

Kudardup

VILLAGE

STRUCTURE PLAN

Amendment No. 1

Lot 1 Kudardup Road, Kudardup



PREPARED FOR KUDARDUP VILLAGE PTY LTD



ACROSS PLANNING
Land Use. People. Place.

DOCUMENT CONTROL

ISSUE	DATE	ISSUE DETAILS	AUTHOR	CHECKED	APPROVED
DRAFT	13.08.2018	Client Review	KS	KH	KH
A	15.08.2018	Lodge with Shire of Augusta - Margaret River	KS	KH	KH
B	22.04.2020	Modifications required by WAPC	LG	LG	LG

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 WAS APPROVED BY RESOLUTION OF THE WESTERN AUSTRALIAN PLANNING COMMISSION ON:

10 February 2015

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

Date of Expiry: 19 October 2025

Amend. No.	Summary of the Amendment	Amendment Type	Date approved by the WAPC
1	<ol style="list-style-type: none"> 1. Modify the 'Rural-residential' provisions by reducing the minimum lot size from 2 to 1 ha, removing building envelopes and increase the indicative lot yield from 10 to 14 lots; 2. Substitute the 'Public Open Space' Reserve with three 'Residential R5' lots and a 10 metre-wide 'Public Open Space' reserve alongside the entry road; 3. Other modifications to the structure plan map and the structure plan text, in particular Section 5.2 'Subdivision' requirements and Section 5.3 Development' of Part One 'Implementation' as it relates to the establishment of the Agriculture Spray Drift buffer and the interface with Kudardup Road, including the requirement for an updated bushfire management plan and the means for land use conflict mitigation. 	Minor	25 May 2020

Table 1 Table of Amendments

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 WAS APPROVED BY RESOLUTION OF THE WESTERN AUSTRALIAN PLANNING COMMISSION ON:

10 February 2015

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

Date of Expiry: 19 October 2025

Executive Summary

The Kudardup Village Local Structure Plan prepared by Calibre Professional Services Pty Ltd was endorsed by the Western Australian Planning Commission (WAPC) on 10th February 2015. Key features of the Structure Plan are outlined below.

Village Development

Kudardup along with a number of settlements within the Shire of Augusta-Margaret River has been identified for expansion as a hamlet in keeping with the landscape, environmental and landscape qualities of the Leeuwin-Naturaliste Ridge.

Kudardup Village Pty Ltd seeks to create the first substantial component of a hamlet in the centre of Kudardup to comprise approximately 135 home sites with a focus on rural character, sustainable self sufficiency and environmental rehabilitation. Strategic justification for the project is provided by the following key outcomes:

- Kudardup's identification in strategic planning documents for hamlet development.
- The site's identification within the Kudardup Village Strategy for hamlet development.
- The ability of Kudardup to support Augusta, Molloy Island and the Rails to Trails project.

Sustainability

One of the challenges of achieving sustainable rural development is how to blend environmental outcomes and community needs with appropriate servicing technology and urban design to create a vibrant and affordable hamlet. The aim for Kudardup Village is to implement practical sustainability outcomes that provide benefits from the construction phase to long term growth of the local community. The key focus to achieve this aim will be environmental rehabilitation and the implementation of a sustainability package for all landowners.

Economy and Affordability

The project aims to promote local employment through land use and development diversity with a focus on work from home opportunities that builds upon the standard level of development permitted by the Local Planning Scheme. Affordability is addressed by providing options for rural housing, sustainable development initiatives and employment opportunities that encourage self sufficiency.

Subdivision approval for Stage 1 of the development was granted by the WAPC but it had become apparent that there was market demand for a range of smaller lots, along with the needs for other modifications to the endorsed Structure Plan.

Amendment No. 1

In late 2018, Kudardup Village Pty Ltd engaged *Across Planning* to help obtain approval of Amendment No.1 to the Structure Plan to enable:

- creation of a mix of 1ha and 2ha rural residential lots;
- a reconfiguration of lots and Public Open Space (POS) to be able to retain the existing dwelling on the property; and
- removal of the building envelopes to allow greater flexibility in the location of dwellings.

The changes to the rural residential lots responds to market demand for 1ha lots in the locality while creating better use of this land. As pre-selling of Stage 1 has proceeded, it became evident that there is a demand for lots of this size. Consultation with the landowner to the north was undertaken and the noise associated with harvesting, pruning and spraying of existing vines is to be addressed by a s70A *Transfer of Land Act* notification on titles of proposed lots in recognition of the location and occasional night-time noise due to the proximity to existing agricultural uses.

It was previously envisaged the existing dwelling on Kudardup Road would be demolished upon development of this portion of the structure plan area. The dwelling, which is tenanted, has since been renovated and there has been interest to purchase the dwelling once subdivision occurs in this precinct. Proposed lots have been reconfigured to include the dwelling within a 'Residential R5' lot and the POS reconfigured to a linear park along the adjacent entry road. Vegetation in this location is mainly degraded, introduced species of little environmental value.

The removal of building envelopes on the rural residential lots is supported by the Shire of Augusta Margaret River. Lot setbacks will revert to those outlined in Schedule 9 of the local planning scheme while taking into account additional setbacks as shown on the Structure Plan Map for fire management, Bussell Highway, agricultural spray drift and landscaped corridors.

The amendment to the Structure Plan is considered 'minor' as it does not represent a departure from the original endorsed version in relation to its purpose and intent, nor does it alter the indicative lot yield estimate by more than 10%, as referred to in Clause 17.1 of the WAPC's Structure Plan Framework, 2015.

The main elements of the Structure Plan are summarised in *Table 2*.

Item	Data
Total area covered by the structure plan	71 hectares
Residential land use proposed: Residential R10 - minimum area 1500m ² Residential R5 - minimum area 2000m ² Rural Residential - minimum area 1ha	No. of lots 27 103 14
Total estimated lot yield	144
Public Open Space provided	9.7888ha

Table 2 Structure Plan Summary

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I	Property and Ownership details
II	Flora and Vegetation Assessment
III	Fauna Assessment
IV	Heritage
V	Transport Assessment
VI	Water Management Strategy
VII	Fire Management Plan
VIII	Servicing Report
IX	Geotechnical Report
X	Noise Assessment Email



PART ONE: IMPLEMENTATION



1 Structure Plan Area

The Structure Plan applies to the land known as Lot 1 Kudardup Road, Kudardup. The Modified Structure Plan Map (Structure Plan map) comprises *Figure 1: Plan No. 15264P-SP-01C*.

The Structure Plan Area is bounded by Bussell Highway to the west and Kudardup Road to the South, as denoted on the Structure Plan Map.

The Structure Plan Area comprises an individual lot, as outlined in *Table 3*.

Lot Number	Plan Number	Street Address	Area
1	51956	Lot 1 Kudardup Road, Kudardup	71ha

Table 3 Site Details

2 Structure Plan Content

The Structure Plan comprises:

Part One	Statutory Section
Part Two	Explanatory Information
Appendices	Technical Reports
Structure Plan Map	<i>Plan No. 15264P-SP-01C</i>

Part One includes only the Structure Plan map, associated provisions and requirements that are statutorily required to implement the Structure Plan, including subdivision and development control.

Part Two justifies and clarifies the provisions contained in Part One and is used as a reference guide to interpret Part One and to assist with implementation.

3 Interpretation and Relationship with the Scheme

Unless otherwise specified in this part, the words and expressions used in this Local Structure Plan shall have the respective meanings given to them in the Shire of Augusta-Margaret River Local Planning Scheme No.1 (the Scheme) including any amendments gazetted thereto.

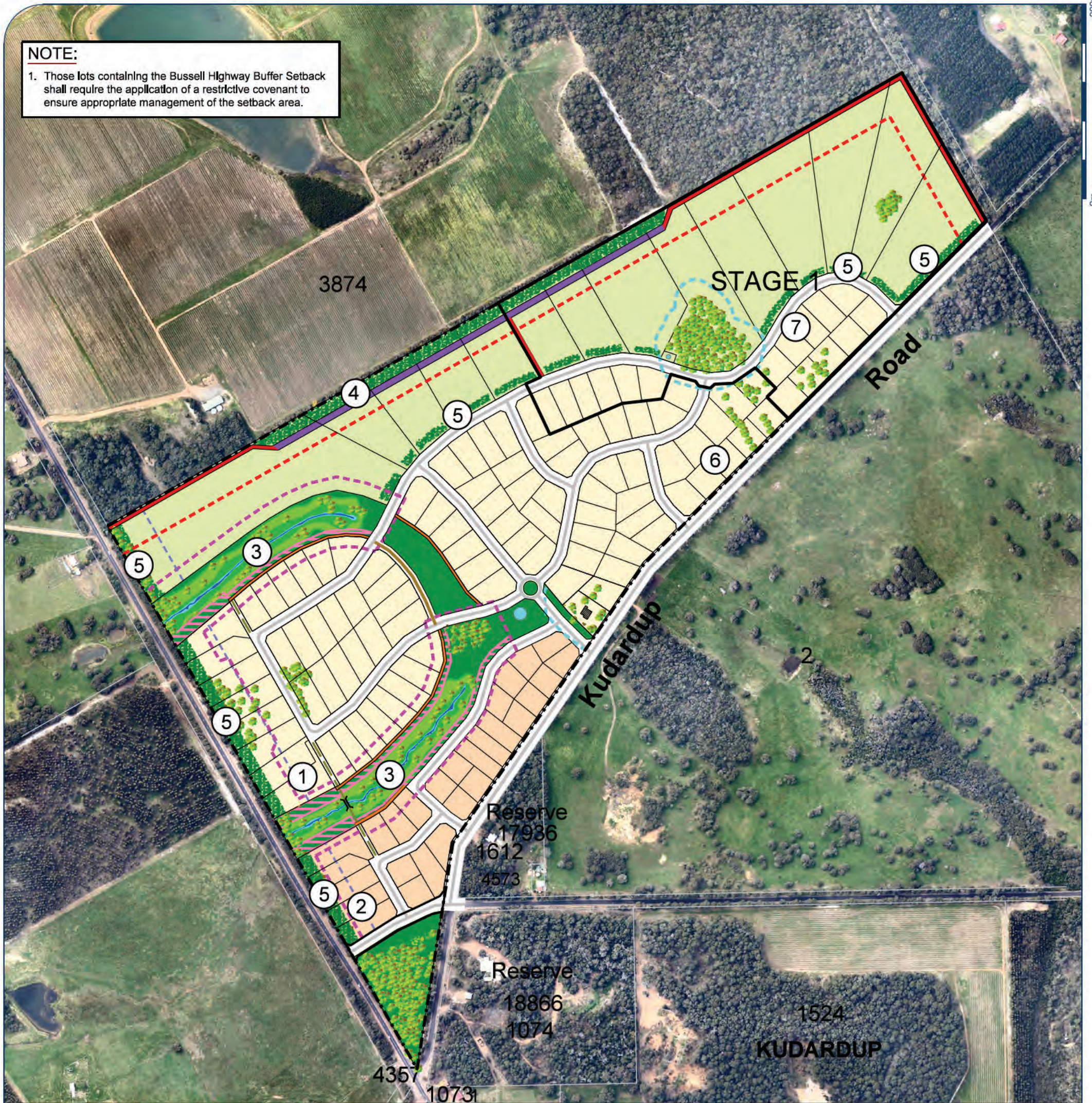
Where terms are not defined in the Scheme, the meanings shall be as set out within Part One of the Local Structure Plan.

In this Local Structure Plan, unless the context otherwise requires:

'Scheme' means the Shire of Augusta-Margaret River Local Planning Scheme No.1.

'Structure Plan' means the Local Structure Plan for Lot 1 Kudardup Road, Kudardup.

NOTE:
 1. Those lots containing the Bussell Highway Buffer Setback shall require the application of a restrictive covenant to ensure appropriate management of the setback area.



LEGEND		OTHER			
	Subject Land		Village Core - Residential and Limited Commercial/Tourism Development (refer to schedule 11 of LPS1)		27m Development Setback (Fire management)
	Existing Cadastral		18m Road Reserves		50m General Development Setback
ZONES			12m Road Reserves		Low Fuel Area
	Residential R5 (Minimum lot size - 2,000m ²)		6m Fire Service Access Route		100,000L Water Tank for Fire Fighting
	Residential R10 (Minimum lot size - 1,500m ²)		10m Fire Service Access Route		Tree Preservation
	Rural Residential (Minimum lot size -1ha)		4m wide Limestone Dual Use Path and Firebreak		Landscape Corridor
RESERVES			PAW/Emergency Accessway		Foot Bridge
	Public Open Space		Indicative Development Setback (Fire management)		Existing Dwelling
	60m Highway Setback				50m Highway Setback
	50m Highway Setback				Creekline Rehabilitation Area
	Creekline Rehabilitation Area				20m tree planting zone to help mitigate agricultural spray drift in conjunction with 50m General Development Setback
	20m tree planting zone to help mitigate agricultural spray drift in conjunction with 50m General Development Setback				20m Proposed Landscaped Corridor Within Lots
	20m Proposed Landscaped Corridor Within Lots				Shared (paired) crossovers for all lots that require access from Kudardup Road
	Shared (paired) crossovers for all lots that require access from Kudardup Road				Subdivision Stage 1
	Subdivision Stage 1				

FIGURE 1



ACROSS PLANNING
 ✉ PO Box 151 Australind WA 6233
 ☎ +61 438 971 207
 ✉ larry@acrossplanning.com.au

MODIFIED STRUCTURE PLAN
 Lot 1 Kudardup Road, Kudardup



Plan No: 15264P-SP-01C

Date: 23.03.2020
 Rev: C
 Scale: A1 @ 1:3000, A3 @ 1:6000
 Co-ords: MGA
 Aerial: Nearmap

This plan has been prepared for planning purposes. Areas, contours and dimensions shown are subject to survey.



Structure Plan Statistic	Quantity
Structure Plan Area	71ha
Proposed land Uses	
Village Core Residential R10 (27 lots) (including local roads)	6.5ha
Residential R5 (103 lots) (including local roads)	28ha
Rural Residential (14 lots)	23ha
Proposed Yields	
Estimated Lot yield	144
Estimated Number of Dwellings	144
Estimated Population (based on occupancy rate of 2 persons/dwelling)	288 (100% occupancy) 216 (75% occupancy)
Estimated potential commercial/tourist floor space (assume average of 50m ² floor space for 50% of 144 Lots)	3,600m ²
Estimated potential employment (assume average of 2 employees for 50% of 144 Lots)	144
Proposed Open Space and Foreshore Areas	
Local parks, creekline rehabilitation, tree preservation and drainage	9.7888ha
Percentage of Public Open Space provided	13.79%

Table 4 Land Use Table

4 Operation

The Structure Plan Amendment came into effect on 10 February 2015, when it was approved by the WAPC, and will expire on 19 October 2025.

5 Land Use and Subdivision

The Local Structure Plan Map (Plan 1) outlines land use, zones and reserves applicable within the Structure Plan area. The zones and reserves designated under this Structure Plan apply to the land within it as if the zones and reserves were incorporated into the Scheme.

This structure plan provides a framework for future subdivision and development of the subject land.

This Structure Plan is to be read in conjunction with Schedule 15 of the Shire of Augusta-Margaret River Local Planning Scheme No. 1.



5.1 Land Use Permissibility

Land use permissibility within the Structure Plan Area shall be in accordance with the 'Future Development' Zone or as required under the relevant local planning scheme (as amended) with due regard being given to the provisions of the structure plan."

