

Shire of Denmark Town Planning Scheme No. 3 Amendment No. 148



SHIRE OF DENMARK
TOWN PLANNING SCHEME No. 3
AMENDMENT No. 148

File No:

Part of Agenda:

MINISTER FOR PLANNING

Proposal to amend a Local Planning Scheme

1.	Local Authority:	Shire of Denmark
2.	Description of Local Planning Scheme:	Town Planning Scheme No.3
3.	Type of Scheme:	District Zoning Scheme
4.	Serial No. of Amendment:	148
5.	Proposal:	<ul style="list-style-type: none">a) Rezoning No. 40 (Lot 305) Wentworth Road, Ocean Beach, from 'Rural' to 'Tourist (T15)' zone.b) Inserting Tourist (T15) and associated provisions into Appendix XIII - Schedule of Tourist Zones of the Scheme Text;c) Introducing definitions 'Brewery' and 'Tourist Development'; andd) Amending the Scheme Map accordingly

PLANNING AND DEVELOPMENT ACT 2005

RESOLUTION DECIDING TO AMEND A LOCAL PLANNING SCHEME

Shire of Denmark
Local Planning Scheme No. 3
Amendment No. 148

RESOLVED that the Council, in pursuance of Section 75 of the *Planning and Development Act 2005*, amend the above Local Planning Scheme by:

- a) Rezoning No. 40 (Lot 305) Wentworth Road, Ocean Beach, from 'Rural' to 'Tourist (T15)' zone.
- b) Inserting Tourist (T15) and associated provisions into Appendix XIII - Schedule of Tourist Zones of the Scheme Text;
- c) Introducing the definitions:
 - a. "Brewery" - means premises the subject of a producer's licence authorising the production of beer, cider or spirits granted under the Liquor Control Act 1988;
 - b. "Tourist Development" -- means a building, or a group of buildings forming a complex, other than a bed and breakfast, a caravan park or holiday accommodation, used to provide -
 - (i) short-term accommodation for guests; and
 - (ii) onsite facilities for the use of guests; and
 - (iii) facilities for the management of the development.
- d) Amending the Scheme Map accordingly

This Amendment is complex under the provisions of the Planning and Development (Local Planning Scheme) Regulations 2015.

Dated this 16th day of Feb 2021


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Chief Executive Officer

AMENDMENT REPORT

DOCUMENT CONTROL

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A	26.10.2020	Draft	QA/Client	
B	29.10.2020	Final	Shire	Changes to Sec 3.2.3, Figures and AA land uses
C	1.7.2021	Final	Shire	Updated to respond to Shire comments
D	4.12.2021	Final	Shire	Updated to respond to Shire comments
E	1.5.2023	Final	Shire	Updated to respond to Shire comments

Prepared by: SW

Reviewed by: DC

Date: 1 May 2023

Job Name: Lot 305 Wentworth Road, Ocean Beach

Version: E

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Scheme Map Amendment No. 148

1 INTRODUCTION

Scheme Amendment No. 148 proposes to rezone No. 40 (Lot 305) Wentworth Road, Ocean Beach from 'Rural' to 'Tourist' under the Shire of Denmark's Town Planning Scheme No.3 (TPS3).

The site is located in the vicinity of William Bay, approximately 10 km west of the Denmark Town Centre via South Coast Highway and is deemed to be of high tourism value based on general location and site specific criteria. It is within close proximity to both major tourist attractions and activities, including; William Bay National Park, Elephant Rocks, Mad Fish Bay, Greens Pool, breweries/cideries/wineries, walk/bike trails and the Valley of the Giants.

The site comprises an area of around 26 hectares of general agricultural land, and is of an insufficient size to support traditional agricultural activities as a sustainable stand-alone operation. As such, the landowner has transitioned to what is effectively a tourist land use, by developing a boutique premium food and beverage tourism centre ("*tourist centre*"). Underpinning development of the tourist centre is the broad compatibility of the land use in this rural locality. The main opportunity for the site to support a viable stand-alone operation now rest with tourism in the form of expanding the tourist centre and providing a complementary tavern that will include a restaurant (café), bar, cellar sales (in association with an approved distillery), the sale of take away packaged alcohol and the hosting of events. This will be complemented by tourist accommodation and a spa retreat.

This will provide an opportunity for Denmark to attract more domestic and international visitors and increasing the overall appeal of the Shire as a tourist destination. Another significant outcome arising is an economic benefit provided to other local tourist businesses and operators, and opportunities to bring new investment and employment into the area.

This report provides additional detailed information in support of the amendment.

2 SITE CONTEXT AND BACKGROUND

2.1 LEGAL DESCRIPTION

Details of the landholding and ownership are contained in **Table 1** below. A copy of the Certificate of Title is included at **Appendix A**.

Landowner	Lot No.	Vol/Folio	Plan/Diagram	Area (Ha)	Road Name/No.
K. Birkbeck	305	2809/900	P75450	26.8270	Wentworth Road/40

Table 1: Land and ownership details

2.2 LOCAL CONTEXT

The site is located in the vicinity of William Bay within the Shire of Denmark, approximately 10 km west of the Denmark Town Centre via South Coast Highway. It is within close proximity to William Bay National Park (~1km), Greens Pool (~4km), Elephant Rocks (~4km) and Mad Fish Bay (~4.5km). A location plan and site plan showing the regional and local context are provided in **Figures 1 and 2**.

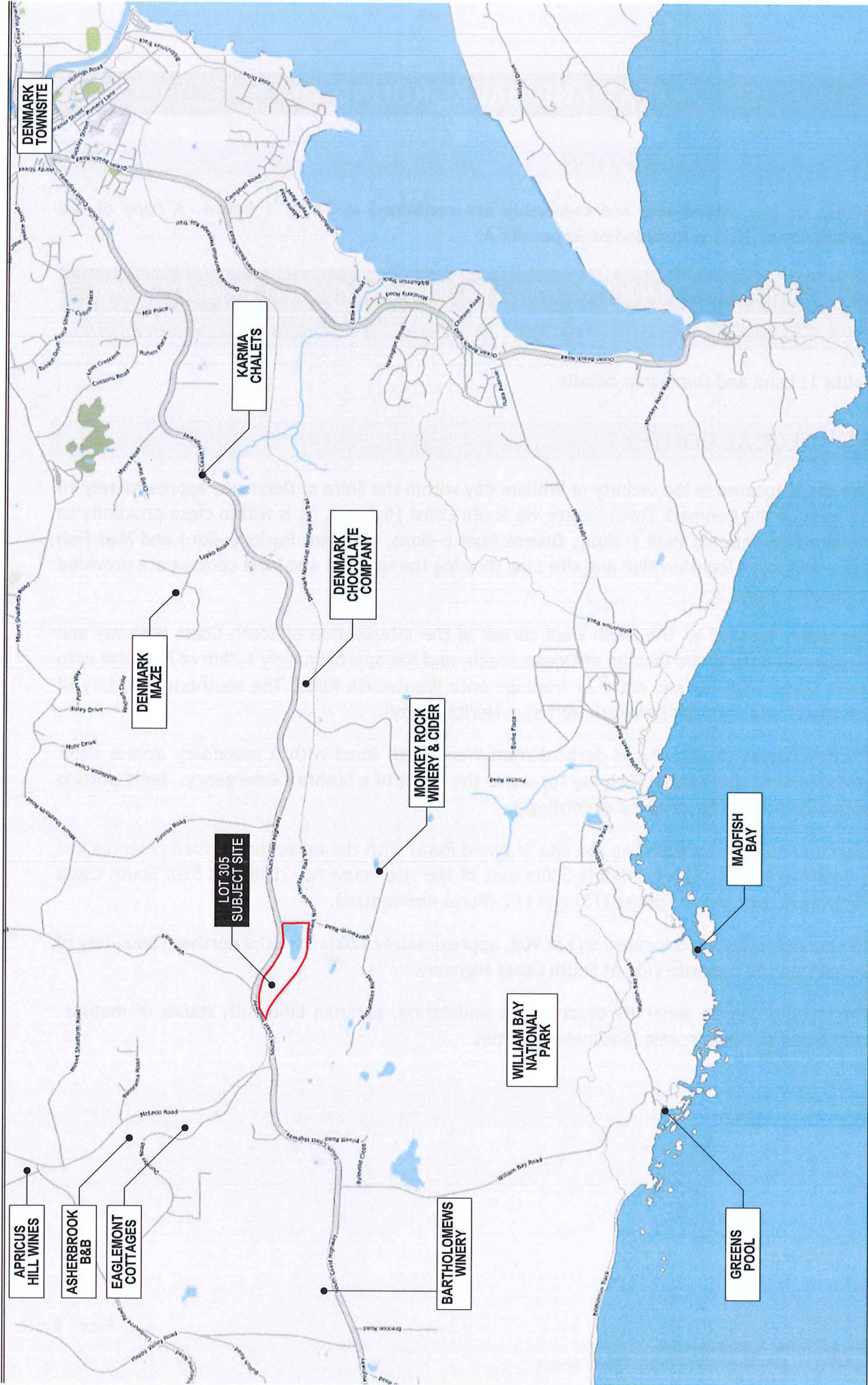
The site is located on the south west corner of the intersection of South Coast Highway and Wentworth Road in the locality of Ocean Beach, and has approximately 1.3km of frontage onto South Coast Highway and 400m of frontage onto Wentworth Road. The southern boundary of the site fronts onto the Denmark-Nornalup Heritage trail.

Primary access to the site is derived from Wentworth Road with a secondary access point provided onto South Coast Highway for use in the event of a bushfire emergency. Both existing access points will be retained accordingly.

Land immediately surrounding the site is zoned Rural with the exception of road reserves and the heritage trail. Approximately 500m east of the site house no. 2048 (Lot 550) South Coast Highway is dual zoned Tourist (T5) and LP2 (Rural Residential).

The nearest dwelling is located on Lot 908, approximately 220m from the northern boundary of the site on the opposite side of South Coast Highway.

The locality can be generally described as undulating, agrarian land with stands of mature karri trees and high scenic landscape qualities.



**FIGURE 1 - REGIONAL LOCATION
LOT 305 SOUTH COAST HIGHWAY, OCEAN BEACH**



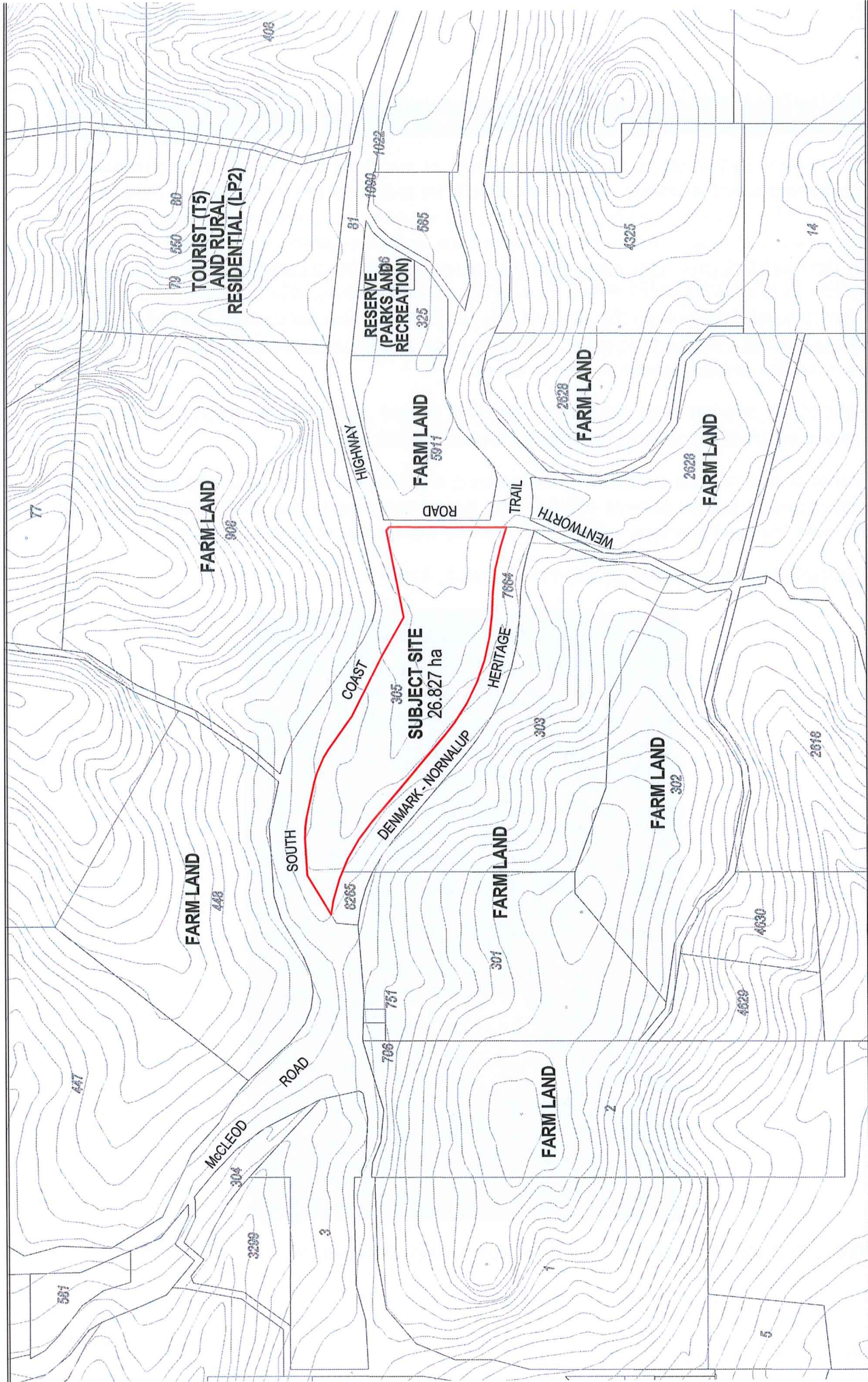


FIGURE 2 - SITE PLAN / LOCATION PLAN
 LOT 305 SOUTH COAST HIGHWAY, OCEAN BEACH

2.3 EXISTING DEVELOPMENT AND LAND USE

The eastern portion of the site contains a series of manmade dams which are interconnected via numerous embankments. A tourist centre is located adjacent to the dams. The premium food and beverage tourist centre has been constructed to accommodate the proposed tavern and associated uses. Through this amendment the landowner proposes to increase the capacity of the tourist centre. This will enable the landowner to attract corporate clients and private events from markets which they are currently unable to service due to constrained capacity. Tourist accommodation on the site will provide tourist centre guests with the ability to stay onsite overnight following an event. This is an important factor for many corporate and private events when deciding where to host an event.

Most of the site has been previously cleared to enable agriculture to occur. Cleared areas contain pastures and support grazing of a limited number of cattle.

Stands of mature karri trees have been retained in strategic areas to assist with environmental management, and to prevent alluvial soils being deposited in the dam. These trees also increase the rural character and ambiance of the site for tourist centre guests.

Photographs of the site are provided in Figures 3, 4 and 5.

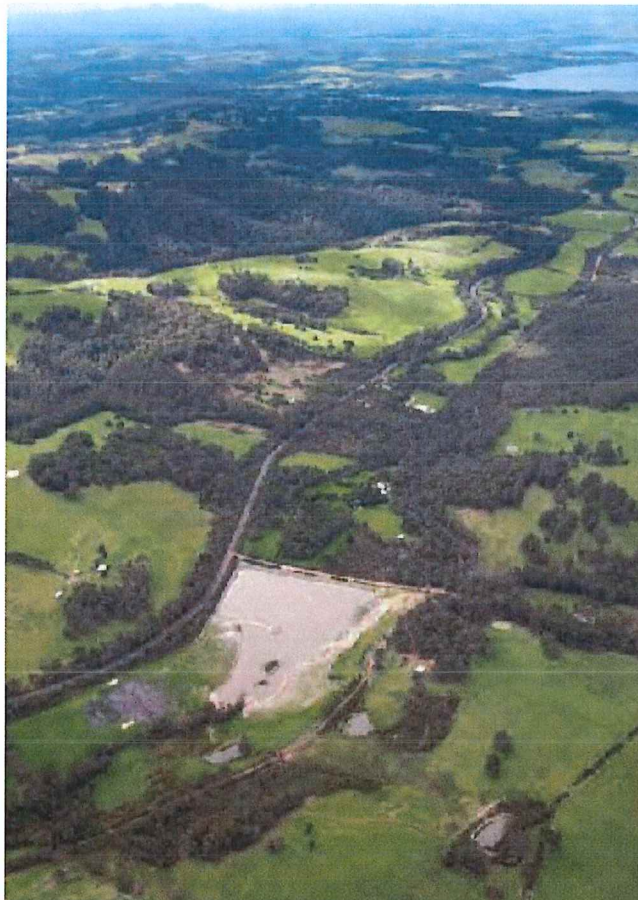


Figure 3: Aerial photo of the site looking east towards Denmark town



Figure 4: Tourist Centre



Figure 5: Tourist Centre and Dams

2.4 OPPORTUNITIES AND CONSTRAINTS

The small size of the land holding restricts its capacity to support traditional agricultural activities as a sustainable stand-alone operation. As such, the landowner has diversified the uses occurring on the site by constructing a tourist centre overlooking a series of dams that may be used for marron farming and provide a source of water for a distillery.

The bucolic amenity and environmental features of the site have proven successful to support the development of a tourist centre and dams. As the site has a marginal ability to sustain productive agricultural activities, the main opportunity to support a viable stand-alone operation rests with tourism in the form of expanding the tourist centre and providing a complementary tavern including a restaurant (café), bar, cellar door sales (in association with the approved distillery), tourist accommodation and spa retreat.

