access to all areas within the Urban Development Zone and to provide good connectivity to surrounding localities,*
- e) To provide appropriate retail, service commercial, commercial and community facilities to service the needs of the residents of the Urban Development Zone with a view to integrating such facilities to maximise convenience,*
- f) To ensure that the build and natural environment of the Urban Development Zone is developed and managed in a sustainable manner to provide quality lifestyle opportunities for the residents; and*
- g) To have regard to the Urban Development Zone's relationship to sensitive landforms such as coastal dunes, rivers, wetlands etc.*

##### *Clause 5.10.3 Development Approval*



*No development shall be approved within the Urban Development Zone unless it is generally in accordance with an approved Outline Development Plan approved by the Council and the Western Australian Planning Commission.*

*The provisions of Clause 5.1 DEVELOPMENT OF LAND apply in the Urban Development Zone. Permitted uses of land are those uses nominated on the approved Outline Development Plan.*

#### *Clause 5.10.4 Subdivision*

*Prior to making recommendations to the Western Australian Planning Commission on subdivision applications the Council shall have approved an Outline Development Plan.*

#### *Clause 5.10.5 Outline Development Plan Requirements*

*An Outline Development Plan may comprise of a plan, diagram or report, or a combination of these, in such detail as determined by Council, to demonstrate that the land can be developed in a coordinated and orderly manner consistent with regional and district planning objectives. An Outline Development Plan may take the form of a Local Structure Plan, Subdivision Guide Plan, Land Use Plan; or Development Plan depending on the issues to be addressed in each case. Information supporting an Outline Development Plan may include the following:*

- (a) A statement or plan placing the Outline Development Plan in a wider context.*
- (b) Existing Conditions:*
  - cadastral and topographical information;*
  - existing land uses and development;*
  - vegetation and soil type;*
  - hydrological conditions of the land including depths to water tables, location of wetlands, watercourses, drainage lines and land which may be subject to inundation;*
  - utility services;*
  - any other identified development constraints;*
  - Relationship of the Urban Development Zone to industrial or utility service buffer zones;*
  - sites of Aboriginal and European heritage value.*
- (c) Proposed Development*
  - movement systems including road layout, pedestrian networks and public transportation corridors;*
  - community facilities;*
  - commercial facilities;*



- *public open space;*
- *indicative subdivision layout and proposed residential densities;*
- *indicated finished topographical levels;*
- *environmental assessment;*
- *proposed fire protection measures;*
- *additional school facilities.*

*(d) Implementation Statement*

- *staging of subdivision and development;*
- *commitments to the provision of community services;*
- *proposals for cost sharing;*
- *proposals for resolving any outstanding issues.*

*(e) Such other information as the Council considers necessary.*

**5.10.6 Advertising an Outline Development Plan**

*Prior to considering an Outline Development Plan the Council may require it to be advertised for a period generally between 21 and 42 days in accordance with any one or more of the following measures:*

- (a) as part of an Amendment to a Town Planning Scheme;*
- (b) written notice to the owners or occupiers of land within an area determined by Council as likely to be affected by the plan;*
- (c) a sign or signs being displayed on or near the land;*
- (d) referral of the plan to any government agency or community group that it considers may have an interest; and/or*
- (e) any other means of notification deemed to be reasonably necessary by the Council.*

*Where an Outline Development Plan has been advertised before the Gazettal of a scheme amendment in a manner which would have complied with the provisions of Clause 5.10.6 had those provisions been in operation at the time of the advertising, such advertising shall be deemed to satisfy the requirements hereof as if the Gazettal had occurred before the advertising.*

**Clause 5.10.7 Council Adoption of an Outline Development Plan**

*In considering a proposed Outline Development Plan the Council after advertising the plan and considering any submissions which are received shall:*



- (a) *reject the plan; or*
- (b) *adopt the plan with or without modifications.*

*Where the Council either rejects or requires the plan to be modified it shall state the reasons for doing so.*

#### *Clause 5.10.8 WAPC Adoption of an Outline Development Plan*

*An Outline Development Plan shall have no effect until such time it has been endorsed by the Western Australian Planning Commission. In submitting the Outline Development Plan for endorsement the Council shall include:*

- (a) *a copy of the plan and any modifications;*
- (b) *a copy of the explanatory report which accompanies the plan;*
- (c) *a schedule of all submissions and responses received as a result of advertising the plan.*

*This schedule shall include Council's resolution in respect of each submission.*

#### *Clause 5.10.9 Modification of an Outline Development Plan*

*An Outline Development Plan may be modified by the Council provided that:*

- (a) *for a major modification the procedures contained in Clauses 5.10.6, 5.10.7 and 5.10.8 are complied with; or*
- (b) *for a minor modification the Council may approve such a modification without complying with the procedures contained in Clauses 5.10.6 and 5.10.7 but may refer the modification to the Western Australian Planning Commission and relevant government agencies for comment.*

