

Shire of Denmark Local Planning Strategy Amendment



Shire of Denmark

**Local Planning Strategy
Amendment 1**

CERTIFICATION FOR ADVERTISING

Certified for advertising by the Western Australian Planning Commission on

COUNCIL RECOMMENDED / SUBMITTED FOR APPROVAL

Supported for submission to the Western Australian Planning Commission for endorsement by resolution of Shire of Denmark at the Meeting of Council held on the

SHIRE PRESIDENT

CHIEF EXECUTIVE OFFICER

ENDORSEMENT OF LOCAL PLANNING STRATEGY

Endorsed by the Western Australian Planning Commission on

an officer of the Commission duly authorised by the Commission (pursuant to the Planning and Development Act 2005)

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1.0 Introduction

The Shire of Denmark's Local Planning Strategy (LPS) was endorsed by the Western Australian Planning Commission (WAPC) on the 22 May 2012. The Strategy was intended to guide the future growth of Denmark Shire for the next 20 years.

As a result of the review of key WAPC Policies, market trends and the need for commercially viable and affordable rural land for agricultural pursuits there is a requirement for the review of the land currently identified for Rural Smallholdings. Rural Smallholdings is identified in the LPS is as follows:

“Land, typically in the order of 4ha–40ha, used for minor rural pursuits, hobby farms, conservation lots and alternative residential life style purposes where part-time income from cottage industries, home occupation and use of the land for agriculture may be derived. This land use may also seek to preserve and enhance landscape quality, environmental and conservation attributes”.

The Shire of Denmark's Town Planning Scheme No.3 (TPS3) does not include a Rural Smallholdings zone. It is acknowledged the equivalent Rural Smallholdings zone within TPS3 is Special Rural, of which some of these comprise lots 4ha and greater. Based on any future Scheme Review of TPS3, the Special Rural zoning with lots greater than 4ha will be superceded by Rural Smallholdings.

The modification to the LPS is in response for the need for additional Rural Smallholdings. Regulation 17 of the Planning and Development (Local Planning Scheme) Regulations 2015 provide for a Local Planning Strategy to be modified.

2.0 Development Issues

2.1 Rural Smallholding Identification in Local Planning Strategy

The LPS makes allowance for the provision of Rural Smallholding development. As acknowledged, TPS3 does not make allowance for Rural Smallholding lots. However, an equivalent lot size and land use currently used within TPS3 for this lot product is Special Rural. The Special Rural zoning makes allowance for lots 1-4ha and 4ha plus. It is understood the review of TPS3 will zone existing 4-40ha lots as Rural Smallholdings.

There are currently 387 Special Rural lots within the Shire and 87 of these are greater than 4ha (i.e. to be future Rural Smallholdings). Of the 87 lots only 27 lots are vacant.

2.2 Areas Identified for Rural Smallholdings

Within the LPS allowance is made for the future expansion of Rural Smallholding lots. The expansion of these lots will be subject to a Scheme Amendment to rezone the land from Rural to Rural Smallholdings. A Scheme Amendment will require appropriate justification and detailed investigations on a broad range of matters in support of any future Amendment.

The current areas identified for future Rural Smallholding are identified on Plan 2 of 3 of the LPS (refer **Appendix 1**). The majority of these areas are shown west of Cussons Road, South of Mount Shadforth Road, north of South Coast Highway and east of an unnamed Road Reserve west of Lapko Road.

2.3 State Planning Policy 3.7- Planning in Bushfire Prone Areas

The WAPC's revised State Planning Policy 3.7- Planning in Bushfire Prone Areas (SPP 3.7) came into effect in December 2015. One of the key objectives of SPP 3.7 is to avoid any increase in the threat of bushfire to people, property and infrastructure.

The WAPC have recently determined not to support the subdivision of land within bushfire prone areas given this will increase the threat of bushfire to people, property and infrastructure. It is noted generally land identified as being bushfire prone comprises significant remnant vegetation.

In considering the recent approach being taken by the WAPC in implementing SPP3.7 against the land identified for future Rural Smallholdings, 36% of land identified for Rural Smallholdings in the LPS cannot be supported for rezoning and ultimate development as it is heavily vegetated. Refer **Appendix 2** illustrating the land identified in Plan 2 of the LPS.

2.4 Lot Uptake for Rural Smallholding

The LPS identifies the lot uptake of Special Rural zoned land as follows:

“Since 2006 the take- up rate of Special Rural zoned land has been 7 dwellings/year- reflecting that there is a need for the Local Planning Strategy, being a 20 year document, to identify additional expansions areas for rural residential development.”

Whilst the LPS is only 6 years old, the impacts resultant from SPP 3.7 require review of the LPS to identify additional expansion areas of Rural Smallholding land.

With respect to the 2017 uptake and interest of Rural Smallholding lots Joss Harman of Country Property Brokers in Denmark WA advised approximately 30% of real estate enquiry is for rural land and of this 15% is for Rural Smallholding lots. Given there are only 27 vacant Rural Smallholding sized lots and 8 available for sale there is a recognised shortage of this lot product.

2.5 Viable Agricultural Pursuits on Rural Land

A report was prepared by Bedbrook Johnston Williams for Lot 50 Mt Shadforth Road and Lot 52 Middleton Close, Shadforth (currently zoned rural and comprise a total area of 60 hectares) as to the viability for traditional agricultural pursuits (i.e. cattle grazing). Whilst this report was prepared to support a rural subdivision application over the mentioned landholding, the comments raised hold merit as to the general viability of traditional agricultural practices (refer report- **Appendix 3**).

The report summarises that based on the land area (i.e. 60 hectares that can carry 53 cattle) and the average price of cattle there would be an operating loss on a land area of this size.

The report goes on to further state that other agricultural uses, which can be facilitated on lot sizes more akin to the lot size of Rural Smallholdings (i.e. horticulture), are viable for an agricultural pursuit.

In considering the viability of agricultural pursuits, the value of the land price has to be considered. As a general comment, the cheaper the land the easier it is to make an agricultural pursuit viable. Therefore it is more viable to operate an agricultural pursuit on a 4ha land holding as opposed to a traditional Denmark Rural landholding of 50ha.

3.0 Proposed Modifications

3.1 Amendment Area of Local Planning Strategy- Rural Smallholding Area

The LPS currently identifies Lot 50 Mt Shadforth Road and Lot 52 Middleton Close, Shadforth (the site) as Priority Agriculture. This Amendment to the LPS replaces the Priority Agriculture identification with Rural Smallholdings (refer **Appendix 4** for amended LPS Plan 3 Map).

3.2 Justification for Amendment to Local Planning Strategy

The need for additional Rural Smallholdings within the Shire of Denmark has been identified. The justification for additional land for Rural Smallholdings is as follows:

- A large portion (36%) of the land identified for Rural Smallholdings comprises significant vegetation.
- With the revision of SPP 3.7 there has been a reduction in the land identified within the LPS for Rural Smallholding development that can be developed.
- There is a demand for Rural Smallholding land within the Shire of Denmark. Based on the demand and the land currently identified for Rural Smallholdings, which cannot be developed resultant from SPP 3.7, there will eventually be a premature shortage of available product.
- The creation of Rural Smallholding lots allows for agricultural pursuits that have greater commercial viability than traditional agricultural uses on Rural zoned land.

3.3 State Planning Policy 2.5- Rural Planning

The proposed modification is supported by the WAPC's State Planning Policy 2.5- Rural Planning (SPP 2.5). SPP 2.5 aims to support rural land and land uses to cater for both anticipated and unexpected needs. SPP 2.5 requires decision makers to be fully informed when making a decision regarding rural land and for economic, environmental and social issues to be taken into account.

3.3.1 Objectives

The key objectives of SPP 2.5 relevant to the modification of site for Rural Smallholding are as follows:

- (a) support existing, expanded and future primary production through the protection of rural land, particularly priority agricultural land and land required for animal premises and/or the production of food;
- (b) provide investment security for existing, expanded and future primary production and promote economic growth and regional development on rural land for rural land uses;
- (e) avoid and minimise land use conflicts;
- (g) protect and sustainably manage environmental, landscape and water resource assets.

The modification represents orderly and proper planning in accordance with SPP 2.5 objectives as follows:

- The ultimate development of the site (refer **Appendix 5**) will provide Rural Smallholding lots of a size that can be appropriately priced to support horticultural production and not jeopardize the rural intent and future primary production potential. Any future development will facilitate primary production.

- The ultimate development of the site will bring a lower acquisition price of individual lots, as opposed to the sale of the englobo land holding. This makes it more achievable for a broader portion of the property market to be able to acquire rural land for the purpose of primary production, i.e. currently only a small portion of the property market can afford to acquire traditional 50ha horticultural land and make it commercially productive.
- The ultimate development of the site will not create any land use conflicts, as future agricultural operations will not generate significant noise, operate during the evening and will have minimal traffic implications.
- The ultimate development of the site will see the protection of the majority of the vegetation and maintenance of the existing creekline, which forms the catchment to Little River.

3.3.2 Clause 5.3 of SPP 2.5

Clause 5.3 of SPP 2.5 acknowledges the market for Rural Living development. As Rural Smallholdings is considered Rural Living, Clause 5.3 of SPP 2.5 is applicable to this application. In recognising this, the definition of Rural Smallholdings in the LPS acknowledges, amongst other items, the purpose of Rural Smallholdings is for minor rural pursuits whereby land for agriculture may be derived. Therefore, whilst Rural Living may be considered a lifestyle choice, there is the intended ability for agricultural pursuits on Rural Living Land.

The relevant policy measures under Clause 5.3 of SPP 2.5 applicable to this application are as follows:

C

(i) the land be adjacent to, adjoining or close to existing urban areas with access to services, facilities and amenities;

(ii) the proposal will not conflict with the primary production of nearby land or reduce its potential;

(iii) areas required for priority agricultural land are avoided;

(iv) the extent of proposed settlement is guided by existing land supply and take-up, dwelling commencements and population projections;

(v) areas required for urban uses are avoided;

(vi) water supply shall be as follows-

where reticulated supply is demonstrated not to be available, or the individual lots are greater than four hectares, the WAPC may consider a fit for purpose domestic potable water supply, which includes water for fire fighting. The supply must be demonstrated, sustainable and consistent with the standards for water and health;

(vii) electricity supply shall be as follows-

where a network is available the precinct is to be serviced with electricity by a licenced service provider....

(viii) the precinct has reasonable access to community facilities, particularly education, health and recreation;

(ix) the land is predominantly cleared of remnant vegetation or the loss of remnant vegetation through clearing for building envelopes, bushfire protection and fencing is minimal and environmental values are not compromised;

(x) the proposal demonstrates and will achieve improved environmental and landscape outcomes and a reduction in nutrient export in the context of the soil and total water management cycle, which may include rehabilitation as appropriate;

(xi) the land is capable of supporting the development of dwellings and associated infrastructure (including waste water disposal and keeping of stock) and is not located in a floodway or an area prone to seasonal inundation;

(xii) the land is not subject to a separation distance or buffer from an adjoining landuse, or if it is, that no sensitive land uses be permitted in the area of impact;

(xiii) the lots can be serviced by constructed road/s capable of providing access during all weather conditions, including access and egress for emergency purposes;

(xiv) bushfire risk and natural hazards can be minimised and managed in accordance with State policy, without adversely affecting the natural environment. Proposals in areas of extreme bushfire risk will not be supported.

The amendment to the LPS is reflective of the objectives of Clause 5.3 of SPP 2.5 as follows:

Proximity to Urban Areas

The site immediately abuts an existing special rural development (Mt Shadforth Estate) to the east. There are existing services within proximity to the site (power and road infrastructure), which will be utilised for the Rural Smallholding development of the site.

With respect to the Denmark townsite, the site is 7km to the west. Given the services and amenities provided within the Denmark townsite, the site is in close proximity to facilities and amenities.

Conflict with Primary Production

To the north, the site is separated by Mt Shadforth Road from rural land used for grazing purposes. Similarly to the south, grazing land abuts a portion of the site and the west Sunrise Road separates the adjoining Lot 51 from grazing land.

The surrounding land use will not conflict with the Rural Smallholding identification of the site. Furthermore, given the site can be developed into 4ha landholdings or greater and is forecast to be utilised for viable agricultural pursuits the site will complement the adjoining land uses.

Avoiding Areas for Priority Agriculture

It is acknowledged the site is identified in the LPS as Priority Agriculture. However, given the site can be subdivided and developed for viable agricultural pursuits (as justified by the Bedbrook Johnston Williams report), the intent of the site for priority agriculture can still be maintained post the ultimate development.

Existing Land Supply and take-up

As identified above, there is a current and forecast shortage of land supply for Rural Smallholdings as a result of SPP 3.7 and the existing remnant vegetation.

Area required for Urban Uses

The site is not identified for an urban use.

Water Supply

Water will be supplied to future dwellings via a rainwater tank. Given the average annual rainfall in Denmark is circa 1,000mm the provision of a 92,000 litre rainwater tank will suffice in the provision of potable water.

Electricity Supply

The existing Western Power infrastructure is sufficient to provide a reliable source of power supply.

Access to Community Facilities

The site is located 7km west of the Denmark townsite. Given the Denmark townsite provides a range of educational opportunities, health services and recreation, the site is well located with access to community facilities.

Land is Predominantly Cleared

The site comprises existing pasture and areas of remnant vegetation. The ultimate development of the site for Rural Smallholdings will not impact on remnant vegetation or require clearing of remnant vegetation to meet bushfire protection measures.

Improved Environmental and Landscape Outcomes

Rural Smallholding development of the site into smaller titles facilitates improved land management. The creation of smaller titles for intensive farming by a larger number of persons as opposed to single landowner will enable a more “hands on” land management regime. Future owners managing small scale agricultural pursuits will be limiting soil erosion, contributing to soil structure, retaining the remnant native vegetation and sustainably utilising the natural attributes of the site to meet the needs of food production.

Capable of Supporting Dwellings and Associated Infrastructure

The site is suitable for the establishment of dwellings and associated effluent disposal. This has been confirmed with geotechnical work undertaken for a previous development proposed over the site at a higher density (refer **Appendix 6**).

Separation Distance

There are no buffers or separation distances from the adjoining land uses.

Lots Serviced by Constructed Road

The site is currently serviced by constructed roads. Subject to any development of the site, any internal roads or exiting gravel roads addressing the site will be constructed to a bitumen finish.

Bushfire

The site can be developed in accordance with SPP 3.7.

3.3.3 Shire of Denmark Local Planning Strategy- Clause 6.12.2

Clause 6.12.2 of the LPS identifies the requirements of a rezoning request to facilitate the rezoning of the Rural Smallholding land identified in the LPS from Rural to Rural Smallholdings. The relevant listed

requirements for a Rural Smallholding zoning request can be addressed for the site at the time of rezoning as follows:

Agricultural Impact Assessment

The report prepared by Bedbrook Johnston Williams confirms the ultimate development of the site is viable and will have a positive agricultural impact through increased agricultural opportunities.

Land Capability

A land capability report has previously been prepared for the site based on a proposed higher density development. The land capability report supported the development potential of the site (refer **Appendix 6**).

Fire Management Plan

A suitable Bushfire Management Plan can be prepared for the ultimate development of the site, which will meet the requirements of SPP 3.7.

Vegetation Loss

As the site is predominantly pasture there will be minimal vegetation loss when the site is ultimately developed.

Access to Infrastructure

The site is serviced by a sealed road and electrical infrastructure. The site is in close proximity to the amenities of the Denmark townsite, being 7km west of the site.

Flora and Fauna

A suitable flora and fauna report can be prepared at the time of rezoning. Given the site is predominantly cleared and significant clearing will not be required to facilitate the ultimate development, there will be no environmental issues.

Local Water Management Strategy (LWMS)

A suitable LWMS can be prepared for the site. Given the ultimate low density development, gradient and contours, it is not envisaged there will be issues with the preparation of a suitable LWMS that facilitates development.

Development to Tie in with Adjoining Sites

The development will fit seamlessly with the adjoining Special Rural site to the east and is bounded by Sunrise Road and Mt Shadforth Road. The existing Rural to the south of the site will blend in with the proposed use classes of the site.

Protection of Creekline and Water Courses

A portion of the site forms the head of Little River. The ultimate development of the site will not impact on the catchment of the Little River; it will in fact improve it from the current agricultural use.

Natural Landscape Qualities Visibility from Local Roads

The ultimate development will be of a low density, which is not considered to have an impact on the external visibility into the development.

3.4 WAPC Agenda Report for Adoption of LPS

It is understood when the LPS was in a draft format, the site, and land further west to McLeod Road was identified for Rural Smallholdings. The WAPC made determination in granting consent to advertise that the westward expansion of Rural Smallholdings from the Denmark townsite be only from Cussons Road to Middleton Close and this would yield approximately 82 Rural Smallholding lots.

During the advertising period submissions were received for the inclusion of the land initially identified by the draft LPS. The WAPC resolved not to support the Rural Smallholdings land west of Middleton Close given the need to protect rural land and create consolidated settlement forms.

In response to this, the following is noted

Lot Yield

On the grounds that 82 Rural Smallholding lots were forecast to be created within the area currently identified within the LPS, it is considered with the 36% reduction in developable land as a result of SPP 3.7, additional land is required to facilitate the shortfall in development yield.

The modification to the LPS and ultimate development of the site makes allowance for the creation of 9 lots, which will facilitate 21% of the lots that cannot be developed as initially forecast in the LPS.

Protection of Rural Land.

The need for the protection of Rural Land is not disputed. However, in considering the definition of Rural Smallholdings, which states land can be used for minor rural pursuits and part time income from the use of the land can be derived, the proposed modification will not be jeopardising the site for rural purposes.

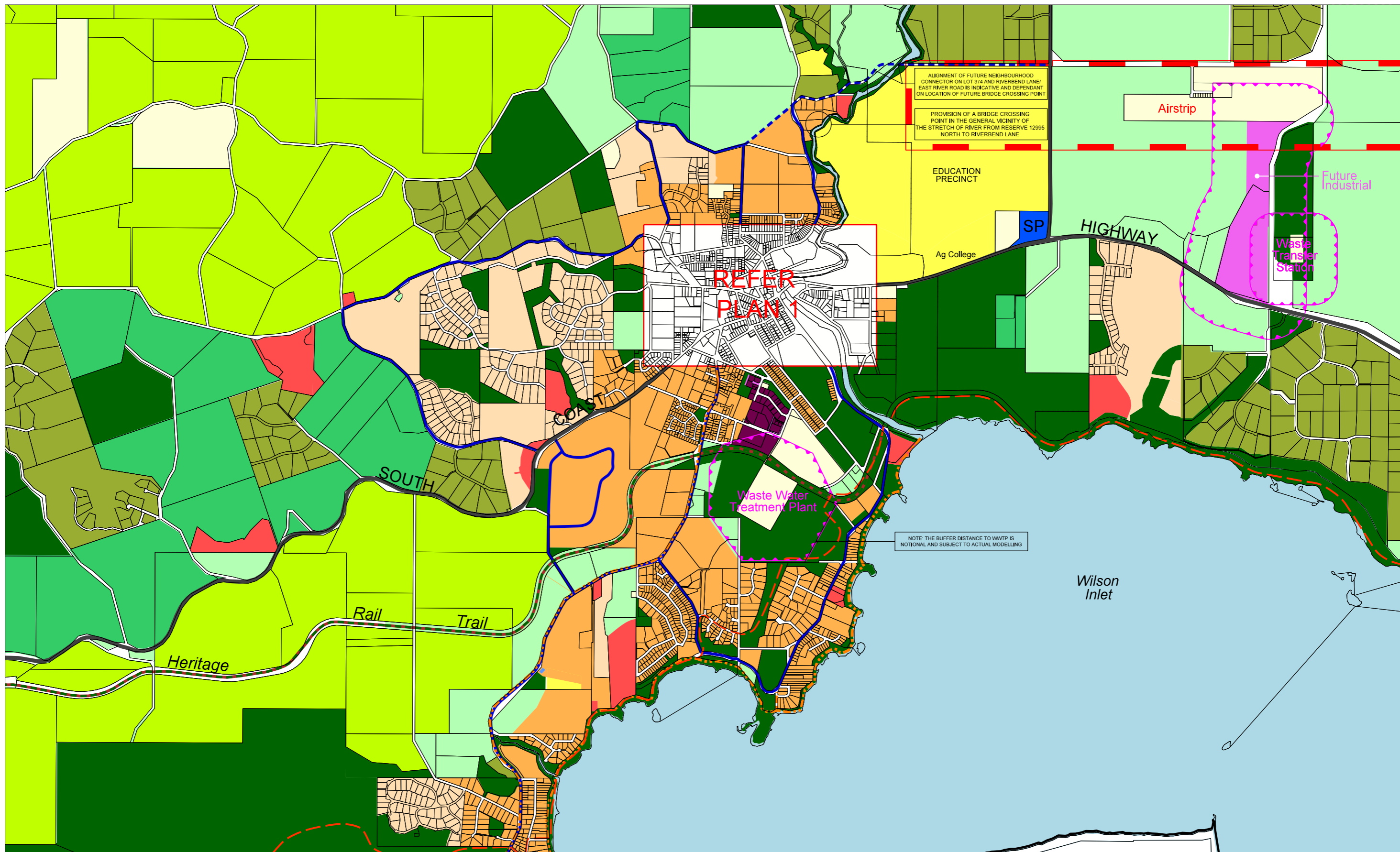
The ultimate development allows for the creation of 9 lots that can facilitate a viable agricultural pursuit (refer Appendix 3 report by Bedbrook Johnston Williams). Under a Rural Smallholding identification the existing Rural Land is not being jeopardised by the modification to the LPS.