5.2 Subdivision

The following matters shall be addressed prior to the issuance of any subdivision approval and the Local Government will not recommend approval to any subdivision unless these matters have been addressed to its satisfaction:

- a. 'Servicing Plan', for the Structure Plan Area, which demonstrates that each lot has a suitable minimum site area requirement for on-site effluent disposal or alternatively, that development will be serviced by an approved reticulated sewerage system. In regard to the on-site effluent disposal assessment required as part of the 'Servicing Plan', a detailed geotechnical assessment will be required for all lots. Notwithstanding the forgoing, the subdivider shall undertake the detailed geotechnical assessment to demonstrate the acceptability of future lots to accommodate on-site effluent disposal, as a condition of subdivision for Stage 1 delineated on Plan.
- b. The subdivider, demonstrating to the satisfaction of the Western Australian Planning Commission, that issues associated with the power transmission lines that traverse the Structure Plan Area (i.e. the proposed retention and undergrounding of these lines or alternatively their relocation) have been resolved in consultation with Western Power.
- c. The preparation of a 'Shared Paths and Footpaths Plan', which addresses the requirements of 'Liveable Neighbourhoods' and is to the specifications and satisfaction of the Local Government.
- d. The Bushfire Management Plan (Version H) is to be modified prior to subdivision by:
 - deleting reference to roadside clearing along Kudardup Road;
 - reviewing the vegetation classification of the vegetation within the road verge of Kudardup Road based on limited clearing/pruning for crossovers and services and recalibrate the associated BAL ratings accordingly;
 - reviewing the vegetation classification of the 20 metre wide planting zone (Agricultural spray Drift buffer) and recalculate the associated BAL ratings accordingly;
 - widening the Fire Service Access Route alongside the aforementioned 20 metre wide planting zone to 10 metre;
 - making the bushfire management plan mapping consistent with the structure plan map;
 - Under Table 5 of Section 6.0 Responsibilities for Implementation and management of the bushfire measures', add Implementation No.3.4 for the Shire of Augusta-Margaret River to state: *"The local government may consider amending its local planning scheme or using other statutory planning controls (e.g. local development plan to implement the revised setbacks based on the recommended BAL ratings. "*;
 - Under Table 5 of Section 6.0, modify Implementation Provision No.1.9 by substituting *"Section 70A of the Transfer of Land Act"* with *"Section 165 of the Planning and Development Act 2005"*; and
 - removing boundary firebreaks which dissect the Agriculture Spray Drift buffer.



The following matters will be addressed via recommended conditions of subdivision and the Local Government will not recommend clearance of subdivision conditions unless these matters have been addressed to its satisfaction:

- a. The finalisation of a 'Developer Contributions Plan and Implementation Plan' for community facilities consistent with the expectations of the Kudardup Settlement Strategy and the payment of proportional contributions required by that plan.
- b. The subdivider is to prepare and implement an 'Urban Water Management Plan (UWMP)' to the satisfaction of the Local Government and Department of Water. The UWMP is to address total water cycle management, drainage reserves, road swales and bioretention areas where planting for nutrient stripping purposes is proposed. The UWMP is to include provision of details on water dependent ecosystems proposed within the subdivision to enhance degraded environments and to improve ecological function by providing fauna habitat. In particular detention basins, drainage reserves and roadside bioretention swales are to be addressed.
- c. The subdivider is to prepare and implement an Environmental Management Plan to the satisfaction and specifications of the Local Government and is to address the following:
 - Landscaping and vegetation protection provisions for the identified Creekline rehabilitation areas and vegetated areas;
 - Measures to ensure the identification, protection and long-term management of stands of remnant vegetation within proposed buffers open space and individual lots;
 - Measures to ensure appropriate management of weeds and the spread of dieback;
 - Noise and dust during the construction phase;
 - Fauna and Flora protection measures; and
 - Measures to ensure implementation and management on an ongoing basis.
- d. The subdivider is to prepare and implement a suitable landscape concept plan to the satisfaction of the Local Government to address the landscape treatment of proposed buffers, creekline rehabilitation areas and open space. Any such plan is to include the use of local endemic species that occur within the relevant vegetation complexes and soil types across the Structure Plan and demonstrate sufficient planting to meet the buffering requirements identified on the Local Structure Plan (Plan 1).
- e. Notwithstanding the Kudardup Settlement Strategy, prior to subdivision the subdivider shall prepare a subdivision staging plan that can include the early first release of rural residential and R5 Residential lots to assist with the provision and early implementation of the Environmental Management Plan and the extension of Fisher Road to create a new intersection with Bussell Highway. The extension and relocation of the Fisher Road intersection with Bussell Highway shall be undertaken in the following stages:
 - Stage 1 – up to 25 Lots:
 - New Fisher Road reserve extension and intersection with Bussell Highway to be created and ceded free of cost.
 - Intersection and Fisher Road design to be finalised and approved by Council and Main Roads WA:



- Stage 2 – 26 Lots and above:
 - Stage 1 intersection to be constructed including relocation of intersection;
 - Existing section of Kudardup Road to be rehabilitated and the road intersection to Bussell Highway shall be constructed to Main Roads WA standards.
- f. The subdivider is to update and implement the requirements of the endorsed Fire Management Plan applicable to the Structure Plan to the satisfaction of the Department of Fire and Emergency Services and the Local Government.
- g. At the time of subdivision, the subdivider shall place Section 70A (*Transfer of Land Act 1893*) notification on the Certificate(s) of Title advising landowners:
 - of the proximity of existing agricultural land uses; which may impact local amenity including occasional night-time noise emissions;
 - of the requirement to install a grey water re-use system for any development;
 - of Design Guidelines applicable to the Residential R10 zone and lots fronting Public Open Space; and
 - of the proximity of the Bussell Highway and the potential for amenity to be affected by road traffic noise.
- h. The preparation and implementation of Design Guidelines and/or a Local Development Plan for development within the Residential R10 zone and those lots with direct frontage to Public Open Space as shown on Plan 1 to be approved by the Local Government.
- i. Prior to lodgement of subdivision applications for the area outside of Stage 1 delineated on Plan 1, the subdivider shall undertake further detailed geotechnical assessment to demonstrate the potential for disturbance of Acid Sulphate Soil and appropriate remediation or mitigation measures as necessary.
- j. The implementation of the 'Shared Paths and Footpaths Plan'.
- k. The 'Parks and Recreation' reserve (Public Open Space) shown on the Plan 1, is to be ceded free of cost by the subdivider without any payment of compensation by the Local Government or the Crown.
- l. At the time of subdivision, mechanisms for the protection in perpetuity of the Agricultural Spray Drift Buffer shall be implemented and the buffer will need to be effective prior to clearance of lots to the satisfaction of the Department of Health.
- m. At the time of subdivision, the subdivider shall place a Section 165 (*Planning and Development Act 2005*) notification on the Certificate(s) of Title advising landowners that the land is designated within a Bushfire Prone Area and additional planning and building requirements may apply, in addition to on-going maintenance responsibilities as outlined in the approved Bushfire Management Plan.

5.3 Development

- a. The disposal of liquid and solid waste shall be carried out within the Structure Plan Area by the installation of sewerage disposal systems to the satisfaction of the Local Government, subject to:
 - Aerobic treatment units and effluent disposal systems or alternative effluent disposal



systems, capable of minimising phosphorous movement from each lot, shall be installed to provide for treatment and disposal of wastewater, unless in a particular instance the use of conventional effluent disposal systems can be demonstrated as appropriate;

- A minimum of 50 metres is to be retained between effluent waste water disposal sites and perennial water courses;
 - Grey water treatment and re-use systems are to be installed and operated at all times to the satisfaction of the Local Government and the Department of Health.
- b. Notwithstanding the Residential R10 code designation shown on Plan 1 the minimum lot size per dwelling required for land designated Residential R10 shall be 1500m².
- c. All development proposals shall have regard to the approved Bushfire Management Plan and any development control provisions as outlined in the local planning scheme or local development plan. The 50 metre Development Setback is established for the purpose of buffering development from the adjoining agricultural practices and additional setbacks may be required to meet bushfire planning requirements at the time of development.

6 Open Space

Table 5 shows a breakdown of open space and foreshore reserves shown on the amended Structure Plan.

No.	Structure Plan Open Space Description	Area
1	Local Park (linear adjacent existing homestead)	0.1064 ha
2.	Local Park (triangular cnr Bussell Hwy/Kudardup Rd)	1.5568 ha
3.	Creepline POS and Rehabilitation Area with drainage	7.1256 ha
	Total area open space	9.7888 ha

Table 5 Structure Plan Open Space Provision

7 Residential Density

The residential design codes shown on the Structure Plan map are to be applied in accordance with the Residential Design Codes.

8 Subdivision and Development Requirements

Subdivision, development and land use within the Local Structure Plan area is to be generally in accordance with this Local Structure Plan.

The subdivision requirements apply to the Local Structure Plan in addition to any requirements of the Scheme:

- a) Mechanisms for the protection in perpetuity of the Agricultural Spray Drift Buffer shall be implemented and the buffer will need to be effective prior to clearance of lots to the satisfaction of the Department of Health.



9 Variations to the Residential Design Codes

Within the Residential R10 Village Core precinct, the following variations to the Residential Design Codes apply:

- The primary street setback including lots with double frontages is reduced from 7.5m to 6.0m.

The above variation of front setback is reduced from a standard 7.5m to 6m to promote the location of dwellings and potential associated permitted commercial and home-based business closer to the street and to increase the space available for the location of buildings and associated structures. All other provisions of the Residential Design Codes apply.

10 Operation and Implementation

Table 6 details additional documents that require completion to facilitate subdivision and/or development of the land as proposed by the Structure Plan, including the agency responsible for approving or endorsing the document.

No.	Documents required prior to subdivision approval (summary from Scheme and Structure Plan)	Agency Responsible for approval or Endorsement
1	Urban Water Management Plan	Local Government DWER
2.	Foreshore and Landscape Management Plan	Local Government
3.	Subdivision Staging Plan	Local Government
4.	Development Guidelines	Local Government

Table 6 Required Post Structure Plan Endorsement Documentation



PART TWO: EXPLANATORY REPORT



1 Planning Background

1.1 Introduction

The Kudardup Village Local Structure Plan Lot 1 Kudardup Road Kudardup was endorsed by the Western Australian Planning Commission on 10th February 2015 and is the guiding document for future subdivision and development of the subject land.

Figure 2 shows the Local Structure Plan superseded by Amendment No 1.

Modifications as part of Amendment No. 1 are reflected in this explanatory report. It should be noted that, with one exception, the amendment to the Structure Plan does not necessitate review of the technical reports which were 'Appendices' contained in a separate document accompanying the original endorsed Structure Plan. The exception is the Bushfire Management Plan which has been updated to reflect modified requirements.

1.2 Purpose of Structure Plan

The following vision and objectives have been developed for the structure plan.

Vision

To offer local residents the opportunity for a self sufficient, affordable and sustainable rural lifestyle that contributes to the development of Kudardup to develop as a vibrant hamlet that supports Augusta.

Objectives

- To create precincts that project individual character for a sustainable rural lifestyle with diverse housing choice.
- To provide opportunities for home-based business, low key tourist and commercial business potential that do not compete with the proposed commercial core of Kudardup and Augusta.
- To protect and enhance the environmental and visual qualities of the site through sustainable rehabilitation.
- To incorporate state of the art water sensitive design solutions.
- To promote self sufficiency and sustainable development through by the design and the introduction of sustainable servicing and practical development guidelines.

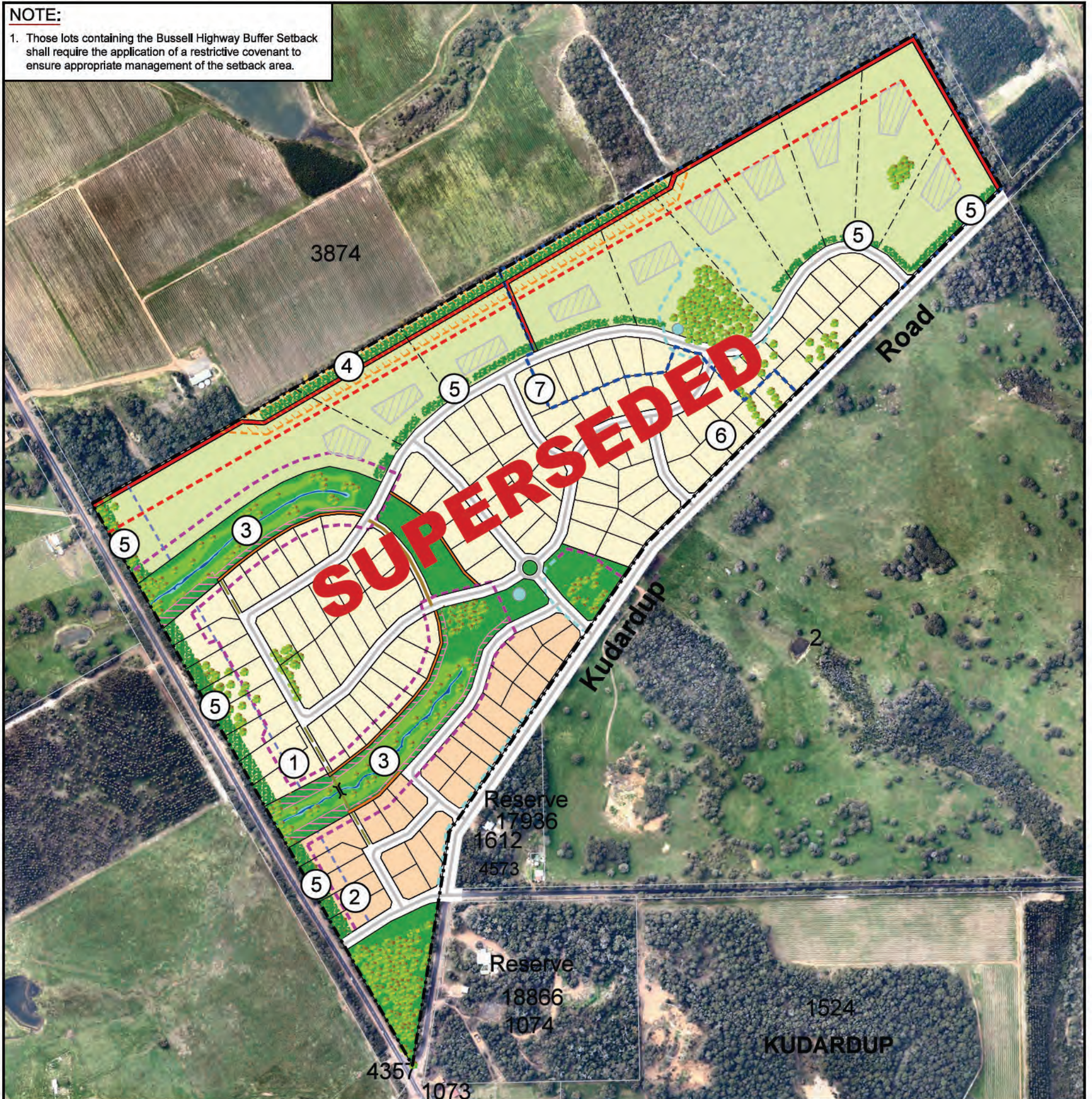
1.3 Land Description and Ownership

The site is located on the north east corner of the intersection of Kudardup Road and Bussell Highway, in the locality of Kudardup as shown in *Figure 3*. It is located approximately 7.5km north of Augusta townsite, along Bussell Highway and west of the Molloy Island Settlement.

The land is legally described as Lot 1 on Diagram 65790 on Certificate of Title Volume 1661 Folio 72. The registered proprietor is Kudardup Village Pty Ltd of Post Office Box 733, Bunbury.

NOTE:

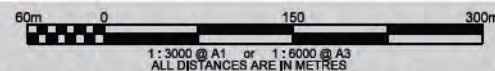
1. Those lots containing the Bussell Highway Buffer Setback shall require the application of a restrictive covenant to ensure appropriate management of the setback area.