#### *Clause 5.10.10 Outline Development Plan Refinement*

*Council may require the preparation of further Outline Development Plans for any area notwithstanding that an Outline Development Plan may exist for that area. Such a plan may be a refinement of an existing plan and shall be read in conjunction with it. When a further Outline Development is required it shall be prepared and adopted in accordance with the provisions of Clauses 5.10.5 to 5.10.8 (inclusive).*

#### *Clause 5.10.11 Appeal*

*Where an applicant, having lodged an Outline Development Plan with Council or the Western Australian Planning Commission, is aggrieved by the Council or the Commission:*

- (a) *refusing to adopt the Outline Development Plan*
- (b) *approving the Outline Development Plan subject to conditions, modifications or requirements unacceptable to the applicant; or*



(c) failing to make a decision on the Outline Development Plan within 120 days of the date of submission, or such longer period agreed in writing between Council and the applicant, shall have a right of appeal under Part V of the Town Planning and Development Act 1928 for a period of 60 days from the date of being notified of the decision.

Unless otherwise agreed to by Council, the proponent of development or subdivision within the Urban Development zone shall meet the cost of preparing, advertising or modifying an Outline Development Plan.

**Clause 5.10.13 Development Precincts**

Council may nominate areas of land within the Urban Development Zone as precincts that are identified by a boundary on the Scheme Map within which, in addition to any provisions that are more generally applicable to land in the zone, specific standards for the subdivision and development of the land within the particular Development Precinct shall apply. The standards applicable to individual Development Precincts are set out in Appendix 16 of the Scheme.”

The specific provisions relating to the site, as provided by the “Development Precinct” within Appendix 16 of the Scheme, are as follows:

<b>DEVELOPMENT PRECINCT</b>	<b>SPECIFIC PROVISIONS</b>
<p><b>“Development Precinct No.4-Weld Road Precinct”</b> as depicted on the Scheme Amendment Map in Amendment No. 38.</p>	<p><b>Preparation of Outline Development Plan</b></p> <ol style="list-style-type: none"> <li>1. Subdivision shall generally be in accordance with an endorsed Outline Development Plan for the Precinct prepared in accordance with Clauses 5.10.1 to 5.10.12 of the Scheme.</li> <li>2. That any Outline Development Plan shall generally be in accordance with the adopted Capel Townsite Strategy including the Capel Townsite Structure Plan.</li> <li>3. The following studies shall be undertaken in addition to any specific requirements of Clauses 5.10.1 to 5.10.12 of the Scheme, together with preparation of the ODP:               <ol style="list-style-type: none"> <li>a. Declared flora and vegetation condition survey;</li> <li>b. Declared fauna survey;</li> <li>c. Identification of areas where retention of remnant vegetation should occur and/or ecological linkages established;</li> <li>d. An Infrastructure Implementation Plan which details the staging and funding of paths, drainage, roads,</li> </ol> </li> </ol>



	<p>public open space, foreshore management and upgrading of Weld, East and Jamieson Roads;</p> <ul style="list-style-type: none"><li>e. A Local Water Management Strategy with this to include analysis of historical information related to the surrounding catchment and water quality outcomes for the Capel River;</li><li>f. Geotechnical Analysis to determine capability of land;</li><li>g. Acid Sulphate Soil Analysis and Contingency;</li><li>h. Detailed Servicing Analysis;</li><li>i. Investigation and determination of the need to provide a primary school on the subject land in consultation with Department of Education and Shire of Capel and consistent with the Capel Townsite Developer Contributions Plan;</li><li>j. A Sustainability Outcomes and Implementation Plan which details the targets and method of delivery that a proponent is prepared to undertake in respect to 'Sustainability Outcomes' inclusive of:<ul style="list-style-type: none"><li>i. On-site power generation.</li><li>ii. On-site water capture and re-use.</li><li>iii. Re-use of grey water.</li><li>iv. Correct housing and lot orientation for passive heating and cooling.</li><li>v. Provision of affordable housing.</li><li>vi. An investigation in to the feasibility of the provision of public transport and the integration of the subdivision with public transport.</li></ul></li></ul> <p>4. That prior to adoption and endorsement of an Outline Development Plan the outcomes of a revised Capel Drainage Strategy and Capel Townsite Traffic Study be incorporated and reflected in the Outline Development Plan.</p> <p>5. Subdivision design shall be consistent with the Western Australian Planning Commission's Liveable Neighbourhoods (Version 3) and any adopted standards intended to achieve solar efficient design with respect to road and lot layout and development.</p> <p><b>Subdivision Coordination Between Land Owners</b></p> <p>6. Subdivision staging is to be negotiated with the Shire of Capel, by the subdividing land owners, prior to lodging a subdivision application, having regard to the orderly implementation of the endorsed Outline Development Plan for the Precinct and the provision of infrastructure services.</p>
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	<ol style="list-style-type: none"><li>7. The Shire of Capel may require a subdividing land owner to enter into a legal agreement to do such things and meet such costs as are reasonably required to ensure that the subdivision and development of the land within the Precinct is completed.</li><li>8. Subdividing land owners shall, provide to the Shire of Capel a Traffic Management Plan and Strategy, to its satisfaction, to ensure the local collector roads and traffic management requirements shown on the Outline Development Plan for the Precinct will be constructed and connected to the local road network in a timely and appropriate manner.</li><li>9. Subdividing land owners shall, prior to undertaking subdivisional works, submit to the Shire of Capel and Department of Water, a Urban Water Management Plan which can be demonstrated to form part of an overall urban drainage plan for the Precinct, and giving regard to drainage relationships and needs for land within Precinct 4 of the Capel Townsite Strategy.</li><li>10. Subdividing land owners shall, prior to undertaking subdivision works, submit to the Shire of Capel a dual use and pedestrian path strategy which can be demonstrated to form an overall dual use and pedestrian path plan for the Precinct and provide connection to the Capel Town Centre.</li><li>11. Subdividing land owners shall, make arrangements to the satisfaction of the Shire of Capel and Health Department of WA to ensure that management of mosquito breeding is incorporated into the design and ongoing management and maintenance of watercourses and urban drainage systems within the Precinct.</li></ol>
	<p><b>Subdivision Conditions</b></p> <ol style="list-style-type: none"><li>12. The Shire of Capel shall request as a condition of subdivision that the subdividing land owners contribute to the upgrading of Weld, East and Jamieson Roads. Subdividing land owners will be responsible for the full costs of any traffic management measures required at the intersection of new subdivision roads within the existing road network.</li><li>13. The Shire of Capel shall request as a condition of subdivision, that the subdividing land owners provide dual use pathways within the subdivision and contribute to the provision of dual use and pedestrian paths that will link the subdivision area to community facilities.</li><li>14. The Shire of Capel shall request as a condition of subdivision, that the subdividing land owners prepare and implement a landscape and revegetation plan to the</li></ol>