Creation of Consolidated Settlement Forms

The WAPC Agenda item draws reference to State Planning Policy 3 (SPP 3) and the need to create consolidated settlement forms. The modification area to the LPS for Rural Smallholdings is located immediately adjacent to an existing Special Rural development and in close proximity to the Denmark townsite. Given this, the modification does represent a consolidated settlement form.

Furthermore, within SPP 3, Clause 5.6 Managing Rural Residential Growth draws reference to SPP 2.5 and the requirements stipulated for rural residential development. The proposal as evidenced above does meet the requirements of SPP 2.5.

Appendix 1
Current Plan 2 of 3 of the LPS



ALIGNMENT OF FUTURE NEIGHBOURHOOD CONNECTOR ON LOT 374 AND RIVERBEND LANE/ EAST RIVER ROAD IS INDICATIVE AND DEPENDANT ON LOCATION OF FUTURE BRIDGE CROSSING POINT

PROVISION OF A BRIDGE CROSSING POINT IN THE GENERAL VICINITY OF THE STRETCH OF RIVER FROM RESERVE 12995 NORTH TO RIVERBEND LANE

EDUCATION PRECINCT

Ag College

SP

Airstrip

Future Industrial

Waste Transfer Station

REFER PLAN 1

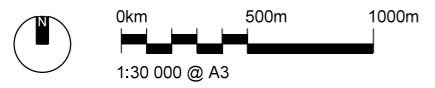
Waste Water Treatment Plant

NOTE: THE BUFFER DISTANCE TO WWTP IS NOTIONAL AND SUBJECT TO ACTUAL MODELLING

Wilson Inlet

LAND USE DESIGNATIONS			
	COMMERCIAL		EDUCATION PRECINCT
	URBAN RESIDENTIAL		WATERWAYS
	SPECIAL RESIDENTIAL		INDUSTRIAL
	RURAL RESIDENTIAL		SERVICE PARK
	RURAL SMALLHOLDINGS		REGIONAL ROAD
	PRIORITY AGRICULTURE		NEIGHBOURHOOD CONNECTOR ROAD
	GENERAL AGRICULTURE		INDICATIVE NEIGHBOURHOOD CONNECTOR ROAD
	MIXED BUSINESS		SHARED PATH
			HERITAGE RAIL TRAIL
			BIBBULMUN TRACK
			PROPOSED MUNDA BIDDI TRAIL
			AIRPORT BUFFER
			WWTP, WTS AND FUTURE INDUSTRIAL BUFFER AREA
			PARKS AND RECREATION
			PUBLIC USE
			TOURIST

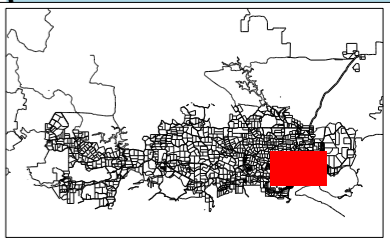
**SHIRE OF DENMARK
LOCAL PLANNING STRATEGY
URBAN AREA - PLAN 2**



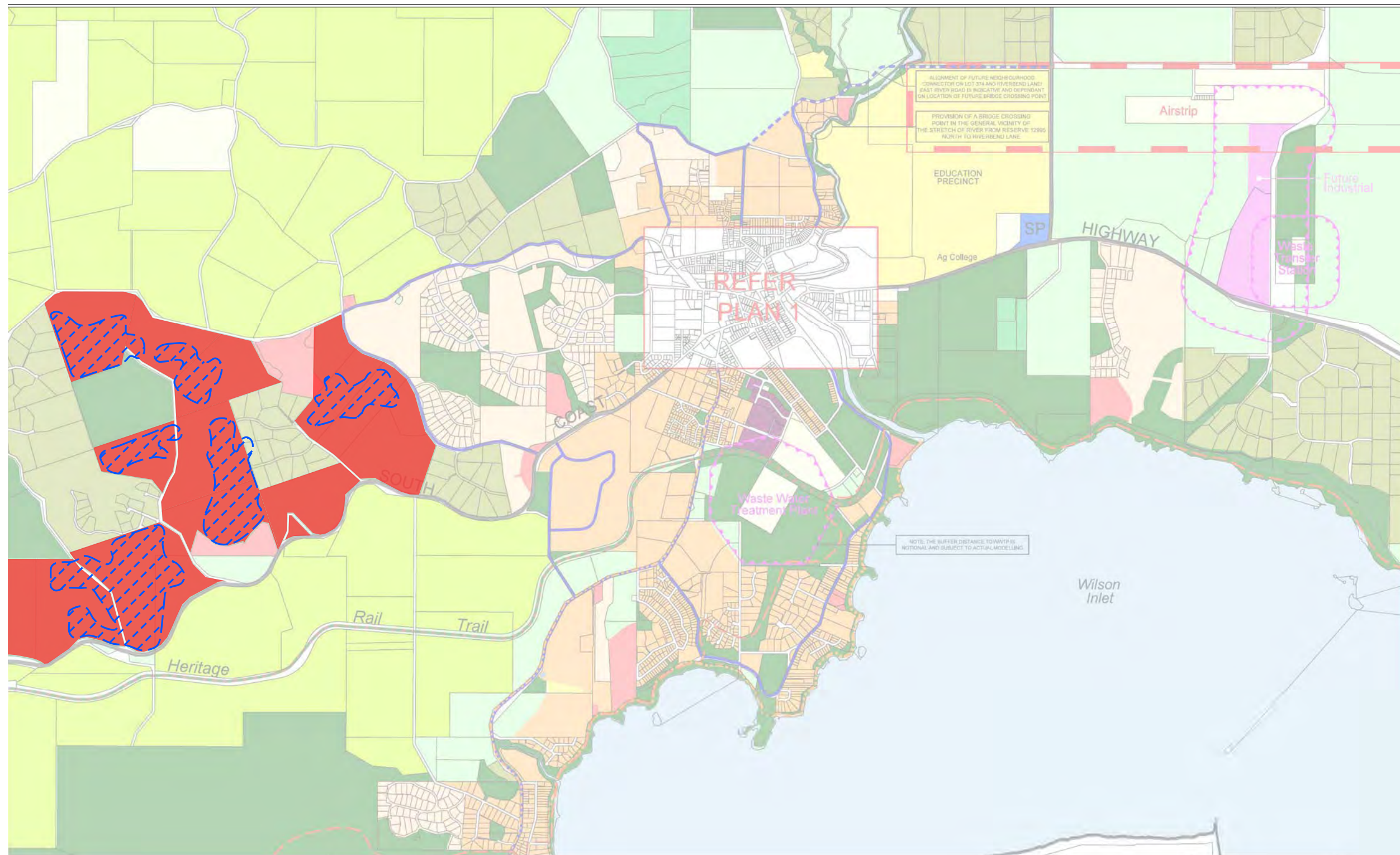
Adopted by resolution of the Shire of Denmark at the Special Meeting of Council held on the 4th day of October 2011.

Endorsed by the Western Australian Planning Commission on the 22nd day of May 2012.

PLAN 2 OF 3



Appendix 2
Remnant Vegetation Within Identified Rural Small Holding



- LEGEND**
- Land within LPS identified for Rural Smallholdings west of Town - 470 ha
 - Land within LPS identified for Rural Smallholdings west of Town too vegetated for development - 170 ha, being 36% of identified land

**SHIRE OF DENMARK
LOCAL PLANNING STRATEGY
URBAN AREA - PLAN 2**



LEGEND			
COMMERCIAL	EDUCATION PRECINCT	SHARED PATH	PARKS AND RECREATION
URBAN RESIDENTIAL	WATERWAYS	HERITAGE RAIL TRAIL	PUBLIC USE
SPECIAL RESIDENTIAL	INDUSTRIAL	BIBBULMUN TRACK	TOURIST
RURAL RESIDENTIAL	SERVICE PARK	PROPOSED MUNDA BIDDI TRAIL	
RURAL SMALLHOLDINGS	REGIONAL ROAD	AIRPORT BUFFER	
PRIORITY AGRICULTURE	NEIGHBOURHOOD CONNECTOR ROAD	WWTP, WTS AND FUTURE INDUSTRIAL BUFFER AREA	
GENERAL AGRICULTURE	INDICATIVE NEIGHBOURHOOD CONNECTOR ROAD		
MIXED BUSINESS			

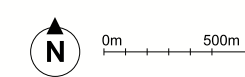
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RURAL SMALLHOLDINGS PERCENTAGE PLAN
SUNRISE ROAD
DENMARK

SAM WILLIAMS | TOWN PLANNING & PROJECT MANAGEMENT
ph: 0418 116216 | email: samwilliams@westnet.com.au



date - 13 DEC 2017 | ref - 17-007-001
scale - 1:35,000 @ A3



Appendix 3
Bedbrook Johnston Williams Report



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AGRICULTURAL REPORT

Application for Subdivision Lot 50 Mt Shadforth Road & Lot 52 Middleton Close SHADFORTH, WESTERN AUSTRALIA

INSPECTION

The subject land was inspected on Tuesday, 28 March 2017.

The land consists of approximately 62 hectares, 7km west of the Denmark townsite. To the south and west of the site is grazing land and to the east is an existing special rural development. The majority of the site is cleared and pastured apart from some remnant vegetation.

There is a central gully with a spring fed creek, surrounded by vegetation. A plan of the proposed subdivision was provided by Sam Williams – Town Planning & Project Management and is included at Appendix TJ1.

This proposal seeks to create 9 rural lots of between 5.2 to 12.6ha and a 1ha dam for irrigation for the rural lots.

EXISTING USE OF THE LAND

The land is currently being used for grazing.

In a report prepared by Martin Wells dated July 2011, titled "High Quality Agricultural Land in the Shire of Denmark Draft Local Planning Strategy – with reference to the potential for development of Lot 834 Mt Shadforth Road (Report No. 1109), a description of the subject land is provided at 3.0.

It is described as cleared in the majority and currently pastured for livestock production. Wells describes the cleared areas as predominantly gentle sloping with some small localised areas of hillside seepages, with the vast majority of the land well drained and capable of supporting a range of agricultural land uses.

Historically the predominant land use would have been cattle grazing.

Pasture on the land and in the surrounding area are based on annual species, including grasses and some legumes including subterranean clover. These pastures can be highly productive, for utilisation in a cattle grazing operation, merino wool operation, or a prime lamb production unit.

However, a lot of 62 hectares is not viable in its own right, and given the high value of land in the area (I was advised in the vicinity of \$1.5 - \$2.0M), it would not be suitable as a farm build up block.



AUSTRALIAN ASSOCIATION OF AGRICULTURAL CONSULTANTS W.A. INC

BJW Agribusiness is an association between Tim Johnston & Associates Pty Ltd and Kaydon Nominees Pty Ltd

A partial budget for a 60 hectare cattle grazing operation is included at Appendix TJ2 as an example of likely returns from a grazing operation, based on current prices.

These show, that for a breeder herd, turning off weaners would generate an operating profit (after interest and depreciation, but before other fixed costs) of approximately \$10,846 on the 60ha (approx.).

However, current prices are sitting at a percentile of 99%, which means that since 2006, prices have been lower than current levels 99% of the time. This can be seen in Appendix TJ3 at Figure 7 – WA Cattle Percentiles with the “Feeder yearling” price of 336c on the 21st April, 2017 being at 99.1% percentile.

If a more average price of say 177c/kg is used (50%) in the Cattle Gross Margin, then the results show an operating loss for a breeder herd on 60ha of \$5,366 (App TJ4), which in my opinion is the indicative of the long-term profitability.

PROPOSED USE OF THE LAND

Martin Wells at 3.3 in his report, concludes that the landform and soil conditions within the proposed subdivision are of generally high capability for most land uses, including horticulture (assuming availability of water for irrigation).

From my inspection of the site and consideration of Mr Wells’ report and associated mapping, and based on my experience, I would agree with this assessment.

I have been advised that the proposed subdivision is to facilitate the creation of lots for the purpose of stone fruit cultivation, namely avocados, of sufficient size to be commercially viable.

Avocado Production

- Avocado production in Australia and particularly Western Australia continues to increase year on year with Avocado Australia reporting for 2015/16 that WA produced 37% of the average production of Australia over the past 2 years (Appendix TJ3). In 2015/16 WA produced 4.3 million trays (22,550t), with a total gross value of production of approximately \$163M.
- Australian consumption of avocados has been steadily increasing with current per capita consumption at about 3.2kg/person which has nearly tripled over the last 20 years. Current exports account for only 1500t, with huge potential for exports into Asia, particularly Singapore and Malaysia.
- Due to climatic differences within WA, avocados from WA can be available all year round, with the main commercial season runs from August through to February. These major commercial plantings are further north from Denmark, which should assist local growers with marketing their fruit.

Establishment of an Avocado Plantation

- Establishment costs for avocados approximate \$10,000 to \$15,000 per hectare, depending on several factors including how much work is done by the owners versus contractors.

One of the critical factors for the success of an avocado plantation is the irrigation during summer months.

The Department of Agriculture & Food WA has calculated the annual water requirements for commercial production of avocados at Denmark (www.agri.wa.gov.au/water-management/growing-avocados-annual-water-requirements) at 5.5 Megabites per hectare, with the following monthly requirements:

TOTAL	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Denmark 5.5	1.4	1.2	0.8	0.1	0	0	0	0	0	0.3	0.8	0.9

Given that Denmark receives on average 240mm of rainfall over the summer months, and with a reasonable catchment, the 1ha dam should provide sufficient water for each of the lots.

Local producers (personal communications) apply 50L water per tree per day over the summer, which at 300 trees/ha implies an irrigation requirement of 15KL/day per hectare or 405KL for 9 lots of 3ha each. On this basis, there would also appear to be sufficient water available from a 1ha dam.

Avocado Benchmarking Survey

In late 2016, Horticulture Innovation Australia Limited published a report on the Australian Avocado Benchmarking Program based on over 200 avocado growers across Australia, including Western Australian growers. 25% of growers in the survey were of less than 10 hectares.

A summary of the report is included at Appendix TJ5.

The physical and financial analysis in this survey, provide an ideal basis to analyse the potential viability of avocado plantations on the proposed lots at Mt Shadforth.

Using the figures for the WA region, as shown in Table 10 of the Report (App TJ6), a theoretical 3 hectare avocado orchard, when in full production would look like the following:

TABLE 1: ENTERPRISE GROSS MARGIN FOR 3HA OF AVOCADOS

Total KGS Harvested per Producing Hectare	12,082
% of Fruit Sold as Mid-Sized (Size Counts 18 to 25)	55%
% of Packed Fruit Sold as Premium Grade %	87%
Tonnes Produced and Sold per FTE per Annum	51
Total Sales Revenue	\$64,888
Employment / Labour Costs	\$10,992
Marketing & Ripening Costs	\$5,814
Freight Costs	\$3,364
Packaging and Pallet Costs	\$3,088
Chemical and Fertiliser Costs	\$3,755
Repairs & Replacements	\$2,038
Rates Levies, Licences, Memberships, Registrations	\$1,049
Power & Gas Costs	\$845
General Expenses	\$3,224
Contract Packing Fees	\$6,195
Fuel & Oil Costs	\$652
Water Costs	\$11
Insurance Costs	\$688
Consultants and Contractor Fees	\$1,214

Motor Vehicles	\$255
Total Operating Costs (excluding Interest & Depreciation)	\$43,680
EBITDA PER PRODUCING HECTARE	\$21,207

With the calculation of interest based on the operating costs at 6% and depreciating the development costs at 10% per annum, the theoretical margin on 3ha would approximate:

Income	\$194,664
Operating Costs	\$131,040
Interest	\$ 7,862
Depreciation	<u>\$ 4,500</u>
Net Margin – 3ha	<u>\$ 51,262</u>

Therefore on 3 hectares it would be possible to generate an average return of over \$50,000 per annum, based on this recent analysis of Western Australian avocado growers.

ALTERNATIVE HORTICULTURAL CROPS

With the growth of boutique breweries across Australia and in particular Western Australia, the demand for locally grown hops is expanding. Hops were grown in WA back in the 1930's, but historically most have been sourced from Victoria and Tasmania.

Hops are a perennial herbaceous climbing plant which dies back to the ground during the winter and makes fresh growth from the root stock during spring. Male and female plants are carried on separate plants, but only the female flowers produce commercial hops. Males are usually planted at 1:100.

Harvest takes place in March-April each year. Hops are usually planted at 1200-1500 plants/hectare and yields of over 1kg/plant can be achieved. Hop Products Australia, one of Australia's largest producers in Victoria and Tasmania, last year averaged 2280kg/ha on 521 hectares.

Hops have a cold requirement which makes them ideal for the Denmark area, and there is already one producer on the Kalgan River at Albany, and another at Margaret River.

In Australia, the commercial hop market is dominated by two main companies, with small scale hop farms uncommon.

However, the craft brewing industry is looking for a wider variety of hops in terms of varieties and provenience.

With retail prices of around \$10 per 100g and based on a 100% market up, this would imply a value of around \$50/kg with one kg produced per plant and 1500 plants/ha, the gross return could be \$75,000/ha.

Assuming operating costs of \$10,000/ha (similar to vineyards), this would prove to be a viable alternative to avocados.

As a rule of thumb, 1kg of hops is used for 150L of beer.

CONCLUSIONS

There are horticultural options for small agricultural lots on Lot 50 Mt Shadforth Road and Lot 52 Middleton Close, Shadforth. These include Avocados which are extremely profitable and already grown locally on small lots very successfully.

It is highly likely that other crops such as hops would also be suitable to the site.

One major constraint in a niche market is the high capital cost of entry. This is exacerbated if the only available land that is suitable, is in too large a parcel, thereby pricing it out of the reach of many aspiring horticulturalists and reducing the return on capital assuming only a small area will be utilised for horticulture if capital is limited.

The Shadforth area is ideally placed for a horticulture precinct being close to Denmark where it will be easy to source and accommodate the backpackers required to harvest the crop at critical times of the year.

A handwritten signature in blue ink, appearing to read 'T Johnston', with a long horizontal flourish extending to the right.