LEGEND

- Subject Land
- Existing Cadastral
- ZONES**
- Residential R5
- Residential R10 (Minimum site area/dwelling - 1,500m²)
- Rural Residential (Minimum lot size -2ha)
- RESERVES**
- Public Open Space
- OTHER**
- Village Core - Residential and Limited Commercial/Tourism Development (refer to schedule 15 of LPS1)
- Building Envelopes
- 18m Road Reserves
- 12m Road Reserves
- 6m Fire Service Access Route
- 4m wide Limestone Dual Use Path and Firebreak
- PAW/Emergency Accessway
- 21m Development Setback (Fire management)
- 27m Development Setback (Fire management)
- 50m Development Setback (Fire management)
- Low Fuel Area
- 100,000L Water Tank for Fire Fighting
- Tree Preservation
- Foot Bridge
- ① 60m Highway Setback
- ② 50m Highway Setback
- ③ Creek Line Rehabilitation Areas
- ④ 40m Agricultural Spray Drift Buffer (with 20m planting zone)
- ⑤ 20m Proposed Landscaped Corridor Within Lots
- ⑥ Shared (paired) crossovers for all lots that require access from Kudardup Road
- ⑦ Subdivision Stage 1

**LOCAL STRUCTURE PLAN
LOT 1
KUDARDUP ROAD
KUDARDUP**



J			
I			
H			
G	MODIFICATION REQUESTED BY WAPC	TDB	03.12.2014
F	MODIFICATION REQUESTED BY WAPC	TDB	06.11.2014
E	MINOR MODIFICATION	KS	20.02.2014
D	LOT ADJUSTMENT FOR FIBRE OPTIC CABLE	JPW	21.11.2013
C	BUILDING ENVELOPES ON 40 SETBACK REVIEWED	JPW	08.05.2013
B	TO COMPLY WITH 10th OCTOBER 2012 COUNCIL RESOLUTION	JPW	24.10.2012
A	FIRE SETBACKS ADDED	JPW	08.06.2012
REVISION	DESCRIPTION	DRAFTER	DATE

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ORIGINAL PLANNER:	KM
ORIGINAL DRAFTER:	JW
CREATED DATE:	01.12.2011
AERIAL DATA:	NEARMAP 2011
CADASTRAL DATA:	LANDGATE 2010 - MGA
TOPOGRAPHIC DATA:	LANDGATE 2010



08116P-SP-01G



Figure 3 Location Plan

The subject land is presently undeveloped and used for grazing. It has one dwelling, which is currently tenanted.

The land has an area of 71ha of gently sloping, mainly parkland cleared with isolated stands of native vegetation overlooking the Leeuwin Naturaliste Ridge.

1.4 Planning Framework

1.4.1 Shire of Augusta Margaret River Local Planning Scheme No. 1

The site is zoned 'Future Development' under the Shire of Augusta Margaret River Local Planning Scheme No. 1 (the Scheme). It is also identified within 'Structure Plan Area 25' (SPA 25) and 'Development Contribution Area 1' as shown in Figure 3.

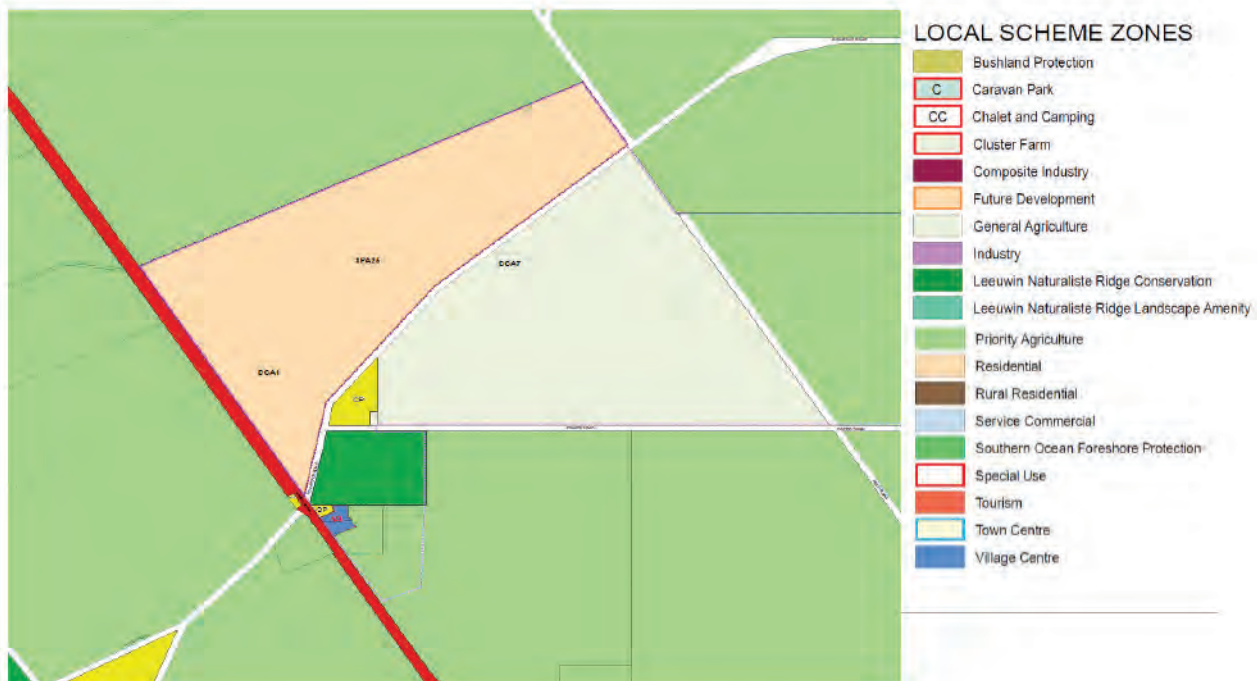
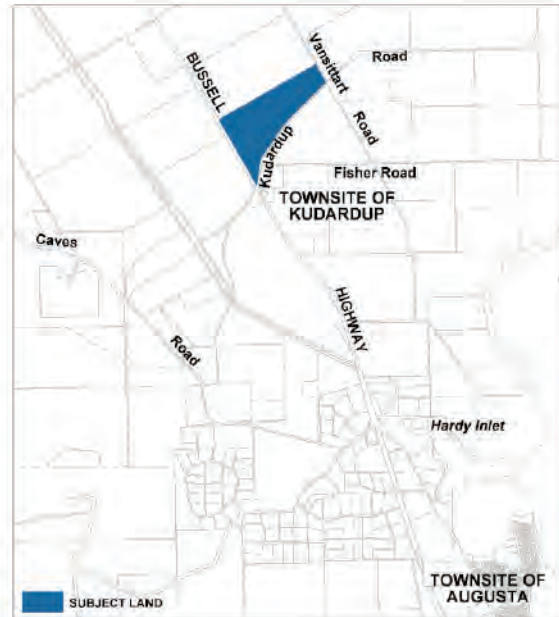


Figure 4 Shire of Augusta Margaret River Local Planning Scheme No.1

The south western extremity of the land is also located within a townsite boundary under the *Land Administration Act 1997*.

Clause 4.2.1 of the Scheme (outlined below) sets out the purpose and objectives of the 'Future Development Zone':

Purpose of the Future Development Zone:

To provide for additional sustainable urban development within and around existing settlements within the Scheme area.



Objectives of the Future Development Zone:

- (a) To designate land considered to be generally suitable for future urban development and to prevent such land being used or developed in a manner which could prejudice its possible future use for planned urban development;*
- (b) To provide for the sustainable development of land in an orderly manner with appropriate levels of physical infrastructure and human services;*
- (c) To require, as a pre-requisite to the local government's support for subdivision proposals and approval to development for urban purposes, the preparation and approval by the local government together with endorsement by the Western Australian Planning Commission of a Structure Plan in accordance with the provisions of Part 4 of the Deemed Provisions; and*
- (d) To guide and control the development so as to achieve compact urban areas linked by open space, natural areas and functional open space consistent with the objectives of attaining sustainable development.*

Clause 4.29 of the Scheme (outlined below) sets out the development requirements of the 'Future Development Zone':

- (a) Prior to the local government granting approval to any development or supporting any proposal for the subdivision of land within the Future Development Zone, other than the erection of a single dwelling or minor changes in the use of land, a Structure Plan shall be prepared and approved pursuant to the provisions of Part 4 of the Deemed Provisions.*
- (b) Notwithstanding the provisions of clause 4.29(a), the local government may approve the construction of a single dwelling on any lot within the Future Development Zone and may grant approval to changes in the use of land that, in the opinion of the local government, will not be likely to prejudice the proper future subdivision and development of the land within the Zone.*
- (c) Where a Structure Plan has been endorsed by the local government and the Western Australian Planning Commission, the land to which the Structure Plan applies shall be developed generally in accordance with the Structure Plan and any associated provisions contained in Schedule 11.*

Schedule 11 of the Scheme details the matters (in addition to Part 4 of the Deemed Provisions) to be addressed for each of the Structure Plan Areas identified.

Clause 6.3 of the Scheme includes the interpretation, purpose, guiding principles, recommended content and payment of contributions amongst other matters in relation to Development Contribution Areas (DCA).

1.4.2 State Planning Policy 6.1 - Leeuwin Naturaliste Ridge

State Planning Policy 6.1 - Leeuwin Naturaliste Ridge (WAPC, 2003) designates Kudardup to develop as a "Hamlet with Enclaves" with an envisaged permanent population of 500 persons as a guide.

The strategic location and potential of Kudardup is also highlighted by Policy LUS of the LNRSP that provides for the settlement to be expanded to a 'Village with Enclaves' following discussions with the local community.

The Structure Plan demonstrates compliance with the SPP 6.1 through the location, scale and form of proposed development that achieves appropriate servicing, environmental, landscape and fire management outcomes.



1.4.3 Leeuwin Naturaliste Sub-regional Planning Strategy

The Leeuwin Naturaliste Sub-regional Planning Strategy (Sub-regional Strategy) was adopted by the WAPC in 2019. Together with SPP 6.1, the Sub-regional Strategy is an overarching planning document that guides the future planning and development of all the land within the local government areas of the Shire of Augusta-Margaret River and the City of Busselton.

The Sub-regional Strategy seeks to ensure that growth and development is well planned, reflects the current government positions, State planning policies and best planning practices with regard to the environment, landscape, settlement patterns and diverse economic opportunities of the area.

In the Sub-regional Strategy, the land subject to the Kudardup Village Structure Plan is shown in the Strategy Plan as 'Urban' and in the Settlement Hierarchy as 'Village'.

1.4.4 Local Planning Strategy

The Shire's Local Planning Strategy (LPS) identifies Kudardup (including the subject land) to develop as a 'Hamlet' with a planned capacity of 500 persons subject to the preparation of a Townsite Strategy that has been fulfilled by Council by the endorsed Kudardup Settlement Strategy.

The structure plan demonstrates compliance with the LPS including addressing key issues of servicing, lot dwelling mix, visual impact with a range of buffers.

1.4.5 Kudardup Settlement Strategy

The Structure Plan demonstrates compliance with development framework provided by the Kudardup Settlement Strategy (KSS) as detailed in *Figure 4* by the following key outcomes:

- The location, scale and form of proposed landuses with identified development cells.
- The creation of a series of 'Green Network Areas' comprising proposed open space, vegetation retention, rehabilitation areas and landscape corridors.
- The provision of appropriate buffers to the Bussell Highway and adjoining rural properties.
- Provision for a new intersection with the Bussell Highway by the extension of Fisher Road.
- The provision of services and drainage management that promotes sustainable self sufficiency.
- The requirement for the introduction of development guidelines to ensure future development is consistent with the character of the area that also includes measures to minimise water and energy use.

The Kudardup Settlement Strategy recommends that development commence within the proposed hamlet core (Cells 1 and 2 of DIA's 2 and 1 respectively).

The Structure Plan includes a variation to the staging of development to allow outer lying lower density lots to be created first. This is proposed in the interests of allowing the proponents to construct the Fisher Road extension, undertake extensive environmental rehabilitation and establish a resident population as the foundation to create a vibrant and safe village core.

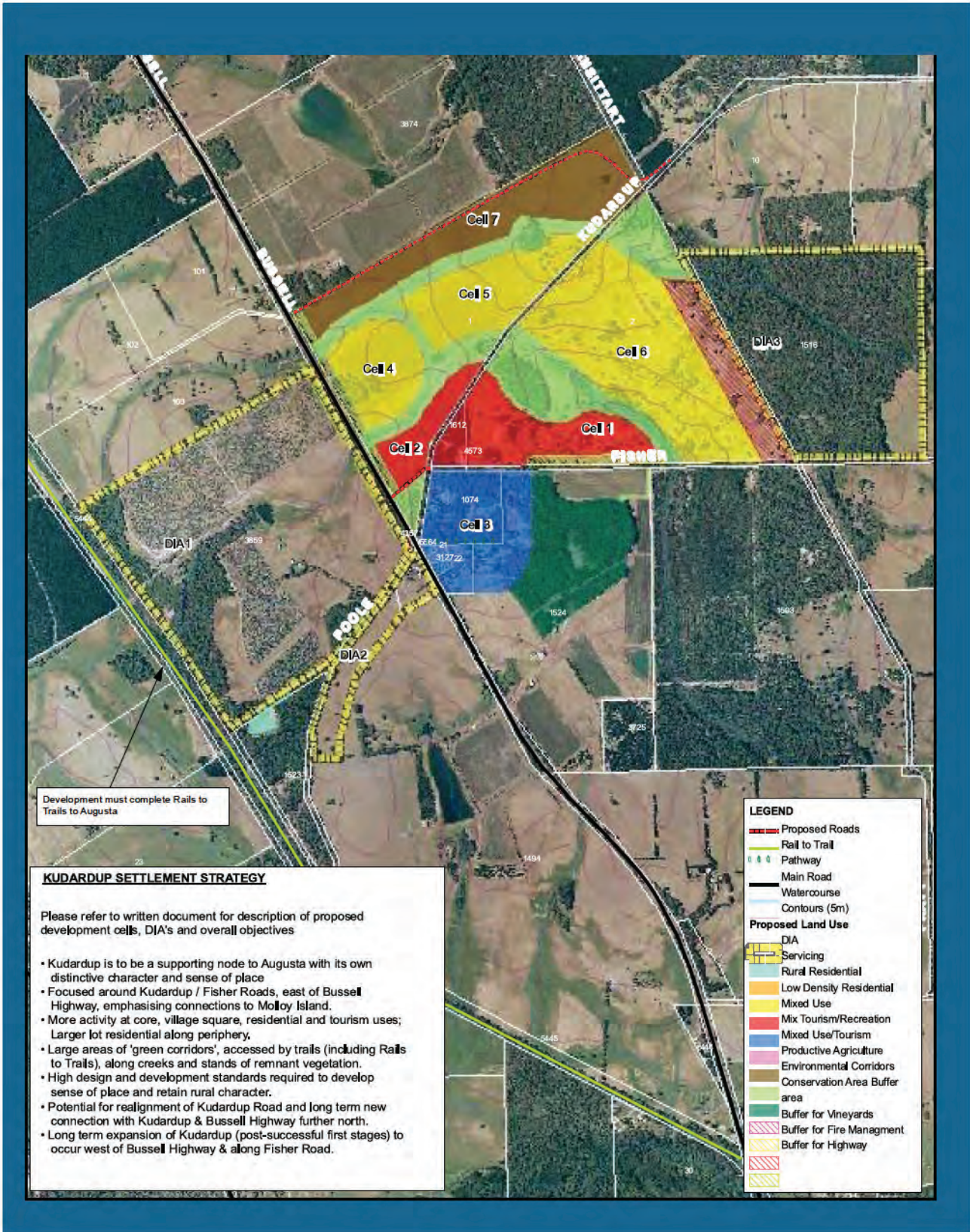


Figure 5 Kudardup Settlement Strategy



1.4.6 Rural Hamlet Design Handbook

The Rural Hamlet Design Handbook was adopted by Council as a reference document and has principally been applied to the Margaret River townsite through a recently adopted Council policy. The KSS outlines that Scheme amendments and structure plans are to follow the site analysis mapping and documentation processes outlined within “Phase Two” of the Rural Hamlet Design Handbook.

The site analysis and documentation contained within the structure plan report closely follows the handbook.