	<p>satisfaction of the Shire of Capel for cleared land, open space areas and vegetated areas.</p> <p>15. The Shire of Capel shall request as a condition of subdivision, that the subdividing land owners will be required to fence where necessary for management along watercourse foreshore reserves, public open space reserves, drainage reserves and where necessary uniform fencing adjoining residential lots to the specification and satisfaction of Council.</p> <p>16. The Shire of Capel shall request as a condition of subdivision, that subdividing land owners are required to implement any foreshore management plans adopted for the Precinct.</p> <p>17. Council will request that as a condition of subdivision, the subdivider be required to provide reticulated sewerage, scheme water, natural gas and underground power to the subdivision.</p>
	<p><b>Community Facilities</b></p> <p>18. The Shire of Capel shall prepare and adopt a community facilities development plan for the townsite of Capel and make available details of estimated costs equitably apportioned to the Weld Road Precinct based on population increase generated by development within the precinct. The plan shall be consistent with any relevant State Planning Policy.</p> <p>19. Subdividing land owners shall at the time of creating new lots contribute to a community facilities development fund, such funds as are reasonably assessed by the Shire of Capel to be an equitable share of meeting the cost of implementing an adopted community infrastructure plan.</p>

In order for any development and/or subdivision to be carried out on land contained within the zone, an approved structure plan is required.

The proposed Structure Plan the subject of this application only relates to a portion of the Development Precinct. While assessment is generally undertaken in accordance with the Scheme requirements, some of the provisions or issues mentioned above may not necessarily be relevant or warrant significant information to be furnished to enable determination of the proposed Structure Plan.

Further details regarding the proposal and how it relates to the above Scheme provisions is contained in Section 4 of this report.



### **3.2 Shire of Capel Land Use Strategy**

The Capel Shire Land Use Strategy has been prepared and implemented pursuant to Section 6.1 of the Scheme. The Strategy has been adopted in accordance with the procedures set out in Clause 8.9 of the Scheme and has the status of a Scheme Policy.

The site is identified within planning unit CA4-Capel Agricultural of the Strategy, to which Clause 6.1.4.5 specifies the majority of the unit being retained for agriculture, with the exception of those areas adjacent to the Capel town site and/or identified for controlled urban expansion.

The subject land is identified by the Strategy for urban expansion.

### **3.3 Shire of Capel Townsite Strategy**

The Capel Townsite Strategy identifies the site within a large urban expansion area which extends from the established urban area of the township to the east and out towards its surrounding rural fringe. The site is specifically identified as 'Short Term – Urban Deferred' and is subject to detailed structure planning.

The proposal to prepare an ODP over the site is consistent with the Strategy and its identification of the site for future townsite expansion. The ODP is required to address specific issues such as drainage and environmental protection, roads, residential density, servicing, the development interface and existing character of the area.

Once approved, the ODP will facilitate future subdivision and housing development not only for the site but it will also inform future structure planning for remainder of the Development Precinct No. 4 and its surrounds.