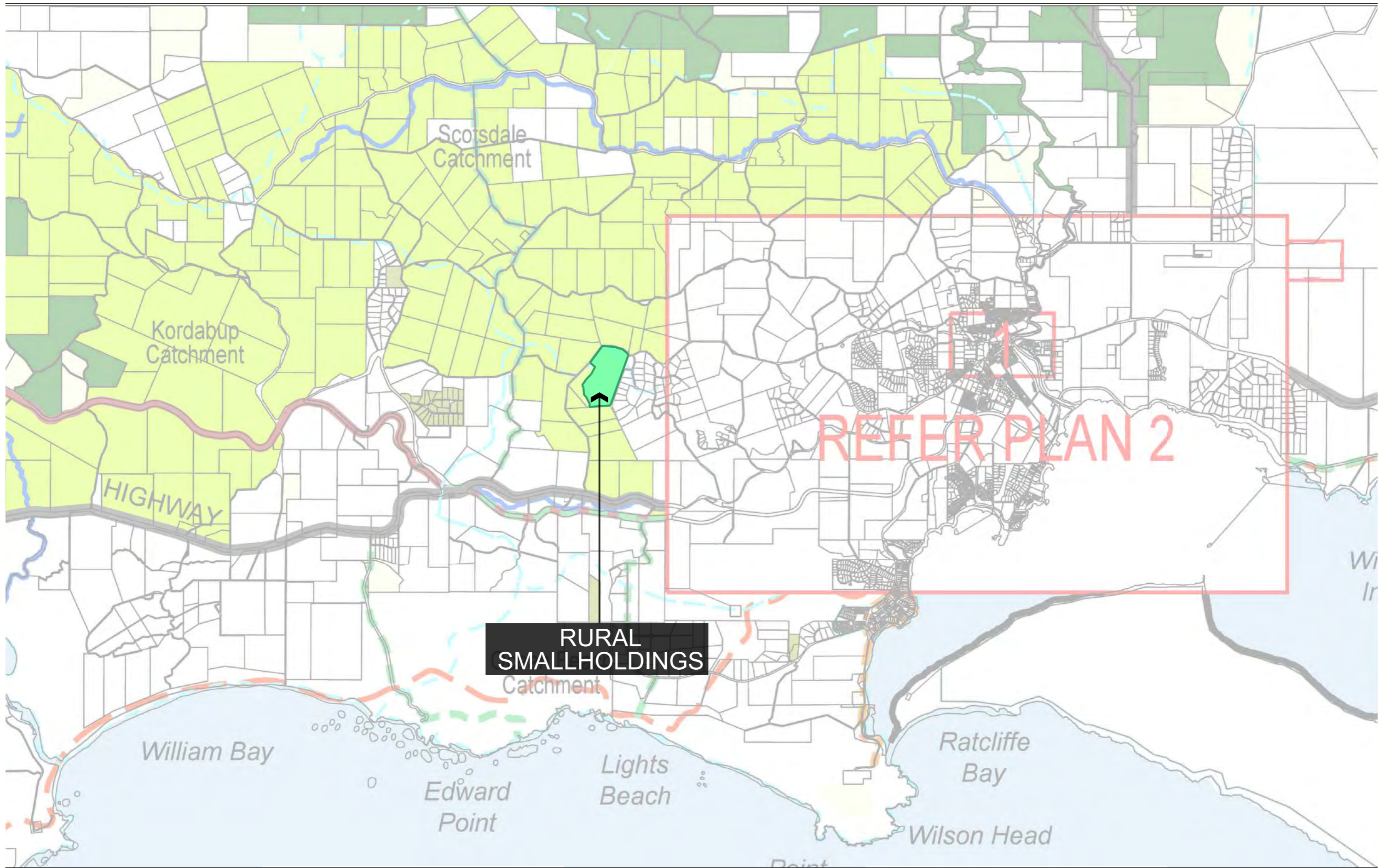
Timothy Charles Johnston

17 May 2017

APPENDIX

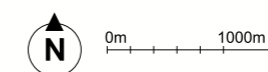
TCJ1	Subdivision Plan
TCJ2	Cattle Gross Margins
TCJ3	Mercado Decile Report – Cattle
TCJ4	Cattle Gross Margin 50% Percentile
TCJ5	HIA – Final Report “Australian Avocado Benchmarking Program Development Rounds II and III
TCJ6	Australian Avocado Benchmarking – Table 10 Detailed Information on Differences between Regions
TCJ7	Curriculum Vitae – Tim Johnston

Appendix 4
Amended LPS Plan



RURAL SMALLHOLDINGS PROPOSED AMENDMENT
SUNRISE ROAD
DENMARK

SAM WILLIAMS | TOWN PLANNING & PROJECT MANAGEMENT
 ph: 0418 116216 | email: samwilliams@westnet.com.au







date - 13 DEC 2017 | ref - 17-007-002
 scale - 1:65,000 @ A3

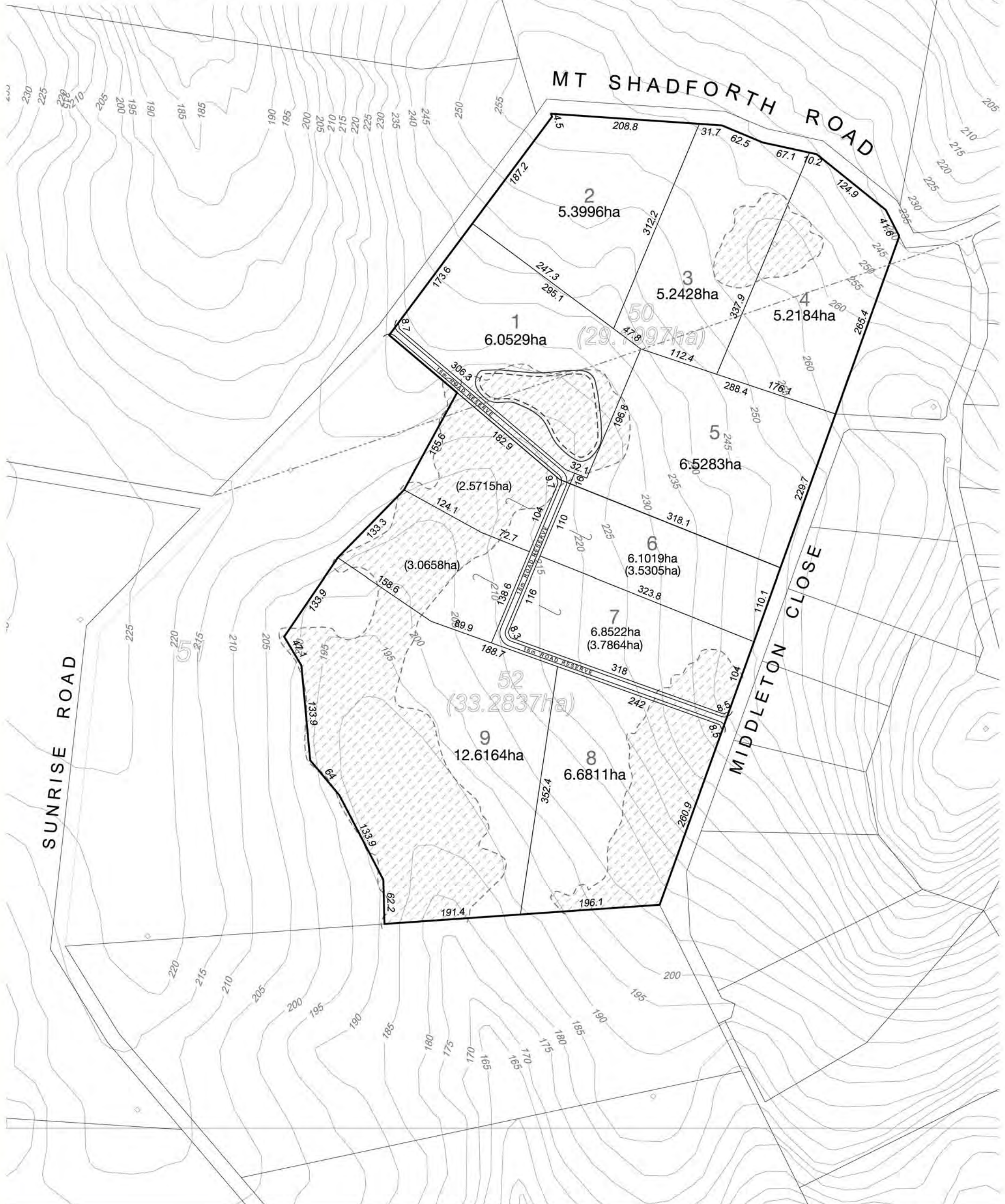


Appendix 5

Ultimate Development of the Site

LEGEND

-  SUBJECT AREA
-  REMNANT VEGETATION
-  DAM (1ha)
-  POWER ALIGNMENT



0m 50m



Appendix 6

Land Capability

Soil Assessment for On-Site Disposal of Effluent Lot 834 Mount Shadforth Road Denmark

Prepared for

Sunland Pty Ltd

By

Thompson McRobert Edgeloe

PO Box 733

BUNBURY WA 6231

Ph: (08) 9791 4411

January 2007

1 Introduction

Thompson McRobert Edgeloe were engaged by Sunland Pty Ltd to provide an assessment of the suitability of proposed development of Lot 834 Mount Shadforth Road Denmark for "On-Site Effluent Disposal".

Lot 834 is a 76.85ha rural residential development comprising of 62 one hectare minimum lots. The lot is bounded by Mount Shadforth Road to the north and northwest and Sunrise road to the west and south and Middleton Road to the east. (See Appendix A Soil Assessment for On Site Effluent Disposal Plan).

The report has been based upon the plans obtained from Taylor Burrell Barnett and soil testing undertaken by Albany Soil and Concrete Testing.

2 Site Description

The site was previously farmed for grazing and the majority of the site is pasture. The site has an ephemeral waterway running north south from lots 37 to 47. The site grades general to the waterway between 10 to 15%. The waterway is vegetated. Lots 49, 60 to 62 and lots 5 to 7 and 11 are also vegetated. The vegetation along the waterway is to be preserved in accordance with the scheme provisions.

Lots 22, 31, 32, 39 and 40 have areas where there is water permeating the surface.

3 Test Results

Soil testing was conducted by Albany Soil and Concrete Testing and a copy of the report is shown in Appendix B Test Results. The field works was conducted on the 2nd November 2006 and samples were analysed 15th November 2006. Sampling was based on soil types across the site to determine the characteristics and capability of these different materials. Thirty (30) inspection pits were dug generally to a depth of 1.5m.

The results are summarised below:

Table 3.1 Test Result Summary

Location	Lot	PRI	Permeability m/s	General Soil Type
Loc 3	8	1616.3	2.3×10^{-6}	Sandy clay
Loc 6	14	1180.0	2.5×10^{-4}	Sandy gravel with silt
Loc 9	19	283.2	2.4×10^{-2}	Sandy gravel with silt
Loc 10	21	98.7	1.2×10^{-3}	Sand with silt
Loc 13	30	1098.6	2.3×10^{-4}	Gravelly silty sand
Loc 15	34	156.3	5.8×10^{-5}	Sandy clay with gravel
Loc 19	59	2455.0	1.2×10^{-7}	Silty clay
Loc 25	46	425.9	3.5×10^{-5}	Gravelly clayey sand
Loc 28	54	7.5	9.2×10^{-2}	Grey sand with silt
Loc 30	27	27.4	1.2×10^{-6}	Sand with silt

Note that water was permeating from the ground near locations 14 and 22. These correlate to Lots 31, 32, 40 and 41. A water table was not recorded at any of the test locations.

Location 4 (Lot 9) granite rock was encountered at a depth of 700mm and the inspection pit was discontinued.

3.1 Soil Description

Generally the soil from 0 to 700mm a gravely sand with silt or sandy gravel with slit. The soil layers below 700mm are generally a silty clay or sandy clay. The majority of the samples where moist except at locations 14, and 21 where they were categorised as wet.

3.2 Phosphorous Retention Index (PRI)

The Phosphorous Retention Index as summarised in Table 3.1 above, for majority of the test locations are high to very high with the exceptions of Loc 28 and 30. The layers are located between the 200 to 600mm depth. . These materials are only in two (2) layers of the soil substrata in these two (2) locations. Both material types are underlain with materials with high PRI's. Both materials are sand with silt and have high permeabilities.

The majority of soil types in the 0 to 700mm depth have high PRI's.

3.3 Permeability

The majority of the site has rapidly draining material with high PRI's underlain with a poorly drained layer of sandy or silty clay. These are summarised in the profile below:

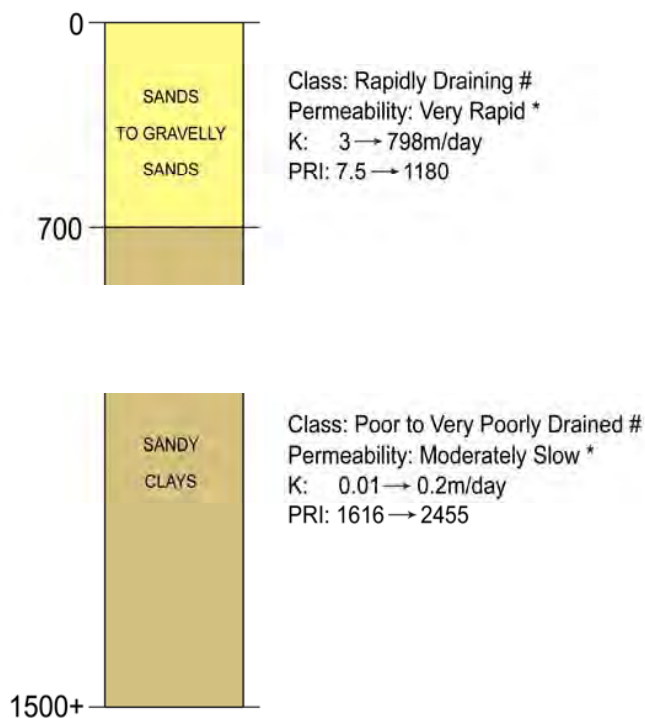


FIG 3.3.1 TYPICAL SOIL PROFILE PROPERTIES

Indicative Drainage Class Table 4.1.1 Determine Soil Category AS/NZS 1547:2000

** Permeability Class Table 3.4 Assessment of Land Capability for On-Site Septic Tank Effluent Disposal. Technical Report No 63 (TRN 63). M Wells (1989).*

The layers with greater than 6m/d have a risk of polluting water bodies (Appendix 1 Wells 1989 TRN 63).

3.4 Drainage

The site has a maximum grade of 15% near lots 49, 50, 61 and 62. Generally leach drains should not be used on slopes greater than 20%. The site drains to the water way traversing the centre of the site from lot 37 to 47.

3.5 Capability for On Site Disposal of Effluent

The lots surrounding the water body require a set back of 100mm for septic systems and 50m for ATU's as per the Environmental Protection Authority Western Australia. The lot sizes generally allow the building envelopes to be placed outside these limits. Lots 34 to 41 will require ATU's to meet this criteria as the building envelopes are within the 100m limit of the water way but not closer than 50m. Similarly lots 26 to 33 and 42 to 47 the set back of the on-site disposal system (building envelopes) will need to be confirmed on site to comply with this standard.

Both the overlaying material (0 to 700mm nominal) and the material below 700mm require some modification to the standard septic system to comply with the requirements of AS/NZS 1547:2000 and the guidelines provided in Assessment of Land Capability for On-Site Septic Tank Effluent Disposal M Well (1989).

The areas noted with water permeating from the surface will need to be filled to obtain the required separation from the surface. ATU's are required in these areas as shown Appendix A Soil Assessment from On-Site Effluent Disposal - Proposed Types on Units. The disposal areas for these units also need to be flat and horizontal. Either the building pad is increased to incorporate the units or some form of terracing as shown on the Department of Health guidelines for the installation of ATU's.

The leach drains will need to be semi inverted and lined as shown in AS/NZS 1547:2000 Figure 4.5A4 see below:

Figure 3.5.1 Discharge Control Trench for Category 1 Soil.

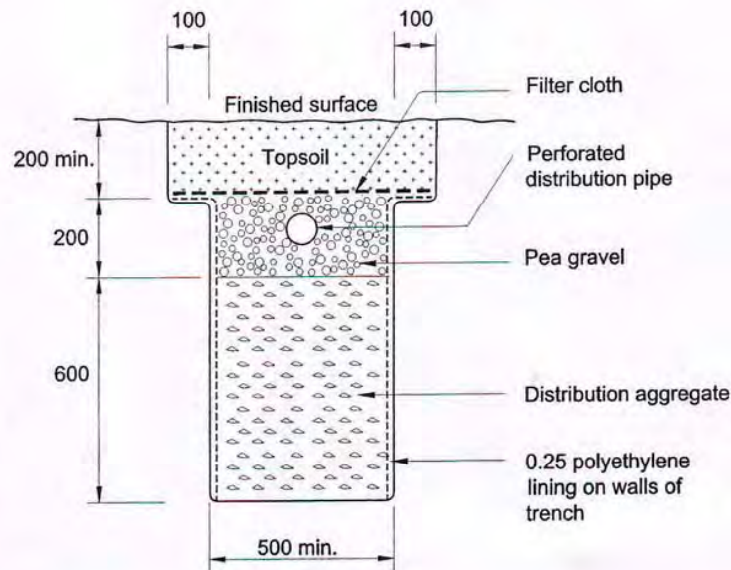


FIGURE 4.5A4 DISCHARGE CONTROL TRENCH FOR CATEGORY 1 SOIL

The Design Loading Rates DLR for the trenches and beds are 20mm/d or 50mm/d (Table 4.2A1 of AS/NZS 1547:200) for primary treated effluent and secondary treated effluent respectively on materials in the 0 to 700mm nominally.

3.6 Recommended Waste Water Systems

The following are the recommended waste water systems and site specific guidelines:

- The size of the building envelopes is to be 2000m² minimum.
- Bund of the leach drains with natural clayey material at least 2m from the down slope of each.
- Semi inverted waste water leach drains installed as per the requirements of the Shire of Denmark in lots outside of the two areas indicated on the plan in Appendix A.
- Waste water disposal systems (conventional septic) to set back 100m from the creek line and 50m for the ATU's.
- Flat or terraced waste water disposal areas are required.
- Lots 34 to 41; 26 to 33 and 42 to 47 require ATU's as per plan in Appendix A.
- Waste water disposal areas for should be sized for a maximum loading of 35 litres per m² for conventional systems and 50 litres per m² for ATU's
- Provide cut off drains on the upslope of the waste water disposal areas.
- Infiltration can be increased in the clayey material areas by placing gravel or aggregate around the leach drains.
- Provision of at least two (2) switchable leach drains of size as designed in accordance with the Regulations.

4 References

Wells, M (1989) Department of Agriculture Western Australia. Assessment of Land Capability for On-Site Septic Tank Effluent Disposal. Resource Management Technical Report No. 63

Wells, M (1989) Department of Agriculture Western Australia. An Assessment of Soil Capability for On-Site Effluent Disposal East Carnarvon, Western Australia. Resource Management Technical Report No. 79

AS/NZS 1547:2000 Onsite domestic wastewater management. Standards Australia
Standards New Zealand

State of Western Australia. Health (Treatment of Sewerage and Disposal of Effluent and Liquid Waste) Regulations 1974.

Fell, R. MacGregor, P. Staplton, D. (1992) Geotechnical Engineering of Embankments
Dams

**APPENDIX A – SOIL ASSESSMENT FOR ON-SITE
EFFLUENT DISPOSAL PROPOSED TYPES OF UNITS**

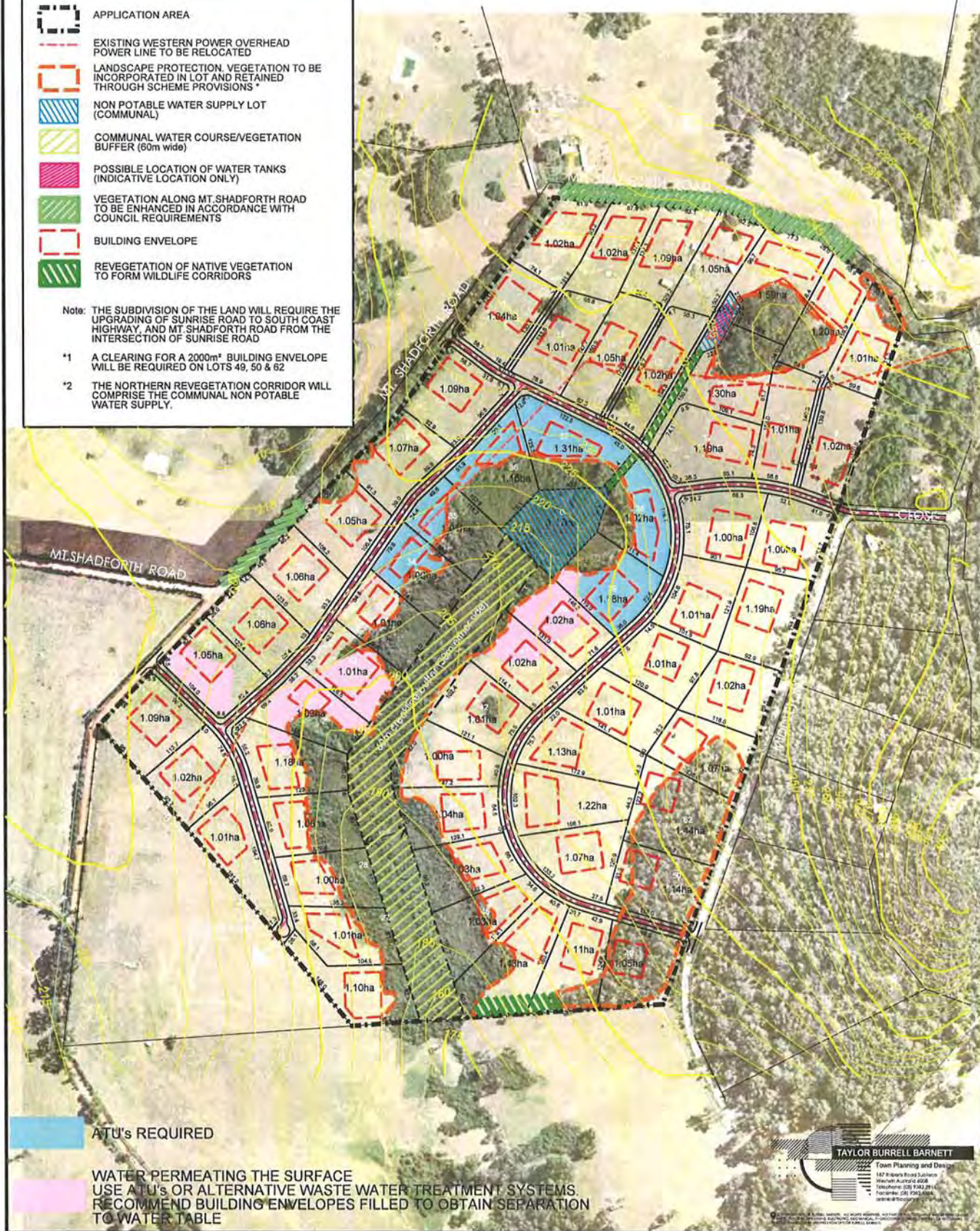
LEGEND

-  APPLICATION AREA
-  EXISTING WESTERN POWER OVERHEAD POWER LINE TO BE RELOCATED
-  LANDSCAPE PROTECTION VEGETATION TO BE INCORPORATED IN LOT AND RETAINED THROUGH SCHEME PROVISIONS*
-  NON POTABLE WATER SUPPLY LOT (COMMUNAL)
-  COMMUNAL WATER COURSE/VEGETATION BUFFER (60m wide)
-  POSSIBLE LOCATION OF WATER TANKS (INDICATIVE LOCATION ONLY)
-  VEGETATION ALONG MT. SHADFORTH ROAD TO BE ENHANCED IN ACCORDANCE WITH COUNCIL REQUIREMENTS
-  BUILDING ENVELOPE
-  REVEGETATION OF NATIVE VEGETATION TO FORM WILDLIFE CORRIDORS

Note: THE SUBDIVISION OF THE LAND WILL REQUIRE THE UPGRADING OF SUNRISE ROAD TO SOUTH COAST HIGHWAY, AND MT. SHADFORTH ROAD FROM THE INTERSECTION OF SUNRISE ROAD

*1 A CLEARING FOR A 2000m² BUILDING ENVELOPE WILL BE REQUIRED ON LOTS 49, 50 & 62

*2 THE NORTHERN REVEGETATION CORRIDOR WILL COMPRISE THE COMMUNAL NON POTABLE WATER SUPPLY.