2 Site Conditions and Environment

Figure 5 - The Site

The site is predominantly gently undulating cleared pasture with isolated areas of remnant trees and cleared drainage lines. The site is currently leased for cattle grazing, supported by an existing dwelling, farm sheds and dam water supplies

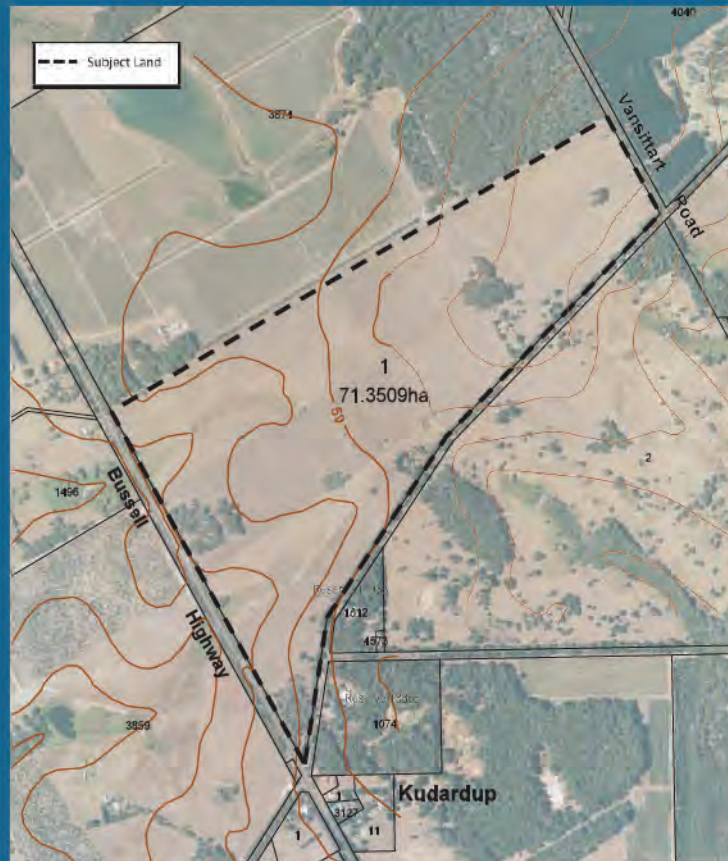


Figure 6 The site



Figure 5- The Site provides an overview of the subject land's site conditions and existing development, that demonstrate the site is ideally suited for hamlet development consistent with the applicable planning framework.

The subject land includes limited environmental assets or constraints for proposed development. In support of the structure plan and Scheme amendment a spring flora/vegetation assessment and a fauna assessment have been undertaken.

2.1 Spring Flora and Vegetation Assessment

A spring flora and vegetation assessment completed in November 2011 by Eco Logic Environmental Services Pty Ltd is contained in *Appendix II*. The assessments confirm that onsite flora and vegetation are limited and do not pose a constraint for the level of development proposed. In summary the assessment confirms:

- The condition of the majority of onsite vegetation comprises parkland cleared trees that are mostly classified as Degraded to Completely degraded from past clearing, grazing and weeds. A portion of vegetation within the southerly tip of the site proposed to be retained as open space is classified as Degraded to Good.
- Onsite vegetation is not considered to be regionally significant due to the Completely Degraded condition and the parkland cleared state of vegetation complexes.
- No DEC listed taxa were recorded during the appropriated timed September Spring survey.
- No Declared or Rare species or Priority species were recorded within the study area.
- As no nationally threatened native species or vegetation communities were recorded within the study area, referral to the Department of Environment, Water, Population and Communities (DEWPC) should not be required. The assessment confirms that subdivision resulting from the Structure Plan is not likely to have a significant impact on any threatened vegetation communities or plant species protected by the SPBC Act.
- The assessment confirms that larger cells of remnant vegetation are proposed to be incorporated and rehabilitated in public open space and drainage areas. Scattered, isolated and smaller areas of remnant trees are recommended where safe, to be retained where possible.





2.2 Fauna Assessment

A fauna assessment completed in September 2011 by Greg Harwood is contained in *Appendix III*. The assessment outlined the following key results and recommendations:

- No evidence of any conservation significant species were found during the field survey.
- No western grey kangaroos were observed during the field survey and whilst some possible paddock grazing may possibly occur a site-specific management plan is not recommended.
- In relation to black cockatoo no evidence was found during the survey of any foraging evidence or roosting trees. 41 onsite trees were observed to contain hollows and had a diameter at breast height over 50cm that would by definition represent black cockatoo foraging habitat.
- In relation to western ringtail possum (WRP) only about 0.3ha of habitat was considered favourable for WRP and no evidence was found of the species using vegetation within the study area. Most of the onsite vegetation (marri and jarrah woodland with a lack of midstorey vegetation) appear unsuitable for WRP to use on a permanent basis.
- Due to past agricultural use remaining onsite vegetation is classified as 'parkland cleared' that supports reduced fauna biodiversity to the extent that fauna using the site now are likely to be general species able to utilise disturbed habitats.



Two small groves of peppermint (total area <0.3ha) and nine scattered peppermint trees representing potential WRP habitat showed no sign of utilization by WRP during the survey period.

On the basis that the majority of all native vegetation is to be retained in reserves and private lots it is considered highly unlikely that the impacts on the overall status of fauna currently utilizing the site will be substantial. Similarly, all fauna species that currently utilize the site are expected to continue to use the site to a similar degree once it is developed.

Once planning for the development has progressed to a stage where subdivision plans are available it is recommended that dialogue with DSEWP be undertaken to determine if referral of the project is required. Whilst remnant vegetation and habitat areas on the site are limited and a range of protection and rehabilitation measures are proposed, including the protection of larger bush remnants within open space corridors, the proponents at the time of preparing this report referred the project to DSEWP.



In addition to the protection of larger bush remnants within open space it is recommended that smaller groves of trees should be included in areas with larger lots. In response the structure plan design places a number of smaller cells of bush remnants in open space areas and larger lots to minimise the need for clearing.

Proposed landscaping should utilise local seed stock including peppermint to provide cockatoo food plants and to improve the habitat for the western ringtail possum.

2.3 Heritage

The Department of Indigenous affairs as detailed in *Appendix IV* confirmed that there were no registered sites within the work area proposed for redevelopment of the property.

Whilst the advice from the department indicated a heritage survey was not required, the proponent has an obligation under Section 15 of the *Aboriginal Heritage Act* in the event that cultural material or new sites are discovered while undertaking the project or through any heritage surveys that may be carried out.

2.4 Context and Constraints Analysis

The following sections and series of figures provides a detailed sieve mapping assessment of the site to determine opportunities and constraints in accordance with the requirements of the KSS. In each case the figures provides text to interpret the mapping undertaken.

The outcome of the mapping assessment confirms the suitability of the site for development with limited and manageable constraints.

2.4.1 Elevation

Figure 6 provides an analysis of site elevation that confirms the majority of the site is capable of development.

The elevation plan confirms the site rises gently from approximately 40m AHD along portions of the Bussell Highway frontage to a maximum elevation of 63m AHD towards the sites eastern extremity. The sites elevated and undulating nature affords distant western views to the Leeuwin Naturaliste Ridge and eastern views to surrounding bushland. The western portions of the site contain two broad swales that drain towards Bussell Highway.

The majority of the site is well elevated and suitable for development.

Potential exists to provide home sites with both access to northern aspect and distant views.

The undulating and elevated nature of the site with distinct lowlands provides good opportunities to implement water sensitive urban design.

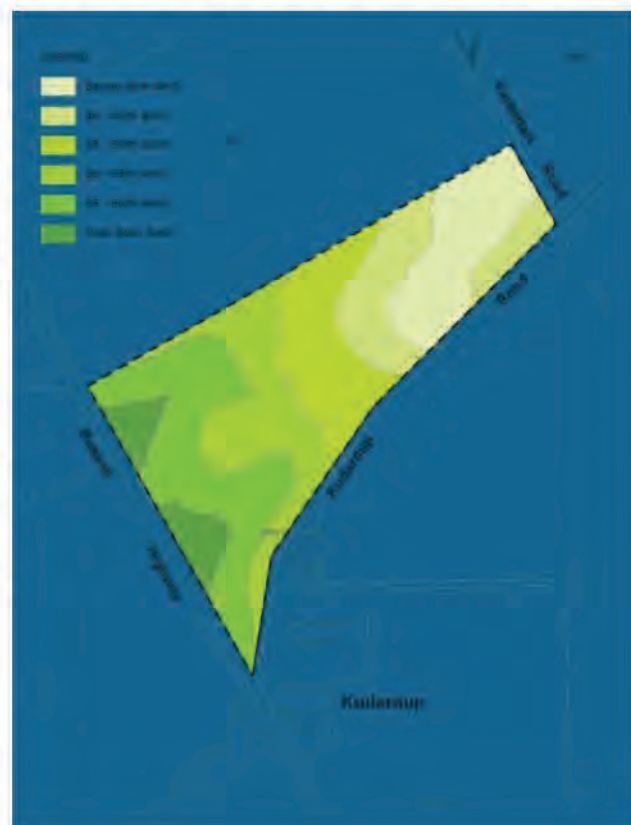


Figure 7 Constraint – Elevation



2.4.2 Slope Plan

Figure 7 confirms that the majority of the site supports slopes of 0 to 5 degrees ideally suited to development. A small area corresponding to the proposed village core has slopes ranging from 5 to 10 degrees that suggests the area is better suited to generously sized lots to allow a more sensitive approach to slope management.

The site comprises the following major landforms:

- Low land areas over the western portions of the site are associated with existing broad drainage lines.
- Large areas of gently sloping land of 0 to 5 degrees support two small hill top areas.

Design Response:

- Gentle slopes demonstrates that the whole of the site is suitable for affordable development.
- Providing generous lot sizes will assist to provide for good home orientation and the minimisation of cut and fill particularly with small areas with slopes of 5 to 10 degrees.
- Drainage swales together with remnant vegetation are suitable for regeneration and open space provision



Figure 8 Constraint – Slope

2.4.3 Aspect and Visual Impact Plan

Figure 8 confirms that the site, with attention to lot sizes can provide for northerly aspect for dwelling development. Attention to planting will assist to screen built development whilst maintaining distant rural vistas.

The gentle undulating nature of the site presents aspects in all directions with predominantly western aspect. Slopes of less than 5 degrees will have no difficulty in achieving northern aspect for the majority of potential housing sites.

The site exhibits distant views to Leeuwin- Naturalist Ridge. Views into the site from Bussell Highway and adjoining land to the north are limited due to existing roadside vegetation, onsite vegetation and site undulation.



Design Response:

- A number of potential house sites can achieve distant views to the Leeuwin Naturaliste Ridge due to the western aspect of much of the site.
- Land along the northern boundary of the site contain areas of northern and north western aspect that would be suitable for potential rural production and buffers to the adjoining vineyard and bushland
- Attention to remnant vegetation retention, and buffer planting along Bussell Highway and portions of the northern boundary in addition to internal planting and rehabilitation will predominantly screen development from outside designated Development Investigation Areas.



Figure 9 Constraint – Aspect

A visual impact assessment has been prepared in accordance with guidelines agreed with Council staff and supported by Council. Three visual representations of views into the site from Bussell Highway have been prepared in addition to information on views from distant vantage points.

Visual representations

Figures 10, 11 and 12 provide three visual impact assessments of views into the site from Bussell Highway. The assessment has been developed by superimposing the modelled location of dwellings and proposed planting within photographs taken from Bussell Highway. The assessment confirms:

- Existing views into the site from Bussell Highway are already largely screened by existing highway verge vegetation that supports a high proportion of peppermint trees up to 6m height and a centrally located embankment of approximately 1.5-2.0m in height.
- Only modest planting within the proposed buffer along the highway is necessary to totally screen the majority of the site and future built development. The only area where a view into the site would be present is from the new access road. It is noted that the location for the new access road is the only location along the highway frontage where limited views into the site are present. It is considered desirable that this new road has some visibility. This new access will effectively only be visible from directly in front of the intersection due to the extent of existing and proposed vegetation within the highway reserve, proposed highway buffer and proposed open space. In practice more planting would be achieved than shown in the images.



- The southern view assessment where the new road link enters, offers limited views into the site for very short distance along the highway. Due to existing and proposed vegetation only one or possibly two dwellings would be partially visible to any extent from Bussell Highway. The dwelling shown in the assessment has intentionally been drawn as a two-storey structure to confirm that even a large dwelling would not be sky lined against the back of trees. In reality it is more likely that dwellings will be single storey, further reducing any visual prominence. The dwelling in the presentation is setback in excess of 60m from the highway in accordance with the structure plan layout.
- There are some existing limited views into the site at the northern end of the property where road side vegetation is relatively sparse for a short distance of approximately 50m. A minimum 20m wide planted buffer as part of any highway buffer would screen views into the site as shown by the visual assessment.
- All images confirm the site is not sky-lined and tall areas of trees exist adjoining the site to the north and are onsite in the southwestern corner that heavily screen any views into the site.



08.116-Kudardup Visual Impact Assessment

Figure 10 Constraint – Visual Assessment View 1

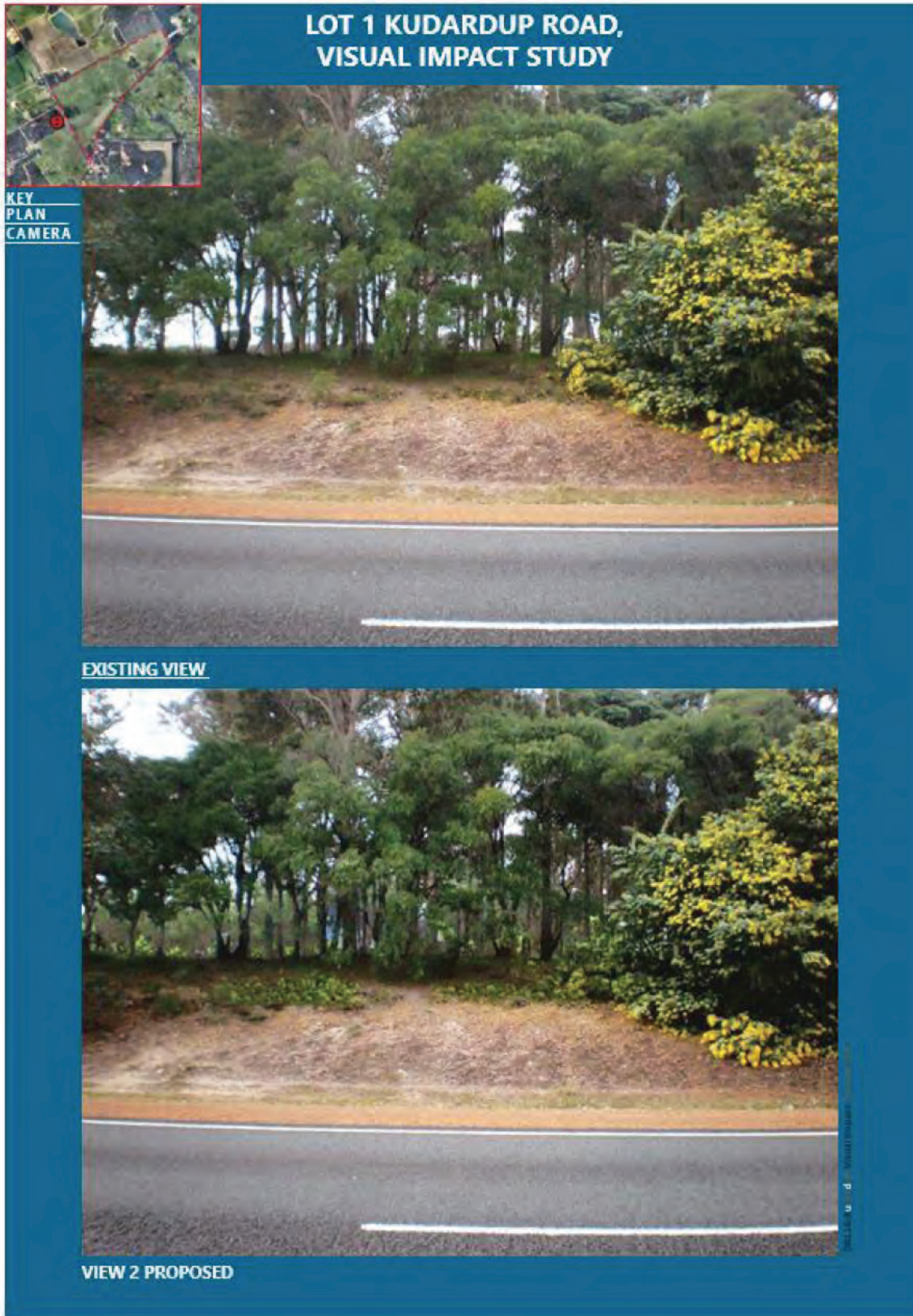


Figure 11 Constraint – Visual Assessment View 2



**LOT 1 KUDARDUP ROAD,
VISUAL IMPACT STUDY**

KEY
PLAN
CAMERA



EXISTING VIEW



VIEW 3 PROPOSED

Figure 12 Constraint – Visual Assessment View 3



Views along Bussell Highway and Kudardup Road

The views looking directly up and down the highway from the northern and southern ends of the site confirms views into the site are negligible and the bulk of verge vegetation already significantly screens the site as shown by the following:



Image 1: View North along Bussell Hwy from the southern end of site showing the extent of existing screening verge vegetation to right of frame.