### **3.4 Shire of Capel Public Open Space Strategy**

The Shire of Capel Public Open Space Strategy provides a guide to the long term planning and development of open space, parks, gardens, reserves and associated community and recreation facilities in the town of Capel.

The POS Strategy recognises the various precincts in the aforementioned Townsite Strategy and suggests a large space near Development Precinct No. 4 is required to provide sufficient area for the development of active open space as well as local POS within walking distance (400 metres) of all residential lots.

Accordingly, the POS Strategy identifies an indicative area to provide formal active open space to accommodate a sports oval and associated facilities to the immediate east of the intersection of Weld and East Roads (possibly in conjunction with a primary school site).

Due to the special residential nature of the proposal (i.e., spacious lots) and its location within the suggested 400 metre catchment of identified active open space nearby, the proposed Structure Plan does not provide any formal POS areas on Lot 4422.

This outcome is not contrary to the intent of the POS Strategy and is reinforced by WAPC Policy DC 2.5 whereby no specific standard of POS contribution is given in respect of special residential lots.



### **3.5 Liveable Neighbourhoods**

Liveable Neighbourhoods was prepared by the WAPC to implement the objectives of the State Planning Strategy and is a compulsory design code and operational policy of the WAPC, which guides the design and assessment of structure plans (regional, district and local), subdivision and development for new urban areas. Its aims include promoting the design of walkable neighbourhoods; places that offer community and a sense of place; mixed uses and active streets; accessible and sustainable parks; energy efficient design; and a variety of lot sizes and housing types.

In the context of this proposal the Scheme provisions as they relate to the site support Liveable Neighbourhoods principles especially with respect to guiding structure planning. Therefore given the site's relatively small area, the proposed special residential lots and that it will ultimately feed into further structure planning to be carried out on surrounding land, it is appropriate that assessment of the proposal is primarily guided by the specific provisions of the Scheme in this instance.

Notwithstanding the above, the principle aims (where relevant) and general intent of Liveable Neighbourhoods is upheld by the proposal.

### **3.6 Greater Bunbury Region Scheme**

The site is currently designated as "urban deferred" under the Greater Bunbury Region Scheme (GBRS).

The GBRS is a statutory region planning scheme which covers the City of Bunbury and the Shires of Harvey, Dardanup and Capel. The GBRS identifies the future uses of land within the Region Scheme area via broad zones and reservations of which local governments covered by the Region Scheme must ensure their local planning scheme is consistent with.

Urban Deferred land is defined as land 'suitable for future urban development but where there are various planning, servicing and environmental requirements which need to be addressed before urban development can take place'. In the context of the site the land is identified as urban deferred on the basis that structure planning is still yet to be carried out.

Therefore once the Structure Plan has been adopted by Council and endorsed by the WAPC lifting of the urban deferment can occur and the land may be transferred from an 'Urban Deferred' to 'Urban' by resolution of the Commission notified in the Gazette.

As outlined in the WAPC Guidelines for the Lifting of Urban Deferment (November 2007) before agreeing to the transfer of land from the urban deferred to the urban, the WAPC will require evidence that:

- The land is capable of being provided with essential services and agreement has been reached between the developers and service providers with regard to the staging and financing of services;
- Planning is sufficiently advanced to depict an acceptable overall design to guide future development;



- The proposed urban development represents a logical progression of development;
- Regional requirements (such as regional roads, open space and public purposes) have been satisfied or provisions made for them; and
- Any constraints to urban development can be satisfactorily addressed.

Each of these elements have been addressed as part of the proposed Structure Plan.



## 4 PROPOSED STRUCTURE PLAN

### 4.1 Overview

As mentioned previously, the subject land (Lot 4422) forms part of a development precinct and is zoned “urban development” under the Scheme.

Pursuant to Clause 5.10 of the Scheme an approved structure plan is required prior to development or subdivision of the land. Presently there is no endorsed structure plan that relates to the site.

Therefore, in order for the landowner to proceed with any form of development on Lot 4422 it is necessary to prepare a structure plan for determination by the Council and WAPC. While the requirement for a structure plan relates to the overall development precinct, given Lot 4422 only forms a small portion of the identified area, it is considered unreasonable to require a structure plan for the entire precinct. On this basis LB Planning approached Shire planning staff and DPLH officers to discuss the matter in further detail. Subsequently, it was agreed that it was appropriate to consider a proposed structure plan in respect of Lot 4422 only (in isolation to the balance of the development precinct).

As part of its preparation there are various requirements that need to be considered through the scheme provisions, the extent and degree of which is largely determined by the issues arising from the initial planning and investigation phase. The proposed Structure Plan in respect of the site has therefore been prepared on this basis and addresses the planning framework where it is specifically relevant to the proposal.

The proposal is also informed by a number of supporting investigations including:

- Spring flora and Vegetation Assessment
- Vegetation, significant fauna and preliminary acid sulphate soil investigation
- Fire Management Plan
- Water Table/Effluent Disposal and Geotechnical Assessment
- Servicing Infrastructure Plan and Storm Water Management Strategy
- Traffic Assessment Report

### 4.2 Statutory Context

The proposed Structure Plan has been prepared accordance with the specific Scheme requirements under Clause 5.10 and Appendix 16 as it relates to “Development Precinct No. 4 – Weld Road”.