ATU's REQUIRED

WATER PERMEATING THE SURFACE USE ATU's OR ALTERNATIVE WASTE WATER TREATMENT SYSTEMS. RECOMMEND BUILDING ENVELOPES FILLED TO OBTAIN SEPARATION TO WATER TABLE

TAYLOR BURRELL BARNETT

Town Planning and Design
187 Rialto Road, Subiaco
Western Australia 6008
Telephone: (08) 9437 2111
Facsimile: (08) 9437 2114
www.tbbr.com.au

SOIL ASSESSMENT FOR ON-SITE EFFLUENT DISPOSAL PROPOSED TYPES OF UNITS

ORIGINAL: A1
SIZE
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ENGINEER:	B.B.	DRAFTER:	S.J.
SCALE:	A1 - 1 : 2500 A3 - 1 : 5000	DATE:	18 / 04 / 07
PLAN No.	06359P-01		



APPENDIX B – TEST RESULTS

4 DEC 2006

ALBANY SOIL AND CONCRETE TESTING

39 Hill St, Albany. W.A. 6330
Phone/Fax: 08 98415309 Mobile: 0427 277797
Email: albsoil@omninet.net.au
A.B.N. : 65 229 884 872

REF: 10469

CLIENT: SUNLAND PTY LTD

PROJECT: LOT 834 SUNRISE RD DENMARK

ALBANY SOIL AND CONCRETE TESTING

39 Hill St, Albany. W.A. 6330
Phone/Fax: 08 98415309 Mobile: 0427 277797
Email: albsoil@omninet.net.au
A.B.N. : 65 229 884 872

REF: 10469

Page 1 of 7

CLIENT: SUNLAND PTY LTD

PROJECT: LOT 834 SUNRISE RD DENMARK

DATE TESTED: 2-11-06

TESTED BY: COLIN GOUGH

APPROVED BY: COLIN GOUGH

SIGNATURE: 

SITE INVESTIGATION

LOC 1	0- 75mm	DARK BROWN SAND WITH SILT (TOPSOIL) (DRY/MOIST)
	75- 250mm	DARK BROWN SAND WITH SILT (MOIST)
	250- 600mm	DARK BROWN SANDY GRAVEL WITH SILT (MOIST)
	600- 700mm	BROWN SILTY SAND MINOR GRAVEL (MOIST)
	700-1500mm	BROWN/ORANGE SILTY SANDY CLAY (MOIST) NO WATER
LOC 2	0- 100mm	DARK BROWN SAND WITH SILT MINOR GRAVEL (TOPSOIL) (DRY)
	100- 500mm	DARK BROWN SANDY GRAVEL WITH SILT (MOIST)
	500-1500mm	BROWN/ORANGE GRAVELLY SANDY CLAY (MOIST) NO WATER
LOC 3	0- 100mm	DARK BROWN SAND WITH SILT (TOPSOIL) (DRY)
	100- 600mm	DARK BROWN SILTY SAND MINOR GRAVEL (MOIST)
	# 600-1500mm	BROWN/ORANGE SANDY CLAY (MOIST) NO WATER
LOC 4	0- 100mm	DARK BROWN SAND WITH SILT (TOPSOIL) (DRY/MOIST)
	100- 500mm	DARK BROWN SILTY SAND MINOR GRAVEL (MOIST)
	500- 700mm	LIGHT BROWN/ORANGE SANDY CLAY (QUARTZY) (MOIST)
	700mm	HIT GRANITE ROCK NO WATER

LOC 5	0- 50mm	DARK BROWN SAND WITH SILT (TOPSOIL) (DRY/MOIST)
	50- 300mm	DARK BROWN SAND WITH SILT MINOR GRAVEL (MOIST)
	300- 450mm	BROWN SANDY GRAVEL WITH SILT (MOIST)
	450-1500mm	LIGHT BROWN/ORANGE SANDY CLAY (MOIST) NO WATER
LOC 6	0- 75mm	DARK BROWN SAND WITH SILT (TOPSOIL) (DRY)
	# 75- 600mm	DARK BROWN SANDY GRAVEL WITH SILT (DRY/MOIST)
	600- 700mm	LIGHT BROWN CLAYEY SANDY GRAVEL (MOIST)
	700-1500mm	LIGHT BROWN/ORANGE/RED SILTY CLAY (MOIST) NO WATER
LOC 7	0- 100mm	DARK BROWN SAND WITH SILT (TOPSOIL) (MOIST)
	100- 400mm	DARK BROWN SAND WITH SILT (MOIST/DRY)
	400- 600mm	BROWN SILTY SAND MINOR GRAVEL (QUARTZY) (MOIST)
	600-1500mm	BROWN/ORANGE/RED SILTY CLAY (MOIST) NO WATER
LOC 8	0- 75mm	DARK BROWN SAND WITH SILT (TOPSOIL) (MOIST)
	75- 250mm	DARK BROWN SANDY GRAVEL WITH SILT (MOIST)
	250-1500mm	BROWN/ORANGE SANDY CLAY (MOIST) NO WATER
LOC 9	0- 75mm	DARK BROWN SAND WITH SILT (TOPSOIL) (DRY/MOIST)
	75- 350mm	DARK BROWN SAND WITH SILT (DRY)
	# 350-1200mm	DARK BROWN SANDY GRAVEL WITH SILT (DRY/MOIST)
	1200-1500mm	BROWN/ORANGE/RED SILTY SANDY CLAY (MOIST) NO WATER

LOC 10	0- 100mm	BLACK SAND WITH SILT (TOPSOIL) (MOIST)
	100- 250mm	BLACK/DARK GREY SAND WITH SILT (TOPSOIL) (MOIST)
	# 250- 750mm	BLACK SAND WITH SILT (VERY MOIST)
	750-1500mm	LIGHT BROWN/ORANGE SILTY SANDY CLAY (MOIST) NO WATER
LOC 11	0- 100mm	DARK GREY SAND WITH SILT (TOPSOIL) (MOIST)
	100- 400mm	DARK GREY SAND WITH SILT (MOIST)
	400- 700mm	LIGHT BROWN/ORANGE GRAVELLY SILTY SAND (MOIST/DRY)
	700-1500mm	LIGHT BROWN SILTY CLAY (DRY) NO WATER
LOC 12	0- 75mm	DARK BROWN SAND WITH SILT (TOPSOIL) (MOIST)
	75- 300mm	DARK BROWN SAND WITH SILT (MOIST)
	300- 400mm	BROWN SANDY GRAVEL WITH SILT (MOIST)
	400- 700mm	LIGHT BROWN GRAVELLY CLAYEY SAND (MOIST)
	700-1500mm	LIGHT BROWN/ORANGE SILTY SANDY CLAY (MOIST) NO WATER
LOC 13	0- 100mm	DARK GREY SAND WITH SILT (TOPSOIL) (MOIST)
	100- 300mm	DARK GREY/DARK BROWN SAND WITH SILT (MOIST)
	# 300-1000mm	LIGHT BROWN GRAVELLY SILTY SAND (QUARTZY) (MOIST)
	1000-1500mm	LIGHT BROWN/ORANGE SILTY SANDY CLAY (MOIST) NO WATER
LOC 14	0- 100mm	DARK GREY SAND WITH SILT (TOPSOIL) (VERY WET – SURFACE WATER)
	100- 250mm	DARK GREY/DARK BROWN SAND WITH SILT (VERY MOIST)
	250-1000mm	LIGHT BROWN/ORANGE SILTY SANDY CLAY (VERY MOIST/WET)
	1000-1500mm	LIGHT GREY/WHITE SILTY CLAY (VERY MOIST/WET) NO FREE WATER

LOC 15	0- 75mm	DARK GREY SAND WITH SILT (TOPSOIL) (MOIST)
	75- 300mm	DARK BROWN SAND WITH SILT (MOIST)
	# 300- 600mm	GREY/BROWN SANDY CLAY WITH GRAVEL (MOIST/VERY MOIST)
	600-1200mm	LIGHT BROWN/ORANGE SILTY SANDY CLAY (MOIST) NO WATER
LOC 16	0- 100mm	DARK GREY SAND WITH SILT (TOPSOIL) (DRY/MOIST)
	100- 350mm	DARK BROWN SAND WITH SILT (DRY/MOIST)
	350- 550mm	BROWN SANDY GRAVEL WITH SILT (MOIST)
	550-1000mm	LIGHT BROWN GRAVELLY SILTY SAND (VERY MOIST)
	1000-1500mm	LIGHT BROWN/ORANGE/RED SILTY SANDY CLAY NO WATER
LOC 17	0- 75mm	DARK BROWN SAND WITH SILT (TOPSOIL) (DRY/MOIST)
	75- 450mm	DARK BROWN SAND WITH SILT (MOIST)
	450- 700mm	BROWN SANDY GRAVEL WITH SILT (MOIST)
	700-1500mm	BROWN/ORANGE SILTY SANDY CLAY (MOIST) NO WATER
LOC 18	0- 75mm	DARK BROWN SAND WITH SILT (TOPSOIL) (DRY)
	75- 300mm	DARK BROWN SILTY SAND MINOR GRAVEL (MOIST)
	300- 750mm	BROWN CLAYEY SANDY GRAVEL (MOIST)
	750-1500mm	LIGHT BROWN/ORANGE SANDY CLAY (MOIST) NO WATER
LOC 19	0- 50mm	DARK GREY SAND WITH SILT (TOPSOIL) (MOIST)
	50- 250mm	DARK GREY SAND WITH SILT MINOR GRAVEL (MOIST)
	# 250-1500mm	LIGHT BROWN/ORANGE/RED SILTY CLAY (MOIST) NO WATER

LOC 20	0- 75mm	DARK GREY SAND WITH SILT (TOPSOIL) (MOIST)
	75- 400mm	VERY DARK BROWN SILTY SANDY GRAVEL (MOIST)
	400-1500mm	BROWN SANDY GRAVEL WITH SILT (MOIST)
	1500-2000mm	BROWN/ORANGE/RED SILTY CLAY (VERY MOIST)
	2000-2100mm	VERY LIGHT BROWN/CREAM SILTY SANDY CLAY (MOIST) NO WATER
LOC 21	0- 150mm	DARK GREY/BLACK SAND WITH SILT (TOPSOIL) (MOIST)
	150- 400mm	DARK GREY/GREY SAND WITH SILT (VERY MOIST)
	400- 600mm	VERY LIGHT BROWN SILTY CLAY (WET)
	600-1000mm	LIGHT BROWN/ORANGE SILTY CLAY (WET)
	1000-1800mm	LIGHT GREY/WHITE SILTY CLAY (WET) WATER @ 400mm
LOC 22	0- 100mm	DARK GREY/BLACK SAND WITH SILT (TOPSOIL) (VERY MOIST)
	100- 600mm	DARK GREY/BROWN SAND WITH SILT (MOIST)
	600-1000mm	LIGHT BROWN GRAVELLY CLAYEY SAND (QUARTZY) (WET)
	1000-2100mm	BROWN/ORANGE/RED SILTY CLAY (MOIST) NO WATER
LOC 23	0- 75mm	DARK GREY/BLACK SAND WITH SILT (TOPSOIL) (WET)
	75- 250mm	DARK GREY/BLACK SAND WITH SILT (VERY MOIST)
	250- 350mm	DARK BROWN GRAVELLY CLAYEY SAND (QUARTZY) (MOIST)
	350- 450mm	LIGHT BROWN SILTY CLAY (MOIST)
	450-2100mm	LIGHT BROWN/ORANGE SILTY CLAY (MOIST) NO WATER
LOC 24	0- 75mm	DARK GREY/BLACK SAND WITH SILT (TOPSOIL) (DRY)
	75- 400mm	BROWN SAND WITH SILT MINOR GRAVEL (DRY/MOIST)
	400-1600mm	BROWN/ORANGE GRAVELLY CLAYEY SAND (QUARTZY) (MOIST/DRY)
	1600-2100mm	BROWN/ORANGE/RED SILTY CLAY (MOIST/DRY) NO WATER

LOC 25	0- 75mm	DARK GREY/BLACK SAND WITH SILT (TOPSOIL) (MOIST)
	75- 500mm	DARK GREY BROWN SAND WITH SILT MINOR GRAVEL (MOIST)
	500- 900mm	DARK BROWN SANDY GRAVEL WITH SILT (MOIST/VERY MOIST)
	# 900-2100mm	BROWN/ORANGE GRAVELLY CLAYEY SAND (QUARTZY) (VERY MOIST) LARGE STONE PRESENT NO WATER
LOC 26	0- 75mm	GREY SAND WITH SILT (TOPSOIL) (MOIST)
	75 300mm	GREY SILTY SAND MINOR GRAVEL (DRY/MOIST)
	300- 600mm	DARK BROWN/GREY SANDY GRAVEL WITH SILT (MOIST)
	600- 700mm	LIGHT BROWN CLAYEY SANDY GRAVEL (QUARTZY) (MOIST/VERY MOIST)
	700-1500mm	BROWN/ORANGE/RED SILTY CLAY (MOIST/VERY MOIST) NO WATER
LOC 27	0- 75mm	VERY DARK BROWN SAND WITH SILT (TOPSOIL) (MOIST)
	75- 300mm	VERY DARK BROWN SILTY SAND (MOIST)
	300- 400mm	DARK BROWN SILTY SAND (MOIST)
	400- 550mm	DARK ORANGE CLAYEY SAND (QUARTY) (MOIST)
	550-1500mm	LIGHT BROWN/ORANGE/RED SILTY CLAY (MOIST) NO WATER
LOC 28	0- 75mm	DARK GREY SAND WITH SILT (TOPSOIL) (MOIST)
	# 75- 350mm	GREY/LIGHT GREY SAND WITH SILT (MOIST)
	350- 700mm	GREY/BROWN SILTY SANDY GRAVEL (MOIST)
	700- 800mm	BROWN/LIGHT BROWN SANDY GRAVEL WITH SILT (MOIST)
	800-1500mm	BROWN/ORANGE/RED SILTY CLAY (MOIST) NO WATER

LOC 29	0- 75mm	GREY SAND WITH SILT (TOPSOIL) (MOIST)
	75- 250mm	GREY SAND WITH SILT (MOIST)
	250- 650mm	GREY GRAVELLY SAND WITH SILT (MOIST)
	650-1100mm	BROWN SANDY GRAVEL WITH SILT (MOIST)
	1100-1500mm	LIGHT BROWN/ORANGE/RED SILTY CLAY (MOIST)
LOC 30	0- 100mm	DARK GREY SAND WITH SILT (TOPSOIL) (MOIST)
#	100- 600mm	DARK GREY/GREY SAND WITH SILT (MOIST)
	600-1000mm	BROWN SANDY GRAVEL WITH SILT (MOIST)
	1000-1500mm	LIGHT BROWN/ORANGE SILTY SANDY CLAY (MOIST)








COMMENTS: PADDOCK COVERED IN CLOVER, KYKE AND OTHER GRASSES. GRANITE OUTCROPS ON RIDGE TOPS WHERE TREES STILL STAND. WATER PERMEATING FROM GROUND NEAR LOCATIONS 14 AND 22. SEE SITE PLAN FOR APPROXIMATE LOCATIONS.

DENOTES SAMPLED FOR LAB TESTING. PHOTOS AND TEST RESULTS ARE ATTACHED.

REF: 10469-
 CLIENT: SUNLAND PTY LTD.

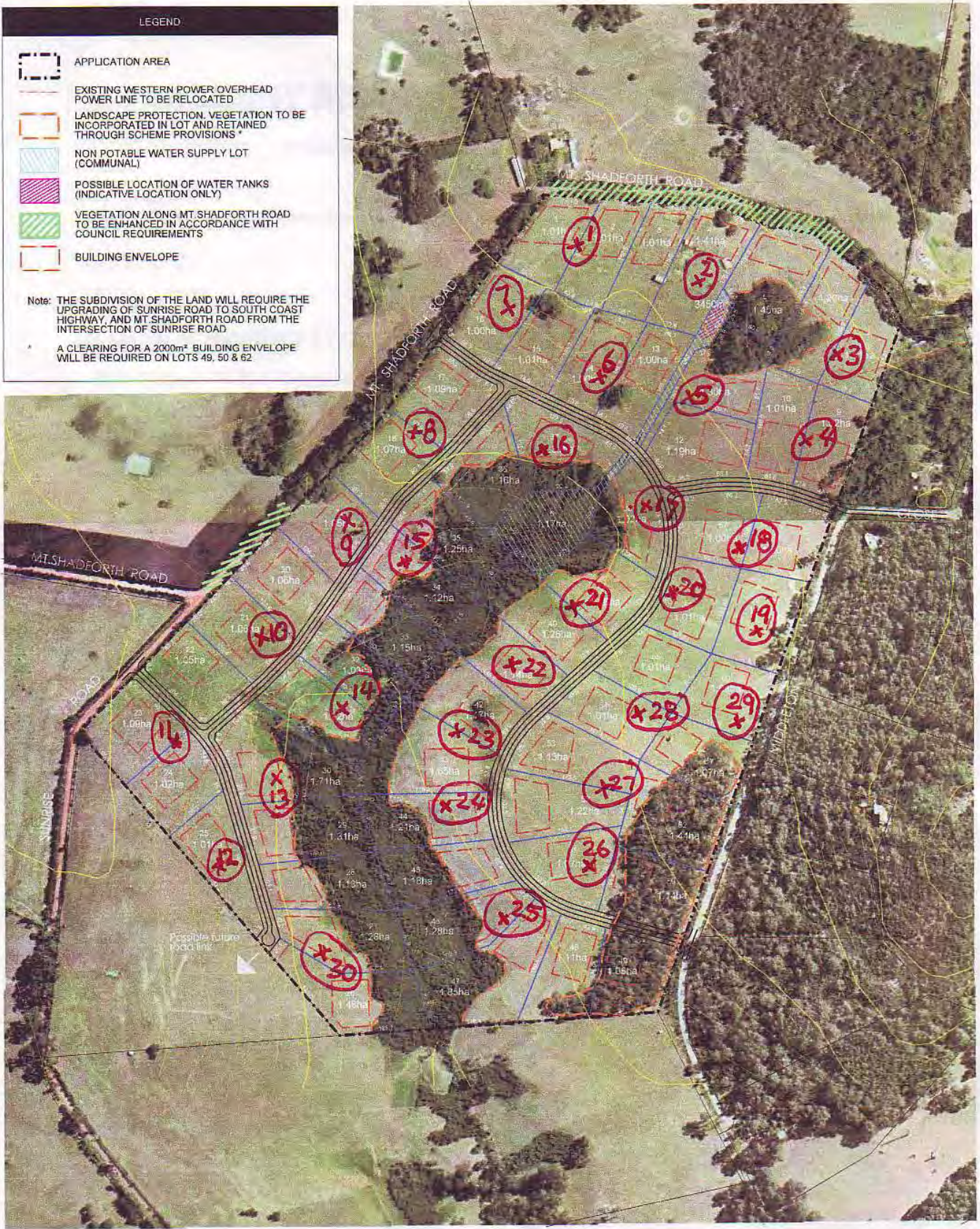
PROJECT: LOT 834 SUNRISE RD,
 DENMARK

LEGEND

-  APPLICATION AREA
-  EXISTING WESTERN POWER OVERHEAD POWER LINE TO BE RELOCATED
-  LANDSCAPE PROTECTION, VEGETATION TO BE INCORPORATED IN LOT AND RETAINED THROUGH SCHEME PROVISIONS*
-  NON POTABLE WATER SUPPLY LOT (COMMUNAL)
-  POSSIBLE LOCATION OF WATER TANKS (INDICATIVE LOCATION ONLY)
-  VEGETATION ALONG MT SHADFORTH ROAD TO BE ENHANCED IN ACCORDANCE WITH COUNCIL REQUIREMENTS
-  BUILDING ENVELOPE

Note: THE SUBDIVISION OF THE LAND WILL REQUIRE THE UPGRADING OF SUNRISE ROAD TO SOUTH COAST HIGHWAY, AND MT SHADFORTH ROAD FROM THE INTERSECTION OF SUNRISE ROAD

* A CLEARING FOR A 2000m² BUILDING ENVELOPE WILL BE REQUIRED ON LOTS 49, 50 & 62



Subdivision Guide Plan
 LOT 834 MT SHADFORTH ROAD
 DENMARK

DATE	2011
DISCUSSION	19/02/2004
PLAN NUMBER	664 P
PROPOSED BY	1:5000 @ A3
SCALE	MGA94
DESIGNED BY	SECTION BY
DATE	DATE



TAYLOR BURRELL BARNETT
 Town Planning and Design
 121 Rogers Road, Seacombe
 Auckland 1013, NZ
 Telephone: 09 473 2711
 Fax: 09 473 1664
 Email: tbb@tbbnz.com

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ALBANY SOIL AND CONCRETE TESTING

39 Hill St, Albany. W.A. 6330
Phone/Fax: 08 98415309 Mobile: 0427 277797
Email: albsoil@omninet.net.au
A.B.N. : 65 229 884 872

REF: 10469

CLIENT: SUNLAND PTY LTD

PROJECT: LOT 834 SUNRISE RD DENMARK

DATE TESTED: 2-11-06

TESTED BY: CSBP LABORATORIES

PHOSPHOROUS RETENTION INDEX

LOCATION	DEPTH	PHOSPHOROUS RETENTION INDEX
LOC 3	600-1500mm	1616.3
LOC 6	75- 600mm	1180.0
LOC 9	350-1200mm	283.2
LOC 10	250- 750mm	98.7
LOC 13	300-1000mm	1098.6
LOC 15	300- 600mm	156.3
LOC 19	250-1500mm	2455.0
LOC 25	900-2100mm	425.9
LOC 28	75- 350mm	7.5
LOC 30	100- 600mm	27.4

COMMENTS: TEST RESULTS AS RECEIVED FROM CSBP LTD. SEE SITE PLAN FOR APPROXIMATE LOCATIONS. SEE SITE LOGS FOR SOIL TYPES.