Image 2: View South along Bussell Hwy from the northern end of the site showing the extent of existing screening verge vegetation to the left of frame.



More extensive views into the site are present from Kudardup Road as shown by the following image looking east along Kudardup Road. Due to the bends in the road, topography and vegetation the site is only visible from directly in front of the site within the identified boundaries of DIA's. Screening is provided by the undulating nature of the terrain and onsite and adjoining screen vegetation.



Image 3: View east along Kudardup Rd showing the extent of road side vegetation and views into the site.



Assessment of distant vantage points

An assessment of distant vantage points as illustrated by the following images confirms:

- The site is not visible from any distant points along the road network including Bussell Highway, Caves Road, Kudardup Road and Fisher Road etc due to screening vegetation within road verges, private property and/or reserves.
- The site is not visible from the Augusta townsite although a very minor glimpse of the ocean east of the townsite is evident at a distance in excess of 12km as shown in the following image. This view only occurs from a small portion of the eastern extremity of the site over extensive vegetation.



Image 4: View south from existing unused dwelling with ocean barely visible mid picture above distant tree line.

- Portions of the site are partially visible from the Lookout near the Augusta Golf Course some 6.8km from the site and potentially from a small number of south-eastern facing rural residential properties 9km from the site on the ridge at Hamlin Bay. Any views to the site from these locations will be discrete and not skylined due to the extent of surrounding and proposed onsite screen vegetation.

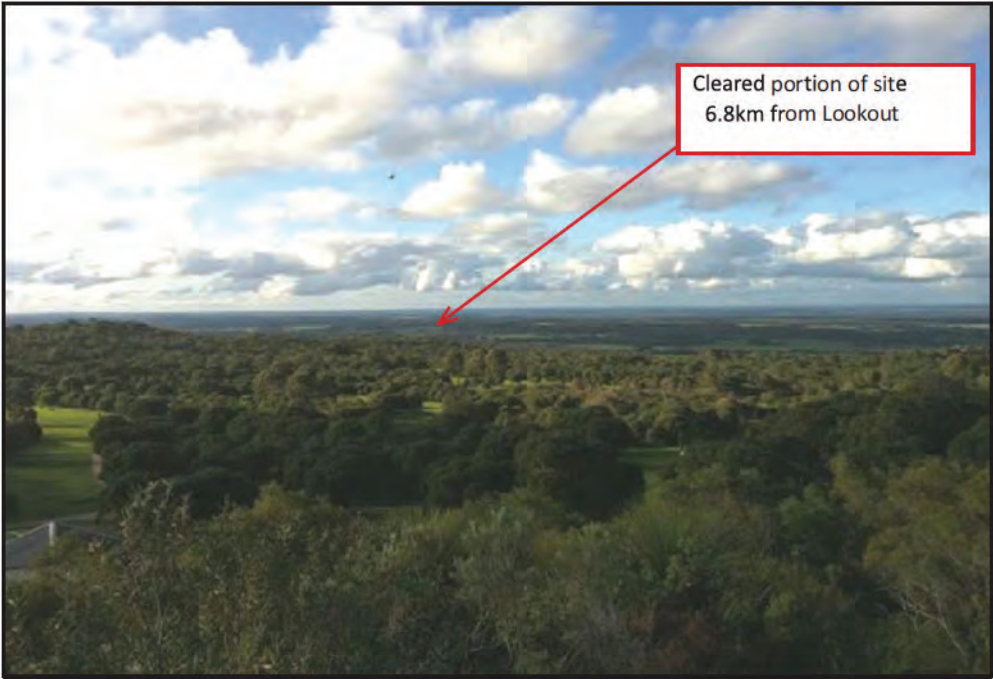


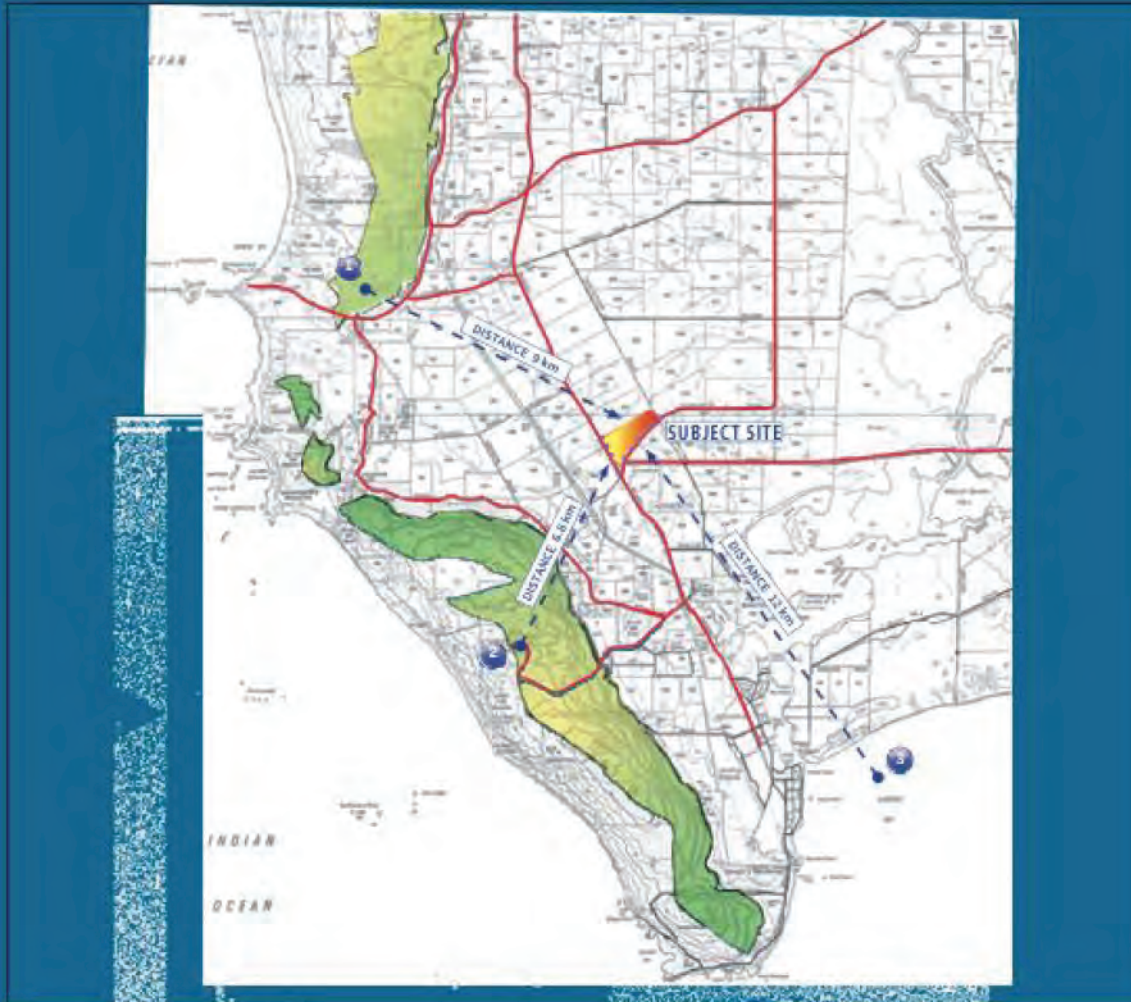
Image 5: View from Augusta Lookout with small portion of site visible as highlighted. Image 6: View south from eastern end of the site to the Leeuwin Naturaliste Ridge in the vicinity of the Lookout.



Image 6: View south from eastern end of the site to the Leeuwin Naturaliste Ridge in the vicinity of the Lookout



LOT 1 KUDARDUP ROAD, DISTANT VIEW



LEGEND








-  Subject Site 63m A.H.D max.
-  Surrounding Ridges and Hills 60m A.H.D min to 200m A.H.D max (Theoretically possible viewing locations without factoring the extent of screen vegetation)
-  Distant local primary road network with no views to site present.
-  Local roads abutting the site with limited to open views into site
-  1 Limited potential view to the site from rural residential lots on the Leeuwin Naturaliste Ridge.
-  2 Limited view line from Augusta Lookout to site.
-  3 Limited ocean glimpse to/from the site.

Figure 13 Constraint – Distant View Assessment View 1

Figure 12 is a distant view assessment based on contour data, without factoring in vegetation. This assessment indicates the site would theoretically be visible from areas along the Leeuwin Naturaliste Ridge. However, as the majority of the ridge is heavily vegetated and has a limited number of eastern and south-eastern facing private properties or lookouts, available views to the site are considered minimal and subdued within the broader rural landscape. The site is potentially viewed from portions of the Leeuwin Naturaliste Ridge at a distance of approximately 6km to in excess of 13km.



2.4.4 Landform, Soils, Hydrology and Drainage Plan

Figure 13 confirms that the landform, soils, hydrology and broad drainage characteristics of the site are conducive to the level of subdivision and development proposed by the Structure Plan.

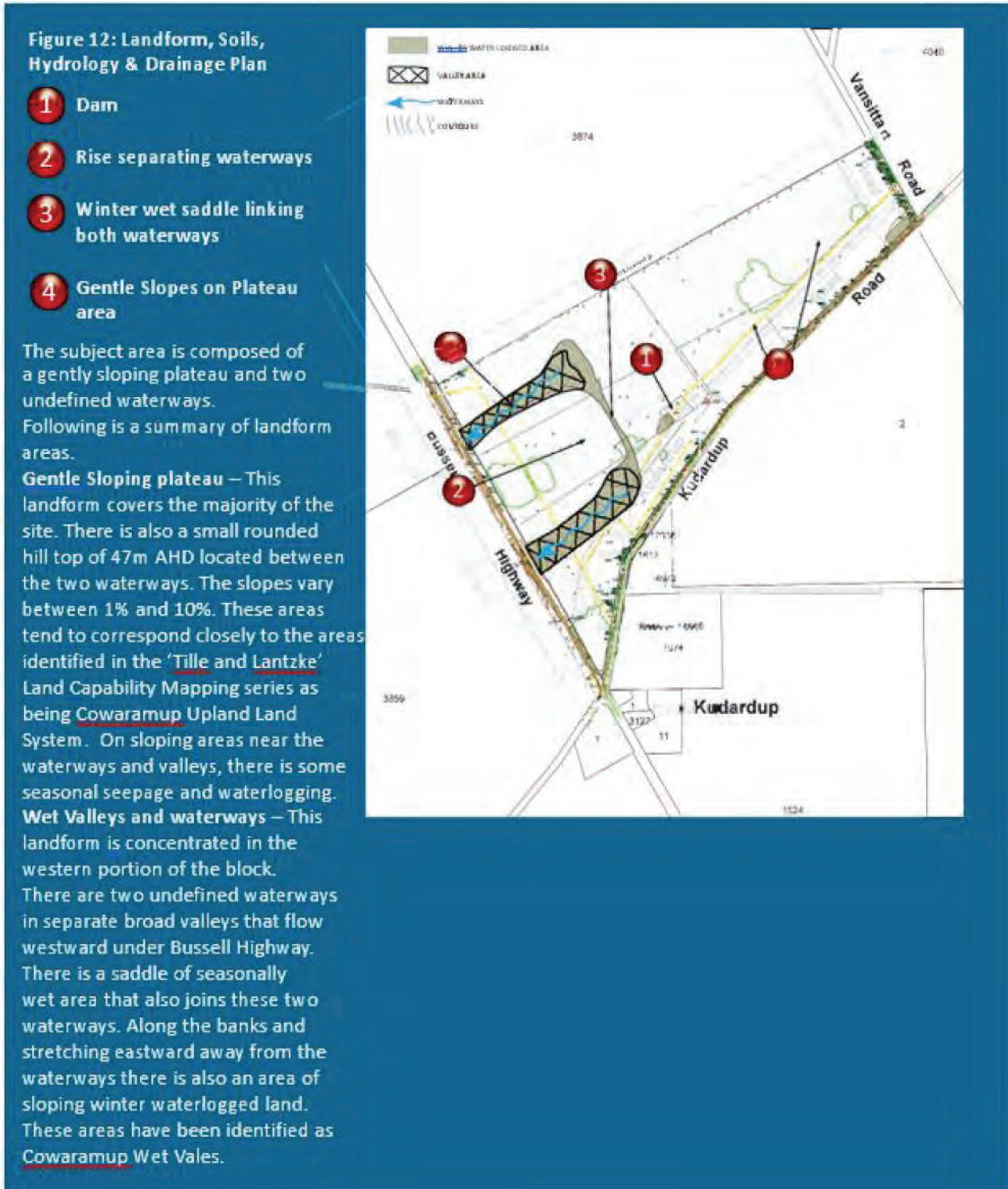


Figure 14 Landform, Soils, Hydrology & Drainage Plan



2.4.5 Natural Environment Plan

Figure 14 confirms that the majority of the site is cleared with only relatively small areas covered by largely degraded vegetation and drainage lines that can be substantially improved as part of development of the land.

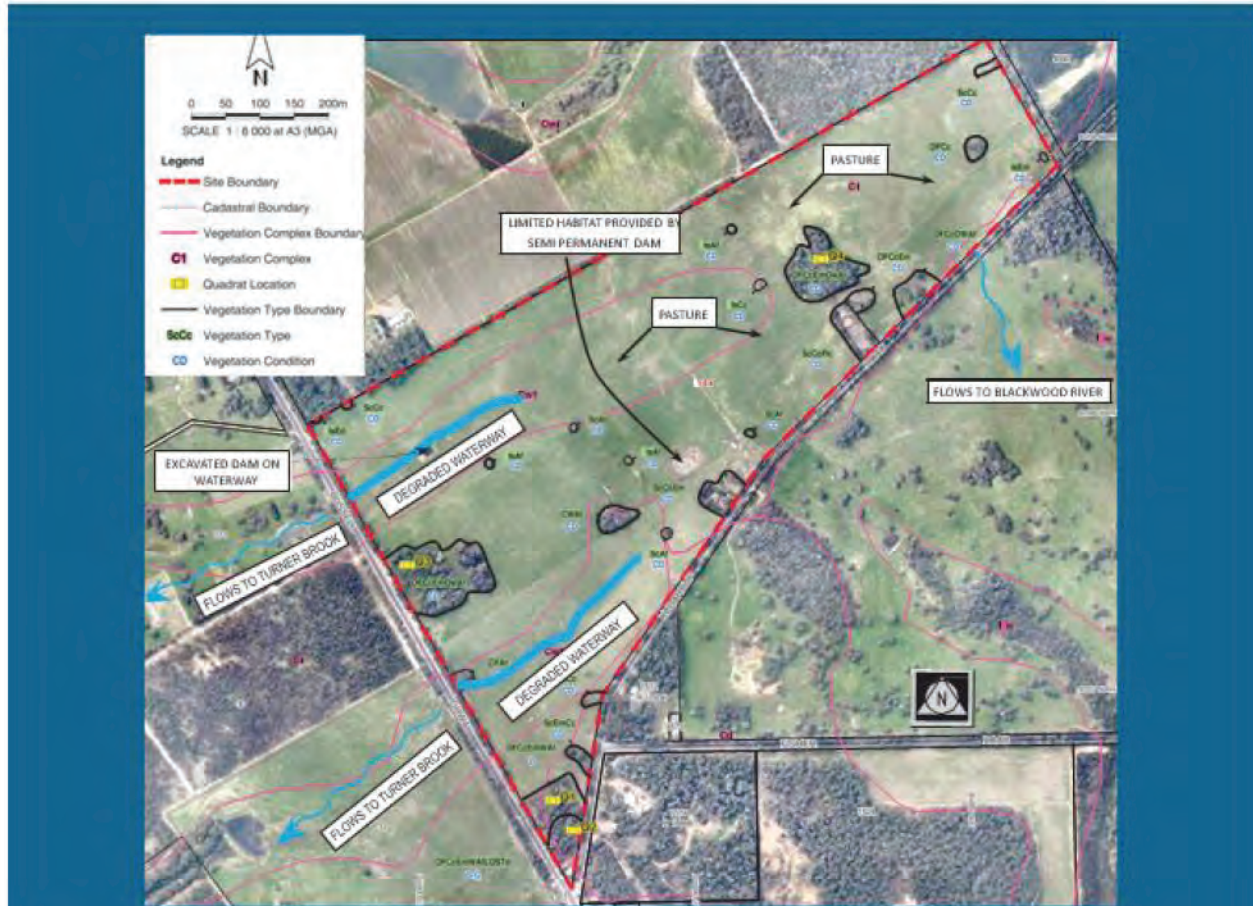


Figure 14 - Natural Environment Plan

Key Environmental Features and Outcomes Comprise:

- Site is predominantly pasture with degraded waterways.
- Majority of remnant vegetation is parkland cleared & classified as degraded or completely degraded apart from south western corner.
- No listed DEC taxa.
- No declared or rate or priority flora species.
- No nationally threatened species or vegetation communities.
- No evidence of conservation significant fauna species.
- No Western grey kangaroo observed.
- No evidence of black cockatoo foraging or roosting. 41 trees observed to contain no crows.
- No evidence of western ringtail possum with only 0.3ha of favourable habitat.
- Larger cells of remnant vegetation to be incorporated in public open space and drainage areas.
- Scattered, isolated and smaller areas of remnant trees to be retained where possible.
- Landscaping should utilise local seed stock including peppermint to provide cockatoo food plants and to improve western ringtail possum habitat.