Special Provision 1 in Appendix 16 refers to the following studies being undertaken in addition to any specific requirements of Clauses 5.10.1 to 5.10.12 of the Scheme, when preparing a structure plan:

- Declared flora and vegetation condition survey;
- Declared fauna survey;



- Identification of areas where retention of remnant vegetation should occur and/or ecological linkages established;
- An Infrastructure Implementation Plan which details the staging and funding of paths, drainage, roads, public open space, foreshore management and upgrading of Weld, East and Jamieson Roads;
- A Local Water Management Strategy with this to include analysis of historical information related to the surrounding catchment and water quality outcomes for the Capel River;
- Geotechnical Analysis to determine capability of land;
- Acid Sulphate Soil Analysis and Contingency;
- Detailed Servicing Analysis;
- Investigation and determination of the need to provide a primary school on the subject land in consultation with Department of Education and Shire of Capel and consistent with the Capel Townsite Developer Contributions Plan;
- A Sustainability Outcomes and Implementation Plan which details the targets and method of delivery that a proponent is prepared to undertake in respect to 'Sustainability Outcomes' inclusive of:
  - On-site power generation.
  - On-site water capture and re-use.
  - Re-use of grey water.
  - Correct housing and lot orientation for passive heating and cooling.
  - Provision of affordable housing.
- An investigation in to the feasibility of the provision of public transport and the integration of the subdivision with public transport.

Except for investigation the need for a primary school on the land (as it is too small) and the Local Water Management Strategy, which is not required (as confirmed by the Department of Water) each of the above studies have been undertaken and are either included in the body of the main report or appended at the rear in the appendices section.

### 4.3 Environmental Considerations

The site comprises approximately 3ha of remnant native vegetation which is generally described as a woodland of *Corymbia calophylla* (Marri) and *Agonis flexuosa* (Peppermint) over introduced annual herbs and grasses.

In addition to the initial Vegetation Assessment dated August 2012, a Spring Flora and Vegetation Assessment was also undertaken and is included in the report (**Appendix A**).

In summary, no rare or priority flora was found on the site and the vegetation that remains was confirmed as degraded with no functional structure.

A Fauna Survey (**Appendix A**) also confirmed that Western Ringtail Possum utilise the site, based on 1 observation, scat and drey signs, however they would be low in number and not totally reliant on the vegetation. Six trees with hollows that are potential suitable for Black Cockatoos



were also found, however no signs of nesting or roosting was observed. In this regard it is considered that the Black Cockatoo species (which are highly mobile) utilise the site opportunistically as a feeding site within their range without any specific reliance. Despite this, efforts should be made to retain, enhance or create foraging roosting and potential breeding habitat so that cockatoos will continue to utilise the area.

Preliminary consultation with the Department of Biodiversity, Conservation & Attractions (DBCA) during preparation of the Structure Plan confirmed that it considers the special residential concept similar to adjoining properties to the west as providing the best option for protecting the large number of dispersed *agonis flexuosa* trees on the property as habitat to support the threatened Western Ringtail Possum.

DBCA also acknowledged that this type of subdivision could consider retaining some of the trees in road reserve provided there are no complications with fill and/or drainage.

Each of the various aspects raised by DBCA during the Structure Plan preliminary investigation phase have been considered and applied to the intended Structure Plan design layout as detailed by the subdivision concept plan (**Plan 2**).

One of the proposal's main objectives is to retain as much of the existing vegetation as possible in order to retain its character and support habitat protection. While this primarily translates into creating larger lots and providing less road, as part of the subdivision, another feature of the design seeks to provide a 10m wide landscape buffer along the interface of Weld Road. The purpose of the buffer is aimed at protecting the vegetation located in this portion of the site and screening the development from Weld Road, while also restricting access.

#### 4.4 Density

The proposed density is based on the lower density code of R5 which is consistent with the existing special residential lots in the surrounding area.

While it is envisaged that higher density development may be established for the rest of the development precinct area to the south, in the future, given its physical separation, vegetation characteristics and direct relationship with the existing residential area to the west, the proposed lower density is considered suitable for the site.

The Structure Plan is envisaged to support approximately 20 special residential lots which range from 2033m<sup>2</sup> to 4268m<sup>2</sup> with an average lot size of approximately 2787m<sup>2</sup>, consistent with the R5 density.

#### 4.5 Traffic, Road Access and Pedestrian Movement

A Transport Assessment has been carried out by Shawmac and its findings are outlined in a report attached at **Appendix D**.

As part of the assessment the following key transport issues were reviewed:

- The capacity of the local road network to accommodate the traffic generated by the proposal.
- The extent to which the additional traffic generated can be safety managed on the adjacent current and future road network.
- The provision of safe access to the proposed subdivision from the adjacent road network.