The site is generally flat, sloping gently from approximately 110m in the west down to 70m in the east, with an average grade of 2 degrees. The site well drained and of a suitable size to support a tourist development. Given the site is in close proximity to unique tourist attractions and landmarks of both local and State significance (including William Bay, Greens Pool, and Elephant Rocks), its strategic proximity to walking and bike trails (including Denmark-Nornalup heritage trail, Munda Biddi trail and the Bibbulmun Track) and located adjacent a major tourist route (South Coast Highway), there is an opportunity to develop an intermodal tourist development catering for tourists travelling on foot, bike and in vehicles.

An intermodal tourist development on the site will provide tourists with the unique ability to access all track/trails from a single location, increasing track/trail usage and improve upon the overall tourism appeal of the Shire. This will provide an opportunity for Denmark to become a world class trails destination.

Various forms of tourist accommodation are proposed to accommodate the variety of tourists, including chalets and camping/glamping sites. Planning approval has already been obtained for a tavern, cellar door sales, restaurant, rural industries and marron dams, with the Rural zone having been maximised. The existing tourist centre presents an opportunity for its expansion and the complementary development of a tavern that will include a restaurant (café), bar, cellar sales (in association with an approved distillery), the sale of take away packaged alcohol and the hosting of events. This will provide a new tourist attraction to both guests and tourists visiting the Shire.

The series of dams located at the western end of the site will be retained as these provide increased amenity to tourists and guests. These dams also provide a suitable water source to support future land uses and development, as well as in the event of a bushfire emergency.

Any development within this locality should be suitably planned to protect the high scenic landscape value of the area. Accordingly, clustering of built-form around the dams is deemed preferable to ribbon development along the boundary, as this will minimise any potential visual

impacts to surrounding properties and people travelling on South Coast Highway. This area of the site also contains the highest level of tourism amenity, which is an important consideration when planning for tourism.

Higher elevated portions of the site containing pastures are more suited for “glamping sites” with the mature karri trees providing shade, screening and amenity to future sites. The temporal occupancy and low impact of “glamping” sites (including limited or controlled artificial light and noise intrusion) are well suited to the site.

A large stand of mature karri trees has been retained at the eastern end of the site, and centrally on an east-west axis where a gully channels winter rainfalls downhill and into the dams. This vegetation will be retained and protected through scheme provisions and a Local Development Plan to assist with environmental management of the holding. Retained vegetation constrains any form of development with the possible exception of walk trails, picnic tables or similar.

In addition to the above, the site is not:

- Located in a floodway or floodplain, or subject to seasonal inundation
- Registered on the contaminated soils database
- Registered on the local or State heritage register
- Subject to acid sulphate soils

There are not other known environmental constraints for the site or locality other than those detailed above.

As illustrated in an opportunities and constraints plan shown in **Figure 6**, the physical attributes of the site are suited to tourist development. The *Local Development Plan*, by designating and identifying developable areas, will ensure the long term protection of areas containing remnant vegetation and the environmental aspects they serve.



LEGEND

- SUBJECT SITE
- EXISTING VEGETATION
- EXISTING DAMS
- EXISTING BUILT FORM
- EXISTING ACCESS

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**FIGURE 6 - OPPORTUNITIES AND CONSTRAINTS PLAN
 LOT 305 SOUTH COAST HIGHWAY, OCEAN BEACH**

3 PLANNING CONTEXT

3.1 STRATEGIC PLANNING CONTEXT

The following key Strategies form the relevant framework for the designation of Tourist zoning within the Shire of Denmark Town Planning Scheme No. 3:

- Lower Great Southern Planning Strategy; and
- Shire of Denmark Local Planning Strategy

3.1.1 LOWER GREAT SOUTHERN STRATEGY 2016 (LGSS)

The purpose of the LGSS is to guide land use planning and provide strategic direction for the Lower Great Southern over a 20 year timeframe. The LGSS address' land use, transport and infrastructure planning on a local and regional level, and provides specific direction to local governments when preparing more detailed local planning strategies and local planning schemes.

The LGSS acknowledges the importance of tourism in the region, with the key objective for tourism being as follows:

“Maximise opportunities for the development and growth of a sustainable tourism industry.”

Section 2.13 of the LGSS identifies a range of actions that should be pursued by various government agencies in regards to tourist development, including:

- 1) *Update tourism components of local planning strategies as necessary to respond to changing needs of the tourism sector and take advantage of emerging markets.*
- 2) *Zone identified strategic tourism sites in endorsed local planning strategies solely for tourism development in local planning schemes, to protect them for that purpose.*
- 3) *Maintain and improve, where necessary, existing linkages to major tourism attractions and develop additional tourism routes in the Lower Great Southern.*
- 4) *Provide adequate and consistent signage to tourism destinations.*

Rezoning the site to Tourist in TPS3 supports the tourism objective of the LGSS. Tourism zoning over the site will promote further development and growth of a sustainable tourism industry within the Shire, and a land use that complements existing uses currently occurring on-site.

Underpinning development of the tourist centre is the broad compatibility of the land use in this rural locality. Expansion of the tourist centre and complementary tourist development will allow the landowner to market these services to a wider range of corporate clients and private events both domestic and internationally, and draw more

visitors and tourists to the Shire. Zoning the site Tourist in TPS3 will assist to protect the site for this purpose and facilitate further complementary tourist development in a strategic location in close proximity to existing tourist attractions.

Future tourist development on the site will improve upon existing tourist linkages to major tourism attractions by providing additional tourism experiences adjacent to a number of major tourist routes, including; South Coast Highway, Munda Biddi trail and Denmark-Nornalup heritage trail. Improving tourist linkages not only benefits other tourism operators and businesses, but positively contributes to the overall appeal and reputation of the Shire as a tourist destination.

3.1.2 SHIRE OF DENMARK LOCAL PLANNING STRATEGY (LPS)

The Shire's Local Planning Strategy (LPS) was adopted by Council at the Special Meeting of Council held on 4 October 2011 and endorsed by the Western Australian Planning commission on 22 May 2012. The LPS forms the basis for future land use, zoning, subdivision and development throughout the Shire, and is implemented through the statutory planning system, which includes amendments to the Scheme.

The site is designated in the Shire's LPS as 'General Agriculture' (refer to **Figure 7**), in recognition of the land not being identified as either having State, regional and/or local level significance for agricultural purposes.

Although the LPS is not a zoning plan and the site has not been identified as a 'Tourist Site' in the LPS, use of the site for tourist purposes is deemed appropriate given its close proximity to existing tourist attractions and landmarks, including:

- The tourist centre on- site (existing)
- The Tavern, (i.e. restaurant/café etc) proposed on-site
- The existing distillery and proposed tavern on-site
- The spa retreat proposed onsite
- William Bay National Park
- Greens Pool
- Elephant Rocks
- Mad Fish Bay
- Walk/bike/horse trails
- Wineries/Cideries/Breweries
- Denmark's town centre (shops, cafes, restaurants, etc)
- Denmark Chocolate Company
- Denmark Dinosaur World
- Valley of the Giants

Noting the sites close proximity to tourist attractions, its limited agricultural potential and the success of the tourist centre which effectively serves as a tourism use, the following provisions of the LPS are relevant to this amendment:

Objective - To encourage eco-tourism and facilitate new tourism developments and choices of tourist accommodation types to enhance the Denmark Shire as a destination of choice for visitors.

Strategy (b) - To retain the low key level and natural character of the 'natural environment' tourist sites.

Strategy (e) - Encourage new tourist developments to employ a sustainable approach with their developments and a desire to establish a tourism industry that supports and enhances the local community, protects its environment and generates economic benefit.

Strategy (f) - Embrace new tourism attractions and/or developments which achieve the objective above as they bring investment and employment into the area.

Strategy (g) - To consider low key, low density tourist accommodation proposals near to identified strategic tourism sites.

Implementation Point 3 - Council in considering development and/or subdivision applications for new tourist development, prior to the adoption of a Local Planning Strategy, give due regard to Planning Bulletin 83/2011: Planning for Tourism.

This amendment supports the above objective and strategies by providing an opportunity for the future development of a range of tourist accommodation types (chalets and camping/glamping sites) and new tourism facilities (tavern, restaurant, brewery, winery and spa retreat) that complement the tourist centre and the surrounding land holdings. This will assist with enhancing the Denmark Shire as a destination choice for visitors and events.

Tourism development suitably located on the site will ensure the rural character of the natural environment is retained and visual landscape qualities of the locality are protected. Further protection measures to retain the natural character of both the site and locality are proposed through site specific scheme provisions and a Local Development Plan to ensure future tourist development is screened from view and built-from materials used blend into the environment.

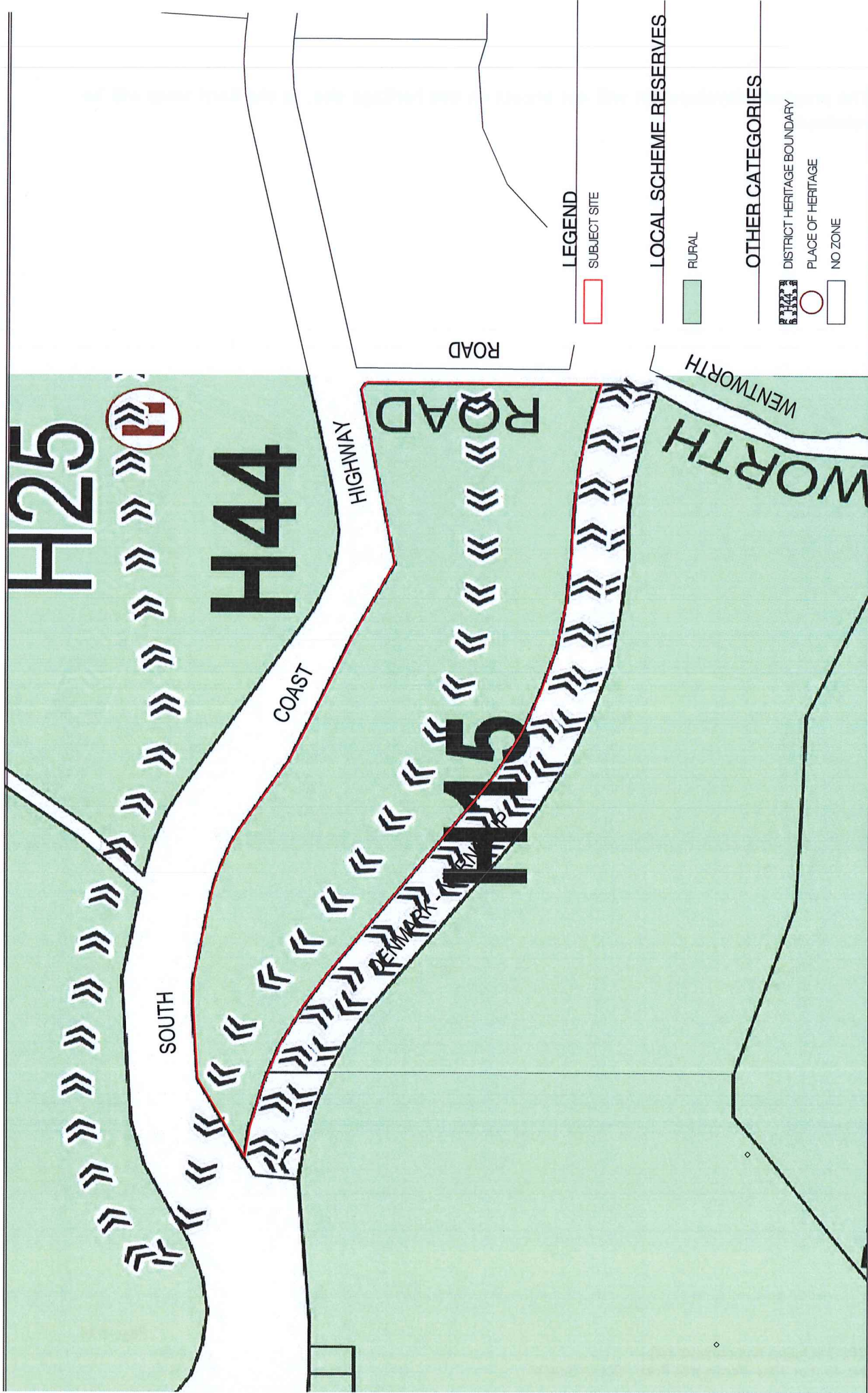
The proposed future tourist development underpinning this amendment will employ a sustainable approach in order to protect the environment and generate economic benefits. It is intended that the distillery will source local ingredients to produce alcoholic beverages with up to 98% local content, which will provide economic benefit to local producers. Further, an intermodal tourist development strategically located in a location where various major tourist routes intersect provides an opportunity for Denmark to become a world class trail destination, attracting more domestic and international visitors and increasing the overall appeal of the Shire as a tourist destination. A significant outcome arising from this is the economic benefit provided to other local tourist businesses and operators, and opportunities to bring new investment and employment into the area.

As established, future tourist development will be located in close proximity to existing tourist attractions and at the intersection of major tourist routes, which will assist to increase visitations to tourist attractions and usage of trails/tracks.

Enabling the site to be used for its highest and best use will also generate positive outcomes for the wider Denmark community by providing new employment opportunities associated with the establishment and ongoing management of the tourist development, in a location that is within close proximity to the Denmark town centre.

Heritage Place No. 44 is located on the northern side of South Coast Highway and relates to a stand of mature Karri trees located within the road reserve worthy of heritage protection.

The proposed development will not impact on this heritage site, as the Karri trees will be retained.



LEGEND
 SUBJECT SITE

LOCAL SCHEME RESERVES
 RURAL

OTHER CATEGORIES
 DISTRICT HERITAGE BOUNDARY
 PLACE OF HERITAGE
 NO ZONE

**FIGURE 7 - LOCAL PLANNING STRATEGY DESIGNATION OF SITE AND SURROUNDS
 LOT 305 SOUTH COAST HIGHWAY, OCEAN BEACH**

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3.2 STATE GOVERNMENT PLANNING CONTEXT

The following Regulations and State Planning Policies and Bulletins form the relevant framework for the designation of Tourist zoning within the Shire of Denmark Town Planning Scheme No. 3:

- Caravan Park and Camping Grounds Regulations 1997
- SPP 2.5 - Rural Planning;
- SPP 3.7 - Planning in Bushfire Prone Areas;
- SPP5.4- Road and Rail Noise
- Government Sewerage Policy;
- Planning Bulletin 83/2013 - Planning for Tourism;

3.2.1 CARAVAN PARK AND CAMPING GROUNDS REGULATIONS 1997

The Caravan Park and Camping Grounds Regulations 1997 requires that all camping grounds in Western Australia be licensed by the local government.

Details of the facilities and content of the camping/glamping sites including (but not limited to) road widths, toilets, showers, and lighting will be identified through the development application and licensing process(s).

3.2.2 STATE PLANNING POLICY NO. 2.5 - RURAL PLANNING

State Planning Policy 2.5 - Rural Planning (SPP 2.5) seeks to protect and preserve Western Australia's rural land assets due to the importance of their economic, natural resource, food production, environmental and landscape values, as well as to ensure broad compatibility with rural land uses.

One of the key elements in achieving these objectives is ensuring that zones and sites are suitable for their intended purpose. Clause 6.4 of SPP 2.5 identifies the following criteria to assist decision makers when contemplating zoning proposals or amendments affecting rural land:

- (a) *the suitability of the site to be developed for the proposed use;*
- (b) *the siting of the zone/land use in the context of surrounding zones/land uses (existing and proposed);*
- (c) *the capacity of the site to accommodate the proposed zone/land use and associated impacts and:*
 - (i) *only support proposals which are consistent with endorsed planning strategies, or in exceptional circumstances, where the proposal meets the objectives and intent of WAPC policy;*
 - (ii) *only support the introduction of sensitive zones that may affect the existing and future operation of primary production where the management of impacts and/or mitigation approaches have been substantively resolved and are not wholly deferred to later stages of planning;*

- (iii) that the continuation of existing rural land uses are taken into account;*
- (iv) ensure that lifting of urban deferred land in a region scheme is in accordance with clause 6.4 (b);*
- (v) ensure that the sensitive zone does not overlap with any buffer determined to be necessary as a result of introducing the new zone, and the area within the buffer should retain its rural zoning until such time as the buffer is no longer required; and*
- (vi) ensure that adequate land is identified to contain impacts from existing primary production, before introducing sensitive or industrial zones on rural land.*

This amendment supports the above policy objectives and measures, as demonstrated in the following:

- (a) The site is of a suitable size and character to support Tourist zoning. The eastern portion of the site contains a tourist centre overlooking a series of dams, which effectively serves a tourism purpose. The site is generally flat and of an appropriate size for the development of tourist accommodation and complementary, tavern and spa retreat.
- (b) Environmental characteristics of the locality, including (but not limited to) its topography and retained remnant vegetation ensure that Tourist zoning of the site is able to integrate with the surrounding land uses. Large lot sizes and adequate separation distances to neighboring dwellings ensure compatibility between Tourist zoning and the surrounding zones and land uses.
- (c) (i) This amendment supports the objectives and intent of WAPC policy by introducing Tourist zoning in a locality that is compatible with its surrounding zoning and land use, and in close proximity to existing tourist attractions. Strategic placement of tourist infrastructure within the site reduces the potential for visual impacts on the landscape and assists in achieving suitable setbacks to neighboring dwellings and primary production activities. Existing stands of mature karri trees provide further visual and acoustic screening to the surrounding area.
 - (ii) Management of impacts and/or mitigation approaches associated with rezoning the site have been substantially resolved with a series of planning control measures proposed in the Local Development Plan and site specific provisions to be introduced into Appendix 13 of TPS3. Additional planning control measures are able to be provided through the development application process to ensure responsible social and environmental outcomes are achieved.
 - (iii) This amendment considers and supports the continuation of existing rural land uses in the locality and will not impact on these uses occurring in the future.
 - (iv) The site is not identified as urban deferred or subject to a region scheme.
 - (v) The site is not subject to any buffers; however South Coast Highway, Wentworth Road and the Denmark-Nornalup Heritage trail abutting the site provide increased separation and assist with buffering the site (and future development) from surrounding land uses.
 - (vi) The prevailing lot sizes, environmental characteristics and land uses occurring in the locality ensure that any potential impacts from existing primary production can be appropriately managed and will not impact on future tourist development.