Figure 15 Natural Environment Plan



3 Site Framework

The following sections develop a series of strategic frameworks to guide development of the Structure Plan and project implementation.

3.1 Productive Framework

Although the majority of the once grazing property has been identified for residential development, opportunities can be created to encourage a range of productive pursuits. In accordance with *Figure 15* the following productive framework has been developed for the site.

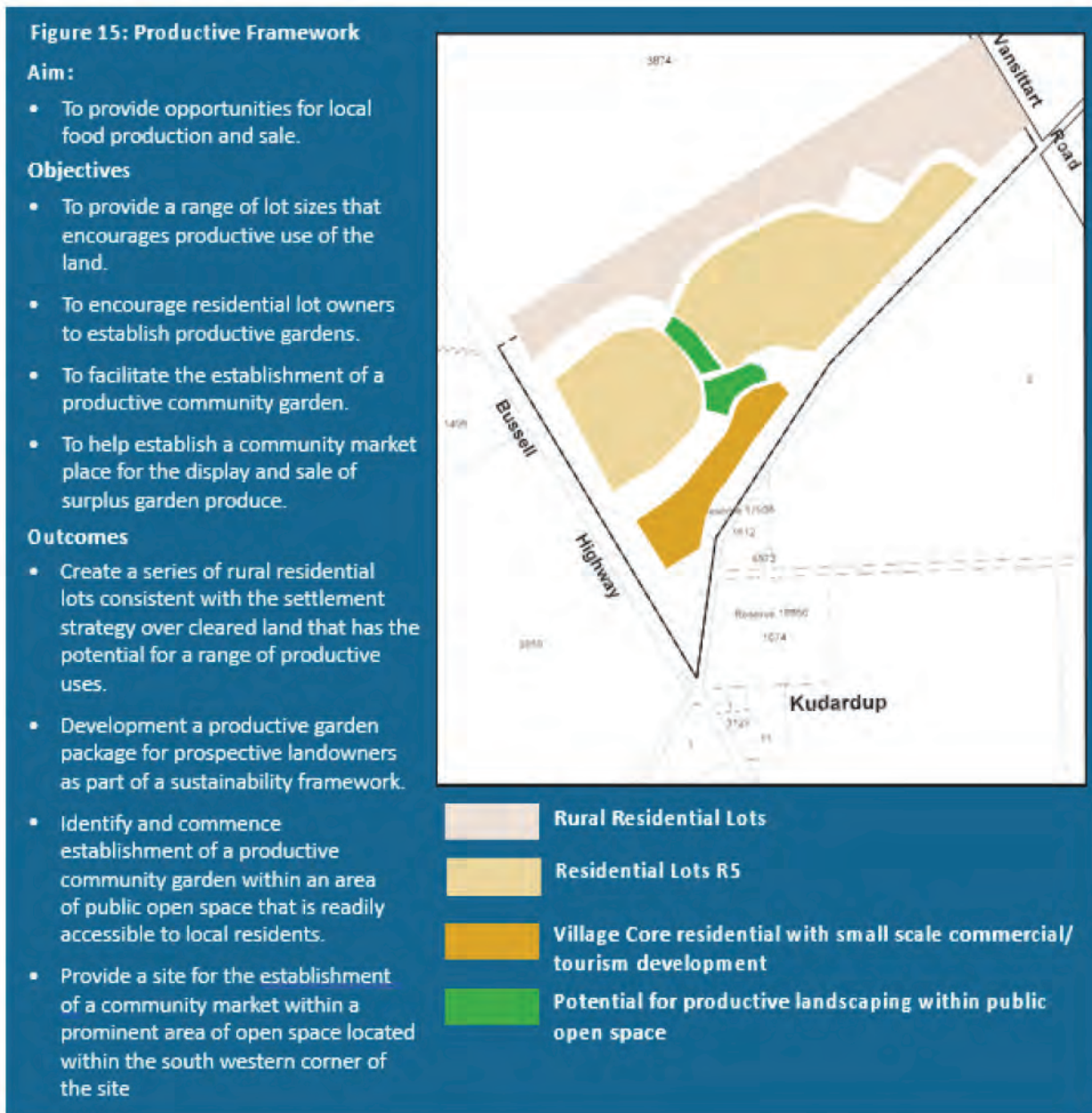


Figure 16 Productive Framework



3.2 Ecological and Restorative Framework

The following ecological and restorative framework is developed for the Structure Plan area.

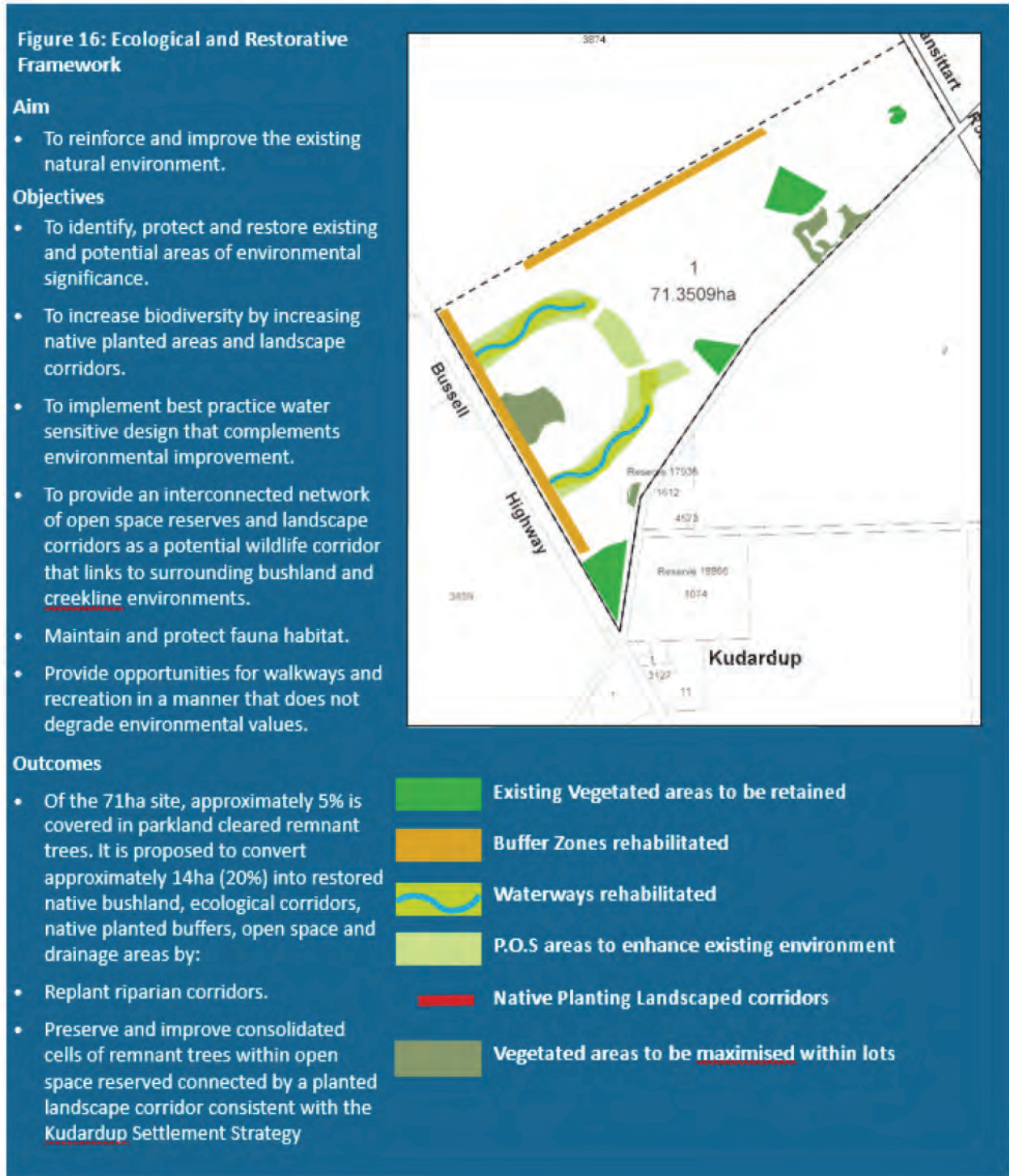


Figure 17 Ecological and Restorative Framework



3.3 Social, Economic and Cultural Framework

The following social, economic and cultural framework is developed for the Structure Plan area.

Social, Economic and Cultural Framework

Aim

To create a community that values and builds upon the rural character of the area and develops a culture based on a high quality of life, self sufficiency and creativity.

Objectives

- To create a hamlet with a strong rural ambiance and character through generously sized allotments that overlook treed parks and streetscapes.
- To create a self sufficient mixed community that builds upon the services and tourist enterprises within the area including Augusta.
- To provide opportunities for home based business and limited commercial development to complement the future commercial core of Kudardup.
- To provide opportunities of productive landscapes.
- To reduce energy and water use.

Outcomes

1. To design a network of street and paths that provide for ease of access to the local road network and community facilities.
2. Provide a network of open space parks and corridors for environmental restoration, drainage, recreation and productive areas as a backdrop for residential development.
3. Provide wide tree planted streetscapes.
4. Promote and include land use controls that provide opportunities for home based business and limited ancillary commercial development.
5. Facilitate development guidelines for sustainable development and servicing that promotes self sufficient.

3.4 Sustainability Initiatives and Implementation Framework

Table 7 details a sustainability framework is developed for the Structure Plan area. The framework has a focus on environmental restoration, productive open space areas and self sufficiency for landowners. A Key feature is and the implementation of a sustainable development package for individual lot owners to implement and encourage a range of sustainable development initiatives.

3.5 Development Framework

The development framework for the subject land is provided by the Kudardup Settlement Strategy that identifies the land for hamlet development and divides the land into a series of development cells and green network corridors. The structure plan has been developed to closely match the outcomes for the land detailed by the settlement strategy.



Sustainability Initiatives and Implementations Framework								
Sustainability Pillar	Sustainability Element	Objective	Details	Body responsible for implementation	Body responsible for longterm management	General comments on how achieved/incorporated		
Environment	Water Use	Water self sufficiency	Use rainwater tanks for all water uses within the house	Landowner	Landowner	Rainwater tanks encouraged by developer and mandated in building approvals		
			Grey water recycling encouraged where block size available	Landowner	Landowner	Developer will provide literature on greywater reuse. Systems have to be compliant with Department of Health regulations		
			Treated Wastewater used for subsurface irrigation of non food plants within designated disposal area	Landowner	Landowner	Key areas of each lot identified as designated effluent disposal areas		
			Streetscape and POS partly watered by stormwater runoff	Developer	Council	Bioretention gardens fed by stormwater infiltrates into the soil profile for later use by deep rooted plants.		
			Improved water use efficiency	Developer and land owner	Landowner	Developer to provide encourage lot owners to install waterwise gardens		
		Water quality	Management of water quality	Management of water quality	Low water use garden plants, with a focus on native species used for POS landscaping	Developer	Council	Landscaping includes low water use and native plant species combined with efficient irrigation.
					POS areas to be planted after first winter rains where possible to aid in establishment. This will reduce supplementary watering.	Developer	NA	Incorporated into POS landscaping program
					Mulch to preserve moisture used on all POS garden beds	Developer	Council	Incorporated into POS landscaping program
					Water efficient fittings and appliances encouraged on private lots	Landowner	Landowner	Low water use fixtures to be used in all buildings as per current building guidelines
					Application of WSUD throughout subdivision	Developer	Council	Undertaken as part of future Water management planning and site construction
					Creepline areas rehabilitated to further improve water quality prior to runoff leaving the subject land.	Developer	Council	Work is currently being undertaken to revegetate the creepline area by the developer.
					Minimal fertilizer and low water soluble fertiliser applied to POS areas and private gardens.	Developer/ landowner	Council/ land owner	Plants with local fertilizer requirements utilised and supported with nutrient wise gardening information and POS nutrient management criteria.
					Use soil amendments throughout POS areas to reduce nutrient leakage to waterways and groundwater.	Developer	NA	Soil amendments incorporated as part of construction works.
					Controls and land uses to minimise nutrient loading within private lots	Developer/ Council	Landowner	Achieved through stipulations on landuses and guidance provided to landholders
					Erosion controls during site development	Developer	NA	Control sediment runoff during subdivision construction utilising such techniques as sediment curtains, sediment traps, hydromulch.
Erosion control during house construction	Council/Builder	NA	Encourage builders to be Green Star accredited. Provide builders/lot owners with information that states that they must control sediment runoff.					
All wastewater treatment systems to incorporate nutrient stripping/absorbing methods.	Landowner/ Council	Landowner	Stipulated through building approvals.					
Energy	Reduced usage of energy from fossil carbon sources	Reduced usage of energy	Encourage installation of grid connected photovoltaics on each residence to meet part of in house demand	Developer	Landowner	Landowners to be provided with information on benefits of photovoltaic cells.		
			Encourage installation of gas boosted solar hot/heat pump water heating	Developer/ Landowner / Council	Landowner	Developer to provide information on benefits of solar hot water systems and stipulated with building approvals		
			Solar passive / energy efficient housing to be encouraged through building guidelines and 6 Star minimum requirements	Developer/ Builder/ Landowner		Houses to meet relevant Australian Building guidelines. Houses to meet local Design guidelines including solar setbacks.		
			Lots are large enough to accommodate houses having their long axis east-west.	Developer/ Council/ Builder/ Landowner	Council/ Landowner	Subdivision layout and Detailed area plan set the framework for maximising preferred solar orientation. Council to analyse suitability of building design for solar orientation.		
			Energy efficient lighting to be used in POS and Street verges	Developer	Council	Also minimise light pollution and ongoing energy costs.		
Biodiversity	Enhancement of local biodiversity values	Enhancement of local biodiversity values	Maximise use of native species in private gardens by providing awareness raising material and incentives.	Developer/ Landowner	Landowner	Achieved through Landscaping guidelines		
			Use native species where ever possible in POS and Streetscape to assist with fauna movement.	Developer	Council	Outlined within POS Landscaping Plan		
			Revegetation of a 60m wide strip on each of the two seasonal waterways to provide new habitat.	Developer	Council	Outlined within POS Landscaping Plan and UWMP		
			Protect and enhance existing native vegetation through incorporation into POS and strategic placement of building envelopes.	Developer	Council	Outlined within POS Landscaping Plan and building approvals		
			Revegetation of a green corridor to link bush areas within and outside the subject land	Developer	Council/ Landowner	Planted as part of sbdivisional works and managed through guidelines and easement on private lots.		
Landform	Retain significant local landforms	Retain significant local landforms	Retain on site landforms through careful placement of lots, roads and POS as well as restoration of the creeklines.	Developer	Council	Minimal earthworks to be undertaken and layout designed to respond to local landforms.		
			Contain waste on building site in approved manner until disposed of correctly	Builder	NA	Builders to maintain clean sites to minimise sediment and rubbish movement. Enforced by Council		
Waste	Clean building sites	Clean building sites	Contain all site construction waste as part of development in approved manner and recycle or reuse material where ever possible.	Developer	NA	Subdivision works to include dust and sediment control mechanisms.Enforced by Council.		
			Demolish and remove existing buildings and infrastructures and recycle /reuse material where ever possible.	Developer	NA	Undertaken as part of subdivisional works		
			Social	Visual Amenity/ landscape	Incorporation of native species	Landscaped areas and gardens reflect the ecological uniqueness of the site and surrounding area	Developer	Council
Key POS area to incorporate productive plants	Developer	Council/ Community				Implemented as part of subdivisional work with the potential for a community group to take some responsibility for the site.		
Market site to be incorporated into POS area	Developer	Council/ Community				Implemented as part of subdivisional work with the potential for a community group to take some responsibility for the site.		
Travel	Roads safe and attractive	Roads safe and attractive	Road reserves are both safe and visually attractive to encourage walking and cycling while minimising accidents.	Developer	Council	Road verges planted with appropriate species. Road design and edge treatments meet safety standards.		
			Provide cycleways and footpaths throughout subdivision and links to existing/future pathways around Kudardup.	Developer	Council	Developer to provide roads, footpaths/cycleways that allow people to move through the subdivision within minimal car usage. Council/ other developers to provide links to other areas off site.		
Noise	Reduce noise pollution	Reduce noise pollution	Provide an appropriate buffer along Bussell Highway	Developer	Council	Developer to implemented planted buffer as part of subdivisional works		
			Provide a variety of lot sizes and formats to cater for a range of landuses and lifestyles.	Developer	Landowners	Developer to provide a variety of lot sizes and guidelines through Detailed area Plan.		
Housing diversity	Range of lifestyle options	Range of lifestyle options	A range of built form to be encouraged to provide a range of living options and visual diversity, with building guidelines also developed	Builder/ Landowner/ Council	Landowners	Builders to provide a variety of building types . Council to encourage through Building Approvals.		
			Economic	Local employment	Local employment	Provide local employment opportunities through encouragement of home based businesses and suitable lot styles.	Developer/ Home occupier/ Builder/ Council	Home occupier/Council
General Employment options	Developer	Council				Subject land is close to Augusta and other potential employment opportunities.		
Affordability	House and land affordability	House and land affordability	Site located close to local employment opportunities with good connectivity	Developer	Builder	Developer to provide a range of block sizes . Builders to provide efficient and well priced housing in keeping with the location.		
			Provide a range of dwelling options to assist with the affordability of accommodation.	Developer	Builder			