- The safety and efficiency of the site's internal road network and in particular the extent that the site is able to safely and efficiently accommodate alternative and sustainable transport modes including pedestrians and cyclists.

In summary the assessment concluded the following:

- The proposed internal transport network (layout, hierarchy, reserve widths and intersection layout) is considered to be adequate to carry the design traffic flows.
- The existing external transport network is adequate to accommodate the proposed subdivision generated traffic.
- The demand of public transport services and pedestrian and cyclist facilities is considered low and provision of these facilities are not considered necessary as a part of the proposed subdivision.
- The proposed internal road is recommended to be sealed to 6m. The unsealed sections of East Road and Reynolds Road adjacent to Lot 4422 should be sealed to be consistent with the existing East Road and Reynolds Road road seal.
- To ensure sufficient intersection sight distance, vegetation control on the inside curve of Weld Road to the south of Weld Road / Reynolds Road intersection is recommended if the speed zoning of Weld Road remains at 80km/hr under post development scenario.

## 4.6 Servicing and Infrastructure

An engineering servicing analysis has been prepared by Wood & Grieve Engineers and is attached at **Appendix C**. The purpose of the report is to provide technical support, pertaining to the provision of necessary services to the site, as a prerequisite to subdivision and development.

A summary of the details contained within the servicing report is provided below.

### 4.6.1 Water Supply

The Water Corporation has existing 100mm diameter water mains within the adjacent East Road reserve.

There are no foreseeable issues with the existing 100mm diameter water mains flow capacity within the adjacent East Road reserve being extended to service the proposed residential development. Water Corporation has confirmed by email that the current Capel water supply system has sufficient capacity to service the proposed residential development.

It is anticipated that DN100 reticulation pipes will be used within the proposed development.

### 4.6.2 Electrical Supply

An existing HV overhead line traverses the site from North to South and also supplies a transformer near the existing sheds. In order to obtain Western Power clearance of the WAPC conditions relating to power, the existing HV line has to be removed and installed underground within the road reserve. The existing sheds on the site will be demolished and therefore the existing transformer will also be removed as part of the subdivision works.

The proposed lots will be serviced by means of a combination of mini and uni-pillars located within alternate lots. Pillars can supply a maximum of 2 lots and their location will be coordinated with other



services (water, sewer, comms). Low voltage cabling will be installed on the 0-500mm alignment and will in all likelihood share a trench with communications infrastructure.

Western Power will install a new termination pole in the North Western corner of lot 4001, and a new HV cable will be installed from this pole in an easement on the Northern boundary of lots 4001 & 4000 to the power alignment on the eastern side of East Road. The HV cable will be extended from this location to a new substation site (6m wide x 4.2m deep) on the South Eastern corner of Lot 4013 where it will be terminated in an HV switch. The HV switch will supply a transformer on the same site and will also provide an interconnection with a new termination pole (by Western Power) on the Northern boundary of Lot 2653.

### 4.6.3 Telecommunications

Telstra has copper communications infrastructure in the constructed portion of Reynolds Road. It is however likely that this development will be serviced by NBNCo.

The communications designer will undertake a NBN design for the subdivision as part of the detailed design and approval phase. This will consist of a fibre ready pit and conduit network located in the road reserve and lead in conduits into each lot. Once constructed, the network will be inspected by NBNCo who will assume ownership of the network and install cabling to each lot.

### 4.6.4 Waste Water Disposal

As stated in the Engineering Servicing Report (**Appendix C**) upon review of the Water Corporation's wastewater planning scheme for the Capel area, East Road forms the easternmost boundary of the Capel Wastewater Treatment Plant catchment area, and as such, the site falls just outside of the catchment area for the proposed wastewater pump station (WWPS) No. 106 (hereinafter referred to as WWPS-106).

This means that wastewater flows from the site have not been allowed for in existing wastewater infrastructure, and in the planning of proposed future infrastructure. A copy of the Water Corporation's scheme planning for the Capel area is included in Appendix 1 of the Engineering Servicing Report (**Appendix C**).

It is understood that the existing residential development surrounding the site being the subject of this report currently utilise septic tank and leach drains for domestic waste water disposal.

It may be the case that the existing infrastructure and the proposed WWPS-106 can accommodate the wastewater flows from the site, and the site can therefore be included within the catchment of WWPS-106. This would require further discussions with the Water Corporation however, due to the reasons provided below, bringing "deep sewer" infrastructure to the site is not a viable option.

WWPS-106 is proposed to be located north of the central Capel townsite, and the Capel River. The Water Corporation has advised that there is currently no project planned for the construction of WWPS-106.

At the time of writing this report, no sewerage infrastructure forming part of the Capel scheme exists north of the Capel River.