Albany Soil & Concrete Testing

ALBANY SOIL AND CONCRETE TESTING

39 Hill St, Albany. W.A. 6330

Phone/Fax: 08 98415309 Mobile: 0427 277797

Email: albsoil@omninet.net.au

A.B.N. : 65 229 884 872

REF: 10469

CLIENT: SUNLAND PTY LTD

PROJECT: LOT 834 SUNRISE RD DENMARK

DATE TESTED: 15-11-06

TESTED BY: COLIN GOUGH

SIGNATURE: 

INSITU PERMEABILITY TESTING

LOCATION	DEPTH	INSITU PERMEABILITY
LOC 3	600-1500mm	2.3×10^{-6} m/s
LOC 6	75- 600mm	2.5×10^{-4} m/s
LOC 9	350-1200mm	2.4×10^{-2} m/s
LOC 10	250- 750mm	1.2×10^{-3} m/s
LOC 13	300-1000mm	2.3×10^{-4} m/s
LOC 15	300- 600mm	5.8×10^{-5} m/s
LOC 19	250-1500mm	1.2×10^{-7} m/s
LOC 25	900-2100mm	3.5×10^{-5} m/s
LOC 28	75- 350mm	9.2×10^{-2} m/s
LOC 30	100- 600mm	1.2×10^{-3} m/s

COMMENTS: PERMEABILITY'S PLACED @ ASSUMED INSITU DENSITY. SEE SITE LOGS FOR SOIL DESCRIPTIONS. SEE SITE PLAN FOR APPROXIMATE LOCATIONS.

Albany Soil & Concrete Testing

39 Hill St. Albany WA 6330

Phone/Fax: 08 98415309 Mobile: 0427277797

Client: SUNLAND PTY LTD
 Project: LOT 834 SUNRISE RD DENMARK LOC 3
 Reference No.: 10469 Date Tested: 15-11-06 Tested By: COLIN GOUGH

SOIL DESCRIPTION
SEE SITE LOGS

PARTICLE SIZE DISTRIBUTION TEST RESULT

PARTICLE SIZE DISTRIBUTION:- AS - 1289 C6.1

SIEVING			
SIEVE SIZE	% PASSING	SIEVE SIZE	% PASSING
75.0mm	100	1.18mm	80
37.5mm	100	600 micron	70
19.0mm	100	425 micron	64
9.5mm	98	300 micron	57
4.75mm	94	150 micron	42
2.36mm	89	75 micron	34

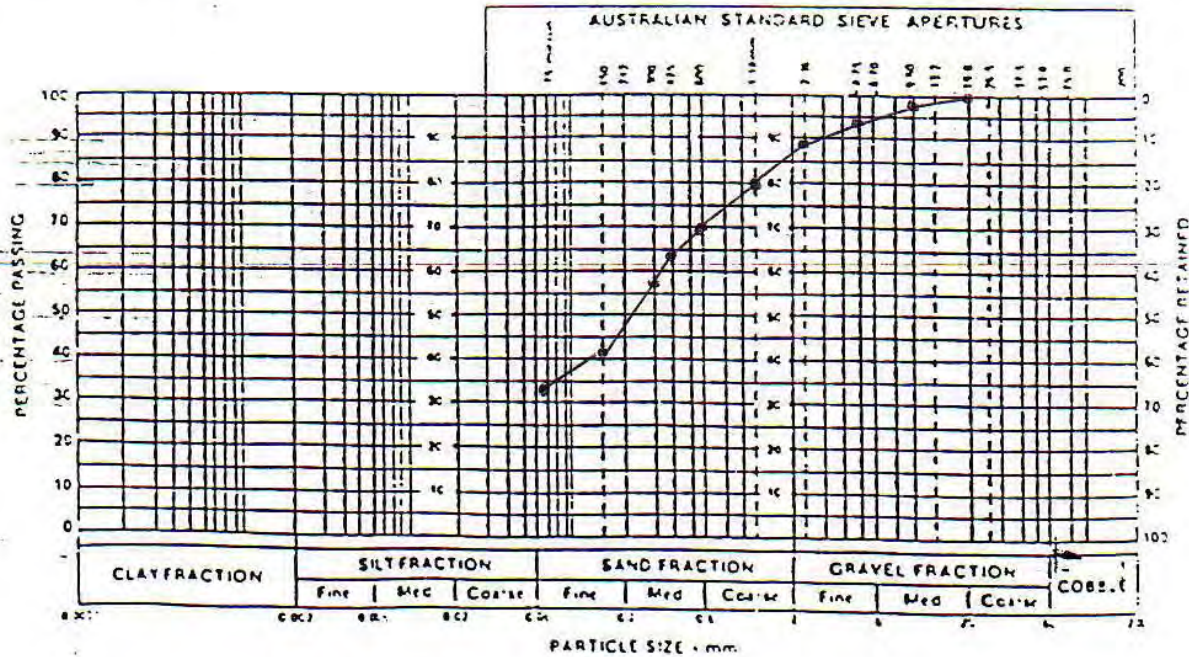
LOCATION:

LOC 3 600-1500mm

COMMENTS

SEE SITE PLAN FOR APPROXIMATE LOCATIONS

GRADING CURVE



DATE REPORTED: 28-11-06

REPORTED BY:

M GOUGH

Albany Soil & Concrete Testing

39 Hill St, Albany WA 6330

Phone/Fax: 08 98415309 Mobile: 0427277797

Client: SUNLAND PTY LTD
 Project: LOT 834 SUNRISE RD DENMARK LOC 6
 Reference No.: 10469 Date Tested: 15-11-06 Tested By: COLIN GOUGH

SOIL DESCRIPTION
SEE SITE LOGS

PARTICLE SIZE DISTRIBUTION TEST RESULT

PARTICLE SIZE DISTRIBUTION:- AS - 1289 C6.1

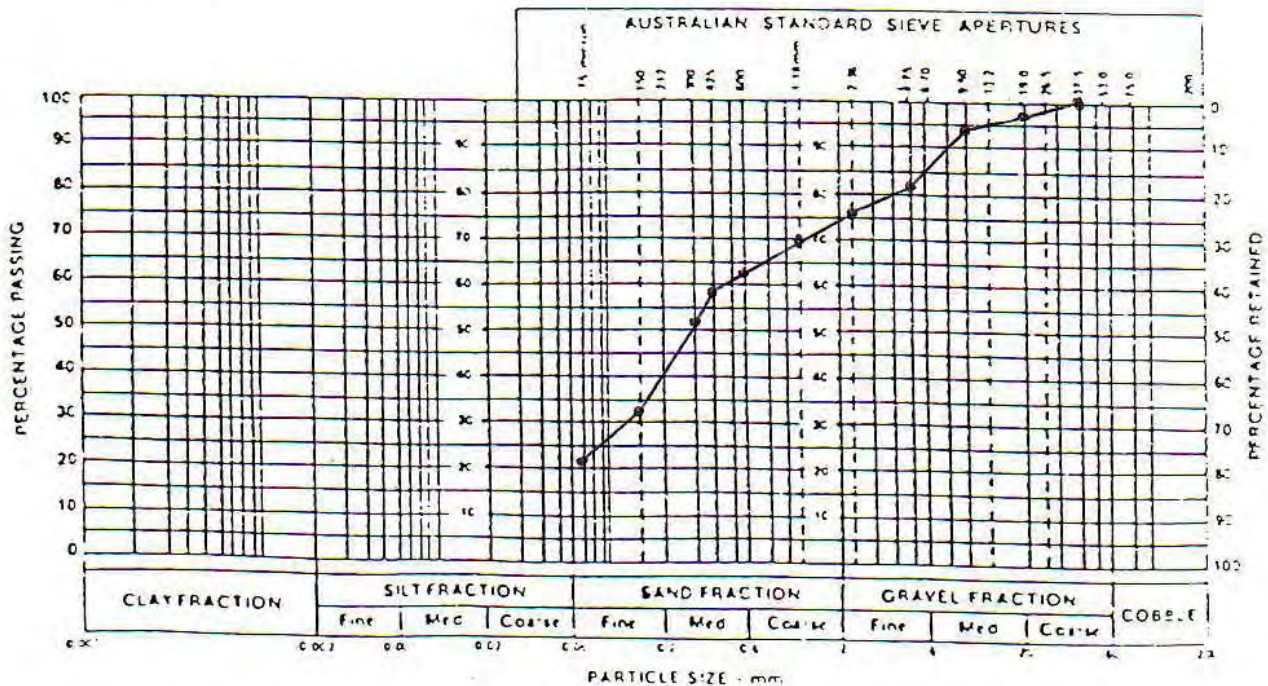
SIEVING			
SIEVE SIZE	% PASSING	SIEVE SIZE	% PASSING
75.0mm	100	1.18mm	70
37.5mm	100	600 micron	63
19.0mm	97	425 micron	58
9.5mm	89	300 micron	52
4.75mm	82	150 micron	33
2.36mm	76	75 micron	22

LOCATION:

LOC 6 75-600mm

COMMENTS: SEE SITE PLAN FOR APPROXIMATE LOCATIONS

GRADING CURVE



ASCT

DATE REPORTED: 28-11-06

REPORTED BY:

M GOPUGH

Albany Soil & Concrete Testing

39 Hill St, Albany WA 6330

Phone/Fax: 08 98415309 Mobile: 0427277797

Client: SUNLAND PTY LTD
 Project: LOT 834 SUNRISE RD DENMARK LOC 9
 Reference No.: 10469 Date Tested: 15-11-06 Tested By: COLIN GOUGH

SOIL DESCRIPTION
SEE SITE LOGS

PARTICLE SIZE DISTRIBUTION TEST RESULT

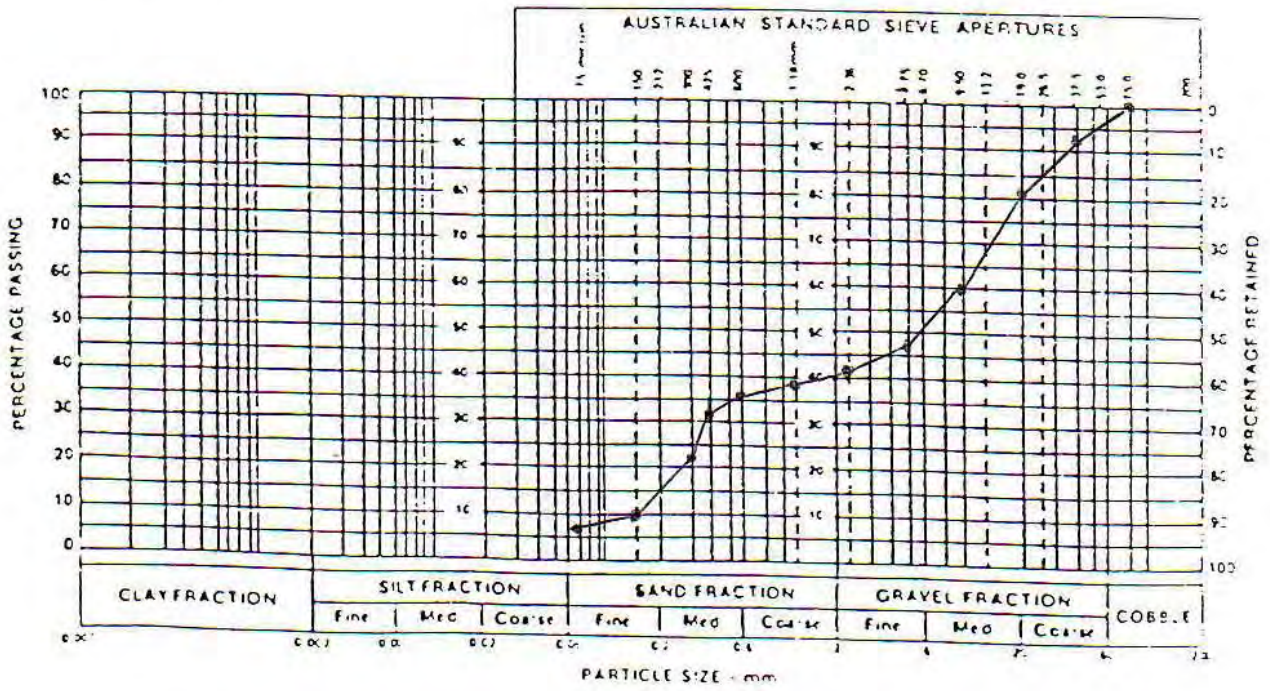
PARTICLE SIZE DISTRIBUTION:- AS - 1289 C6.1

SIEVING			
SIEVE SIZE	% PASSING	SIEVE SIZE	% PASSING
75.0mm	100	1.18mm	39
37.5mm	93	600 micron	36
19.0mm	81	425 micron	31
9.5mm	60	300 micron	23
4.75mm	47	150 micron	10
2.36mm	42	75 micron	7

LOCATION:
LOC 9 350-1200mm

COMMENTS: SEE SITE PLAN FOR APPROXIMATE LOCATIONS

GRADING CURVE



DATE REPORTED: 28-11-06 REPORTED BY: M GOUGH

Albany Soil & Concrete Testing

39 Hill St, Albany WA 6330

Phone/Fax: 08 98415309 Mobile: 0427277797

SUNLAND PTY LTD

Client:
 Project: LOT 834 SUNRISE RD DENMARK LOC 10
 Reference No.: 10469 Date Tested: 15-11-06 Tested By: COLIN GOUGH

SOIL DESCRIPTION
SEE SITE LOGS

PARTICLE SIZE DISTRIBUTION TEST RESULT

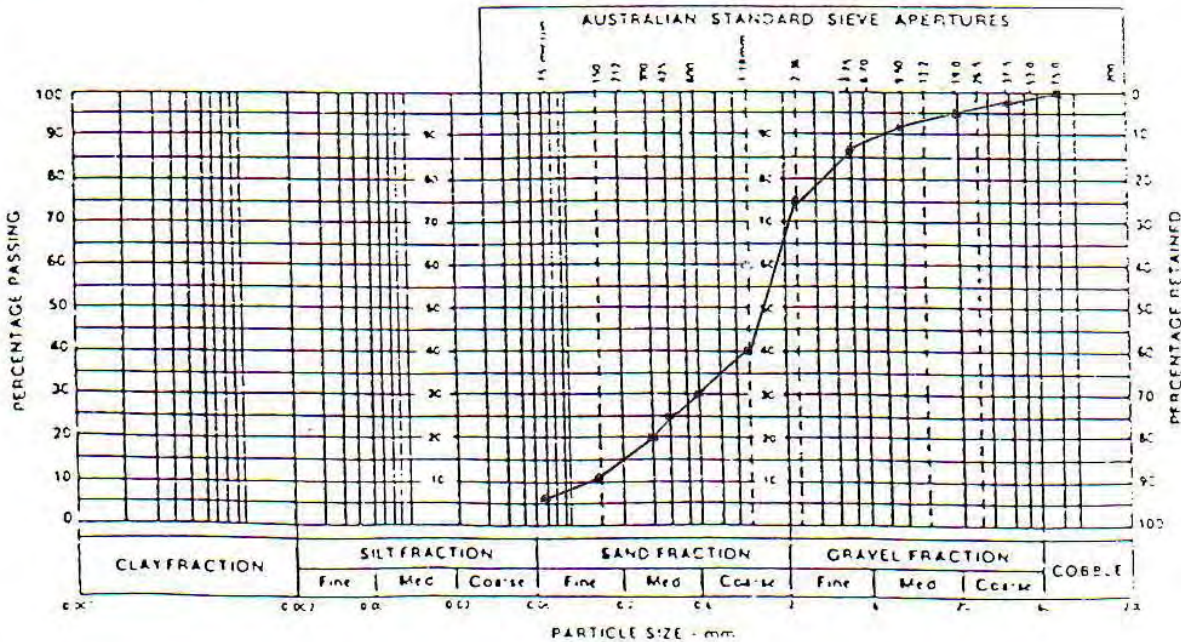
PARTICLE SIZE DISTRIBUTION:- AS - 1289 C6.1

SIEVING			
SIEVE SIZE	% PASSING	SIEVE SIZE	% PASSING
75.0mm	100	1.18mm	40
37.5mm	97	600 micron	30
19.0mm	95	425 micron	25
9.5mm	92	300 micron	20
4.75mm	86	150 micron	11
2.36mm	75	75 micron	7

LOCATION: LOC 10 250-750mm

COMMENTS: SEE SITE PLAN FOR APPROXIMATE LOCATIONS

GRADING CURVE



ASCT

DATE REPORTED: 28-11-06 REPORTED BY: M GOUGH

Albany Soil & Concrete Testing

39 Hill St, Albany WA 6330

Phone/Fax: 08 98415309 Mobile: 0427277797

SUNLAND PTY LTD

Client:

Project: LOT 834 SUNRISE RD DENMARK LOC 13

Reference No.: 10469 Date Tested: 15-11-06 Tested By: COLIN GOUGH

SOIL DESCRIPTION
SEE SITE LOGS

PARTICLE SIZE DISTRIBUTION TEST RESULT

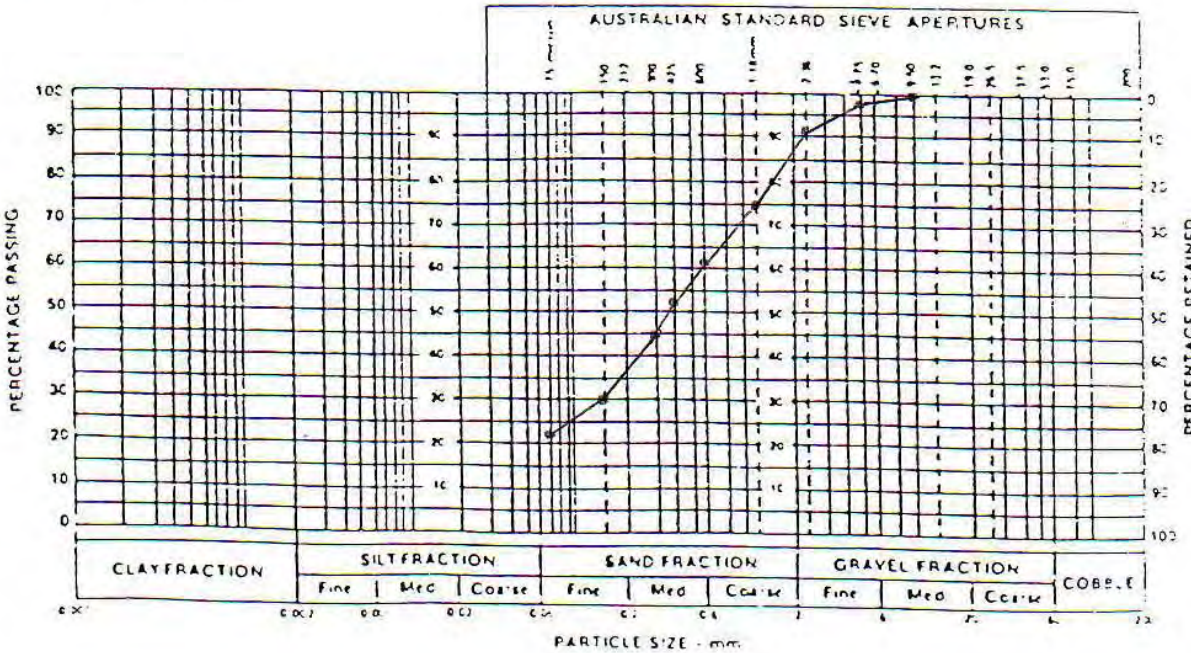
PARTICLE SIZE DISTRIBUTION:- AS - 1289 C6.1

SIEVING			
SIEVE SIZE	% PASSING	SIEVE SIZE	% PASSING
75.0mm	100	1.18mm	75
37.5mm	100	600 micron	62
19.0mm	100	425 micron	53
9.5mm	100	300 micron	45
4.75mm	97	150 micron	30
2.36mm	91	75 micron	23

LOCATION: LOC 13 300-1000mm

COMMENTS: SEE SITE PLAN FOR APPROXIMATE LOCATIONS

GRADING CURVE



ASCT

DATE REPORTED: 28-11-06

REPORTED BY: M GOUGH

Albany Soil & Concrete Testing

39 Hill St, Albany WA 6330

Phone/Fax: 08 98415309 Mobile: 0427277797

SUNLAND PTY LTD

Client:

Project: LOT 834 SUNRISE RD DENMARK LOC 15

Reference No.: 10469 Date Tested: 15-11-06 Tested By: COLIN GOUGH

SOIL DESCRIPTION
SEE SITE LOGS

PARTICLE SIZE DISTRIBUTION TEST RESULT

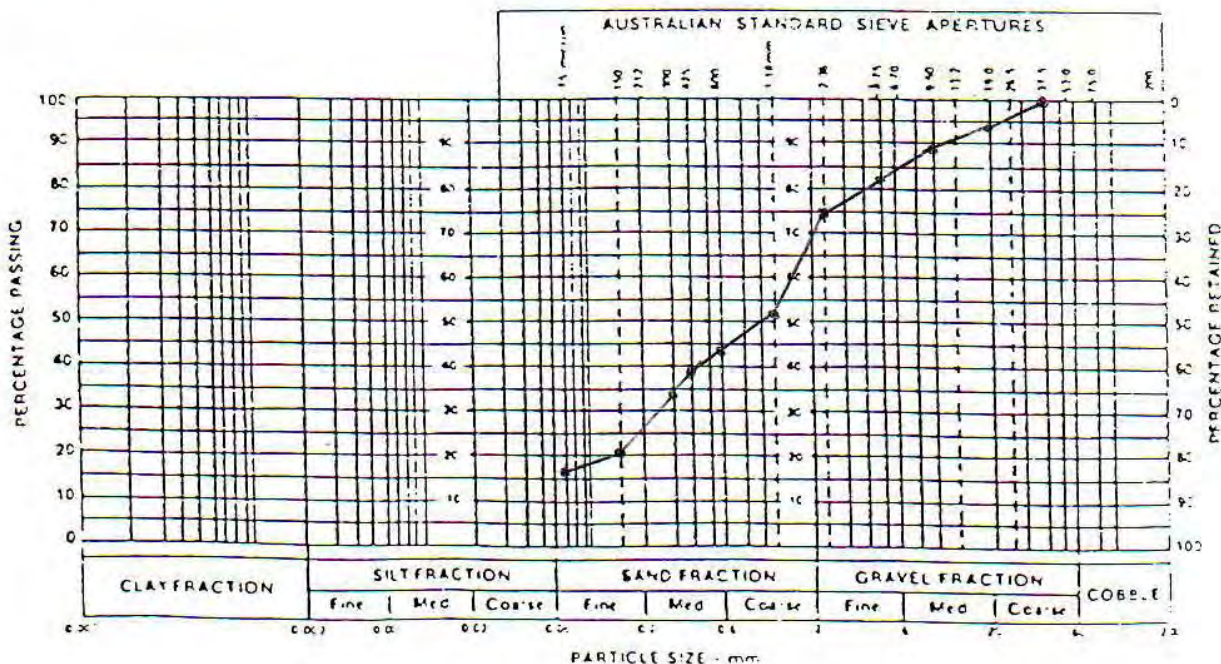
PARTICLE SIZE DISTRIBUTION:- AS - 1289 C6.1

SIEVING			
SIEVE SIZE	% PASSING	SIEVE SIZE	% PASSING
75.0mm	100	1.18mm	52
37.5mm	100	600 micron	44
19.0mm	94	425 micron	39
9.5mm	89	300 micron	34
4.75mm	83	150 micron	21
2.36mm	75	75 micron	17

LOCATION: LOC 15 300-600mm

COMMENTS: SEE SITE PLAN FOR APPROXIMATE LOCATIONS

GRADING CURVE



ASCT

DATE REPORTED: 28-11-06

REPORTED BY: M GOUGH

Albany Soil & Concrete Testing

39 Hill St, Albany WA 6330

Phone/Fax: 08 98415309 Mobile: 0427277797

SUNLAND PTY LTD

Client:

Project: LOT 834 SUNRISE RD DENMARK LOC 19

Reference No.: 10469 Date Tested: 15-11-06 Tested By: COLIN GOUGH

SOIL DESCRIPTION
SEE SITE LOGS

PARTICLE SIZE DISTRIBUTION TEST RESULT

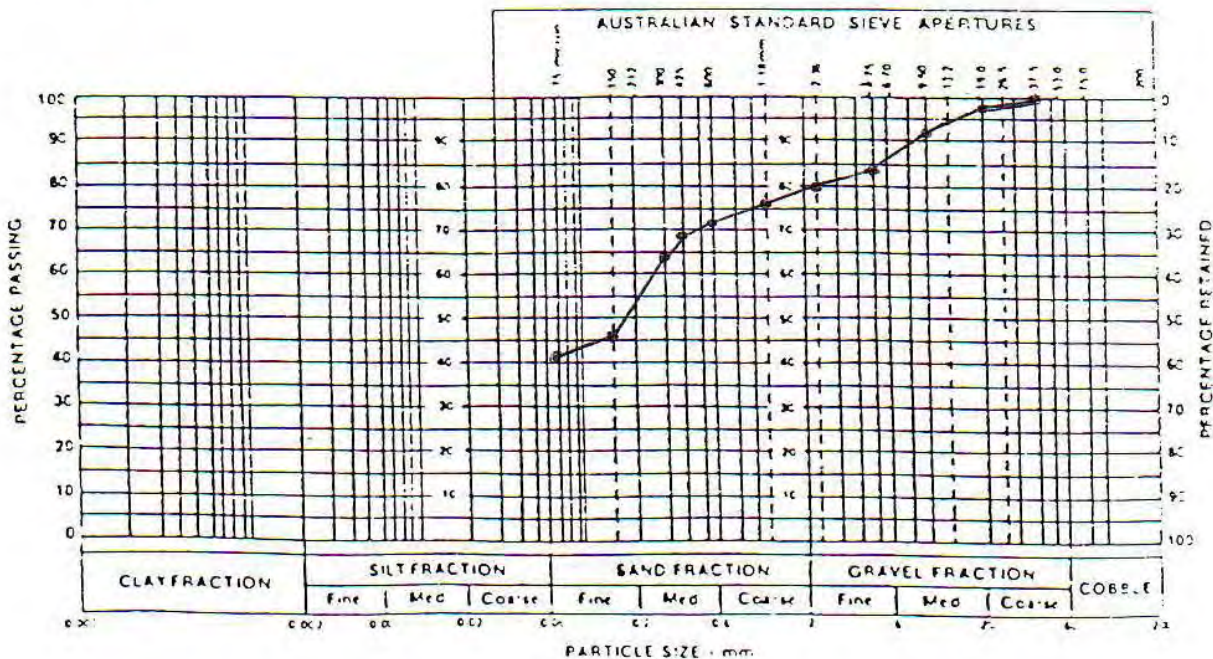
PARTICLE SIZE DISTRIBUTION:- AS - 1289 C6.1

SIEVING			
SIEVE SIZE	% PASSING	SIEVE SIZE	% PASSING
75.0mm	100	1.18mm	76
37.5mm	100	600 micron	72
19.0mm	98	425 micron	69
9.5mm	92	300 micron	64
4.75mm	84	150 micron	46
2.36mm	80	75 micron	41

LOCATION: LOC 19 250-1500mm

COMMENTS: SEE SITE PLAN FOR APPROXIMATE LOCATIONS

GRADING CURVE



ASCT

DATE REPORTED: 28-11-06

REPORTED BY: M GOUGH

Albany Soil & Concrete Testing

39 Hill St, Albany WA 6330

Phone/Fax: 08 98415309 Mobile: 0427277797

Client: SUNLAND PTY LTD
 Project: LOT 834 SUNRISE RD DENMARK LOC 25
 Reference No.: 10469 Date Tested: 15-11-06 Tested By: COLIN GOUGH

SOIL DESCRIPTION
SEE SITE LOGS

PARTICLE SIZE DISTRIBUTION TEST RESULT

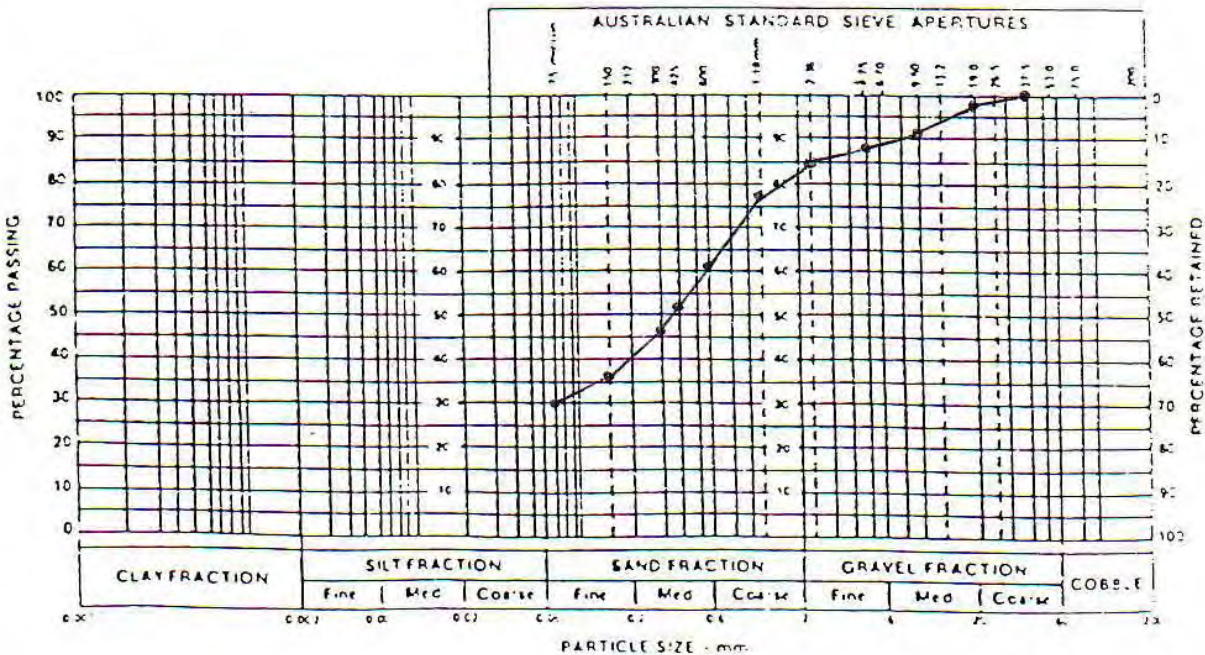
PARTICLE SIZE DISTRIBUTION:- AS - 1289 C6.1

SIEVING			
SIEVE SIZE	% PASSING	SIEVE SIZE	% PASSING
75.0mm	100	1.18mm	77
37.5mm	100	600 micron	61
19.0mm	98	425 micron	52
9.5mm	92	300 micron	46
4.75mm	88	150 micron	36
2.36mm	85	75 micron	30

LOCATION: LOC 25 900-2100mm

COMMENTS: SEE SITE PLAN FOR APPROXIMATE LOCATIONS

GRADING CURVE



ASCT

DATE REPORTED: 28-11-06

REPORTED BY: M GOUGH

Albany Soil & Concrete Testing

39 Hill St, Albany WA 6330

Phone/Fax: 08 98415309 Mobile: 0427277797

Client: SUNLAND PTY LTD
 Project: LOT 834 SUNRISE RD DENMARK LOC 28
 Reference No.: 10469 Date Tested: 15-11-06 Tested By: COLIN GOUGH

SOIL DESCRIPTION
SEE SITE LOGS

PARTICLE SIZE DISTRIBUTION TEST RESULT

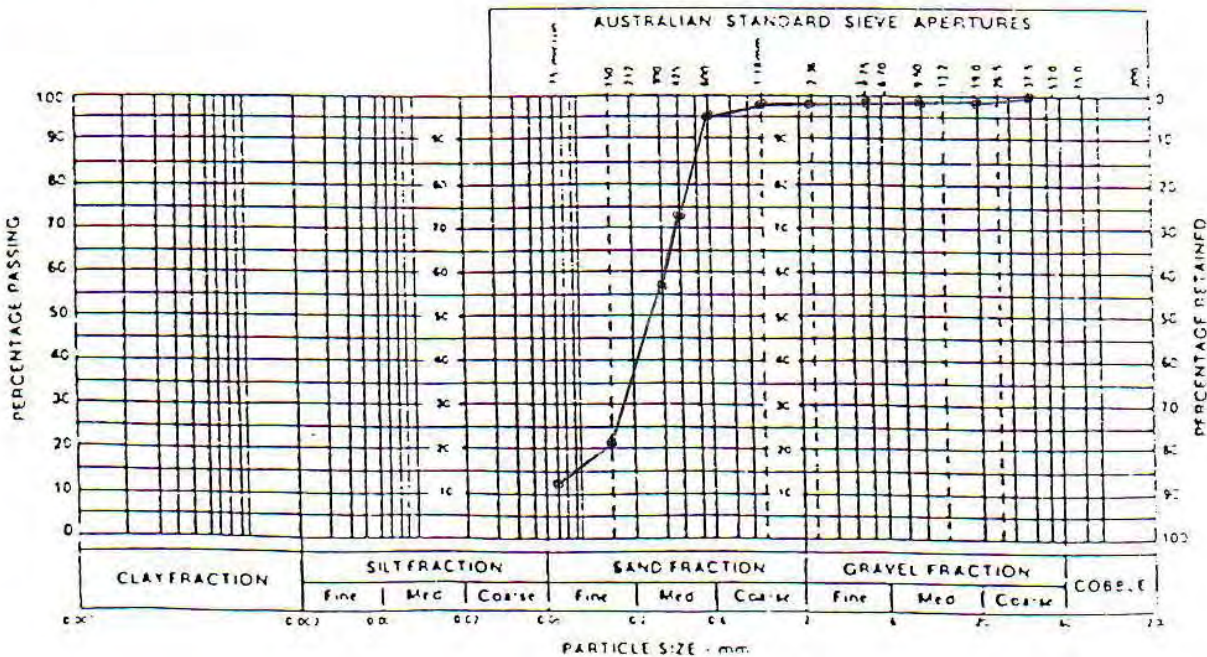
PARTICLE SIZE DISTRIBUTION:- AS - 1289 C6.1

SIEVING			
SIEVE SIZE	% PASSING	SIEVE SIZE	% PASSING
75.0mm	100	1.18mm	98
37.5mm	100	600 micron	85
19.0mm	99	425 micron	73
9.5mm	99	300 micron	56
4.75mm	99	150 micron	21
2.36mm	99	75 micron	13

LOCATION: LOC 28 75-350mm

COMMENTS: SEE SITE PLAN FOR APPROXIMATE LOCATIONS

GRADING CURVE



ASCT

DATE REPORTED: 28-11-06

REPORTED BY: M GOUGH

Albany Soil & Concrete Testing

39 Hill St, Albany WA 6330

Phone/Fax: 08 98415309 Mobile: 0427277797

Client: SUNLAND PTY LTD
 Project: LOT 834 SUNRISE RD DENMARK LOC 30
 Reference No.: 10469 Date Tested: Tested By:

SOIL DESCRIPTION
SEE SITE LOGS

PARTICLE SIZE DISTRIBUTION TEST RESULT

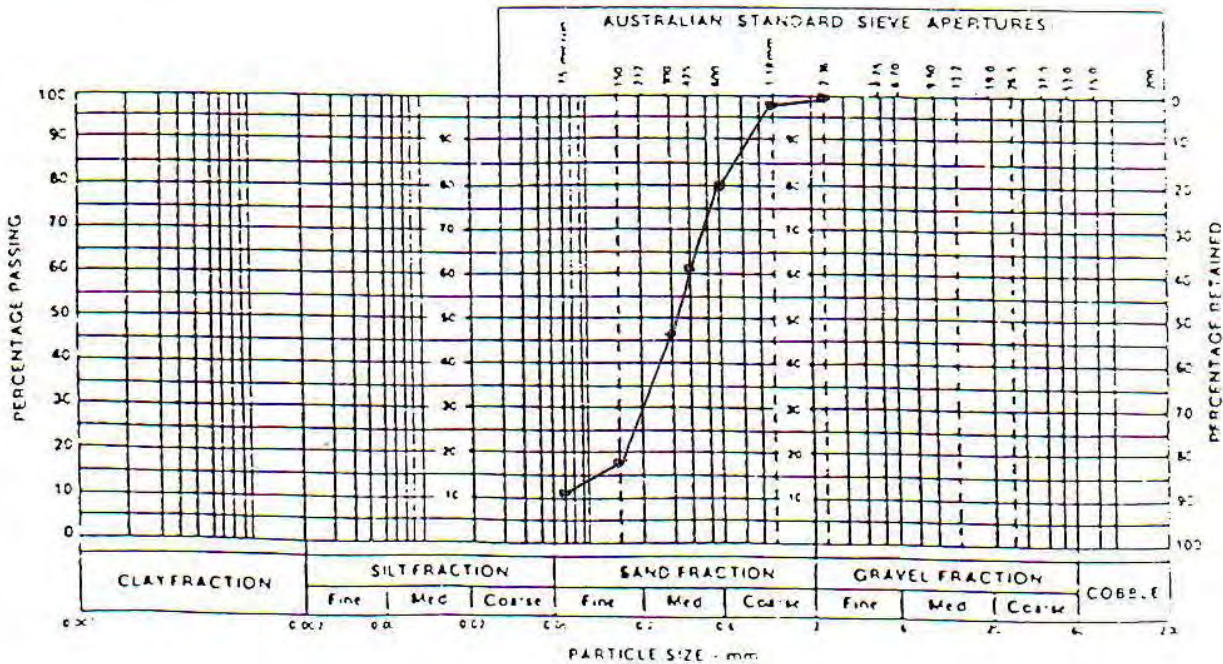
PARTICLE SIZE DISTRIBUTION:- AS - 1289 C6.1

SIEVING			
SIEVE SIZE	% PASSING	SIEVE SIZE	% PASSING
75.0mm	100	1.18mm	98
37.5mm	100	600 micron	80
19.0mm	100	425 micron	61
9.5mm	100	300 micron	46
4.75mm	100	150 micron	18
2.36mm	100	75 micron	12

LOCATION: LOC 30 100-600mm

COMMENTS: SEE SITE PLAN FOR APPROXIMATE LOCATIONS

GRADING CURVE



ASCT

DATE REPORTED: 28-11-06

REPORTED BY: M GOUGH

Albany Soil & Concrete Testing

39 Hill St, Albany WA 6330
 Phone/Fax: 08 98415309 Mobile: 0427277797

Client: SUNLAND PTY LTD
 Project: LOT 834 SUNRISE RD DENMARK
 Reference No.: 10469 Date Tested: 14-11-06 Tested By: COLIN GOUGH