Further support for this amendment is provided in clause 5.5 of SPP 2.5, which acknowledges the WAPC's policy is to:

- (c) *support small scale tourism opportunities such as bed and breakfast, holiday house, chalets, art gallery, micro-brewery and land uses associated with primary production, within the rural zone.*

3.2.3 STATE PLANNING POLICY NO. 3.7 - PLANNING IN BUSHFIRE PRONE AREAS

State Planning Policy 3.7 (SPP 3.7) establishes the foundation for land use planning to address bushfire risk management in Western Australia. It is used to inform and guide decision-makers, referral agencies and landowners to help achieve acceptable bushfire protection outcomes in areas identified as '*bushfire prone*'.

The site is designated as *bushfire prone* by the Commissioner of Fire and Emergency Services. As part of this application a suitable Bushfire Management Plan has been prepared (refer **Appendix B**).

As identified in the BMP and the supporting BAL contour plans, development is proposed to occur on a portion of the site identified as BAL-29 or lower; or with the appropriate performance criteria can be adequately sited. Furthermore the necessary requirements of SPP 3.7 have been adequately addressed.

3.2.4 STATE PLANNING POLICY NO. 5.4 - ROAD AND RAIL NOISE

The intent SPP 5.4 is to minimise the impact of road and rail noise on noise sensitive land uses. The site abuts South Coast Highway, which is classified as a Primary Road in Table 1 of SPP 5.4. As the trigger distance from a sensitive land use to a primary road is 300 metres, SPP 5.4 is applicable to the site.

In accordance with the Appended Noise Management Plan and Environmental Noise Assessment (refer **Appendix C**), with the application of the appropriate noise mitigation measures, the site can be developed in compliance with SPP 5.4.

3.2.5 GOVERNMENT SEWERAGE POLICY 2019

The Government Sewerage Policy 2019 is a whole of government policy promoting the use of reticulated sewerage, and setting out minimum standards to be achieved for onsite effluent disposal throughout the State. As the site is located outside of the Water Corporations' reticulated waste water network and unable to connect to deep sewerage, future Tourist development will require onsite effluent disposal, in a similar way to that associated with the tourist centre.

A Site and Soil Assessment (refer to **Appendix D**) undertaken for the site identifies effluent disposal is able to occur in accordance with the Government Sewerage Policy 2019.

3.2.6 PLANNING BULLETIN 83/2013 - PLANNING FOR TOURISM

PB83 sets out the policy position of the WAPC to guide decision making for subdivision, development and scheme amendment proposals for tourism purposes. PB83 also provides guidance to local government when planning for tourism development to be undertaken as part of the local planning strategy process.

PB83 notes a tourism site “*should be assessed on its physical characteristics rather than existing built form or current zoning.*” Furthermore:

“The identification of tourism sites does not imply that the site is suitable for immediate development or redevelopment. Sites may be identified to facilitate the long term protection of land for tourism purposes where economic conditions appropriate for the development may not be reached for a number of years.”

PB83 establishes a number of general location criteria to determine the tourism value of a tourist site. Table 2 lists the policy criteria and site specific attributes for the site.

Criteria	PB83	Site Specific Attributes	Acceptable
1	<p>Accessibility</p> <p><i>The site has adequate existing or proposed transport links (such as major road or airport access).</i></p>	<p>Safe access can be provided to existing transport links.</p> <ul style="list-style-type: none"> • Safe access to the site is provided via Wentworth Road which is an unsealed road maintained to a high standard by the local government. This access will be retained to service future tourist development. • Secondary access is provided onto South Coast Highway and will be retained to provide a secondary access point in the event of a bushfire emergency. 	<p>✓</p> <p>✓</p>
2 2 (cont)	<p>Uniqueness</p> <p><i>The site contains, or is in the vicinity of, an attraction or prominent and/or unique landmark of local, regional or State significance.</i></p>	<p>The site is in the vicinity of unique attractions and landmarks of both local and State significance, including:</p> <ul style="list-style-type: none"> • William Bay National Park is an A-Class Reserve of State significance, and is located approximately 1 km from the site. • Denmark - Greens Pool walk trail, Denmark - Nornalup heritage trail, the Munda-Biddi bike trail and the Bibbulmun Track are all located within close proximity to the site. • Future development of the site will provide for tourist 	<p>✓</p> <p>✓</p> <p>✓</p>

		accommodation, distillery, tavern and spa retreat that complement the tourist centre and provide an opportunity for other tourism businesses and attractions to benefit from.	
3	<p>Setting</p> <p><i>The setting of the site has an aspect and outlook that supports recreational tourism activities and/or the creation of a tourism character and ambience (e.g. immediately adjacent to a beach).</i></p>	<p>The site is located in an area that supports tourist development, including:</p> <ul style="list-style-type: none"> • A bucolic area with natural ambience and highly valued landscape qualities. ✓ • Close proximity to William Bay National Park (~1 km), Greens Pool (~4 km), Elephant Rocks (~4 km) and Mad Fish Bay (~4.5 km). ✓ • Direct frontage to South Coast Highway which is an established major tourist route. ✓ • Direct frontage on to the Denmark-Nornalup Heritage trail. ✓ • Close proximity to the Munda Biddi trail. The landowner has donated land for the future realignment and linking of this track to the Bibbulmun Track. ✓ • Close proximity to the Bibbulmun Track. ✓ • The existing tourist centre and proposed tavern and spa retreat located on-site. ✓ 	
4 4 (cont)	<p>Tourism activities and amenities</p> <p><i>The site provides, has easy access to, or is capable of development of supporting activities and amenities such as tours, fishing, historic sites, walk trails, environmental interpretation,</i></p>	<p>The site has convenient access to tourist activities and amenities, including:</p> <ul style="list-style-type: none"> • On-site tourist centre (existing) ✓ • On-site distillery (existing) ✓ • On-site tavern (proposed) ✓ • On-site spa retreat (proposed) ✓ • Wineries/Cideries/Breweries ✓ • Denmark's town centre (shops, cafes, restaurants, etc) ✓ • Walk/bike/horse trails ✓ • Beaches ✓ • Denmark Chocolate Company ✓ • Denmark Dinosaur World ✓ 	

	cafes, restaurants, shops and the like.	<ul style="list-style-type: none"> Valley of the Giants 	
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Table 2: Assessment of general location criteria

PB83 lists various *site specific* criteria when determining the tourism value of a tourist site and provides guidance to decision makers in determining the strategic value of tourist sites. **Table 3** lists the policy criteria and site specific attributes relevant to the site.

Criteria	PB83	Site Specific Attributes	Acceptable
1	<p>Suitability in a land use context</p> <p>The site is located in a land use context that will not limit the extent of activities available to guests due to amenity impacts on adjoining residents or where the adjoining uses potentially detract from the tourism character of the site (e.g. located within a residential area).</p>	<p>The site is located within a bucolic area, with surrounding land uses that complementary the tourism use of the site. Tourist development is generally accepted as a compatible land use within rural areas, and an important part of the settlement pattern “particularly within regional areas of the State.”</p> <p>Tourist development is proposed on a portion of the site that provides suitable setbacks to ensure potential visual impacts and land use conflict do not occur.</p>	✓
2	<p>Capability</p> <p>The site has the capacity to be developed for tourism purposes and accommodate the associated services in a manner that does not detract from the natural attributes of the site or result in environmental degradation. Examples include: clearing for bushfire protection, sewerage capacity, water supply and rubbish disposal.</p>	<p>The site is capable of being developed for tourist purposes and associated services, without detracting from the natural attributes of the site or result in environmental degradation as follows:</p> <ul style="list-style-type: none"> • Clearing of remnant vegetation is not required to support tourist development. Existing stands of trees will be retained to assist with environmental management and provide shade and amenity to tourist accommodation. • Tourist development is able to conform to the provisions of SPP 3.7 - Planning in Bushfire Prone areas. • Tourist development is able to conform to the provisions of the Government Sewerage Policy. • A sufficient water and power supply is able to be provided to service future tourist development. 	<p>✓</p> <p>✓</p> <p>✓</p> <p>✓</p> <p>✓</p>

		<ul style="list-style-type: none"> • Solid waste will be collected and stored in green wheeled garbage bins, and sent to the Denmark rubbish tip by the owner/operator on a regular basis. 	
3	<p>Size</p> <p>The size of the site should be adequate to accommodate a sustainable tourism facility with respect to its design, operation and function, and its site specific and wider impacts and consideration of future growth/expansion.</p> <p>This will require a site to be able to be developed without compromising the sustainable use of natural and cultural resources or existing social structures. Development of the site should also contribute to the delivery of diversified and balanced tourism opportunities.</p>	<p>The site is of a sufficient size to support an integrated and diversified tourist development including:</p> <ul style="list-style-type: none"> • Tourist Centre (existing) • Distillery (existing) • Tavern (existing) • Shop (proposed) • Spa retreat (proposed) • Chalets (proposed) • Camping/glamping ground (proposed) • Winery (proposed) • Brewery (proposed) <p>Development of the site is able to occur without compromising the natural or cultural resources, including environmental and landscape qualities.</p>	<p>✓</p> <p>✓</p>
4	<p>Function</p> <p>The use of the site meets a particular accommodation, market need and/or ensures a range of tourism accommodation within the locality. Examples are: beachfront caravan parks, school holiday</p>	<p>The site is suitable for low intensity tourist development, including:</p> <ul style="list-style-type: none"> • Tourist Centre (existing) • Distillery (existing) • Tavern (proposed) • Shop (proposed) • Spa retreat (proposed) • Chalets (proposed) • Camping/glamping ground (proposed) • Winery (proposed) 	<p>✓</p>

	camps and Crown tourism leases.	<ul style="list-style-type: none"> • Brewery (proposed) <p>Tourist accommodation in the form of chalets and camping/glamping grounds provides a range of accommodation types to meet the needs of different tourists in this locality.</p> <p>The site is not deemed suitable for high intensity tourist development such as motels, hotels or amusement and theme parks.</p>	✓
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Table 3: Assessment of site specific criteria

The site is deemed to have a high tourism value based on location and site specific criteria that provide guidance to when identifying suitable tourist sites in a local planning scheme.

3.3 LOCAL GOVERNMENT PLANNING CONTEXT

The following local town planning scheme and policies form the relevant framework for the designation of Tourist zoning within the Shire of Denmark Town Planning Scheme No. 3:

- Shire of Denmark Town Planning Scheme No. 3;
- Denmark Tourism Planning Strategy (Stage 1);
- Policy No. 5 Minimum Setbacks;
- Policy No. 29 - Rural Settlement Strategy; and
- Policy 130201 - Tourism Policy

3.3.1 TOWN PLANNING SCHEME NO. 3

The site is currently zoned 'Rural' under the Shire of Denmark's TPS3, which acknowledges the purpose and intent of the Rural zone is to provide for a range of normal rural activities and to protect the land from inappropriate uses.

This amendment supports the rezoning of the site to Tourist. Clause 3.1.3 of TPS3 identifies the primary purpose and intent of the Tourist zone, as follows:

"For tourist accommodation and associated services."

Further, clause 5.33 of TPS3 establishes the following development provisions applicable to Tourist zones:

"All tourist zones shall require development to be in accordance with a Development Plan approved by Council and conditions of development shall be in accordance with Appendix 13 - Schedule of Tourist Zones."

Whilst TPS3 acknowledges the general compatibility of tourist accommodation and associated services within the Rural zone, this amendment will facilitate the long term protection of the site for tourist purposes and provide apt zoning to support future tourist development.

This amendment supports the primary purpose and intent of the Tourist zone, with the ultimate tourist development to occur in accordance with a Local Development Plan approved by the Council. A copy of the Local Development Plan is included at **Appendix E**.

A series of site specific planning control measures are proposed to be included in Appendix 13 of TPS3, to ensure the ultimate tourist development achieves suitable environmental, social and community outcomes.

3.3.2 DENMARK TOURISM PLANNING STRATEGY - STAGE 1

Stage 1 of the above Strategy provides a brief overview of the Shire's tourism profile. Stage 2 is yet to be prepared and will allow for the preparation of a comprehensive tourism strategy which will actively involve discourse with the tourism industry and local community.

The Strategy acknowledges that tourism is a significant contributor to the local economy, and provides the second highest number of jobs next to agriculture. It also recognises the important role camping grounds play within the Shire with an annual average of 16,500 (or

18% of all) domestic visitors, and 5,300 (or 46% of all) international visitors staying in caravan park or camping ground in 2003 and 2004.

Whilst the Strategy does not provide sufficient detail of visitor stays in caravan parks, camping grounds lodges or chalets, it does acknowledge that chalets are a form of accommodation often located in rural areas as well as in caravan parks and camping grounds. Therefore this statistic is considered to include people staying in chalets.

Clause 8.1.1 requires that a scheme amendment is required to rezone land to a dedicated tourist zone where more than eight chalet developments are proposed.

This amendment supports the findings of the Strategy by providing an important and popular accommodation type and attraction for tourists in a location within close proximity to areas of tourism significance, including:

- **Tourism routes** being South Coast Highway, William Bay Road and Scotsdale Road;
- **National, marine and regional parks** such as William Bay National Park, Owingup and Quarram Nature Reserves and Greens Pool;
- **Attractions and amenities** including Mad Fish Bay, Elephant Rocks, the Valley of the Giants, wineries/cideries/breweries and the existing tourist centre, distillery and proposed tavern; and
- **Trails** including the Denmark - Green Pools walk trail, Denmark - Nornalup heritage trail, the Munda-Biddi bike trail and the Bibbulmun track.

3.3.3 POLICY NO 5 - MINIMUM SETBACKS

Policy No. 5 establishes minimum setbacks for development within different zones, with those within the Tourist zone being as follows:

MINIMUM SETBACK			
	FRONT (m)	SIDE (m)	REAR (m)
TOURIST	30	20	30

The proposed setbacks to be included in Appendix 13 of TPS 3 reflect the above.

3.3.4 POLICY NO 29 - RURAL SETTLEMENT STRATEGY

Policy No. 29 was prepared in January 1999 and presents long term goals for land use, development and conservation of rural areas within the Shire. The strategy provides for a sustainable settlement pattern to accommodate growth over the Shire.

Strategy objectives relevant to this amendment include:

- Encourage limited tourist nodes based on existing development or features;

- Recognise the scenic importance of South Coast Highway and ensure development is suitably setback and screened. Uncontrolled linear sprawl will not be supported;
- Recognise use of setbacks and appropriate/sensitive screening techniques, which will retain views. Key tourist routes include Scotsdale Road, Mt Shadforth Road, William Bay Road, Parry Beach Road, McLeod Road, Peaceful Bay Road, Valley of the Giants Road and South Coast Highway; and
- Encourage appropriate bushfire management planning to be developed incorporated in development proposals.

This amendment supports the above policy objectives by rezoning the site to Tourist, which will encourage further tourist development that complements the existing tourist centre. As discussed later in Section 4.4, a number of measures are available to minimise visual impacts and protect scenic qualities including clustering of development centrally within the site, the use of building materials that are sympathetic to rural areas, suitable setbacks and the retention of existing vegetation to screen future tourist development from scenic vantage points, tourist routes and surrounding areas.

Section 5.3 acknowledges tourist accommodation can be provided in many different forms and scales and establishes a number of tourist nodes including William Bay, which is located 1 km (approx.) south of the site adjacent to other landholdings owned by the proponent and is subject to planning review to complement Lot 305. It notes when considering applications, Council will determine them to be either low impact or high impact based on their discretion. At the time of lodging this amendment it is unclear which category this amendment falls into, however it is acknowledged that small chalet developments may be considered over the entire Shire and high impact proposals will only be favoured in the rural nodes identified.

3.3.5 P130201: TOURISM POLICY

Council Policy P130201 identifies a range of initiative actions whereby progression of tourism ventures is to be supported and developed within the Shire. Denmark has a heavy reliance on tourism and associated ancillary activities, including the provision of high quality accommodation. The quality of product on offer reflects on the Shire overall, as well as the tourism attractiveness of the wider Great Southern Region.

Relevant Objectives and Guidelines, as they relate to this amendment are identified below:

Objectives

- To recognise tourism as a social and economic force and as a major or potential major employer within the Shire of Denmark.*
- To foster and create a community awareness of the benefits of tourism within the Shire of Denmark.*
- To ensure that Council will guide and influence the development of tourism in the Shire of Denmark.*
- To provide the basic facilities and infrastructure sufficient to encourage development.*

- E. To ensure that facilities within the Shire are adequate to cater for visitors and residents.*
- F. To ensure that the attributes of the natural environment within the Shire are managed sustainably so as to maintain and enhance the resource base on which the tourism industry relies.*

Guidelines

- 1 . Council will work closely with the Denmark Tourism Inc, Tourism WA, Australia's South West and regional industry associations in all aspects of tourism development.*
- 2. Council will endeavour to provide an adequate budget allocation for tourism expenditure.*
- 5. In the formulation of its planning regulations, Council will have regard to the requirements of tourism development.*
 - a. Council, in its review of planning instruments, i.e. Strategic Plans, Town Plans and Development Central Plans, will take into consideration policies on tourism and other leisure related issues.*
 - b. In the preparation of local laws and regulations, Council will have regard to their impact on tourism and balanced development within the Shire.*
 - c. Council will encourage tourism product development and investment throughout the area and will facilitate the development application process.*
 - d. Council will encourage a high standard of design and aesthetics in all forms of tourism development.*
 - e. Council will ensure the welfare of the whole community when supporting tourism development and the provision of facilities.*
 - f. When considering tourism developments, Council will consider the social, cultural, economic and environmental impact of the proposal within the area.*
 - g. Council will ensure that where sensitive environmental, historic or cultural areas exist, these areas will be adequately protected in relation to development or usage.*

The proposal is consistent with the intentions of the above Council Policy as follows:

- The site currently provides limited opportunity to derive an income from agriculture, as its size is insufficient to support primary production as a sustainable stand-alone operation.
- The development will provide additional short stay accommodation in the form of chalets and “glamping”/camping grounds, which have a proven track record of being an attractive and positive economic driver for small local communities which do not provide large scale employment opportunities.
- Tourist accommodation provides significant downstream benefits for local communities in terms of dollars spent, benefiting local tourist attractions, businesses and tourism

operators. These flow-on effects are critical to the viability and employment opportunities for many local residents.