Table 7 Sustainability Initiatives and Implementation Framework



4 Land Use and Subdivision Requirements

4.1 Land Use Outcomes

Justification of proposed land uses and integration with surrounding land uses

The structure plan proposes the following primary land uses outcomes to facilitate the development of a rural hamlet consistent with the planning framework and the environmental qualities of the site:

- Village Core Residential R10 lots.
- Residential R5 lots.
- Rural Residential lots.
- Various forms of open space and rehabilitation areas to support hamlet development.

Justification of the proposed land uses is provided by the following key observations:

- The whole of the site has been identified for development within the LPS and Kudardup Settlement Strategy.
- The site assessment and structure plan design provides for full development of the subject land consistent with the development cells and proportional projected population levels provided by the Kudardup Settlement Strategy.
- The results of consultation during preparation of the Kudardup Settlement Strategy and separate preliminary consultation with Kudardup landowners demonstrates a strong preference for generously sized lots with a rural character.
- The form of development proposed is conducive to promoting self-sustainability in terms of water supply, effluent disposal supported by a range of other sustainable development initiatives.

4.1.1 Residential

Kudardup Settlement Strategy and Residential Design Codes Compliance

The Structure Plan has been developed to comply with the identified area for residential development with a network of open space reserves and landscaped corridors consistent with the Kudardup Settlement Strategy.

The Structure Plan will facilitate residential development in compliance with the Residential Design Codes and only a minor variation to the front setback of Residential R10 lots within the Village Core precinct is proposed.

Proposed Lot size, lot mix, housing product, choice and lot yield estimates

The Structure Plan has been designed to facilitate a sustainable rural lifestyle with diverse housing choice not generally offered within Augusta as the nearest principal centre with the following outcomes:



Village Core Residential Precinct

Within the Village Core Precinct Residential R10 lots with an indicative size of 1,500m² are proposed to yield approximately 27 lots. Lots within the precinct are intentionally generous to provide land for separate ancillary home based and commercial development whereby the level of ultimate built development would be significantly higher and more diverse level of development than a conventional residential zone.

Potential housing choice within the core will be primarily single dwellings, however the strategic location and added commercial potential has the capacity to generate a diversity of housing and business choice.

Residential R5 Precinct

The Residential R5 Precinct is anticipated to yield in the order of 99 lots with a minimum size of 2,000m² with the potential for separate buildings for home-based business development. The generous sized lots with development guidelines to implement a range of sustainable development initiatives will generate a range of design responses to create housing diversity. Given the area of the precinct it is expected that an average lot size of 2,300m² will likely be achieved.

Rural Residential Precinct

The Structure Plan provides for the creation of nine (9) rural residential lots ranging in size from 2.0ha to 4.3ha with the potential for additional home-based trade. Housing choice in this precinct is expected to be more rural in nature subject to compliance with proposed development guidelines.

Views, outlook, lot orientation and street block pattern

The subject land is largely elevated with predominant western views to the Leeuwin Naturaliste Ridge in addition to some northern and southern views to surrounding rural properties.

The street network and lot orientation has been largely dictated by the orientation of the property, slopes, existing drainage lines and remnant vegetation. With generously sized lots flexibility is provided to allow housing to be orientated for solar access.

The proposed street network has been designed to interconnect all development cells to promote ease of access and permeability throughout the Structure Plan area.

4.1.2 Open Space and Recreation

The Structure Plan is based on an extensive open space and recreation framework that comprises the following essential elements to provide residents and visitors with a high level of visual and practical access to a variety of open space areas:

- The provision of three local parks that will contain areas of remnant vegetation. The most prominent of these parks located on the corner of Bussell Highway and the new extension of Fisher Road is proposed to include space for a local open-air market. This area of open space as identified in the Kudardup Settlement Strategy is ideally located as a community focal area and is also close to a nearby Shire reserve that already includes a range of facilities.
- The provision of a local park to contain a productive community garden. This park is well located to the edge of the village core area and will be readily accessible to all residents.
- Extensive areas of creekline rehabilitation that will form an important natural landscape feature and backdrop to surrounding development.
- A highway buffer reserve that will further strengthen the rural ambiance and help frame the



development area by trees.

- The Structure Plan and movement framework provides for a network of pedestrian paths for all streets.

4.1.3 Water Management

A detailed Local Water Management Strategy (LWMS) prepared for the site is contained in Appendix VI. Water management strategies detailed for the subject land are based on best practice water sensitive urban designs that integrate sustainability and the provision of attractive communities. The strategies will be achieved through the synthesis of planning and designs to manage, protect and conserve the total water cycle.

At a broad level the LWMS confirms the site supports two degraded seasonal waterways that are largely devoid of native vegetation. The majority of the site's stormwater flows south westward under Bussell Highway where the water eventually joins the Turner Brook. A small proportion of stormwater flows north into a large irrigation dam on the adjoining property and a portion also discharges south under Kudardup Road, where the water ultimately flows to the Blackwood River. The minimum depth to groundwater also varies across the site from at the surface to 3m+ below the surface.

The following list summaries the Water Sensitive Urban Design (WSUD) elements that will be implemented within the development to achieve best management practices.



4.1.4 Water Conservation and Servicing

- All houses are to supply their own water, predominately through rainwater capture with tanks sized at 135kl.
- Encouragement of water efficient fixtures and fittings for all buildings constructed is to be undertaken. A residential household on average per annum could save between 31 and 46KL inside the house alone using adequate water efficient appliances and fixtures.
- Provision of awareness raising material on water saving measures and ideal roof size to meet water requirements is to be provided to the lot purchasers.
- Potential for future non-potable schemes for smaller lots, should future economics and technology make it viable.



- Each lot to treat its effluent to a standard that minimises the risk for pollution to the groundwater, downstream systems or residents. This water can be used for subsurface irrigation of on lot gardens.
- Public open spaces, bioretention units and street landscaping will have a strong focus on using locally suitable native Waterwise species and use of soil amendments to reduce irrigation requirements.

4.1.5 Stormwater Management

- Detention basins are to be installed that limit the peak outflow from the development to comparable pre-development levels.
- Bioretention gardens will be installed that will be designed to attenuate, treat and infiltrate the 1:1 storm events.
- All lots will detain part of the peak flow within a 1KL air gap within their rainwater tanks which is linked to on lot shallow garden basins. A link to the roadside drainage system is not envisaged to be necessary.



4.1.6 Ecosystem Protection

- Water sensitive urban designs (WSUD) will include bioretention swales, dispersing basins and soak wells to capture sediments, large debris and nutrients from all water runoff from impervious surfaces.
- The public open spaces will be composed of predominantly local native plants with minimal lawn areas. This will minimise the quantity of fertiliser application required.
- The onsite waterways are to be rehabilitated with a 60m wide strip of dense native vegetation planting and weed control.
- New ephemeral wetland and waterway habitat will be created through the appropriate planting with native vegetation and landscaping within the WSUD features. This will be complemented by the protection of existing on-site vegetation, and planting of new vegetation to enhance habitat creation.
- Households will be informed regarding nutrient wise garden practices to reduce nutrient loading on private lots.



4.1.7 Groundwater Management

- Inflows to the groundwater will be treated through bioretention gardens/ swales and dispersing basins.
- Filling building pads and infrastructure sites will be undertaken where necessary so that adequate clearance is maintained between average annual maximum ground water level (AAMGL) or controlled groundwater level (CGL) and finished surface level.
- Sub-soil drainage pipe network will be used only where high groundwater is encountered within the road reserve. The subsoil is to be set at or close to the AAMGL with water discharged to the stormwater pipe system.
- Groundwater discharge regimes are to be maintained so that there are no negative impacts on the subject land or downstream significant ecosystems.
- Monitoring of the groundwater levels will be undertaken across the subject land post development to determine any detrimental impacts on the groundwater resource.
- Soil amelioration products to treat water infiltrating through bioretention systems will be used.

The Shire of Augusta Margaret River is investigating an option to prepare a District Water Management Strategy for Southern Capes region. The LWMS for the Kudardup site will provide valuable local information on site conditions and specific water management objectives for small settlements to assist with development of a district strategy.

4.1.8 Fire Management

A detailed Fire Management Plan prepared for the Structure Plan area has been revised to inform Amendment No. 1 (Lush Fire and Planning, April 2020).

The subject land has traditionally been used for broad acre farming and is predominantly cleared apart from small sections of remnant vegetation. Land surrounding the site contains remnant vegetation, vineyards and broad acre farming.

The Fire Management Plan confirms the proposed subdivision layout complies with DFES's *Planning for Bushfire Protection Guidelines* 2010.

In summary, the Fire Management Plan recommends the following fire protection measures:

1. Applying the provisions of Australian Standard AS3959 (2009) Construction of Buildings in Bushfire Prone Areas in areas within 100m of the classified vegetation including the creek line revegetation buffers.
2. Requiring that a Bushfire Attack Level (BAL) classification plan is prepared for each stage of the subdivision.
3. Requiring minimum development setbacks from the areas of classified vegetation.
4. Requiring the annual maintenance of fuel loads within properties.
5. The provision of 20m wide building protection zones.
6. Provision of three 50,000L water tanks within the estate for fire fighting purposes.



7. Requiring each dwelling to provide 15,000L of water for fire fighting purposes in accordance with Clause 5.22 of the Scheme.
8. Provision of a fire service access along the northern boundary of the site designing the PAW's to allow access for fire fighting.
9. Requiring 2m wide boundary firebreaks on properties which are larger than 4,000 sqm.
10. Promoting the annual maintenance of properties prior to the start of fire season.
11. Ensuring that prospective purchasers are made aware of the fire management measures.

4.1.9 Noise Impact Assessment

Council initially recommended that a noise assessment condition be placed on the structure plan. The structure plan along with supporting information was referred to Herring Storer for assessment. In accordance with the following advice from Herring Storer (as contained in Appendix X) a noise assessment is not required.

- Based on the traffic volumes, Bussell Highway would not be considered under State Planning Policy 5.4 as triggering an acoustic assessment.
- If, in the event of an increase in traffic volumes beyond those forecast (up to double the volume), the setbacks provided in the facade lots would meet the "target" criterion noise level stipulated in SPP 5.4 at the 50m distance provided.
- Additionally, attenuation of noise levels would be provide by the embankment in the road reserve. Although no quantifiable unless predictive noise modelling was conducted, reductions in the order of 3dB(A) would be expected.

Overall, acoustically, this is a well-designed structure plan, that should require no further input, other than the information above.

4.1.10 Commercial Development and Employment

The Structure Plan aims to promote local employment through land use and development diversity with a focus on work from home opportunities and limited ancillary commercial uses that builds upon the standard level of development permitted by the Local Planning Scheme.

In addition to such uses as Home Business, Home Occupation, Home Office, Bed and Breakfast, Guesthouse, Convenience Store, and Home Store etc permitted within the Residential zone, the Structure Plan provides for Art and Craft Centre and Consulting Rooms to be permitted within the village core and a new use of Home-based Trade (up to 200m² of floor space) is proposed for the productive rural residential lots.

Based on the broad assumption that at full development 50% of approximately 135 dwellings may have an average of 50m² dedicated some form of home based or ancillary commercial development the Structure Plan area could potentially generate in the order of 3,375m² of commercial floor space. Based on this level of commercial development and assuming that each business could sustain 1 to 2 employees including owner occupiers, the Structure Plan area could generate employment for approximately 67 to 135 people.



The potential for home-based business would be strengthened by the establishment of a local market space as envisaged within the proposed vegetated open space reserve located on the corner of the new Fisher Road extension and Bussell Highway. This location would be able to take advantage of attracting passing trade.

4.1.11 Infrastructure Coordination, Servicing and Staging

The provision of infrastructure, services and staging are supported by a servicing report contained in *Appendix VIII* and a geotechnical, acid sulphate soils and effluent disposal investigation contained in *Appendix IX*. The following sections detail the various key infrastructures, servicing and staging matters from the above assessments relevant to the structure plan process.

Power and Telecommunications

The subject site is approximately 15 kilometres from Western Power's Beenup Zone Substation. Power in the local vicinity is overhead, and a number of lines cross the site. These will need to be removed and relocated underground progressively as the subdivision is developed.

All lots within the subdivision will be provided with underground power. In addition, sustainability initiatives will also include guidelines to encourage the installation of photovoltaic arrays to supplement mains power to each household. In addition, thermal efficiency solar-passive orientation of dwellings will be encouraged. It is anticipated that the overall demand for mains power will be significantly reduced by virtue of these initiatives. Notwithstanding, Western Power does not have any mechanism at this stage assessment of the reduced power loadings, and the design of the infrastructure will be based on standard peak loads.

It is proposed that all lots will be connected to NBN / Telstra communication services.

Available information indicates that NBN would service this area with a fixed wireless service but given it is located on a cable transit link, cable connection may also be possible.

This will be further refined at the subdivision stage.

4.1.12 Roads

The subject land fronts Kudardup Road and Fisher Road that feature rural road formations, with a sealed width of approximately five to six metres. The verges of these roads are grassed or timbered, and vary from gently sloping to moderately sloping.

Bussell Highway abuts the western edge of the site that is under the control of Main Roads, and is constructed to typical rural Highway standards. The speed environment in the vicinity is 110 kph, reducing to 90 kph at the southernmost frontage to the site. The vertical alignment of Bussell Highway has been constrained by the requirement to meet sight distance and other associated criteria. As a result, the highway traverses a number of cut and fill embankments (of up to three metres) along the frontage of the site.

For proposed residential subdivision traditional kerbed roadways with piped drainage systems have been recommended given the combination of slopes and relatively heavy soils. The servicing report provides details on how road construction can be achieved and also provides details on Bioretention treatment recommended for open space and other areas within each of the sub-catchments to ensure a sustainable approach.