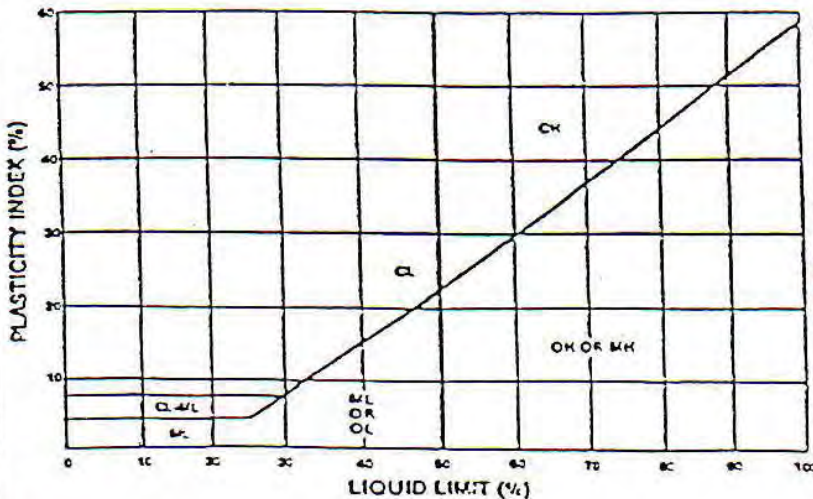
SOIL DESCRIPTION
 SEE SITE LOGS

PLASTIC PROPERTIES - SUMMARY OF TEST RESULTS

LIMITS, INDEX, SHRINKAGE:- -AS 1289 C1.1, C2.1, C3.1, C4.1

LAB No.	A	B	C	D	E
SAMPLE IDENTIFICATION	LOC 3	LOC 6	LOC 9	LOC 10	LOC 13
DEPTH (m)	0.6-1.5	0.075-0.6	0.35-1.2	0.25-0.75	0.3-1.0
LIQUID LIMIT (%)	38	43	N/A	N/A	30
PLASTIC LIMIT (%)	24	37	N/A	N/A	24
PLASTICITY INDEX (%)	14	6	NP	NP	6
LINEAR SHRINKAGE (%)	8.2	3.9	0.0	1.6	3.1

PLASTICITY CHART (A.S. 1726)



COMMENTS:

N/A DENOTES NOT ATTAINABLE
 NP DENOTES NON PLASTIC

LOCATION:

- A = LOC 3 600-1500mm
- B = LOC 6 75-600mm
- C = LOC 9 350-1200mm
- D = LOC 10 250- 750mm
- E = LOC 13 300-1000mm

Length of Linear Shrinkage Mould (MM)
 255

Nature of Shrinkage: NORMAL

History of Samples: AIR DRIED

Method of Preparation: DRY SIEVED

Method of Test One Point

Standard

DATE REPORTED: 28-11-06

REPORTED BY: M GOUGH

Albany Soil & Concrete Testing

39 Hill St, Albany WA 6330
 Phone/Fax: 08 98415309 Mobile: 0427277797

Client: SUNLAND PTY LTD
 Project: LOT 834 SUNRISE RD DENMARK
 Reference No.: 10469 Date Tested: 15-11-06 Tested By: COLIN GOUGH

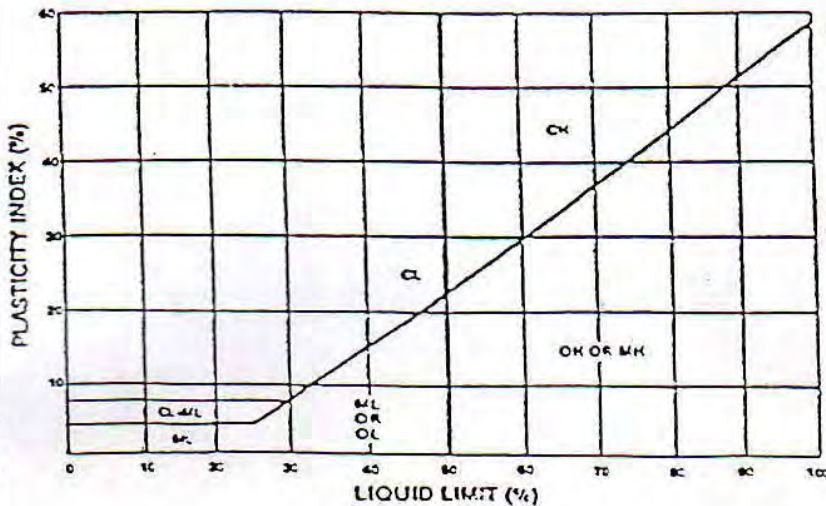
SOIL DESCRIPTION
 SEE SITE LOGS

PLASTIC PROPERTIES - SUMMARY OF TEST RESULTS

LIMITS, INDEX, SHRINKAGE:- -AS 1289 C1.1, C2.1, C3.1, C4.1

LAB No.	F	G	H	I	J
SAMPLE IDENTIFICATION	LOC 15	LOC 19	LOC 25	LOC 28	LOC 30
DEPTH (m)	0.3-0.6	0.25-1.5	0.9-2.1	0.075-0.35	0.1-0.6
LIQUID LIMIT (%)	26	43	32	N/A	N/A
PLASTIC LIMIT (%)	17	25	22	N/A	N/A
PLASTICITY INDEX (%)	9	18	10	NP	NP
LINEAR SHRINKAGE (%)	4.3	8.6	4.3	0.0	0.0

PLASTICITY CHART (A.S. 1726)



COMMENTS:

N/A DENOTES NOT ATTAINABLE
 NP DENOTES NON PLASTIC
 SEE SITE PLAN FOR APPROXIMATE LOCATIONS. SEE SITE LOGS FOR SOIL TYPES

LOCATION:

- F = LOC 15 300-600mm
- G = LOC 19 250-1500mm
- H = LOC 25 900-2100mm
- I = LOC 28 75-350mm
- J = LOC 30 100-600mm

Length of Linear Shrinkage Mould (MM)
 255

Nature of Shrinkage: NORMAL

History of Samples: AIR DRIED Method of Test One Point

Method of Preparation: DRY SIEVED

Standard

DATE REPORTED: 28-11-06

REPORTED BY: M GOUGH

REF: 10469

PROJECT: LOT 834 SUNRISE RD, DENMARK.

CLIENT: SUNLAND PTY LTD



REF: 10469

CLIENT: SUNLAND PTY LTD

PROJECT: LOT 834 SUNRISE RD, DENMARK.



ITEM NO: 9.1

SHIRE OF DENMARK: LOCAL PLANNING STRATEGY: FINAL ENDORSEMENT

WAPC OR COMMITTEE: **Statutory Planning Committee**

REPORTING AGENCY: Department of Planning
REPORTING OFFICER: Planning Manager, Great Southern
AUTHORISING OFFICER: Director, South West Region
AGENDA PART: D
FILE NO: DP/09/011 34/1
DATE: 27 February 2012
ATTACHMENT(S):
1 LPS Map (with modifications)
2 LPS Map (with modifications)
3 LPS Map (with modifications)
4 Schedule of Submissions
5 Schedule of Modifications
6 Proposed rural provisions
7 Map of area west of Cussons Road
8 Rudyard area map
9 Plan Lot 374
10 Lot Demand / Supply Table

RECOMMENDATION:

That the Western Australian Planning Commission resolves to:

- 1. determine the submissions in accordance with the attached Schedule of Submissions;*
- 2. endorse the Local Planning Strategy subject to the attached Schedule of Modifications being carried out;*
- 3. advise the Shire that future variations to State Policy in regard to rural living proposals could be applied for via an amendment to the local planning strategy. Please liaise with the Department of Planning to discuss evidence-based approach to such variation.*

SUMMARY:

The key points relating to this report are:

- the Local Planning Strategy (LPS) requires modification prior to final endorsement; and
- The modifications are consistent with the strategic approach taken in the advertised LPS and as such readvertising of the LPS is not warranted.

BACKGROUND:

The Denmark Shire submitted a Local Planning Strategy (LPS) for consent to advertise on 31 March 2011, and requested a timeframe that allowed it to finalise the adoption of the LPS prior to Council elections in October 2011.

The WAPC granted consent to advertise the LPS which, following a presentation from the Shire, included an expanded rural smallholdings area extending west from Cussons Road to Middleton Close. The WAPC also advised the Shire that due to the condensed assessment time frame requested by the Shire, the WAPC will give further consideration to the content of the LPS following consideration of submissions.

The LPS was advertised with 206 submissions received. The Shire has modified the LPS in response to those submissions, and forwarded the modified LPS to the WAPC for endorsement.

LEGISLATION / STRATEGIC PLAN / POLICY:

Legislation	<i>Town Planning Regulations 1967 as amended</i>
Section:	Clause 12B
Strategic Plan	
Strategic Goal:	<ol style="list-style-type: none">1. Building Relationships2. Planning
Outcomes:	<ol style="list-style-type: none">1. Excellence in Service2. Planned Local Communities
Strategies:	<ol style="list-style-type: none">1. Develop Connected and Accessible Communities
Policy	
Number and / or Name:	Lower Great Southern Strategy SPP 2.5 Land Use Planning in Rural Areas SPP 3 Urban Growth and Settlement DC 3.4 Subdivision of Rural Land

DETAILS:

The Shire of Denmark is located west of Albany in the Great Southern Region. The main settlement is the Denmark township, with a smaller coastal settlement of Peaceful Bay, and Nornalup on the Frankland River to the west. The major activities in rural areas are plantations, sheep and cattle grazing, viticulture and other specialist crops.

The LPS comprises Part 1 which provides the strategic direction and Part 2 which provides the background and analysis. Three plans being of the town centre, urban

areas, and whole shire represent the spatial locations of the land use designations (Attachments 1, 2 and 3).

Key issues for the WAPC consideration are outlined in the comments section and highlighted in the Schedule of Modifications.

GOVERNMENT AND CORPORATE IMPLICATIONS:

The LPS, once endorsed by the WAPC, is the key strategic planning document which ensures orderly and proper planning within the Shire.

CONSULTATION:

Advertising of the LPS occurred in late 2011 with 206 submissions received by the Shire. The major issues identified in the submissions related to rural living areas, commercial designation in Denmark township, and the Northern Link Road. Suggested WAPC responses to the submissions are included in the Schedule of Submissions (Attachment 4).

OFFICER'S COMMENTS:

Of particular relevance to the assessment of the LPS is:

- State Planning Policy 3 (SPP 3) which promotes a consolidated settlement form;
- State Planning Policy 2.5 (SPP 2.5) which sets provisions by which rural residential and rural smallholdings developments must comply; and
- Development Control Policy 3.4 (DC 3.4) which seeks to protect rural land by allowing for the subdivision of rural land by exception only.

The Schedule of Modifications (Attachment 5) addresses the major issues as discussed below, as well as including minor textual amendments which provide completeness and consistency to the document.

Rural Land

The LPS separates rural land into two designations: Priority Agriculture and General Agriculture. Priority Agriculture represents the best agricultural land. The extent of this designation is different to that land shown as agricultural land of State and regional significance / Priority Agricultural Land (PAL) in the Lower Great Southern Strategy due to local knowledge of the soils. This difference is not problematic provided the subdivision provisions proposed by the Shire (as discussed below) are modified thereby ensuring the protection of all rural land.

Subdivision

The LPS requires the subdivision of rural land to be in accordance with DC 3.4. However DC 3.4 (Feb 2012) Clause 5.3 provides for regional variations to subdivision provisions when included in strategies and schemes provided they meet the stated objectives of the policy, and are evidenced based. To this end the LPS proposes the following regional variations.

Priority Agriculture

Section 6.11.2 of the LPS provides for the subdivision of land in the Priority Agriculture designation subject to meeting a number of criteria (Attachment 6). The Shire advise that the provision provides for the opportunity for subdivision proposals to be considered on their merits and not just against a State policy with minimal consideration of local issues.

No evidence has been provided to support the Shire's variation. The criteria are so broad as to allow consideration of the subdivision of any land within the Priority Agriculture designation.

Clause 5.1 of SPP 2.5 (Feb 2012) states that:

It is the view of the WAPC that there is an existing supply of suitably sized and located rural lots to cater for intensive and emerging primary production land uses. Creation of new rural lots through ad-hoc, unplanned subdivision is considered to be inconsistent with, or contrary to, the objectives of this policy.

The proposed LPS provision provides for discretionary subdivision in the Priority Agriculture areas of the Shire where numerous lots of varying sizes currently exist. The avenue of providing for additional subdivision is contrary to the protection of agricultural land and is not supported (refer modification 49).

General Agriculture

Section 6.11.3 of the LPS provides for subdivision of land in the General Agriculture designation via prevailing lot size as follows:

The minimum lot size for the General Agriculture area shall be determined by assessing the locality average of surrounding General Agriculture land. Of the minimum lot size determined, 90% shall be tillable or useable agricultural land.

The provision provides for subdivision proposals to be considered on their merits taking into account prevailing lot size (Attachment 6).

No evidence has been provided to support the Shire's variation such as the need for such a provision, what prevailing lot sizes might be in separate rural areas of the Shire, how many additional lots may be created by such a provision etc.

The superseded DC 3.4 provided for the subdivision of rural land via prevailing lot size in broadacre farming areas i.e. the Wheatbelt which excludes Shire of Denmark. The current DC 3.4 (Feb 2012) does not provide for subdivision on the basis of prevailing lot size.

Clause 5.1 of SPP 2.5 (Feb 2012) states that:

It is the view of the WAPC that there is an existing supply of suitably sized and located rural lots to cater for intensive and emerging primary production land uses. Creation of new rural lots through ad-hoc, unplanned subdivision is considered to be inconsistent with, or contrary to, the objectives of this policy.

The proposed provision provides a vehicle for subdivision (via prevailing lot size) in the General Agricultural areas of the Shire where numerous lots of varying sizes currently exist. The avenue of providing for additional subdivision is contrary to the protection of rural land and is not supported (refer modification 51)

Homestead Lots

Section 6.12.5 of the LPS provides for the creation of Homestead lots within the Shire.

The superseded DC 3.4 provided for Homestead lots in the Wheatbelt area, while the current DC 3.4 provides for Homestead lots in the Homestead Lot Policy Area (which again excludes the Shire of Denmark).

The Shire's rationale for the proposed variation is that homestead lots:

- Are a recognised form of rural living development;
- Do not fragment rural land;
- Do not result in the loss of rural character;
- Provide the opportunity for farmers to retain an association with the land should they desire to do so; and
- Support the population base for the agricultural collector district population.

No evidence has been provided to support the Shire's rationale.

The current DC3.4 (Feb 2012) indicates that homestead lots are intended:

to allow primary producers to continue to occupy their dwelling when they cease to farm, and to provide settlement opportunities in areas where land fragmentation is limited and unlikely to increase.

A review of the cadastre base of the rural areas of the Shire indicates that land fragmentation has already occurred. Implementation of SPP 2.5 and DC 3.4 will halt these past trends in an effort to preserve agricultural land for agricultural use. Therefore due to the existing cadastre pattern in the Shire, rather than existing primary producers having to subdivide their land to live in a rural area, the opportunity currently exists to acquire a smaller existing lot in a rural area should they wish to do so.

The regional variation to provide for Homestead lots in Denmark Shire is therefore not supported (refer modifications 19 and 61).

Multiple Occupancy Zone

Following advertising, the LPS now includes support for the establishment of Rural Multiple Occupancy Zones in rural areas. This zone is in the current planning scheme and provides for multiple residences associated with a rural enterprise. This form of development provides for housing in rural areas which can add to a dispersed settlement form. The housing form is not supported throughout the Shire, but is an appropriate residential form in designated rural living areas (refer modification 60).

Rural Smallholdings (4- 40ha)

In granting consent to advertise the LPS in April 2011, the WAPC considered a presentation by the Shire suggesting a two staged (eastern and western) approach to the development of the area west of Cussons Road to McCloud Road, and excluded the land between the two stages from development as it was considered to be Priority Agricultural Land (PAL). As a result of that presentation, the Commission supported a westward expansion of the rural smallholdings area from Cussons Road

to Middleton Close only (the eastern stage) i.e. the stage closest to Denmark. This area will yield approximately 82 additional rural smallholdings lots.

Additional Areas west of Middleton Close

Following advertising, and the Shire's response to submissions from land owners in the area, the LPS now proposes a further expansion of the rural smallholding area from Middleton Close to McCloud Road, which also includes that land previously shown as PAL (Attachment 7). This area will approximately yield an additional 137 rural smallholdings lots.

In 2003, the original draft LPS proposed that rural living be expanded westward from Cussons Road to McCloud Road. At that time the WAPC required the land to be excluded from the rural living designations and included in an agriculture designation. In 2008, the agricultural land directly to the west of Middleton Close was previously proposed to be rezoned to the Rural Residential zone but was refused consent to advertise by the Minister as it was assessed as PAL.

The majority of the land west of Middleton Close to McLeod Road now proposed for rural small holdings is PAL. The Department of Agriculture and Food has recently advised that they do not support this land being designated as rural small holdings due to the loss of PAL.

SPP 2.5 provides for PAL to be used for non-rural purposes where it is included in an endorsed LPS. The Shire considers the proposed additional rural smallholdings development west of Middleton Close to McCloud Road to constitute "infill" development (although "infill" is a term most usually used in urban areas). Although rural smallholding areas currently exist to the west of Denmark, they also exist westward beyond McCloud Road. The overall pattern of rural smallholdings development west of Denmark is dispersed, rather than concentrated within an area where small undeveloped pockets of land provide opportunities for "infill".

Providing for additional rural living opportunities in this area would provide for additional living areas removed from the service and community centre of Denmark. The WAPC and the Minister have recently reiterated the need to protect rural land, and State Planning Policy 3 clearly states the need to create compact consolidated settlement forms, as opposed to providing for settlements that develop away from service and community centres. The designation of land west of Middleton Close for Rural Smallholdings is therefore not supported (refer modifications 57 and 64).

Additional Areas following Submissions

The Shire has responded to some submissions by including other additional areas into the Rural Smallholdings designation. The majority of these additions designate land in close proximity to Denmark township and are supported. However the designation of Lot 7075 at Lights Road is not supported as it is not closer to Denmark than existing rural smallholdings lots, and is currently used for grazing and pasture production (refer modification 66). The additional areas identified by the Shire and supported by the Department will yield approximately 13 additional rural smallholdings lots.

Rural Residential (1- 4ha)

Additional Area adjacent to Wilson Inlet

The LPS proposes a rural residential area to the east of Denmark at Rudyard, adjacent to Wilson Inlet. The proposal would approximately yield an additional 71 rural residential lots.

To the west of this land (closer to Denmark) is an existing Special Rural estate. The existing estate was rezoned in 2001 as Stage One of the Rudyard Structure Plan area which included the land now proposed at Rudyard for rural residential development (Attachment 8). However in 1999, the WAPC endorsed the "Rural Settlement Strategy for Denmark " which shows Stage One of the Rudyard Structure Plan area as "Landscape Protection / Special Rural Nodes" with the other stages shown as "Primary Purpose Broadacre Farming". Neither the Shire nor the WAPC has endorsed the Rudyard Structure Plan. The Rudyard Structure Plan therefore has no status, and no further development was envisaged over the Rudyard Structure Plan area in the 1999 Rural Settlement Strategy.

In 2003 the Rudyard area was shown as Rural Smallholdings in the draft LPS however the WAPC required it to be excluded from this designation and included in an agriculture designation.

The Rudyard area is currently zoned Rural and there are no previous subdivision approvals for Special Rural or rural residential over the land. The land includes parcels of PAL.

SPP 2.5 provides for the use of PAL for non-rural purposes where it is included in an endorsed Local Planning Strategy. The area proposed for rural residential development at Rudyard would extend the rural living areas away from the service and community centre of Denmark which does not support a compact settlement footprint, and is therefore not supported (refer modifications 55 and 65).

Additional Areas following Submissions

Following submissions the Shire has included land along East River Road into the Rural Residential designation. This will provide for an additional 31 lots. The land is within a locality with existing rural residential lots, and the additional lots will be located closer to the Denmark township than existing lots and can therefore be supported.

Additional Areas when Scheme reviewed

The LPS proposes via a new town planning scheme, to zone some of the existing Special Rural areas where lot sizes are predominantly under 4ha to the Rural Residential zone which is supported. The additional lot yield is unknown due to constraining factors in some estates such as existing vegetation etc but this will add to the number of additional Rural Residential lots in the Shire.

Potable Water

The LPS indicates that potable water shall be via roof water catchment and storage. Denmark Shire is in an area of the State where domestic water requirements can be met with sufficient roof catchment and on site storage (300m² roof / 95KI tank for

98% reliability). Utilising proven on site water sources as an alternative to reticulated supplies is consistent with SPP 2.5 and is supported.