- At a site-specific level, through the control of various proposed scheme provisions the site will contribute to and enhance Denmark's reputation as a quality and attractive tourist destination with quality facilities, amenities and tourism attractions.

3.3.6 SHIRE OF DENMARK SUSTAINABLE TOURISM STRATEGY

The Shire of Denmark has prepared a new tourism strategy to guide long term tourism management and growth in Denmark. Known as the Sustainable Tourism Strategy, the strategy aims to build on local industry strengths, to identify the social, economic and environmental impact of tourism on the community and to guide the development of a sustainable visitor servicing model for the future.

This Strategy acknowledges that tourism is an essential part of the local economy, supporting businesses that provide employment for a significant proportion of residents. It recognises that tourism depends on quality infrastructure to attract both visitors and investors, and that Council can encourage tourism investment that aligns with its tourism vision through strategic tourism planning that enables development and reduces red tape.

This amendment is consistent with the following vision of the strategy:

“Tourism respects, celebrates and enhances Denmark’s culture, history and natural environment. The region offers opportunities for inspiring, immersive experiences; positive interactions between locals and visitors; and supports creativity and enterprise. We are all enriched by being part of this unique place.”

4 PROPOSED DEVELOPMENT

4.1 BACKGROUND

Traditional broad acre farming on rural zoned lots increasingly requires larger landholdings to remain economically sustainable. Many small rural lots (including the subject site) are unable to sustain traditional farming practices as a viable stand-alone operation, and either need to adapt and diversify their activities or become quasi-lifestyle properties where primary income is generated off-site.

As discussed in Section 3.3.2, tourism is an important contributor to the local economy in Denmark and provides the second highest number of jobs next to agriculture. Caravan and camping grounds play an important role in accommodating tourists and visitors in the Shire, with an annual average of 16,500 (or 18% of all) domestic visitors, and 5,300 (or 46% of all) international visitors staying in a caravan park or camping ground in 2003 and 2004.

To address the limited agricultural function of the site, the landowner has transitioned to what is effectively a tourist land use, by developing a tourist centre that caters for the local community, tourists, farmers, Indigenous communities, corporate clients and private events. Underpinning development of the tourist centre is the broad compatibility of this land use in this rural locality.

Whilst the tourist centre effectively serves a tourist purpose, amending the sites zoning to Tourist will provide an opportunity for further complementary tourist development. This will enable the landowner to market their services to a wider range of corporate clients and private events, provide services and accommodation forms that meets the needs of a variety of tourist needs, draw more visitors to the Shire and increase visitor numbers to tourist attractions. This will also provide economic benefits to other tourism businesses and bring new job opportunities and investment into the Shire.

4.1.1 EXISTING AND PROPOSED ZONING

The site is currently zoned Rural under TPS3. This amendment supports rezoning the site to a Tourist zone.

The ultimate tourist development will be co-ordinated and controlled through a Local Development Plan, site specific planning control measures proposed to be introduced into Appendix 13 of TPS3 and conditions of development approval.

4.2 PROPOSED TOURISM DEVELOPMENT

The ultimate tourist development will consist of three complementary and integrated uses:

- i. A Tourist Centre, comprising a Tavern, Shop, Restaurant, Winery, Distillery and Brewery.
- ii. Tourist accommodation.
- iii. Spa Retreat.

Each of the above is discussed in more detail in the following sections. As identified in **Appendix E - Local Development Plan**, the broad layout of the proposed tourist development is illustrated.

In accordance with recommendations of the various State planning for tourism policies and documents, any strata titling of tourism development would be restricted to built form strata (i.e. - survey strata or vacant strata should not be proposed or supported).

4.2.1 TOURIST ACCOMMODATION AND SPA RETREAT

A number of forms of tourist accommodation are proposed to cater for different tourist needs, including chalets and camping sites (i.e. “ glamping”).

A spa retreat is located adjacent to the lodge. This will provide, but not be limited to, massage therapy, holistic healing, beauty therapy and aromatherapy.

Chalets are proposed to be located to the north of the tourist centre and will overlook the dams. These chalets will provide for up to two guest beds and cater for small groups, families or corporate clients.

Camping/glamping sites are proposed to the west of the dams in areas that have been cleared and contain pastures. These sites will provide accommodation for backpackers, campers, as well as cyclists and hikers using the Munda Biddi trail, Bibbulmun Track and Denmark-Nornalup heritage trail.

A Local Development Plan has been prepared and included at **Appendix E** illustrating the location of the tourist accommodation and its relationship with other elements of the tourist development and surrounding areas. The final layout and detailed design of the tourist accommodation and camping/glamping sites will be determined through the development application process.

4.2.2 TOURIST CENTRE AND TAVERN

Future expansion of the tourist centre will incorporate a tavern that will include a restaurant (café), bar, cellar sales (in association with an approved distillery), the sale of take away packaged alcohol and the hosting of events and provide guests and visitors with another unique tourist attraction to visit. Many of these uses are already approved and have been developed.

The distillery, winery and brewery, which currently forms part of the tourist centre, will source local ingredients to produce alcoholic beverages with up to 98% local content.

Tourists and guests will be provided with an opportunity to take guided tours to better understand where their beverages come from and how they are produced. The tavern will provide opportunities for product sampling and “farm gate” sales in a new and exciting beverage category of low calorie/alcohol seltzers as well as traditional distillery outputs; gin, vodka and schnapps. A copy of the landowners Alcohol Management Plan is included at **Appendix F**.

Agritourism, otherwise known as food tourism, encompasses a wide variety of activities where agriculture and tourism intersect, including the production of wine, craft beer and spirits. This sector of tourism is becoming increasingly important to regional economies and for some regions (e.g. - Margaret River) agritourists contributes more to the local economy than agriculture.¹

Growth of the agritourism sector is forecast to continue as consumers and tourists increasingly seek to better understand where their food comes from, learn how it is produced and experience the ultimate in low food miles by enjoying produce where it is produced. Agritourism also allows regional economies to showcase what’s good about the region, its unique growing conditions, natural resources (clean air, water and soils) and provides a tourist drawcard from which other regional tourism businesses and experiences can benefit.

This amendment provides an opportunity to responsibly integrate different tourist uses on a single site. This will further assist with promoting Denmark as a desirable tourist destination, provide economic benefits to other tourism businesses and bring new job opportunities and investment into the Shire.

¹ <https://www2.deloitte.com/au/en/pages/consumer-industrial-products/articles/agritourism.html>

4.3 SERVICING

4.3.1 ACCESS

No changes to the existing site access are required to support this amendment. The existing crossover onto Wentworth Road will be retained and continue to serve as the primary access/egress to the site. Wentworth Road is a well maintained local distributor road (unsealed) under the responsibility of the Shire of Denmark.

The development approval issued in 2020 required the upgrade of Wentworth Road to a sealed standard to the satisfaction of the Shire of Denmark.

The existing crossover onto South Coast Highway will be retained and serve as a secondary access/egress in the event of a bushfire emergency. South Coast Highway is a well maintained road and a declared highway under responsibility of Main Roads WA (MRWA). South Coast Highway is subject to a 90 kph speed limit adjacent to the site and beyond.

As confirmed by the traffic assessment (refer to **Appendix G**) both crossovers are located in areas with good visibility and suitable sightlines to provide safe access to and from the site. Furthermore, the report confirms the South Coast Highway and Wentworth Road intersection is able to support any additional vehicles movements as proposed by this amendment.

4.3.2 POWER AND TELECOMUNICATIONS SUPPLY

Reticulated power infrastructure is available and is currently connected to the site. It is anticipated that the ultimate tourist development will be connected to this power supply, with details of any upgrades and/or separate metering provided through the development application process. To reduce noise impacts on neighbouring properties and to promote renewable energy, the use of diesel generators is not proposed.

4.3.3 WATER SUPPLY

The site and surrounding land holdings are not connected to a reticulated water supply, with rainwater harvesting and storage a common occurrence in rural localities.

The existing dams have obtained the relevant approvals and provide a capacity of over 1 mega-litre and can provide a suitable water supply for the ultimate tourist development. The dams are fed by underground springs with a capacity of more than 125,000 mega litres of mineralised waters. Future development will require a potable water supply be provided from rainwater storage and/or the installation of a bore with water treated either via reverse osmosis or UV sterilization.

Mitigation measures to address safety to the dams will need to be addressed through the development application process.

4.3.4 STORMWATER DRAINAGE

Based on previous studies undertaken for the site relating to the hydrological and environmental nature, from an urban water management perspective, the site is not considered hydrologically constrained due to the slope, geology, separation to groundwater and lot size. It is considered that drainage can be appropriately managed without any adverse impact to the environment or surrounding land users.

A local water management strategy should be prepared at the development application stage, providing details of stormwater run-off, management and onsite containment.

Extensive primary, secondary and tertiary overflows have been designed and constructed in 2011 to withstand a 1:100 year event. In 2013 Lot 305 withstood more than 250 mm in 24 hours (1:100 year flood event). While many dams at the time had their walls breached, the site was able to withstand the flood utilizing its primary and secondary overflows.

4.3.5 EFFLUENT DISPOSAL

The site and surrounding land holdings are not connected to a reticulated sewerage service. Future development will require onsite effluent disposal to occur to the satisfaction of the Department of Health and Shire of Denmark, in a similar way to that associated with the tourist centre.

To mitigate site constraints and any potential risks associated with onsite waste water disposal impacting on the local water quality, as per the findings from the Site and Soil

Evaluation Report- Refer **Appendix D**; wastewater will be piped and disposed of on an adjacent portion of Lot 305

Key findings of the Site and Soil Evaluation report include:

- The site is not located within a Sewage Sensitive Area.
- The site contains a water way (Little River) and several dams, all of which are separated from RTE007 by at least 100m.
- Depth to groundwater during winter testing was at least 0.7m BGL.
- Phosphorus export risk is low, so a nutrient removing system is not likely to be required.
- A secondary treatment system is recommended. The largest concept of the proposed development will require an irrigation area of 7,510m². The area associated with RTE007 comprises 2ha.

4.3.6 SOLID WASTE MANAGEMENT

It is anticipated that solid waste associated with the ultimate tourism development will be collected daily in green wheeled garbage bins and stored in a large “skip style” rubbish bin onsite, before being sent to the Denmark refuse facility on a regular basis.

4.4 VISUAL IMPACT ASSESSMENT

A Visual Impact Assessment has been undertaken in accordance with the WAPC’s Visual Landscape Planning in WA - a manual for evaluation, assessment, siting and design. The assessment has been undertaken and demonstrated in accordance with **Figure 8** and **Table 5** over page.

The proposed development requires consideration of visual impacts on a local level, noting the sites visibility (in terms of the proposed developed area) does not extend significantly beyond a defined and localised area. Given existing landform and site conditions, people using South Coast Highway, scenic vantage points and surrounding residents are likely to be those who would most obviously notice the change in development intensity.

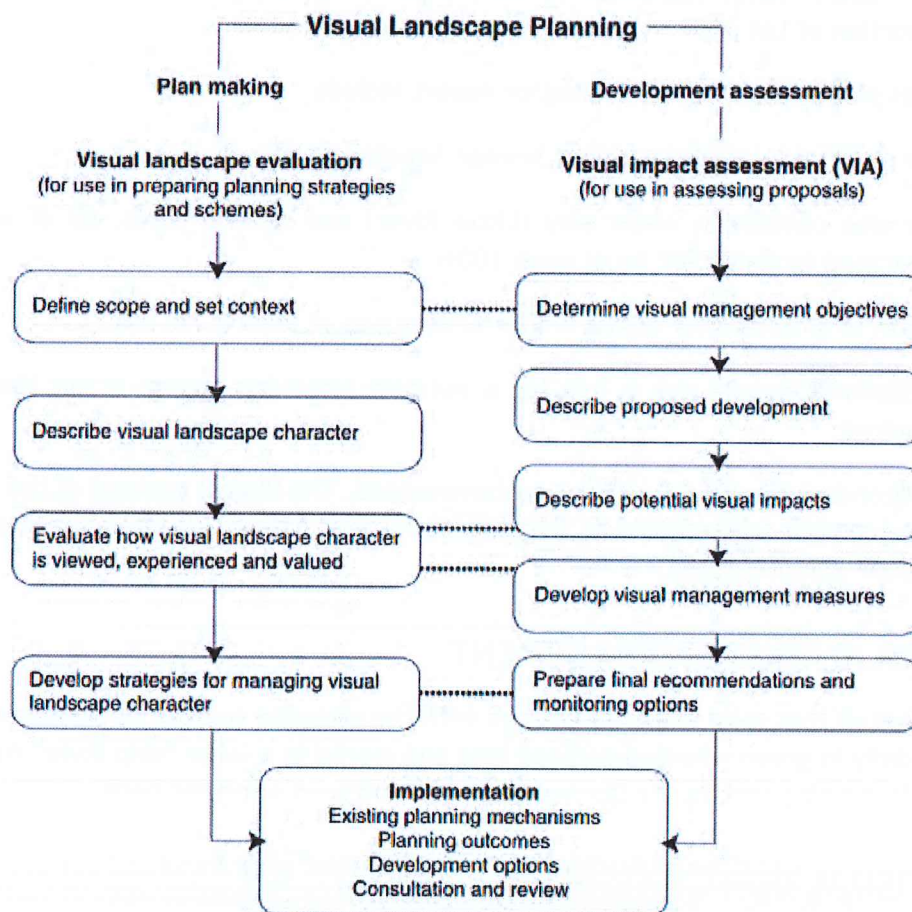


Figure 9: Visual Landscape Planning - Relationship

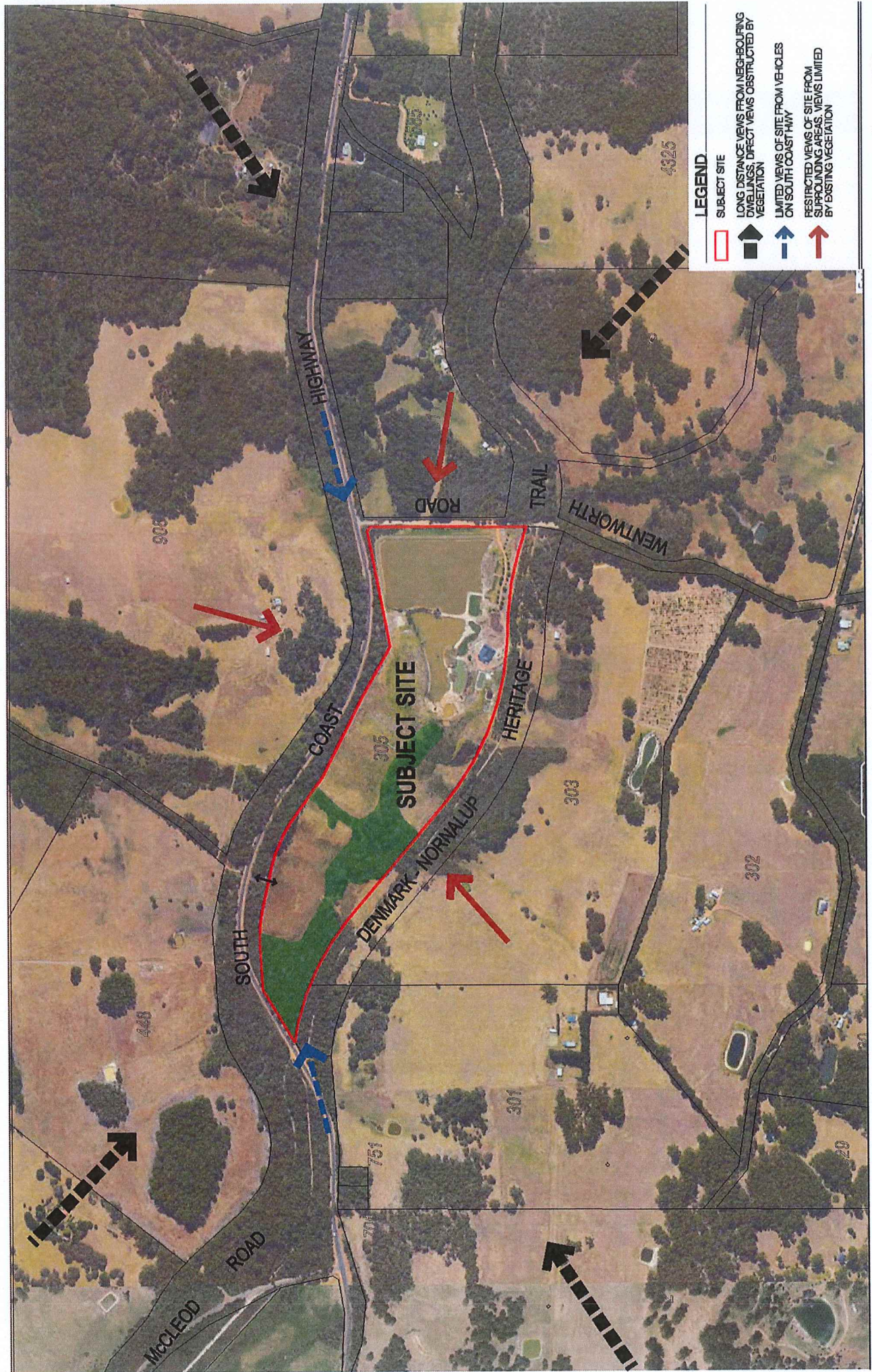
The key considerations have been reflected below, with specific comment provided in italics for ease of reference:

VISUAL LANDSCAPE EVALUATION	DEVELOPMENT ASSESSMENT
<p>Define scope and context: <i>The scope and context of the landscape visual assessment relevant to this particular proposal, is typically defined as the area within a 1km radius when viewed from land.</i></p>	<p>Determine visual impact management objective: <i>The objective for the proposed development and rezoning is to facilitate a built form outcome which seamlessly blends with the existing environment, which displays discrete qualities and retains high environmental values without being overly evident when viewed from the public realm.</i></p>
<p>Describe visual landscape character: <i>The visual landscape character can currently be defined as one which demonstrates low development intensity, situated in an area of high environmental values generated as a result of the current rural setting.</i></p>	<p>Describe proposed development: <i>Refer to Part 6 - "Local Development Plan" of this report.</i></p>

<p>Evaluate how visual landscape character is viewed, experienced and valued: <i>Landscape character is currently viewed, experienced and values by residents and visitors to the area, particularly users of South Coast Highway (from within a vehicle). There is a community expectation that development outcomes are of a high quality, and reflect the rural and environmental character of the locality.</i></p>	<p>Describe potential visual impact: <i>The potential visual impact will be most evident from people using South Coast Highway (within a vehicle). Limited views of the site and of future development will be evident from land to the west and north, given existing vegetation (proposed to be retained) and landform (which is not proposed to be modified).</i></p>
<p>Develop strategies for managing visual landscape character: <i>Where possible development should look to retain and enhance existing landscape values, particularly given the tourism function of the site. Tourists seek high quality settings, and this is expected to complement existing landscape values.</i></p>	<p>Develop visual management measures: <i>A number of potential visual management measures are proposed to minimise the potential visual impact on the existing environment and to ensure future development is harmonious with the receiving environment. Such measures focus not only on the visibility of the site from the public realm, but also protecting and improving existing landscape values which contribute to the setting and on-site amenity of the site. These include:</i></p> <ul style="list-style-type: none"> <i>• Retain and protect existing on-site vegetation and consider strategic building placement to avoid tree removal/disturbance (NB: planting of vegetation is not required given the significant vegetation planting undertaken on the site's boundary to South Coast Highway to date);</i> <i>• Support for additional landscaping adjoining the South Coast Highway frontage in relevant locations;</i> <i>• Limitation on building colours, bulk and materials to ensure blending of built form into existing landform;</i> <i>• Limitations on the fencing materials to ensure it is of a rural nature and blends in with the rural nature and characteristics of the locality;</i> <i>• Clustering of buildings away from the property boundary, so as to avoid ribbon development adjacent to a major tourist route.</i>
	<p>Prepare final recommendations and monitoring options: <i>Introduce relevant Scheme provisions within this amendment, to ensure the matters reflected above are adequately addressed and provided for at the relevant future stage of development. Development controls (colours, building materials etc) can be confirmed and approved at</i></p>

	<i>Development Application and Building Permit stage.</i>
Implementation <ul style="list-style-type: none"> • Existing planning mechanisms • Planning outcomes • Development options • Consultation and review <p><i>See above. Various Scheme provisions are proposed within this Amendment in order to minimise visual impacts on the localised receiving environment.</i></p>	

The above analysis is represented in **Figure 8**, which diagrammatically represents the context of potential visual impact and wider landscape implications.



- LEGEND**
- SUBJECT SITE
 - ➔ LONG DISTANCE VIEWS FROM NEIGHBOURING DWELLINGS, DIRECT VIEWS OBSTRUCTED BY VEGETATION
 - ➔ LIMITED VIEWS OF SITE FROM VEHICLES ON SOUTH COAST HWY
 - ➔ RESTRICTED VIEWS OF SITE FROM SURROUNDING AREAS, VIEWS LIMITED BY EXISTING VEGETATION

**FIGURE 8 - VISUAL LANDSCAPE PLANNING - MAP ANALYSIS
LOT 305 SOUTH COAST HIGHWAY, OCEAN BEACH**

5 ENVIRONMENTAL CONTEXT

Aurora Environmental carried out a Site and Soil Assessment of the site to identify the soil characteristics, late winter ground water levels and suitability for on-site effluent disposal. A copy of the Site and Soil Assessment is included at **Appendix D**, which confirms on-site effluent disposal is able to occur in accordance with provisions of the Government Sewerage Policy 2019.

5.1 LANDFORM

The site can be described as a gently undulating plateau, sloping gently upwards from around 110m AHD in the west down to 70m AHD in the east, with an average slope grade of ~2°.

5.1.1 SOIL CONDITIONS

Localised soils are free draining. The site does not contain any wetlands, quagmires and is not subject to seasonal inundation.

5.1.2 SOIL CHARACTERISTICS

Broad scale mapping from the Department of Primary Industries and Regional Development soil characteristics of south-west Western Australia identifies the soil types in the locality as *Gravels usually in a loamy matrix*. These include loamy gravels, commonly also duplexes and loamy earths.

This indicates that the dominate topsoil is loamy (a thin sandy surface may be present), with uniform loam or loam grading to clay loam or clay.

5.1.3 ACID SULPHATE SOILS

Limited datasets are available showing broad scale mapping of acid sulphate soils for the Denmark area. There is low probability of acid sulphate soils occurring on the site given the soil types in the locality and distance to known acid sulphate soils.

It is recommended that when the nature of ground disturbances are known (i.e. - cut fill, etc), then a Department of Environment and Regulation (DER) "ASS Self Assessment" form is completed, and if required, an ASS investigation and reporting occur as required by the DER. This could be undertaken as a condition of development approval.

5.1.4 SURFACE AND GROUNDWATER

There are no known surface and groundwater bodies, with the exception of the existing dams. A gully containing a stand of mature karri trees is located centrally on an east-west axis and channels winter rainfalls downhill into the dams.

6 LOCAL DEVELOPMENT PLAN

A Local Development Plan (LDP) has been prepared to support this amendment (refer **Appendix E**), and provide guidance to decision makers when considering an application for tourist development over the site. This LDP is a guide only and is subject to review independent of any formal Town Planning Scheme Amendment process.

Key provisions of the LDP include the following:

- **Clustering of built-form** centrally within the site, away from the property boundary, will assist to reduce any potential visual impacts from the public realm or surrounding properties. Clustering around the series of dams provides a high level of amenity and ensures that permanent structures are located on a portion of the site with the least bushfire risk.
- A **tourist centre, restaurant, shop, distillery, brewery, winery and tavern** are identified on a portion of the site where the existing tourist centre is located. Expansion of the tourist centre to include a tavern will overlook the series of dams and provide a high level of amenity. This location is also close to the primary access to the site, which will assist to minimise vehicle movements on-site and avoid vehicle interactions with camping/glamping and chalet guests.
- A **spa retreat** is located adjacent to the primary access to the site, overlooking the series of dams. This location provides a high level of amenity to guests and minimises vehicle movements on-site. It is also sufficiently setback from the tourist centre building to overcome potential noise impacts, but in close enough proximity to allow guests to walk to the tourist centre.
- **Chalet** sites are located around the tourist buildings overlooking the dams. It is anticipated the maximum number of guest vehicles using the chalets will be two per chalet. These locations provide a high level of amenity to guests and minimises vehicle interactions with the camp/glamping sites. It is also sufficiently setback from the tourist centre building to overcome potential noise impacts, but in close enough proximity to allow guests to walk to the tourist centre.
- **Camping/Glamping** sites are located west of the built-form development on areas of the site, which have been cleared and contain pastures. The final location of the camp/glamping sites will be determined at the Development Application stage. However, it is noted future sites will be sufficiently distanced from the built-form and each other to provide privacy and natural ambiance to guests. Future sites will be located adjacent to mature karri trees in order to provide screening from other land uses, help reduce visual and noise impacts, improve privacy and contribute to a desirable setting for camp users. Existing vegetation in the road reserve complemented with additional planting provides visual screening to the camp/glamping sites for vehicles travelling on South Coast Highway.
- Existing stands of mature karri trees located on the western and central portions of the site are to be retained and protected. This will assist with environmental management of the land, including preventing alluvial soils being deposited into the

dams, as well as protecting this portion of the site from future built-form development. These areas of vegetation serve not only to assist with environmental management of the land holding, but also provide important visual screening and setbacks to future tourist development from surrounding lots. Additional planning control measures are proposed within Appendix 13 of TPS 3 prohibiting development or clearing of vegetation in areas identified as *tree retention area*.

- The provision of a **Residence** or Residences to provide future accommodation options for staff to be located in Common Property in any future strata proposal.

7. CONCLUSION

This amendment proposes to rezone No. 40 (Lot 305) Wentworth Road, Ocean Beach from Rural to Tourist, and seeks to introduce a number of site specific planning control measures into Appendix 13 of TPS3.

The salient points of summary and support for this scheme amendment are:

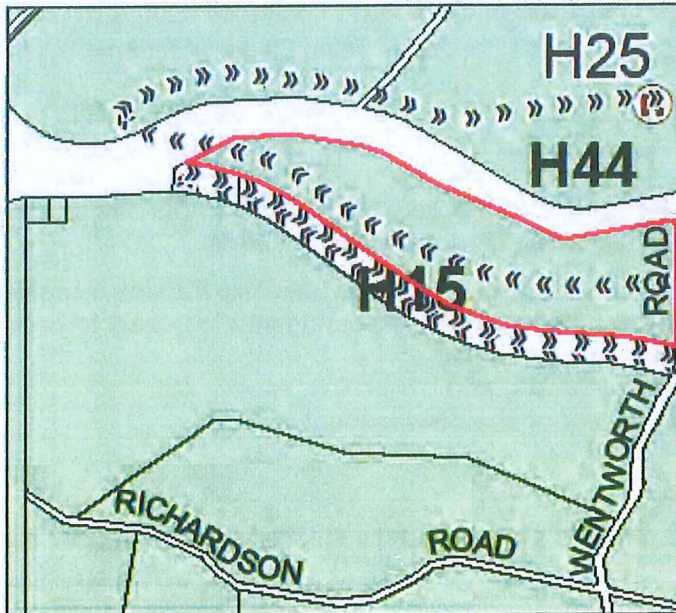
- The site currently provides limited opportunity to derive an income from agriculture, as its size is insufficient to support primary production as a sustainable stand-alone operation. As such, the landowner has transitioned to what is effectively a tourist land use, by developing a tourist centre that caters for corporate clients and private events. Underpinning development of the tourist centre is the broad compatibility of the land use in this rural locality. The main opportunity to support a viable stand-alone operation for the site now rests with tourism in the form of expanding the tourist centre and providing a complementary tourism development.
- Expanding the tourist centre and providing a complementary tavern (and associated uses), spa retreat and tourist accommodation will enable the landowner to attract more corporate clients and private events from markets, which they are currently unable to service. Tourist accommodation on the site will provide tourist centre guests with the ability to stay onsite overnight following an event. This is an important factor for many corporate and private events when deciding where to host an event.
- The site is identified as being suitable for tourism development. Clustering of built-form centrally within the site will assist with screening and ensure that the rural character of the natural environment is retained, and visual landscape qualities of the locality are protected.
- The site is located in close proximity to unique tourist attractions and landmarks of both local and State significance including William Bay National Park (~1km), Greens Pool (~4km), Elephant Rocks (~4km) and Mad Fish Bay (~4.5km), and is deemed to have a high tourism value based on location and site specific criteria that provide guidance when identifying suitable tourist sites in a local planning scheme.
- The site is in close proximity to walking and bike trails (including Denmark-Nornalup heritage trail, Munda Biddi trail and the Bibbulmun Track) and located adjacent a major tourist route, providing an opportunity to develop an intermodal tourist development catering for tourists travelling on foot, bike and in vehicles. This will provide tourists with the unique ability to access all track/trails from a single location, increase track/trail usage and improve upon the overall tourism appeal of the Shire. This will also provide an opportunity for Denmark to become a world class trails destination, attracting more domestic and international visitors and increasing the overall appeal of the Shire as a tourist destination. A significant outcome arising from this is the economic benefit provided to other local tourist businesses and operators, and opportunities to bring new investment and employment into the area.
- Future tourist development on the site will improve upon existing tourist linkages to major tourism attractions by providing additional tourism experiences adjacent to a

number of major tourist routes, including; South Coast Highway, Munda Biddi trail and Denmark-Nornalup heritage trail. Improving tourist linkages not only benefits other tourism operators and businesses, but positively contributes to the overall appeal and reputation of the Shire as a tourist destination.

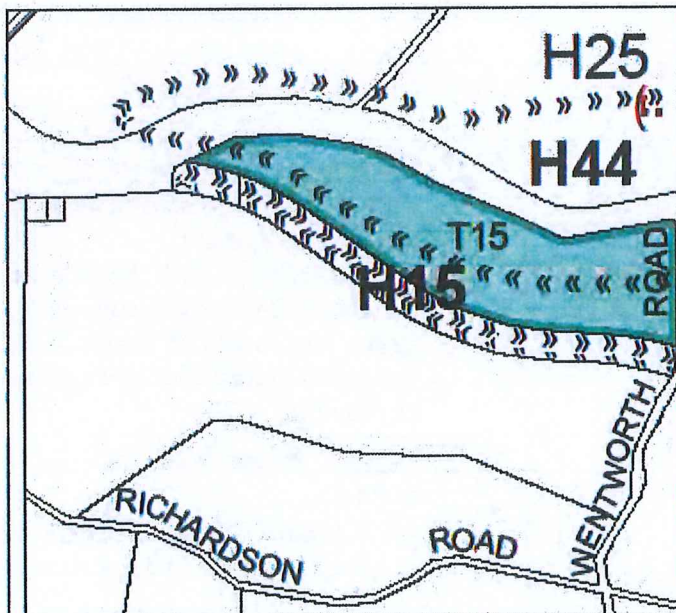
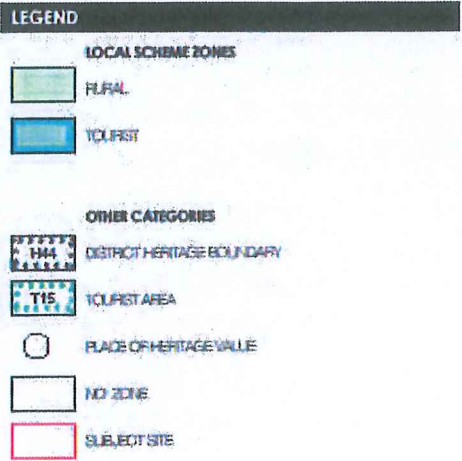
- This amendment supports the objectives and criteria of local and State Planning policies and strategies when planning for tourism, and will provide an opportunity for the future development of a range of tourist accommodation types (chalets and camping/glamping sites) and new tourism facilities (distillery and tavern) that complement the tourist centre and the surrounding land holdings.
- Management of potential impacts and/or mitigation approaches associated with rezoning the site to Tourist have been substantially resolved with planning control measures proposed within Appendix 13 of TPS3 and a Local Development Plan. Additional planning control measures are able to be provided through the development application process to ensure suitable social and environmental outcomes are achieved.
- There are no constraints to development of the site over and beyond the usual local conditions that can't be dealt with through appropriate development controls to be included in Appendix 13 of TPS3 and conditions of development approval.
- Zoning the site Tourist in TPS3 will assist to protect the site for this purpose and enable further complementary tourist development in a strategic location in close proximity to existing tourist attractions.

As a result of the above it is respectfully requested that the Shire of Denmark commence the statutory processes to enable the rezoning to proceed as per the *Scheme Amendment Map* overleaf.

SHIRE OF DENMARK
Town Planning Scheme No.3
Amendment No. 148



EXISTING ZONING



PROPOSED ZONING



OCTOBER 2020
 TOWN PLANNING
 SCHEME NO.3
 AMENDMENT NO. 148

**Planning and Development Act 2005
Shire of Denmark**

Town Planning Scheme No.3

Amendment No.148

The Council of the Shire of Denmark under and by virtue of the powers conferred upon it in that behalf by the *Planning and Development Act 2005*, hereby amends the above Town Planning Scheme by:

- a) Rezoning No. 40 (Lot 305) Wentworth Road, Ocean Beach, from 'Rural' to 'Tourist (T15)' zone.
- b) Introducing the definitions:
 - i. "Brewery" - means premises the subject of a producer's licence authorising the production of beer, cider or spirits granted under the Liquor Control Act 1988;
 - ii. "Tourist Development" - means a building, or a group of buildings forming a complex, other than a bed and breakfast, a caravan park or holiday accommodation, used to provide –
 - (i) short-term accommodation for guests; and
 - (ii) onsite facilities for the use of guests; and
 - (iii) facilities for the management of the development.
- c) Amending the Scheme Map accordingly.
- d) Inserting Tourist (T15) and associated provisions into Appendix XIII – Schedule of Tourist Zones of the Scheme Text.