In order to service the site with mains sewer reticulation, the following needs to take place:



- Construction and commissioning of WWPS-106, including:
  - Construction of the proposed DN150 pressure main from WWPS-106 that will discharge into gravity sewerage infrastructure within the catchment of existing WWPS No. 53 (WWPS-53). This pressure main is planned to be constructed along the existing Capel Drive, and will need to cross the Capel River.
  - Possible upgrade of existing WWPS-53 to accommodate flows from WWPS-106 discharging into its catchment,
  - Possible upgrade of existing WWPS-53 pressure main from DN150 to DN375 as indicated in Water Corporation planning, and
  - Construction of in excess of 1.5km of gravity sewer infrastructure through existing developed residential areas to get to the Site

Unfortunately, the site is separated from the existing WWPS-53 catchment by the Capel River, and this prevents gravity sewerage being constructed directly from the Site to a node within the existing WWPS-53 catchment.

Therefore until such time as WWPS-106 is constructed, gravity sewer infrastructure within the WWPS-106 catchment is constructed out towards the Site, and any necessary upgrades to existing sewerage infrastructure are undertaken servicing the site with reticulation sewer is not considered a viable option.

Accordingly, given the Structure Plan supports lots greater than 2000m<sup>2</sup> and based on the findings of a detailed site analysis to confirm suitability for onsite effluent disposal (Appendix B) non-reticulated wastewater treatment is proposed on the site.

#### **4.6.5 Stormwater Management**

As mentioned in section 2.4 of this report a Stormwater Management Plan was prepared for the subject Development Precinct, when the land was originally rezoned from “Rural” to “Urban Development” zone via Scheme Amendment 38.

Given the Stormwater Management Plan did not include comprehensive subdivision design or detailed drainage infrastructure requirements a revised Stormwater Management Strategy has now been prepared by Wood & Grieve to further inform the proposal. The Strategy is included as part of the engineering servicing report attached at **Appendix C**.

In summary the proposed stormwater management of the site is to consist of:

- Retention on site by lot owners of stormwater from rooves.
- Soakwells to each lot.
- Surface runoff to be captured by permeable open drains on both sides of the road reserve.
- Flows from open drains to discharge into the existing road swale drains.



- Sub-soil drains may be installed to manage the flow of surface runoff and perched groundwater ( i.e. minimise flow from a higher lot to a lower lot). This will need to be reviewed during detailed design.

Furthermore, it is also acknowledged that the specific provisions of the Scheme relating to the site, require a Local Water Management Strategy (LWMS) to accompany the Structure Plan, including analysis of historical information related to the surrounding catchment and water quality outcomes for the Capel River.

Preliminary consultation with Department of Water (DoW) regarding this requirement concluded that because the need for an LWMS is based upon risk and that in this situation the risk is considered low, an LWMS is not required in this instance. The DoW also advised that its position is based on a number of factors including no waterways or wetlands in close proximity to the site, the area is not prone to inundation, the lot sizes are large and only building envelopes will be filled and reticulated water supply will be available. Overall it was considered by the DoW that the proposal would not significantly change the hydrology of the area.

In addition to the above, the DoW also suggested that an Urban Water Management Plan (UWMP) is not required either, but recommended road drainage is undertaken in accordance with best practices, outlined in the stormwater management manual. This position was mainly due to the large lot sizes and small internal road works associated with the proposal.

Notwithstanding this, Shire staff have raised concerns that drainage basins may be required in the lower portions of the site, being the NW and SW comers. Accordingly and while it is proposed to maintain the swale drain approach, potential drainage basin locations have also been identified on the Structure Plan in the event they are deemed to be required following detailed drainage design at the time of subdivision. Despite the advice from DoW suggesting a UWMP is not required, Shire staff have requested the preparation of a UWMP on the basis that Provision 9 of the Scheme requires a UWMP to be prepared prior to subdivisional works. Accordingly, this matter will be further reviewed and confirmed at the subdivision stage.

Finally the internal road was originally proposed at 16m wide however it is now shown on the Structure Plan at 20m wide in order to accommodate appropriate swale areas and dimensions for drainage retention.

#### **4.7 Fire Management**

A Bushfire Management Plan (FMP) has been prepared by Ecosystem Solutions Pty Ltd (Appendix E) to address required fire protection measures associated with the proposed Structure Plan as required by clause 5.10 of the Scheme.

The purpose of this BMP is to detail the fire management methods and requirements that will be implemented within the proposed development. The aim of the BMP is to reduce the threat to residents and fire fighters in the event of a fire within or near the subdivision.

The BMP has been prepared in accordance with the WAPCs State Planning Policy 3.7: Planning in Bushfire Prone Areas and Guidelines for Planning in Bushfire Prone Areas (2015) and in summary in concludes the following:



***“The layout and design of the development is such that no structure will be required to be exposed to a radiant heat flux in excess of 29kW/m<sup>2</sup> (BAL-29) provided the management as outlined in the plan is adopted.”***

#### **4.8 Acid Sulphate Soil Analysis and Contingency**

A preliminary review of potential Acid Sulphate Soils (ASS) and contamination issues was undertaken by Ecosystem Solutions and its findings are provided in the report at **Appendix A**.