Special Residential

Special Residential developments currently exist to the east and west of Denmark township. The LPS states that there are 185 existing vacant Special Residential lots, and an additional 341 lots in designated areas, totalling 526 lots.

Lot size

The LPS proposes minimum lot sizes for Special Residential lots to be 1000m². This is contrary to DC 2.5 which requires a minimum 2000m² lot area. The minimum 1000m² is also contrary to the minimum 2000m² lot area for unsewered lots under the draft Country Sewerage Policy. The proposed 1000m² lot size for Special Residential lots is therefore not supported (refer modification 34).

Lot 374 Denmark

During advertising a submission on behalf of the landowners of Lot 374 directly to the north of the Denmark townsite requested the site be included in part Special Residential and part Rural Residential designations. The LPS identifies only the south-eastern corner of the land for urban residential purposes with the balance shown as General Agriculture. The submission was dismissed by the Shire on the basis that the Shire previously did not support the land being developed for fully serviced residential purposes, and that the proposed neighbourhood connector road in the south-east corner should be the development boundary for the township (even though the neighbourhood connectors do not form the development boundary in some other parts of the township).

The entire site is not needed to be developed for urban residential purposes given the supply of urban residential land available in the future elsewhere in the township. Development of the balance area for special residential and rural residential purposes is compatible with the special residential, rural residential and rural land uses adjacent to the site. Development of the balance land for special residential and rural residential purposes directly adjacent to the urban area of the townsite provides for larger residential and rural living lots as desired by the Shire (Attachment 9). The Shire has informally indicated that if the land is to be designated other than General Agriculture, its preference is for rural residential.

The land is PAL however SPP 2.5 provides for the use of PAL for non-rural purposes where it is included in an endorsed Local Planning Strategy.

It is recommended that the WAPC request the Shire, in consultation with the land owners, give further consideration to designating the balance of the land for special residential and/or rural residential purposes. Should the Shire retain the land in a rural designation, this would not be considered a fatal flaw to the strategic development of the township at this time, and the matter need not be reviewed further by the WAPC (refer modification 37).

Urban Residential and Future Urban

The LPS indicates that a total of 1620 lots is required to cater for the Shire's total housing demand over the life of the LPS (20 years). The land designated for urban residential development (excluding Special Residential, Rural Residential and Rural Smallholdings) will provide for 1761 additional lots.

The Education Department advised the Shire that it has no plans to close or relocate the Denmark Agricultural College from its current site. As a result the Future Urban designation, referred to as Townsite East, over the College land has been deleted from the townsite map. The LPS text however still indicates that should this land be superfluous to the College's needs in the future, the land is to be investigated for development to fully serviced urban residential, which is supported. Removal of the Future Urban designation will not adversely affect the supply of residential land in the township.

Supply and Demand

The LPS indicates that 1620 lots are required to meet the housing demands of the Shire for the next 20 years. Also the demand for Special Rural lots (rural residential and rural smallholdings) is 7 lots per year.

A summary of the lots available from the existing supply plus the future development of designated land in the LPS indicates that adequate land is provided for in the LPS to cater for future demand (Attachment 10). Specifically the LPS when modified as per above will provide for 1761 urban residential lots, 185 rural living lots (Rural Residential and Rural Smallholdings), 526 Special Residential lots, as well as lots in Rural Villages.

Commercial, Mixed Use, and Inner Core:

The areas identified for these designations are essentially as advertised except for the following changes undertaken by the Shire following advertising which are supported;

- Deletion of the Commercial designation on the rear of lots facing Mitchell Street and inclusion into the Residential designation due to the potential impact of commercial traffic on the adjacent Primary School; and
- Deletion of the Commercial designation on an existing reserve fronting South Coast Highway and inclusion into the Parks and Recreation designation.

Adequate area still exists in the Commercial designation to cater for expected floor space demand. The designation of Commercial on the old hospital and FESA sites needs to be more accurately depicted to be south of Millars Creek as previously requested by the WAPC.

Deletion of Northern Link Road

The advertised LPS included a designation for a dedicated Northern Link Road, and a new bridge crossing near East River Road. In response to numerous submissions, the Northern Link Road designation has been deleted. Instead a network of Neighbourhood Connectors throughout the settlement footprint of the Denmark

township has been identified and is supported. This has corrected the misconception portrayed by the Northern Link Road as being a heavy haulage by-pass to the town centre.

Timing Schedule

The LPS provides a broad timing framework for the development of particular components of the strategy. For residential, rural residential, rural smallholdings and industrial development it omits the need to have the required headworks infrastructure in place at the rezoning stage, and this omission needs to be rectified via modification.

Modifications

The above modifications are reflected in the Schedule of Modifications, as well as minor textual modifications which provide the LPS with more clarity and consistency.

CONCLUSION:

The LPS is, subject to the attached Schedule of Modifications, consistent with State Planning Policy and the WAPC's Development Control policies and may be endorsed by the WAPC.

Our Ref: WAPC154899
Your Ref: WAPC154899
Enquiries: Planning Services

29 May 2017

Western Australian Planning Commission
PO Box 1108
ALBANY WA 6330

Emailed to: referrals@planning.wa.gov.au

Dear Ms Lyons

Re: Proposed Subdivision – No. 833 (Lot 50) Mount Shadforth Road, Shadforth and No. 44 (Lot 52) Middleton Close, Shadforth (WAPC Ref: 154899)

Further to your letter dated 8 March 2017, requesting the Shire to provide information, comment, recommended conditions or advice notes pertinent to the above mentioned application, the following information is provided.

Relevant Town Planning Scheme No. 3 Provisions

In accordance with the Shire of Denmark's Town Planning Scheme No. 3 (TPS 3), the subject lots are zoned "Rural".

The intention of the rural zone is to provide for a range of normal rural activities conducted in the Shire and to protect such land from inappropriate uses.

In the applicant's planning report, the justification for subdivision of the land is for intensive agriculture purposes. In this regard, as per TPS 3 this would most likely be classified as 'Horticulture' and this is an "AA" land use in the "Rural" zone; that is the Council may, at its discretion, permit the use in the zone. At this point in time, a development approval has not been applied for on the subject land pertaining to 'Horticulture' pursuits.

The applicant's planning report also references that a 1ha dam is proposed to provide water supply for the 'Horticulture' proposal(s). A dam of this size and location would require development approval to be obtained as per Town Planning Scheme Policy No. 37: 'Dams' (refer Attachment A), and at this point in time a development approval for a dam has not been applied for on the subject land.

Relevant Local Planning Strategy (LPS) Provisions

Under the Shire's adopted LPS the subject land is designated as 'Priority Agriculture' (NB: applicant's planning report incorrectly references is designated 'General Agriculture'). In relation to the 'Priority Agriculture' designation the following is relevant:

Part 1 Section 4.8 "Rural Land – Productive"

Objective:

- Identify and protect Priority Agriculture land of State and regional significance and General Agriculture land which is the balance of the rural land not identified for settlement or future subdivision.



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- *To ensure appropriate land management controls occur with intensive agricultural uses to protect water catchments and to ensure these uses occur in the appropriate location.*

Strategies:

- a) *Applications for intensive agriculture, animal husbandry - intensive and industry - rural may be considered in Priority Agriculture and General Agriculture Resource areas subject to assessment on land use compatibility, land capability, feasibility of proposed use, servicing requirements and conservation and management of natural resources.*

Implementation:

- 2. *Council introduce a “Priority Agriculture” zone (or similar) into the Town Planning Scheme with provisions consistent with the objectives and appropriate land use classes etc, reflective of WAPC SPP 2.5 requirements, and zone the land identified as such in the Local Planning Strategy.*
- 4. *Prior to introducing the “Priority Agriculture” and “General Agriculture Resource” zone provisions into the Town Planning Scheme, Council not support land uses considered incompatible.*
- 5. *Council will only support subdivision of rural land in accordance with the provisions of this Local Planning Strategy.*
- 6. *Council generally not support subdivisions which further fragment any land within the Priority Agriculture and General Agriculture areas in accordance with WAPC Development Control Policy 3.4.*
- 9. *Council prepare a Policy containing guidelines for assessment of intensive agriculture and horticulture uses in a similar vein to Local Planning Policy 9.1: “Private Tree Plantations”.*

Part 2 Section 6.11.2 “Priority Agriculture”

The Lower Great Southern Strategy (LGSS) has identified, based on soils mapping from the Department of Agriculture, land which has been classified as Priority Agriculture with State or regional significance. The LGSS recommends that this land not be used for any other purposes. The area identified as Priority Agriculture under the Lower Great Southern Strategy has generally been identified in the LPS, with some areas added/excluded as a result of an assessment by Council predominantly having regard to slope and water supply availability. It is understood that the Department of Agriculture is undertaking a review of the soils mapping however this data was not available at the time of preparing the LPS.

It is a key objective of this LPS that the identified Priority Agriculture land be protected in accordance with the WAPC’s SPP 2.5 Policy. SPP 2.5 requires that land that has been formally identified as agriculture land of state or regional significance be zoned ‘Priority Agriculture’ where such land is not already zoned Rural Residential or Rural Smallholdings.

Consistent with State Planning Policy 2.5, the LPS accepts that there shall be a general presumption against subdivision of identified Priority Agriculture areas.

In assessing subdivision applications the Shire shall also give due regard to the WAPC’s Development Control Policy 3.4 which sets out the principles in determining applications to achieve the objectives of the SPP 2.5 policy.

Part 2 Section 6.11.5 “Intensive Agriculture/Aquaculture”

The climate associated with the region makes it desirable for “intensive agriculture”, which includes horticulture, viticulture, fodder production, market gardens, turf farms and aquaculture pursuits.

Management of these land uses needs to be considered in any new application particularly in relation to the application of herbicides and pesticides so not contamination offsite occurs in the form of air or water pollution. Potential for impacts on groundwater or surface water catchments also needs to be considered.

The proposal is deemed to be inconsistent with the Shire’s adopted LPS.

Relevant Town Planning Scheme Policies

The following Town Planning Policies are applicable to this proposal:

- *Policy No. 28: ‘Settlement Strategy for Denmark’ states that in relation to rural land the Council’s Rural Settlement Strategy will address the particular issue of the planning for the rural areas. In respect to the future development ... in the outer rural parts of the Shire, Council’s Rural Settlement Strategy provides clear guidance ... and that document is to be read in conjunction with this Settlement Strategy.*
- *Policy No. 29: ‘Rural Settlement Strategy’ considers the following criteria are an essential component for planned coordinated growth of the rural areas:*
 - *Farming is the predominant use on private property within the Shire and is likely to remain so for the foreseeable future.*
 - *With relatively small lot sizes, the overall long term sustainability of broad-acre farming on individual lots may be marginal. The wholesale subdivision of these areas is not an alternative. Council supports the current variety and range of lot sizes throughout the rural areas and does not see this as a precedence to further subdivide.*
 - *Strategies for intensification and diversification need to be encouraged. While limited subdivision may assist in raising capital for implementation of such strategies, it will also contribute to increasing land values and reduce the potential of the land to cater for a range of farming activities.*
 - *A strategy protecting farming areas from further subdivision will stabilise land prices over time and facilitate consolidation of farms.*

The general policy statements go on to detail that:

- (a) *Council will not support applications for subdivision or grant planning consent if it considers the proposals would result in the degradation of water, land, vegetation, landscape or other natural resources and values.*
- (c) *Council will require applications for subdivision and planning consent in the rural areas to retain remnant vegetation and include the creation and planting of wetland and waterway buffer reserves. Council may require the creation of landscape protection areas and fencing of remnant vegetation and buffer areas.*
- (d) *Council will not support intensive subdivision or planning consent applications that create or intensify urban/rural residential corridors outside existing urban centres other than in accordance with this strategy. Council may support proposals that enhance nodal villages built upon existing nodes of development.*
- (g) *Council will support and encourage proposals to develop horticultural activities providing it can be demonstrated that they will not contribute to problems associated with the management issues identified and do not impact adversely on surrounding landuse and residents.*

(l) Council supports the retention of the current mix and variation of lot sizes throughout the Shire. Such a mix and variation will not be considered as setting a precedent for further subdivision of other lots in the locality.

In addition to the above the proposed lots are located within Policy Area 7: 'Little River Catchment' of Policy No. 29. The relevant Objectives to this subdivision proposal are:

7.3.2 To encourage land uses which create little or no nutrient discharge into Wilson Inlet.

7.3.3 To require any urban development/townsite expansion to be in accordance with the Settlement Strategy for Denmark (1998) in order to retain a rural appearance.

7.3.4 To protect remnant vegetation along waterways and adjacent to wetlands.

7.3.5 To protect remnant vegetation on ridge lines overlooking Denmark and South Coast Highway.

7.3.6 To retain the rural character and landscape of the Little River valley floor.

The relevant Policy Statements to this subdivision proposal are:

7.4.1 Council will not support proposals unless they adequately address the management issues.

7.4.3 Council will require remnant vegetation to be retained and protected and may require additional revegetation or specific measures to protect existing remnant vegetation.

7.4.4 All new developments will incorporate waterway buffers where required. Council will encourage the creation of a foreshore protection reserve along Little River and where appropriate, encourage fencing and revegetation.

7.4.5 Council will not support subdivision or development applications that would increase the nutrient discharge into the catchments, waterways and Wilson Inlet.

The proposed subdivision is deemed to be inconsistent with the above policy provisions.

WAPC Policy Assessment

Planning Services have assessed the proposal having regard to the provisions of State Planning Policy 2.5: Rural Planning (SPP 2.5) and Development Control Policy 3.4: Subdivision of Rural Land (DC 3.4), noting the following:

- *SPP 2.5 Clause 5 Policy Measures: There is generally an existing supply of suitably sized and located rural lots to cater for intensive and emerging primary production land uses. Creation of new rural lots through ad hoc, unplanned subdivision is inconsistent with the objectives of this policy.*

Planning Services comment: the applicant's planning report has not demonstrated there is a need for the proposed lot sizes to accommodate intensive agriculture development on the subject land; intensive agriculture could occur on the current lot sizes. It should be noted that the WAPC approved the subdivision of No. 177 (Lot 2) Osborne Road, Shadforth (WAPC 144551) in February 2015 for intensive agriculture purposes – resulting in lot sizes of 23.8405ha and 11.0466 ha (noting that the original land parcel was divided by a road reserve thus the lot sizes reflected the areas as created via the road reserve division).

- *SPP 2.5 Clause 4 Policy Objectives: The objectives of this policy are to:
(e) avoid and minimise land use conflicts;*

Planning Services comment: refer comments below regarding SPP 2.5 Clause 5.12.

- *SPP 2.5 Clause 5.1 Protection of Rural Land and Land Uses: The WAPC will seek to protect rural land as a State resource by:*
 - (e) *creating new rural lots only in accordance with the circumstances under which rural subdivision is intended in Development Control Policy 3.4: Subdivision of Rural Land;*
 - (f) *preventing the creation of new or smaller rural lots on an unplanned or ad-hoc basis, particularly for intensive or emerging primary production land uses.*

Planning Services comment: the applicant's planning report has not demonstrated there is a need for the proposed lot sizes to accommodate intensive agriculture development on the subject land; intensive agriculture could occur on the current lot sizes. It should be noted that the WAPC approved the subdivision of No. 177 (Lot 2) Osborne Road, Shadforth (WAPC 144551) in February 2015 for intensive agriculture purposes – resulting in lot sizes of 23.8405ha and 11.0466 ha (noting that the original land parcel was divided by a road reserve thus the lot sizes reflected the areas as created via the road reserve division).
- *SPP 2.5 Clause 5.4 Rural Lots That May Be Created Under the Exceptional Circumstances of Development Control Policy 3.4 Subdivision of Rural Land*
Planning Services comment: refer relevant comments against DC 3.4 below.
- *SPP 2.5 Clause 5.8 Intensive Agriculture*
Planning Services comment: the proposal for intensive agriculture development on the subject land can occur without subdividing the land; noting that it is considered that the larger lot sizes ensures adequate protection of the existing waterway remnant vegetation on-site and buffers to the future on-site dwelling(s) and/or existing and proposed dwellings on adjoining land parcels – noting that the applicant's planning report does not identify any concerns in relation to land use conflicts so consequently does not provide details on buffer consideration matters as referenced in this clause and clause 5.12 of SPP 2.5.
- *SPP 2.5 Clause 5.12 Preventing and Managing Impacts in Land Use Planning*
Planning Services comment: as stated above the applicant's planning report does not identify any concerns in relation to land use conflicts so consequently does not provide details on buffer considerations.
Having regard to the Department of Health's Guidelines for Separation of Agricultural and Residential Land Uses (August 2012), a minimum 300m buffer is to apply from residential land uses to agricultural land uses (where no appropriate vegetative buffer and/or in the absence of analysis of specific site conditions). In this instance the properties on the eastern side of Middleton Close are used for rural living purposes (zoned "Special Rural (SR4)"), thus applying a minimum 300m buffer from the boundary of these lots prohibits (either totally or at least 75% of) the use of Lots 3-9 for horticultural pursuits.
As per SPP 2.5, single dwellings on rural land are a sensitive land use and should be afforded a reasonable standard of rural amenity (noting this does not appear to be the position of the Department of Health in the above referenced guidelines); in this regard and noting the applicant's planning report references the planting of 2000 trees per lot, it would appear that there will be limited potential for single dwellings on any of the proposed rural lots – noting that it is considered this would be an expectation of the future owners particularly given that a Single House on "Rural" zoned land is a "P" use (that is the use is permitted in the zone provided the relevant standards and requirements laid down in the Scheme are complied with).
- *SPP 2.5 Clause 6.5 Subdivision: It is the view of the WAPC that there are sufficient, suitably sized and located rural lots to cater for intensive and emerging primary production land uses. Creation of new rural lots through ad-hoc, unplanned subdivision will not be permitted.*
In contemplating subdivision proposals on rural land, WAPC policy is:

- a) *The creation of new or smaller rural lots will be by exception and in accordance with Development Control Policy 3.4: Subdivision of Rural Land;*
- b) *The creation of new or smaller rural lots by exception may be provided for in other State Planning Policies and/or a local planning strategy or scheme;*
- d) *The introduction of new dwelling entitlements or other sensitive land uses should not limit or prevent primary production from occurring.*

Planning Services comment: refer all relevant comments above in relation to relevant SPP 2.5 provisions and below for relevant DC 3.4 provisions.

- *DC 3.4 Clause 4 Policy Measures For More Intensive Agricultural Uses*
Planning Services comment: the applicant's planning report has not demonstrated there is a need for the proposed lot sizes to accommodate intensive agriculture development on the subject land; intensive agriculture could occur on the current lot sizes. It should be noted that the WAPC approved the subdivision of No. 177 (Lot 2) Osborne Road, Shadforth (WAPC 144551) in February 2015 for intensive agriculture purposes – resulting in lot sizes of 23.8405ha and 11.0466 ha (noting that the original land parcel was divided by a road reserve thus the lot sizes reflected the areas as created via the road reserve division).
- *DC 3.4 Clause 6 Circumstances Under Which Rural Subdivision May Be Considered*
Planning Services comment: the applicant's planning report has not demonstrated any unusual or unanticipated purposes that would support this subdivision proposal; nor has there been any demonstration that the subdivision is appropriate to promote better land management and achieve environmental, cultural and/or social benefits – noting that the subject lots were created under Subdivision Approval 148024 (Boundary realignment) which was prefaced on a subdivision configuration that was more responsive to land management and environmental considerations than the previous lot configuration.
The proposed lot sizes are more akin to a rural smallholding type of development (i.e. rural living) – noting that the landowner has been pursuing this form of development/zoning for the subject land for many years with the Shire of Denmark and the Western Australian Planning Commission without success (e.g. TPS 3 Scheme Amendment No. 99).

The proposed subdivision is deemed to be inconsistent with the above policy provisions.

Previous Subdivision Proposal (WAPC Ref: 146415)

On 31 October 2012 the WAPC refused a subdivision proposal for three (3) lots over the then No. 833 (Lot 834) Mount Shadforth Road, Shadforth for a variety of reasons pertaining to the Shire's Local Planning Strategy (2011) and relevant provision of the then SPP 2.5 and DC 3.4. Although SPP 2.5 and DC 3.4 have been amended since the refusal of this subdivision, the refusal reasons are generally applicable to this current proposal as well.

Shire Recommendation

*Having regard to the above, it is recommended that the subdivision be **refused**.*

Notwithstanding the above, should the Department of Planning/Western Australian Planning Commission be inclined to approve the subdivision, the Shire welcomes the opportunity to provide conditions at that stage.

I trust the above information is of assistance to you to progress this application. Should you have any further queries or require further clarification, please do not hesitate to contact the undersigned on telephone (08) 9848 0313 or email enquiries@denmark.wa.gov.au.

Yours faithfully



Annette Harbron
Director Planning & Sustainability

Attachment A Town Planning Scheme Policy No 37: Dams