Particulars of the Land		Tourist Use	Conditions of Tourist Use
T15	No.40 (Lot 305) Wentworth Road, Ocean Beach	Notwithstanding any other provisions of the scheme, the following land uses and associated permissibility apply: <ul style="list-style-type: none"> • Brewery (AA) • Boarding House (AA) • Caravan Park (AA) • Caretaker's Dwellings (AA) • Holiday Accommodation (AA) • Tavern (AA) • Tourist Development (AA) • Rural Pursuit (AA) • Restaurant (AA) • Shop (AA) • Winery (AA) • Market (AA) 	<ul style="list-style-type: none"> I. All development shall be connected to a Secondary Treatment System (STS) approved by the Department of Health. A secondary Treatment System with nutrient removal may be required. II. All new development shall be setback a minimum of <ul style="list-style-type: none"> • 30 metres from South Coast Highway. • 20 metres from all other boundaries. III. All structures including fencing within the zone shall be constructed to be sympathetic to existing landscaping in terms of colour, finishes, location and height, to the satisfaction of the local government. IV. At the development application stage the proponent shall

		<ul style="list-style-type: none"> • Private Recreation (AA) • Reception Centre (AA) 	<p>prepare and submit a Landscape Revegetation Plan for the protection of existing remnant vegetation, recognition and protection of black cockatoo habitat and revegetation of water courses.</p> <p>V. Accommodation is limited to a stay of 3 months in a 12 month period other than caretaker's dwelling(s)</p>
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PLANNING AND DEVELOPMENT ACT 2005
SHIRE OF DENMARK

TOWN PLANNING SCHEME NO.3

AMENDMENT NO.148

Adoption:

Adopted by resolution of the Council of the Shire of Denmark at the meeting of the Council held on the
.....16th..... day ofFeb..... 2021,



.....
Shire President

.....
Chief Executive Officer

FINAL APPROVAL

Adopted for final approval by resolution of the Council of the Shire of Denmark at the meeting of the
Council held on the19th..... day ofSEPTEMBER..... 2023 and the Common Seal of the Shire was
hereunto affixed by the authority of a resolution of the Council in the presence of:

.....
Shire President

.....
Chief Executive Officer

RECOMMENDED/SUBMITTED FOR FINAL APPROVAL

.....
Delegated under S.16 of PD Act 2005

12/04/2024
.....
Date

FINAL APPROVAL GRANTED

It is hereby certified that this is a true copy of the
~~Scheme~~ Amendment, final approval to which was
endorsed by the Minister for Planning on 24/4/2024

Certified by
.....

Officer of the Commission Duty authorised pursuant
to Section 24 of the Planning and Development Act
2005 and Regulation 32(3) Scheme and Regulation
63(3) (Amendment) of the Planning and Development
(Local Planning Scheme) Regulations 2015.

.....
Minister for Planning

.....
Date

APPENDIX A - CERTIFICATE OF TITLE

999L
GATEWAY SETTS
Exam - Post
M224676



WESTERN



AUSTRALIA

REGISTER NUMBER 305/DP75450	
DUPLICATE EDITION 1	DATE DUPLICATE ISSUED 23/4/2013

DUPLICATE CERTIFICATE OF TITLE
UNDER THE TRANSFER OF LAND ACT 1893

VOLUME **2809** FOLIO **900**

The person described in the first schedule is the registered proprietor of an estate in fee simple in the land described below subject to the reservations, conditions and depth limit contained in the original grant (if a grant issued) and to the limitations, interests, encumbrances and notifications shown in the second schedule



REGISTRAR OF TITLES

LAND DESCRIPTION:

LOT 305 ON DEPOSITED PLAN 75450

REGISTERED PROPRIETOR:
(FIRST SCHEDULE)

KAREN BIRKBECK OF PO BOX 332, DENMARK

(AF M224676) REGISTERED 28 MARCH 2013

LIMITATIONS, INTERESTS, ENCUMBRANCES AND NOTIFICATIONS:
(SECOND SCHEDULE)

1. M224677 RESTRICTIVE COVENANT TO SHIRE OF DENMARK SEE DEPOSITED PLAN 75450 REGISTERED 28.3.2013.

Warning. A current search of the certificate of title held in electronic form should be obtained before dealing on this land.
Lot as described in the land description may be a lot or location.

-----END OF DUPLICATE CERTIFICATE OF TITLE-----

STATEMENTS:

The statements set out below are not intended to be nor should they be relied on as substitutes for inspection of the land and the relevant documents or for local government, legal, surveying or other professional advice

SKETCH OF LAND: DP75450 [SHEET 1,2].
PREVIOUS TITLE: 2597-800.
PROPERTY STREET ADDRESS: NO STREET ADDRESS INFORMATION AVAILABLE.
LOCAL GOVERNMENT AREA: SHIRE OF DENMARK.



APPENDIX B - BUSHFIRE MANAGEMENT PLAN



 **BushFire Works**

BUSHFIRE MANAGEMENT PLAN
Lot 305 #2201 South Coast Highway,
OCEAN BEACH

CLIENT: Stephen & Karen Birkbeck
SITE LOCATION: Lot 305 #2201 South Coast Highway, Ocean Beach
DATE: 21/05/2021
SHIRE/CITY: Shire of Denmark
FIRE CONSULTANT: Craig Hughes, David Deeley
CLIENT CONTACT # 08 9840 9695
BFW FILE #: 20190520
VERSION #: 2.0



BushFire Works

ABN 945 23123 843

PO Box 1249, Bibra Lake DC, WA 6965

enquire@bushfireworks.com.au

www.bushfireworks.com.au

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Bushfire Management Plan – Complex Development Application

Bushfire management plan/Statement addressing the Bushfire Protection Criteria coversheet

Site address:

Site visit: Yes No

Date of site visit (if applicable): Day Month Year

Report author or reviewer:

WA BPAD accreditation level (please circle):

Not accredited Level 1 BAL assessor Level 2 practitioner Level 3 practitioner

If accredited please provide the following.

BPAD accreditation number: Accreditation expiry: Month Year

Bushfire management plan version number:

Bushfire management plan date: Day Month Year

Client/business name:

	Yes	No
Has the BAL been calculated by a method other than method 1 as outlined in AS3959 (tick no if AS3959 method 1 has been used to calculate the BAL)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Have any of the bushfire protection criteria elements been addressed through the use of a performance principle (tick no if only acceptable solutions have been used to address all of the bushfire protection criteria elements)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Is the proposal any of the following (see [SPP 3.7 for definitions](#))?

	Yes	No
Unavoidable development (in BAL-40 or BAL-FZ)	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Strategic planning proposal (including rezoning applications)	<input checked="" type="checkbox"/>	<input type="checkbox"/>
High risk land-use	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Vulnerable land-use	<input checked="" type="checkbox"/>	<input type="checkbox"/>

None of the above

Note: Only if one (or more) of the above answers in the tables is yes should the decision maker (e.g. local government or the WAPC) refer the proposal to DFES for comment.

Why has it been given one of the above listed classifications (E.g. Considered vulnerable land-use as the development is for accommodation of the elderly, etc.)?

The proposal is to rezone No. 2201 (Lot 305) South Coast Highway, Ocean Beach from 'Rural' to 'Tourist' with future proposal is then to develop a tourist center to include restaurant (café), tourist accommodation and a spa retreat.

The information provided within this bushfire management plan to the best of my knowledge is true and correct:

Signature of report author or reviewer





Date



Bushfire Management Plan – Complex Development Application

Document control

Client: Stephen & Karen Birkbeck

Report version	Purpose	Author/reviewer and accreditation details	Date submitted
Draft 1.1	BMP / BEEP	Peter Bidwell Author	24/10/2019
Final 1.2	Review and sign-off	Dr David Deeley L2	29/10/2019
Draft 2.0	Revised BMP to reflect LDP update	Craig Hughes L1 46483	21/05/2021
Final 2.0	Review and sign-off	Dr David Deeley L2 37575	25/5/2021

I hereby declare that I am a BPAD accredited bushfire practitioner. 	
Accreditation No.	BPAD 46483
Signature	
Date	21/05/2021

I hereby declare that I am a BPAD Accredited bushfire practitioner. 	
Accreditation No.	37575
Signature	
Date	25/05/2021

Disclaimer

The recommendations and measures contained in this assessment report are based on the requirements of the Australian Standards 3959 – Building in Bushfire prone Areas, WAPC / DFES Guidelines for Building in Bushfire Prone areas (State Planning Policy 3.7) and CSIRO's research into Bushfire behaviour. These are considered the minimum standards required to balance the protection of the proposed dwelling and occupants with the aesthetic and environmental conditions required by local, state and federal government authorities. They DO NOT guarantee that a building will not be destroyed or damaged by a bushfire. All surveys and forecasts, projections and recommendations made in this assessment report and associated with this proposed dwelling are made in good faith on the basis of the information available to the fire protection consultant at the time of assessment. The achievement of the level of implementation of fire precautions will depend amongst other things on actions of the landowner or occupiers of the land, over which the fire protection consultant has no control. Notwithstanding anything contained within, the fire consultant/s or local government authority will not, except as the law may require, be liable for any loss or other consequences (whether or not due to negligence of the fire consultant/s and the local government authority, their servants or agents) arising out of the services rendered by the fire consultant/s or local government authority.

Section 1: Proposal Details

The proposal is to rezone No. 2201 (Lot 305) South Coast Highway, Ocean Beach from 'Rural' to 'Tourist' under the Shire of Denmark's Town Planning Scheme No.3 (TPS3).

A future proposal is then to develop a boutique premium food and beverage tourism centre ("*tourist centre*") consisting of a tavern that will include a restaurant (café), bar, cellar sales (in association with an approved distillery), the sale of take away packaged alcohol and the hosting of events. This will be complemented by tourist accommodation and a spa retreat.

This property is situated in the William Bay locality, 10 km west of the Denmark Town Centre via South Coast Highway between Denmark and Bow Bridge, close to the William Bay (Greens Pool) tourist site. It is also situated right on the South Coast Highway – the main tourist thoroughfare in this area.

Lot 305 is totally cleared in the eastern half and has a series of small dams connecting to a very large dam. This area has an existing building currently utilised for commercial purposes. There has been some planting of ornamental trees along the entrance from Wentworth Road. The western half is partially cleared but retains broad areas of uncleared riparian vegetation along the existing creek lines. From the western boundary the land slopes gently (~2°) to the east. Lot 305 is actively farmed with cattle grazing the pastures so there is little grassland fuel available to carry a running fire during the bushfire season.

The area intended for the tourist development is within the existing building site on the eastern portion of the property.

To the north of Lot 305 is the South Coast Highway and associated road reserve with a narrow strip of roadside vegetation. East of Lot 305 is Wentworth Road which is followed by farmland that is partially cleared with swathes of class A Forest and contains a residence. To the south and southwest is the Denmark to Nornalup Rail Trail followed by Lot 304 (also owned by the proponents). Lot 304 is cleared for pasture and cattle grazing with some remaining paddock trees.

Access to Lot 305 is directly from Wentworth Road, some 280 metres south of the South Coast Highway.

The 'Acceptable Solutions' described in this BMP will ensure the development conforms to all relevant policies and standards for the safety of guests and staff, as required by SPP 3.7.

The Guidelines¹ also recommend that consideration also be given to a Bushfire Emergency Evacuation Plan (BEEP), within the statement against the bushfire protection criteria. In this instance a Bushfire Emergency Evacuation Risk Analysis and BEEP will be included at time of future development.

This BMP document and the recommendations contained within it are aligned to the following;

- Consistency with SPP 3.7 and the planning requirements for local government;
- Identification of bushfire risks using vegetation types and slopes as in AS3959 – 2018;
- Identification of assets at risk- life, property, infrastructure and the environment;
- Identification of bushfire risk mitigation measures as acceptable solutions within SPP 3.7;
- Allocation of responsibilities to persons / entities for the implementation of recommendations and management measures;
- Compliance with the Shire of Denmark's "Fire Management Notice".

¹WAPC (2017) Guidelines for Planning in Bushfire Prone Areas v1.3, Dec 2017.

Bushfire Management Plan – Complex Development Application

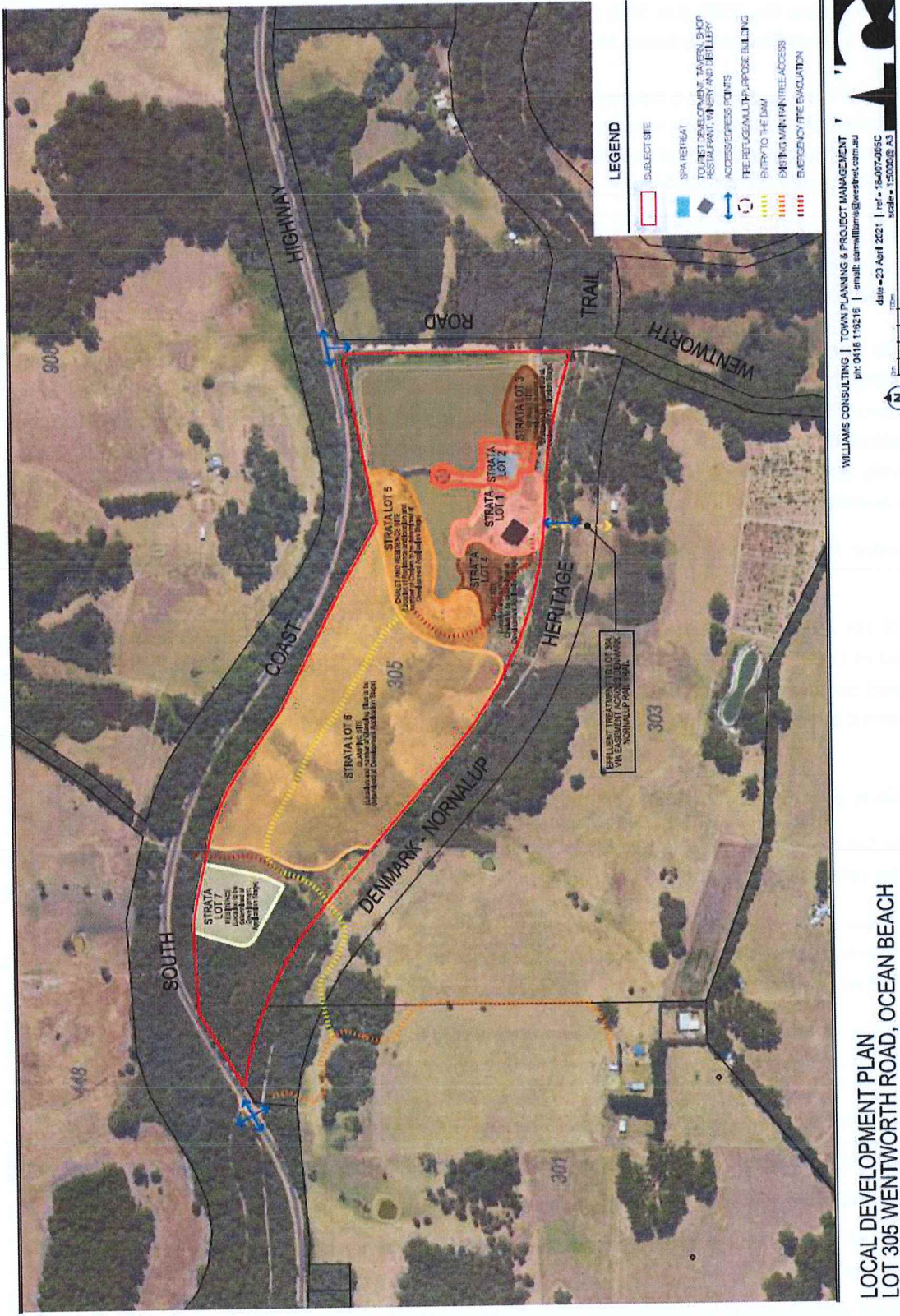


Figure 1 Local Development Plan

Bushfire Management Plan – Complex Development Application

Bushfire Prone Map

- Legend**
- Lots
 - Lot Boundary
 - Bushfire Prone Areas (OBRM, Sept 2019)



Map Printed from FileMaps on Fri May 21 11:55:11 AWST 2021

Figure 2 Bushfire Prone Map

Section 2: Environmental Considerations

Some bushfire prone areas also have high biodiversity values. State Planning Policy 3.7 (SPP3.7) policy objective 5.4 recognises the need to consider bushfire risk management measures alongside environmental, biodiversity and conservation values.

Subsection 2.1: Native Vegetation – modification and clearing

There is no native vegetation modification / clearing required at this lot other than maintaining the APZ around the development site described under Element A2.1. achieve a rating of ≤BAL-29 consistent with SPP3.7.

The selected area retains native vegetation representative of the following Beard vegetation associations by IBRA 7.1 subregion (IBRA Subregion(Code) : Beard Association - approximate area in hectares):

Warren(WAR01) : 1 : Tall forest; karri (Eucalyptus diversicolor) – 3.98 ha

Warren(WAR01) : 14 : Low forest; jarrah – 20.1 ha

This area contains or is within 200 m of a waterway. Consideration needs to be given to the protection of water quality and appropriate buffers.

Subsection 2.2: Re-vegetation/Landscape Plans

There is no revegetation required / planned at this site.

Section 3: Bushfire Assessment Results

Subsection 3.1: Assessment Inputs

All vegetation within 150 metres of the project site has been identified and classified or excluded in accordance to AS 3959. Five types of Classified vegetation were recorded;

- 1) Grassland (Sown Pasture 26) was recorded on majority of the site as currently used for general agricultural.
- 2) Forest (Open Forest 03) was recorded along South Coast Highway, the western portion of the site and on the adjacent properties.
- 3) Shrubland (Closed Heath 10) was recorded along the centre of the site along the dam/ water course.
- 4) Scrub (Closed Scrub 13) was recorded along the centre of the site along the water course as well as on adjacent southern property.
- 5) Excluded Low-threat and non-vegetated areas are present adjacent to the existing buildings and road networks.