4.1.13 Drainage

The existing site is rural in nature, and is located in a broader rural setting. Stormwater infrastructure is confined to open roadside channels and culverts under roadways at strategic locations. The site is also located on a local highpoint within the terrain where runoff entering the site from external catchments is negligible.



The majority of the site drains westwards under Bussell Highway via two reasonably well defined ephemeral creek lines, and two associated 1200mm diameter culverts. There are two smaller sub-catchments at the south-eastern edge of the site that drain under Kudardup Road via a 300mm diameter culverts.

The report includes a Drainage Management Strategy for the site that incorporates the following key features:

- Onsite capture and reuse of roof water.
- Roof water tanks with buffer capacity to detail and reduce the impact of excess runoff.
- Kerbed roads with traditional pit and pipe conveyance system due to site slopes and heavy soils.
- Water quality treatment through bioretention for small storm events.
- Onstream extended detention basins for management of peak flows to reflect pre development flow characteristics.

4.1.14 Water Supply and Effluent Disposal

The servicing report confirms that Kudardup is remote from an existing reticulated water supply and sewerage networks, with the nearest Water Corporation serviced area being Augusta. Water Corporation has indicated it has no plans to service Kudardup with water or sewer. Discussions with the Water Corporation reveal it would give consideration to supply water from the Fisher Road main (some distance to the east of the site). However, this would raise a number of difficult technical issues including the elevation of the site, which rises above the elevation of the Fisher Road treatment plant and header tanks.

To resolve these issues, it is proposed that the site be developed utilising a more self sufficient and sustainable water servicing strategy that will predominately rely on each lot owner supplying their own water and treating their own wastewater.

In summary, the following approach for water supply and effluent disposal are proposed:

- 135kl roof catchment water tanks for potable water supply with capacity for fire fighting and buffer capacity.
- A number of water conservation strategies will be encouraged to reduce overall water usage as well as assist with the decision making of residents.
- Builders and house owners will be encouraged to install water efficient devices and participate in the water conservation methods to achieve potential savings.
- Information will be provided to lot purchasers informing them about Waterwise devices and practices.
- Fire fighting water is to be supplied by a combination of on lot storage and three strategically placed tanks within and adjoining the subject land.
- Wastewater will be treated and disposed or reused at the lot scale. Each lot will be responsible for both their own collection and appropriate treatment of wastewater.
- The strongly adsorbing phosphorus properties of the majority of the site provide adequate soils for effluent disposal. Where the PRI on a particular lot is deemed to not be adequate, then suitable fill soil may be needed for effluent dispersal areas.



- Aerobic Treatment Units (ATU's) are recommended to be utilised to maintain the required separation to groundwater and environmental standards.
- The use of irrigation systems from the on-site effluent disposal will provide irrigation for potential garden areas (excluding gardens growing edible produce). This supplement for garden irrigation will assist in reducing the irrigation required on properties from rainwater tanks and/or domestic bores.
- Separate greywater systems are to be used for irrigation of plants within the lot.

The subject land is not accessible to a reticulated water supply. In the interests of self sufficiency and sustainable development the Structure Plan is based on water supply for all lots being provided by roof catchment tanks. Onsite water supplies will be supported by emergency water supply tanks for fire control and a range of water saving initiatives including grey water reuse systems.

The practicality and sustainable generation of onsite water supplies is strengthened by the generously sized lots proposed by the Structure Plan that ensures sufficient space for the location of required water tanks that will in turn contribute to the rural ambiance of the hamlet.

The Structure Plan includes a development condition that requires water supply to be provided in accordance with Clause 5.22 of the Scheme that specifies minimum tank capacities for all dwellings.

4.1.15 Geotechnical, Acid Sulphate Soils and Effluent Disposal Investigation

A geotechnical, acid sulphate soils and effluent disposal assessment contained in *Appendix IX* confirms that site conditions are suitable for the level and form of development proposed by the Structure Plan. In summary the assessment confirms the following outcomes:

- Soils conditions indicate the site supports topsoil to approximately a depth of 0.2m underlain by variable thickness of medium dense gravelly sand with silt down to a depth of 1.1m that is then underlain by very dense gravel with a clay layer up to a depth of 2.2m. Groundwater across the site varied from close to surface drainage lines to a depth of 2.6m below ground level.
- Preliminary investigations outline there are some acid sulphate soils (ASS) below the site in random areas and it is recommended that detailed ASS investigations be confined to service corridors when invert levels and the extent of service excavations have been confirmed at the detailed design stage.
- Phosphorus retention index values show that the natural subsoil is strongly absorbing and site classification is likely to be 'M' with possible localised areas of Class 'S'.
- The site demonstrates suitability for onsite effluent disposal by the use of Alternative Treatment Units with a recommended horizontal separation of 50m from permanent water bodies.

As detailed, site conditions are suitable for onsite effluent disposal utilising Alternative Treatment Units. This approach is consistent with the Health Departments Draft Country Sewerage Policy for the majority (80%) of the Structure Plan area relating to approximately 108 lots above 2,000m².

The proposed Village Core Residential Precinct is estimated to yield approximately 27 lots in the order of 1,500m² that are similarly proposed to be serviced by Alternative Treatment Units. This approach is justified as a variation to the Draft Country Sewerage Policy for the following reasons:

- The subject land had demonstrated capability for onsite effluent disposal.
- The number of lots within the precinct is limited and finite representing only 20% of the total within the Structure Plan that does not provide for expansion of the precinct due to the surrounding landscape.



- At 1,500m² the proposed lots are of sufficient size to support a single dwelling, outbuildings, potential small scale ancillary landowner commercial uses and onsite effluent disposal areas assisted by a proposed reduction in front setbacks. As a guide the proposed lots could easily support a dwelling, outbuilding and potential commercial building with a combined area of 400m²-500m² with an onsite effluent disposal area of 250m²-500m² leaving in the order of 500m²-850m² for gardens, landscaping, water supply tank, driveway and parking.
- The proposal is generally consistent with the policy that provides for remote and isolated residential subdivisions to comprise 25 lots at a maximum density of R10 (or an average lot size 1,000m² in accordance with the Residential Design Codes). In this case the average lot size will be 50% larger at approximately 1,500m² that would compensate for potentially 3 additional lots.
- The policy details a range of exceptions to allow onsite effluent disposal for towns not listed in Schedule 1 of the policy. Kudardup is a recognised town as defined by the Scheme and is not listed in the policy schedule. The policy states:

Subdivision or residential density development in towns not listed in Schedule 1 may be permitted subject to:

- *The proposal not resulting in creation of lots less than 1,000m²;*
- *Proposals not exceeding a maximum development density of R10;*
- *No individual proposal exceeds 25 lots or dwellings; and*
- *A total town expansion of no more than 100 lots or dwelling units, occurring within the town after the introduction of this Policy.*

The sum of 25 lots or dwellings for individual proposals will include planned future extensions of a proposal, such as when a subdivision or density development is planned to occur in several stages, but will not include proposal for lots 2000m² or greater that are capable of being developed only at a density of R5 or less.

The total of 100 is deemed to have been utilised at the time of formal planning approval.

In response, the Structure Plan demonstrates compliance with the draft policy requirements in the following manner:

- The smallest proposed lots are approximately 1,500m², well in excess of the minimum 1,000m² prescribed by the policy.
- The maximum density proposed is R10 in compliance with the policy.
- As detailed previously the proposal for up to 28 residential R10 lots within the Village Core generally complies with the 25-lot maximum that is compensated by an average lot size in the order of 1,500m² that is 50% larger than the specified minimum of 1,000m².
- Within the Structure Plan area only one cell of approximately 28 lots is proposed that is significantly under the 100-lot threshold, particularly as proposed R5 density lots and larger lots capable of onsite effluent disposal can be excluded. Notwithstanding this outcome, proposals for adjacent DIA 2 are likely to be undertaken on a similar basis



whereby the combined lot yield potential for unsewered lots under 2,000m² would be under the 100- lot threshold in compliance with the policy.

- The introduction of development guidelines can if required address the location and areas for onsite effluent disposal including the creation of bunded terraces for above or sub soil irrigation of wastewater to complement site slopes.
- An extensive range of other complementary water saving measures are to be introduced including grey water reuse, roof catchment water tanks and water efficient appliances.
- The use of onsite Alternative Treatment Units will form a significant component of allowing individual landowners to be self sufficient in the provision of services creating less burden and pressure for reticulated services and ongoing maintenance and infrastructure improvement for a small community.

Notwithstanding the Kudardup Settlement Strategy, prior to subdivision the subdivider shall prepare a subdivision staging plan that can include the early first release of rural residential and R5 Residential lots to assist with the provision and early implementation of the Environmental Management Plan and the extension of Fisher Road to create a new intersection with Bussell Highway.

4.1.16 Staging

The KSS recommends that development commence within the proposed hamlet core (Cells 1 and 2 of DIA's 2 and 1 respectively). The Structure Plan conditions provide for a variation to allow the early first release of rural residential and R5 Residential lots to assist with the provision and early implementation of the landscape and environmental improvements in addition to the extension of Fisher Road to create a new intersection with Bussell Highway. This approach is also proposed to establish a resident population as the foundation for a vibrant and safe village core. This outcome will also provide for the substantial or full implementation of buffer planting and fire control infrastructure (including strategic firebreaks and emergency water supplies) before smaller residential lots and more dense development within the village core occurs.

4.2 Developer Contribution Arrangements

A Developer Contributions Policy for the whole Shire is proposed to be developed by Council within the 2012/13 financial year. The policy is proposed to detail district and local level contributions with a mechanism for collection implemented by a separate amendment to the Scheme. At this stage it is proposed that it will be the responsibility of developers to specify what local contributions will be made and how they will be delivered, including potential for per lot contributions.

Council in October 2012 resolved that Scheme amendment documentation for Kudardup Village include a draft Community Development and Contributions Plan Framework to gain community feedback.

Kudardup Community Development and Contributions Plan Framework

For Kudardup village, the following contributions framework has been prepared.

Existing Kudardup facilities

Kudardup benefits from 4 key reserves that support remnant vegetation and a number of community facilities, comprising:

- Rails to trails reserve to the west of Bussell Highway. Studies are currently underway to investigate key environmental, engineering and funding issues to facilitate extension of the rails to trails network from Busselton to Augusta as a district level project.



- Poole Road waste transfer station.
- Reserve 18866 contains the Augusta Adventure Centre (substantial facility available for Kudardup community use), Kudardup Volunteer Bush Fire Brigade building and the unused derelict Kudardup hall building in need of repair.
- Reserve 17936 contains an existing building that is leased to the Lower Blackwood Landcare Districts Committee.

Proposed Kudardup community needs

The projected population of Kudardup as a hamlet of 500 people is too small to viably support an extensive range of community infrastructure, facilities and services. Essential community facilities and services to support Kudardup are already provided in the nearby principal centre of Augusta and do not need to be duplicated. Kudardup residents will have close access to all education, active recreation, civic, health and town centre facilities and services available in Augusta.

Kudardup as a hamlet should be provided with an appropriate level of facilities to help foster a strong sense of community. Based on the Kudardup Settlement Strategy and preliminary advice from local residents the following list of local initiatives (in order of priority) are proposed for the entire Kudardup hamlet. The final list of local projects will need to be prioritised by Council following further community consultation.

1. Extension of Fisher Road with an upgraded intersection with Bussell Highway generally in accordance with the KSS. Preliminary consultation with local residents confirmed this as a significant benefit and priority for the hamlet.
2. Dual Use path connections to the Rails to Trails (Via Poole Rd), Lot 1074 (containing the Discovery centre) and the proposed commercial core in accordance with the KSS.
3. Upgrading of Lot 1074 as the main reserve for community activities and facilities, including pathway linkages within the reserve. This initiative is proposed to reflect the outcomes of the KSS, existing reserve facilities and the strategic location of Lot 1074 within the centre of the hamlet
4. Residential DIA1 and DIA2 to provide productive landscapes within public open space generally in accordance with the KSS.
5. DIA's to provide pathways links generally in accordance with the KSS.
6. Potential upgrading of the existing Kudardup Hall to function as a local community facility and to retain one of the few remaining older buildings. This project is included to reflect the endeavours of local residents keen to initiate upgrading of the hall.
7. Contribution to community art project/s (within streetscapes and/or key community reserves) that reflect the character and history of Kudardup. This initiative reflects the desire of the KSS to enhance community identify.

DIA1 contributions to community infrastructure and facilities.

The proponents of DIA1 propose the following contribution arrangements:

District Arrangements

1. Potential payment towards determined district contribution items subject to formal adoption of a Developer Contribution Policy and related Scheme amendment to be progressed separately by Council.



Local Initiatives

2. The following initiatives have been agreed by the developer and are expected to be applied as conditions of subdivision:
 - a. The design of the Fisher Road extension and upgraded intersection with Bussell Highway as part of the first stage of subdivision.
 - b. A staged, proportional (based on full development of Kudardup) contribution to construction works for the Fisher road extension and intersection with Bussell Highway with the first stage of construction triggered by subdivision within DIA 1 exceeding the creation of 50 lots.
 - c. Provision of productive landscapes and pathway links within DIA1;
 - d. A proportional contribution to the design and construction of a dual use path to link the Kudardup Village centre to the Rails to Trails reserve along the length of Poole Road;
 - e. Provide a proportional (based on full development of Kudardup) contribution to discretionary local community needs subject to prioritisation by Council and the community and which may comprise:
 - Upgrading of the Kudardup Hall.
 - Upgrading of open space reserve (Lot 1047) by providing paths to the proposed commercial core.
 - Community art projects.

Delivering Local Initiatives

The developers of DIA 1 would prefer to make contributions by way of works at the time of subdivision rather than provide per lot contributions.

4.3 Timing and Staging of Subdivision and Development

The staging of land release will largely be driven by the market, with the first stage of subdivision having been approved, developed and marketed at the eastern end of the development. This approach is necessary to facilitate a suitable return to the developer to construct the Fisher Road extension and to largely complete proposed extensive environmental rehabilitation and buffer planting as a landscape framework for development. Subsequent land release stages are likely to contain a relatively small number of lots with subdivision completion anticipated to take a number of years.



5 Conclusion

The Kudardup Local Structure Plan confirms that the site can support a form of rural village development that offers local residents the opportunity for a self-sufficient, affordable and sustainable rural lifestyle. The form and level of development proposed will contribute to the development of Kudardup as a vibrant hamlet that supports Augusta in accordance with the applicable planning framework.

The Structure Plan achieves a series of precincts that project individual character for a sustainable rural lifestyle with diverse housing choice and provide opportunities for home-based business, low-key tourist and commercial business potential that do not compete with the proposed commercial core of Kudardup and Augusta.

The subject land currently has a subdivision approval for Stage 1 of development. Further stages will be proposed according to market demand.

Key features of the Structure plan include the promotion of self sufficiency and sustainable development with sustainable servicing, extensive environmental rehabilitation, water sensitive design, flexible land use provisions and proposed development guidelines.

Amendment No. 1 to the Structure Plan is consistent with planning goals and aspirations of the relevant WAPC policies and the Shire of Augusta Margaret River Local Planning Strategy, Local Planning Scheme and policies, as well as proper and orderly planning. It also identifies specific land use, residential density codes and other development provisions to guide and control future planning and design.

While Amendment No. 1 introduces some variation to the lot sizes of the rural residential lots and a reconfiguration of lots in the vicinity of the existing dwelling, it does not impact the existing road design or function. A decrease in the size of the POS in this location will have minimal impact with ample POS provided in local parks, creekline rehabilitation, tree preservation and drainage.

Building envelopes previously shown on the rural residential lots have been removed from the amended Structure Plan. Setbacks that will apply to these lots are those shown on the modified Structure Plan map and those in Schedule 9 – Development Standards of the Local Planning Scheme. This is easier to administer than building envelopes and avoids duplication.

The proposed modifications to the Structure Plan are considered 'minor' as they do not represent a departure from the original endorsed version in relation to its purpose and intent, nor does it alter the indicative lot yield estimate by more than 10%.

On the basis of the information presented, it is requested that the Shire amend the Kudardup Local Structure Plan to reflect this change.



ACROSS PLANNING
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