In summary, the field test shows the site has the potential to contain Acid Sulphate Soils and if any major disturbance of the soils is required, further investigations, including laboratory sampling will be required to determine appropriate management and/or mitigation for neutralising any potential acid soils. Given this finding, if any major disturbance is required at the subdivision stage, further ASS investigations will be required to determine appropriate management and/or mitigation for neutralising and potential acid soil.

Notwithstanding the above, it should be noted that construction works should not require dewatering or excavation below the water table and disturbance of potential Acid Sulphate Soils is therefore considered unlikely.

#### **4.9 Sustainability Outcomes and Implementation**

The Western Australian State Sustainability Strategy (Government of Western Australia 2003) provides an operational definition of sustainability:

**“Sustainability is meeting the needs of current and future generations through integration of environmental protection, social advancement and economic prosperity.”**

This section of the report outlines a sustainability outcomes and implementation plan for the proposed ODP area as required by the specific provisions contained in Appendix 16 of the Scheme, as it relates to the site.

Sustainable land use planning involves the following objectives:

- Provision of adequate infrastructure and housing to service the community;
- Minimising the conversion of natural vegetation for development, and realising opportunities for rehabilitation of degraded land;
- Minimising the use of natural resources for human use; and
- Minimising waste and pollution that must be absorbed by the environment

In order to understand some of the principles and methods in which to try and achieve these objectives the following comments are provided below.

Environmental impact by development can be reduced by:

- minimising cut and fill by aligning roads with the contours and requiring lots to (generally) maintain existing slopes;



- minimising road reserve widths; and
- minimising the clearing of existing vegetation at both subdivision and lot scale.

The proposed Structure Plan responds to each of the above.

Another initiative to provide improved sustainability outcomes is to implement sustainable housing design for new and existing residential areas. This may include energy used for lighting, heating and cooling of buildings through careful house orientation. In the temperate climate of the South West, passive heating and cooling are both important, and high performance buildings can be facilitated through houses that provide north facing solar access, and recognise the direction of cooling summer breezes from the south and west.

Materials, water and in particular energy consumption are dependent on the built form and energy efficiency housing design is now explicitly addressed in the Building Code of Australia (BCA).

While the increasing BCA requirements are important in improving the provision energy efficient housing, the planning process can also be used as vehicle to inform and encourage the community as well.

One method is to provide “Design Guidelines” for new residential areas to encourage the following:

1. Basic passive solar design principles such as:
  - Northerly solar access to glazing;
  - Appropriate shading;
  - Well insulated building envelope (walls and glazing);
  - A minimum level of internal thermal mass; and
  - Provision for natural ventilation.
2. Lightweight construction to reduce resource consumption and embodied energy
3. Energy efficient lighting and appliances
4. Low impact gardens and landscaping with endemic species
5. Water efficient fixtures, fittings, appliances and irrigation systems.
6. Treated greywater which is suitable for garden irrigation and limited in-house use.
7. Rainwater Tanks for certain internal non-potable domestic uses (i.e. toilet flushing and washing machine use).
8. Solar Water Heating
9. Use of Smart Meter's and the Renewable Energy buy back scheme for households



It is therefore proposed that each of the above principles/initiatives (although not limited to) will be further detailed in an appropriate set of design guidelines at the subdivision stage.

While it is not expected that application of the Guidelines will be mandatory, they will provide a target and method of delivery for future landowners when building a house. The Guidelines can also be aligned with the Shire of Capel's sustainability initiatives in the context of future planning decisions for other urban growth areas (including the balance of Development Precinct No. 4) and its own policy formulation.

The requirement of the subdivider to prepare and provide a set of Design Guidelines for sustainable housing design to prospective land owners at the time of subdivision will contribute to encouraging improved sustainability outcomes for Capel into the future.



## 5 Conclusion

The proposed Structure Plan presents a responsible and appropriate design response to the future subdivision development of the site in accordance with its zoning.

In summary the proposed Structure Plan achieves the following:

- Provides townsite expansion and a special residential living opportunity for future residents in the Shire of Capel as envisaged by the Council's Land Use Strategy and Town Planning Scheme;
- Contributes to preserving the character and appeal of the surrounding locality;
- Acknowledge the environmental features of the site whilst supporting efficient use of the land for future housing by applying an appropriate special residential density;
- Acknowledges the presence of Western Ringtail Possum Habitat and potential Black Cockatoos on the site, through sensitive planning and design at the time of subdivision;
- Will ensure that the existing character of the locality is maintained through the application of a revegetation buffer along weld, appropriate density and the location of an internal road;
- Larger lot sizes will provide opportunity for future residents to maximise solar efficiency and other sustainability principles within housing design;
- The proposed layout will create greater efficiency in terms of developing land which is well serviced, is highly accessible and which will have minimum impact on the receiving community and environment; and
- Also recognises surrounding land which has been identified for urban expansion and provides an infrastructure layout which does not compromise future planning and development.