Table 1: BAL Analysis – 150 m Lot Survey

Plot	Vegetation Classification	Effective Slope °
1	Class G Grassland	Downslope 0-5
2	Class A - Forest	Upslope/Flat
3	Class C Shrubland	Downslope 0-5
4	Excludable – Clause 2.2.3.2(f)	N/A
5	Class D Scrub	Downslope 0-5
6	Class A - Forest	Upslope/Flat
7	Class G Grassland	Upslope/Flat
8	Class A - Forest	Upslope/Flat

Class A Forest - Trees 30 m high, 30%-70% foliage cover (may include understorey of sclerophyllous low trees or shrubs). Typically dominated by *Eucalypts*, *Melaleuca* or *Calistimon* (may include riverine and wetland environments) and *Callitris*.

Class C Shrubland – Found in wet areas and/or areas affected by poor soil fertility or shallow soils. Shrubs 1 - 2 m high.

Class D Scrub - Found in wet areas and/or areas affected by poor soil fertility or shallow soils, >30% foliage cover. Dry heaths occur in rocky or sandy areas. Shrubs to >2 m high. Typical of coastal areas and tall heaths up to 6 m in height. May be dominated by *Banksia*, *Melaleuca* or *Leptospermum*, with heights of up to 6 m.

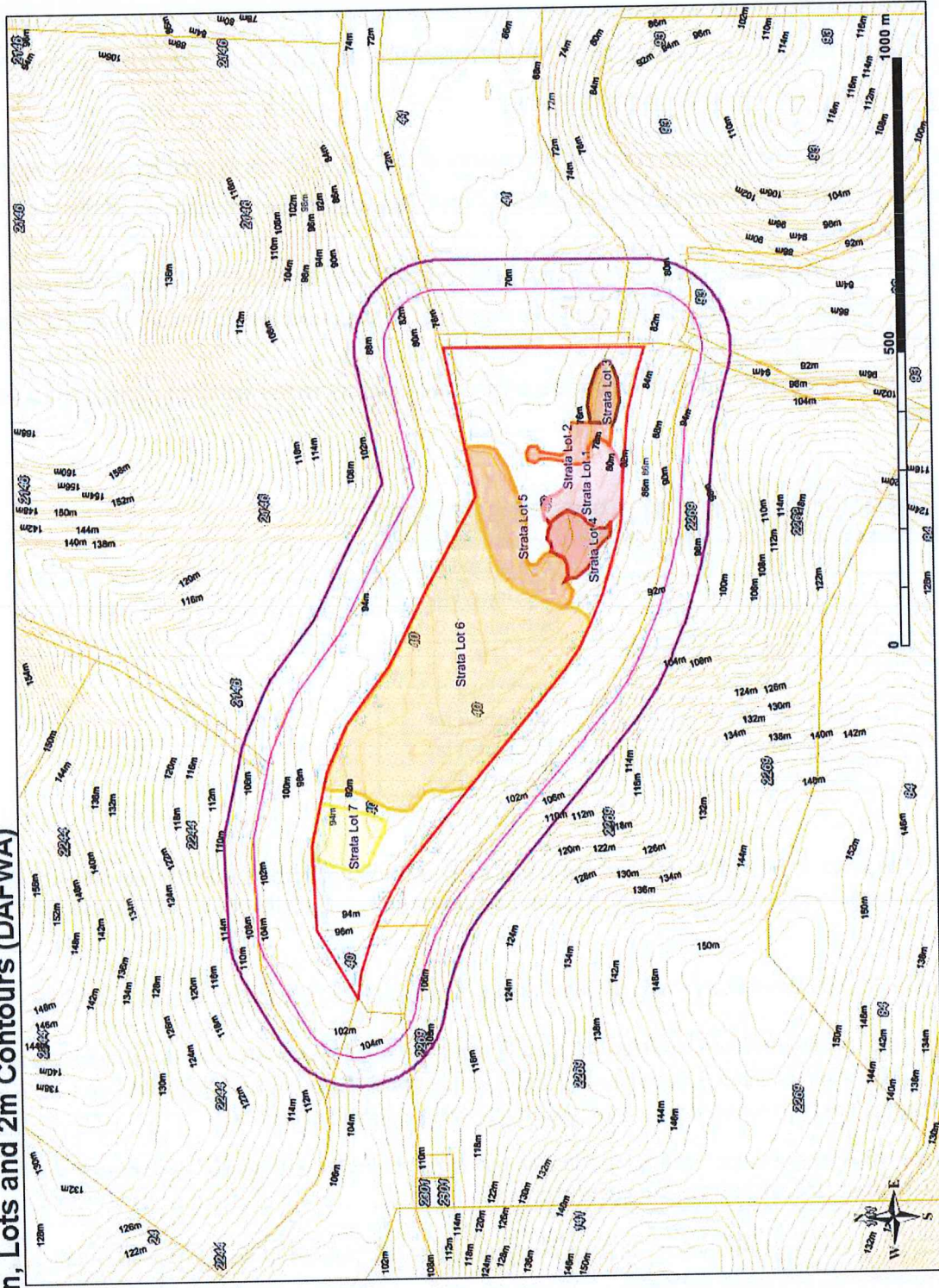
Class G Grassland – All forms (except tussock moorlands), including situations with shrubs and trees, if the overstorey foliage cover is less than 10%. Includes pasture and cropland.

Excluded 2.2.3.2(e) - Non-vegetated areas, that is, areas permanently cleared of vegetation including waterways, roads, footpaths, buildings and rocky outcrops.

Excluded 2.2.3.2(f) - Vegetation regarded as low threat due to factors such as flammability, moisture content or fuel load. This includes grassland managed in a minimal fuel condition, maintained lawns, vineyards, orchards, cultivated gardens, nature strips and wind breaks.

Location, Lots and 2m Contours (DAFWA)

- Legend**
- ▭ Lot Boundary
 - ▭ 150m survey
 - ▭ 100m survey
 - ▭ 100m Survey
 - ▭ Strata Lot 1
 - ▭ Strata Lot 2
 - ▭ Strata Lot 3
 - ▭ Strata Lot 4
 - ▭ Strata Lot 5
 - ▭ Strata Lot 6
 - ▭ Strata Lot 7



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Figure 3 Location, property boundary, Lots, 150m survey, 2m contours

Bushfire Management Plan – Complex Development Application

Photo Points

Legend

- Photo points v1
- Lots
- Lot Boundary
- 150m survey
- 100m survey
- 100m Survey



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Figure 4 Air photo and Photo points

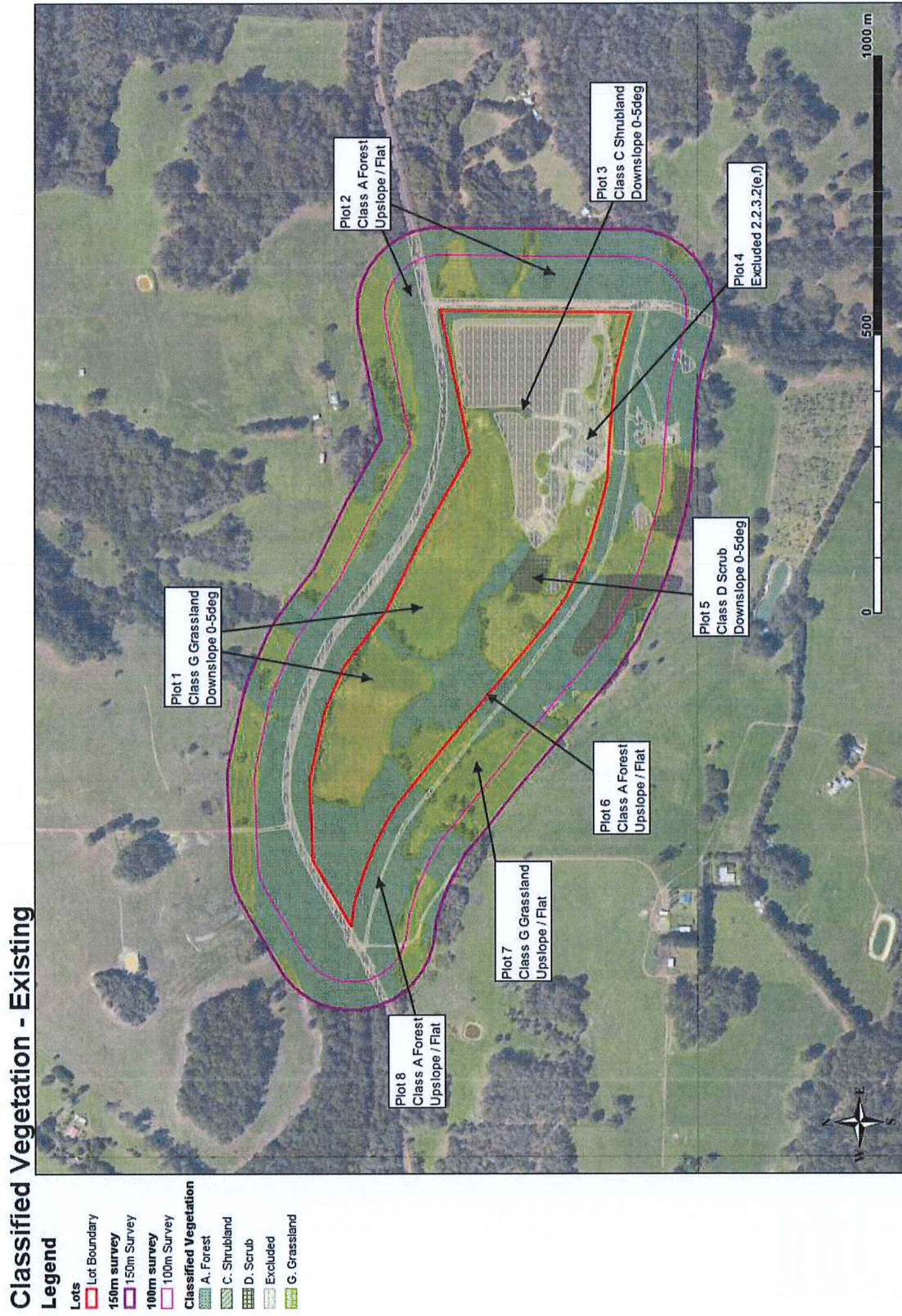


Figure 5 Vegetation, classified existing, pre-development

Bushfire Management Plan – Complex Development Application

Subsection 3.2: Assessment outputs

Vegetation proposed after development and implementation of Proposed APZ is presented in Figure 7.

A BAL contour analysis is presented based on the proposed vegetation after development (Figure 8 and 9), with the Grassland across the development site to be modified and maintained by the landowner at <100 mm, according to the specifications of Schedule 1 (Appendix 1). After that time, the provisions of the Shire’s annual fire management notice will ensure that potential bushfire threats are managed.

The low fuel classified vegetation will require to be maintained to ensure the classified vegetation is maintained at required levels of low threat.

Table 2: BAL Analysis – Proposed Lot Developments Setbacks

SAMPLE PLOT	VEGETATION CLASSIFICATION	EFFECTIVE SLOPE °	ACHIEVABLE RATING	TOTAL DISTANCE REQUIRED (m)
1	Class G Grassland – Sown pasture G-26	Downslope 0-5	BAL-19	14
2	Class A Forest - Open forest A-03	Upslope/Flat	BAL-19	31
3	Class C Shrubland - Closed heath C-10	Downslope 0-5	BAL-29	15
4	Excludable - 2.2.3.2(f) Low Threat Vegetation	N/A	-----	-----
5	Class D Scrub - Closed scrub D-13	Downslope 0-5	BAL-19	22
6	Class A Forest - Open forest A-03	Upslope/Flat	BAL-19	31
7	Class G Grassland – Sown pasture G-26	Upslope/Flat	BAL-19	12
8	Class A Forest - Open forest A-03	Upslope/Flat	BAL-19	31

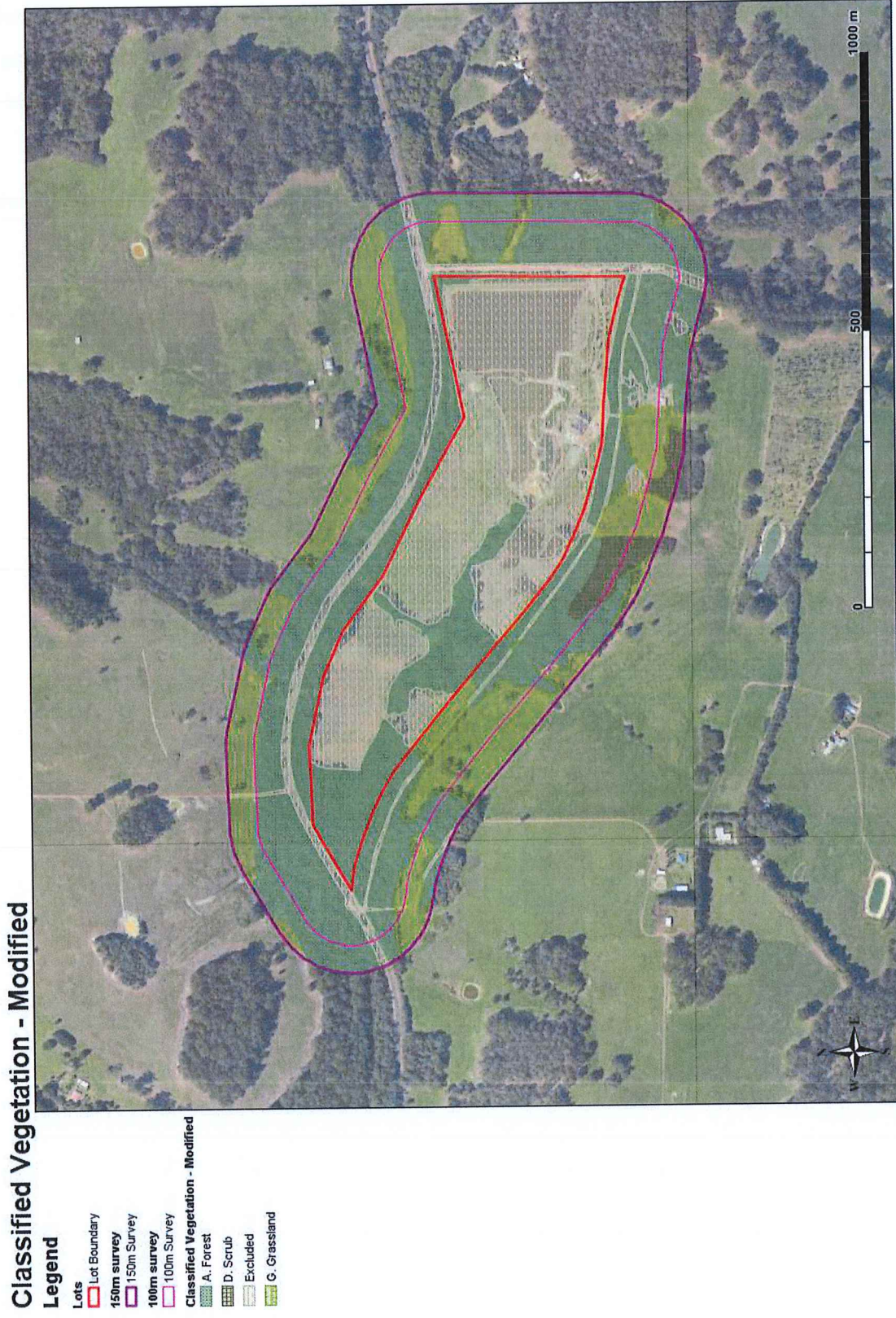


Figure 6 Post-development BAL contours

BAL Contours - After Development

Legend

- Lots
- Lot Boundary
- 150m survey
- 100m survey
- 100m Survey

BAL Contours - After Development

- BAL-12.5
- BAL-19
- BAL-29
- BAL-40
- BAL-FZ
- BAL-LOW



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Figure 7 Post-development BAL contours

BAL Contours - After Development

Legend

- Lots
- Lot Boundary
- 150m survey
- 100m survey
- 100m Survey

- Setbacks
- Setback Distance

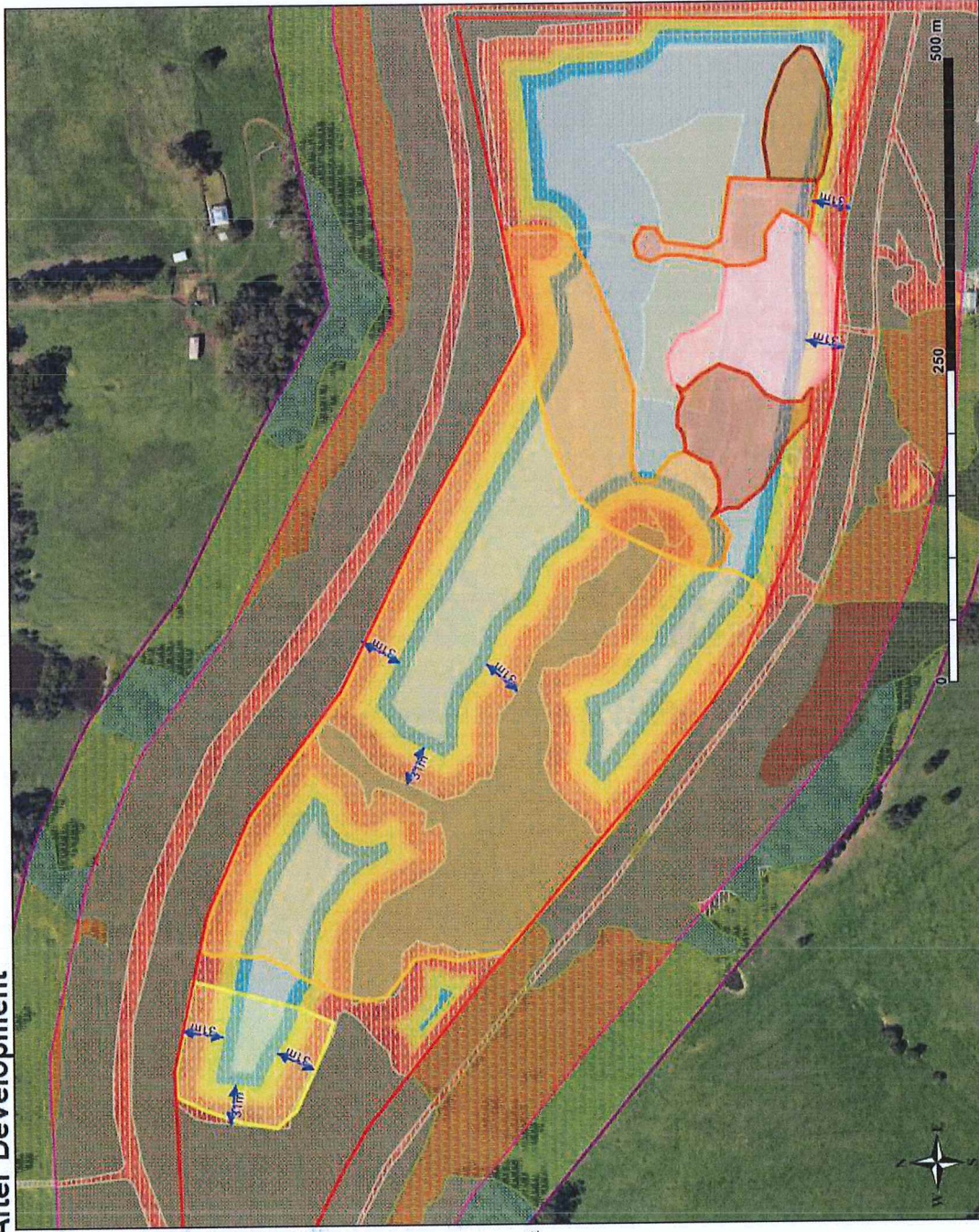
- Lots
- Strata Lot 1
- Strata Lot 2
- Strata Lot 3
- Strata Lot 4
- Strata Lot 5
- Strata Lot 6
- Strata Lot 7

Classified Vegetation - Modified

- A. Forest
- D. Scrub
- Excluded
- G. Grassland

BAL Contours - After Development

- BAL-12.5
- BAL-19
- BAL-29
- BAL-40
- BAL-FZ
- BAL-LOW



Map Printed from FireMaps on Fri May 21 12:45:08 AWST 2021

Figure 8 Post-development BAL contours with setbacks

BHL - After Development

Legend

- Lots
- Lot Boundary
- 150m survey
- 100m survey
- 100m survey
- 100m Survey
- BHL - After Development**
- Extreme
- Low
- Moderate



Map Printed from FireMaps on Mon May 17 05:29:36 AWST 2021

Figure 9 Post-development BHL contours

Section 4: Identification of bushfire hazard issues

Because of the previously cleared nature of the development site plus the establishment of dams and the vegetation all being upslope, the bushfire hazard is minimised. The BAL-19 ratings associated with the site, comply with the Bushfire Protection Criteria (SPP3.7), requiring a rating of ≤BAL-29.

The grass within the APZ site is to be maintained ≤100 mm height in perpetuity.

Section 5: Assessment against the Bushfire Protection Criteria

Subsection 5.1: Compliance

Bushfire protection criteria	Method of compliance	Proposed bushfire management strategies
	Acceptable solutions	
Element 1: Location	<p>A1.1 Development location</p> <p>The development is to take place on an existing rural lot that has been cleared and actively managed as grazing pastures for some time.</p> <p>The development is in a location that on completion will achieve a rating of ≤BAL-29.</p> <p>This meets the intent of Element A1.1.</p>	<p>Some of the lot will continue to be actively managed as grazing pasture which of itself does not constitute a bushfire prone rating.</p> <p>The proposed development locations on the strata lots will be located in an area with managed low fuel with an APZ of BAL-19 / BAL 12.5. This will be maintained to “Schedule 1” WAPC guidelines.</p>
Element 2: Siting and design	<p>A2.1 Asset Protection Zone</p> <p>The proposed developments will be surrounded by a ≥20 m APZ without any requirement to remove remnant original vegetation and will achieve a rating of ≤BAL-29.</p> <p>This meets the intent of Element A2.1.</p>	<p>The proposed ≥20 m APZ surrounding the development will be managed in a low fuel condition, consistent with Schedule 1 of the WAPC guidelines, in perpetuity. Any future landscaping / planting around the glamping and chalets site will be consistent with Schedule 1.</p>
Element 3: Vehicular access	<p>A3.1 Two access routes.</p> <p>Egress from Lot 305 is directly onto Wentworth Road. This two way ‘Public’ road has the option of two routes to two different destinations.</p> <p>This meets the intent of Element A3.1</p>	<p>Wentworth Road heading north meets South Coast Hwy in 280 metres.</p> <p>A second access route will be located on the north side of the site which will connect direct to the South Coast Highway.</p> <p>South Coast Highway can be traversed east or west to 2 different destinations.</p>
	<p>A3.2 Public road. N/A</p>	

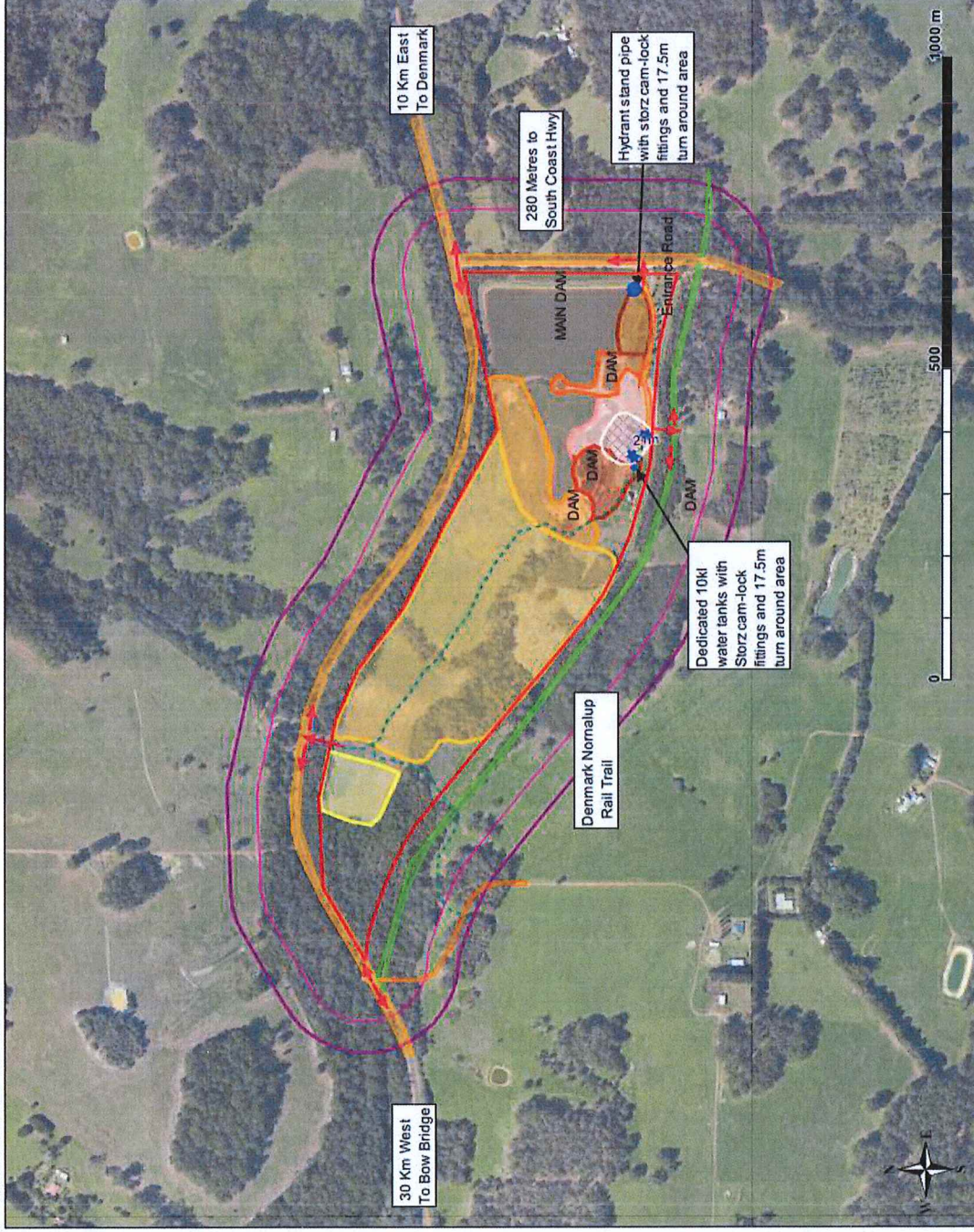
Bushfire Management Plan – Complex Development Application

	A3.3 Cul-de-sac (including a dead-end-road) N/A	There is no Cul-de-sac.
	A3.4 Battle-axe N/A	There is no Battle-axe lots.
	<p>A3.5 Private driveway longer than 50 metres. The driveway into the Tourist Centre is 280 m and meets Table 1, column 3 requirements. Ample areas for passing bays as required. A turn-around area ≥ 17.5 m is provided at the main dam fill point.</p> <p>This meets the intent of Element A3.5.</p>	<p>The existing driveway meets the requirements. Area is cleared – ample areas for passing bays.</p> <p>Ample area around the dams for Type 3.4 fire appliances. (17.5 m)</p> <p>All future driveways will meets the requirements including passing bays.</p> <p>All future driveways will be built to 'private driveway' standards and maintained as per "Table 6"- Vehicle access technical requirements – Appendix 3.</p>
	A3.6 Emergency access way N/A	Existing private road provides adequate emergency access.
	A3.7 Fire service access routes (perimeter roads) N/A	Existing private road provides adequate fire service access.
	<p>A3.8 Firebreak width. South Coast Highway, Wentworth Road and the Denmark Nornalup Rail Trial surround the entire boundary of Lot 305.</p> <p>This meets the intent of Element A3.8.</p>	The proposed development firebreaks will be placed and maintained in accordance with the current Shire of Denmark Fire Management Notice.
Element 4: Water	A4.1 Reticulated areas N/A	
	A4.2 Non-reticulated areas N/A	
	<p>A4.3 Individual lots within non-reticulated areas. 6 dams are present on the site with the main dam having a very suitable turn-around and fill point area.</p> <p>There is also an emergency water supply from a dam on Lot 304 with a 150 mm pipe to the site. 450 kpa pressure</p> <p>This meets the intent of Element A4.3.</p>	<p>A fill point and turn-around (≥ 17.5 m) is available at the main dam at the site entrance.</p> <p>This site is presently utilised by the local Bushfire Brigade.</p> <p>A ≥ 10 kl tank will be installed at future strata lot development stage with fill point Cam-loc fittings and a ≥ 17.5 m turn-around area will be provided as part of driveway.</p>

Bushfire Management Plan – Complex Development Application

Bushfire Measurement Measures

- Legend**
- Lots**
 - Lot Boundary
 - Bushfire management measures**
 - Access - Link
 - Arrow
 - Separation
 - 10kl Water tank
 - APZ
 - Access - Driveway
 - Low Fuel Access
 - Road
 - 150m survey**
 - 150m Survey
 - 100m survey**
 - 100m Survey
 - Lots**
 - Strata Lot 1
 - Strata Lot 2
 - Strata Lot 3
 - Strata Lot 4
 - Strata Lot 5
 - Strata Lot 6
 - Strata Lot 7



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Figure 10 Spatial representation of the bushfire management strategies

Section 6: Responsibilities for Implementation and Management of the Bushfire Measures

DEVELOPER/LANDOWNER – PRIOR TO OCCUPANCY	
No.	Implementation action
1	Ensure water supply points are sign posted.
2	Upgrade the private driveway to the standard stated in the BMP.
3	Establish the Asset Protection Zone to the dimensions and standard stated in the BMP.
4	Install an additional water tank on site at suitable location with firefighting connections at future strata lot stages
5	Comply with the Shire of Denmark Fire Management Notice issued under S33 of the Bush Fires Act 1954.

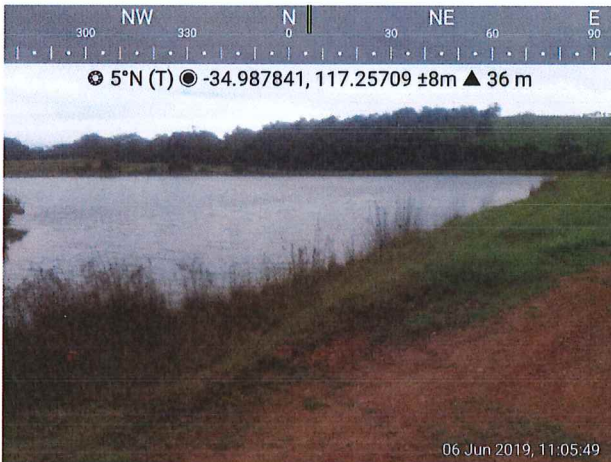
LANDOWNER/OCCUPIER – ONGOING MANAGEMENT	
No.	Management action
1	Maintain the Asset Protection Zone to the dimensions and standard stated in the BMP. 'Schedule 1' specifications to apply.
2	Comply with the Shire of Denmark Fire Management Notice issued under S33 of the Bush Fires Act 1954.
3	Maintain vehicular access routes within the lot to the required surface condition and clearances.
4	Make information available for guests on fire threats, communications and actions should a bushfire occur.
5	Maintain the emergency water supply dams and its associated fittings and vehicular access in good working condition.

LOCAL GOVERNMENT	
No.	Management action
1	Provide annual firebreak and hazard reduction notices.
2	Monitor land owner compliance with regulations.
3	Promote education and awareness of bushfire prevention and preparation measures.

Section 7: Photographs

GROUND PHOTO 1

DIRECTION: N



*Main Dam adjacent to Wentworth Road.
This dam is utilised by the local brigade regularly.*

GROUND PHOTO 2

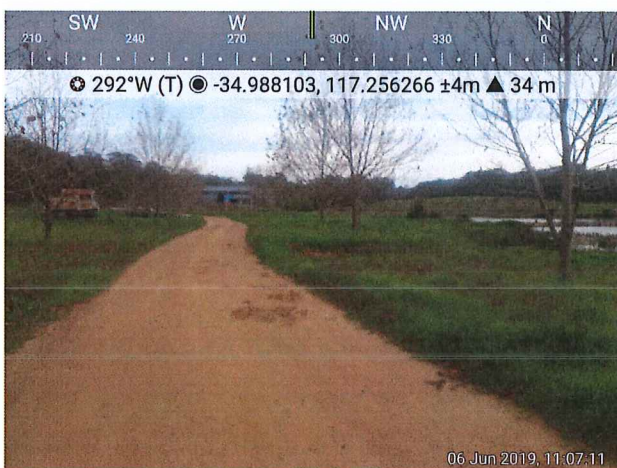
DIRECTION: SW



*Vegetation along the Denmark Normalup Rail Trail.
South of the main entrance to the Retreat site.*

GROUND PHOTO 3

DIRECTION: W



Main entrance to the Spa Retreat site.

GROUND PHOTO 4

DIRECTION: NW



*Maintained grass area along entrance road with
dams in the background.*

Bushfire Management Plan – Complex Development Application

GROUND PHOTO 5

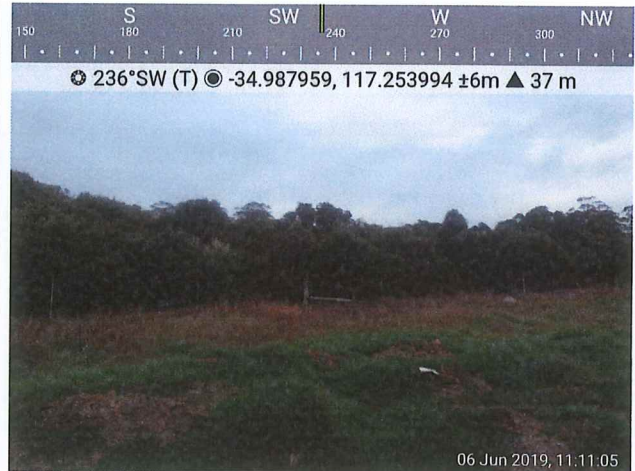
DIRECTION: S



Connection track through Rail Trail from Lot 305 to Lot 304 to the south.

GROUND PHOTO 6

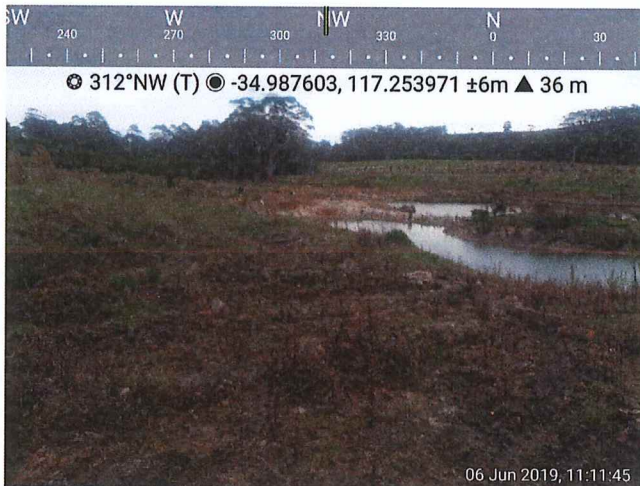
DIRECTION: SW



Class B Woodland with existing perimeter firebreak along Rail Trail.

GROUND PHOTO 7

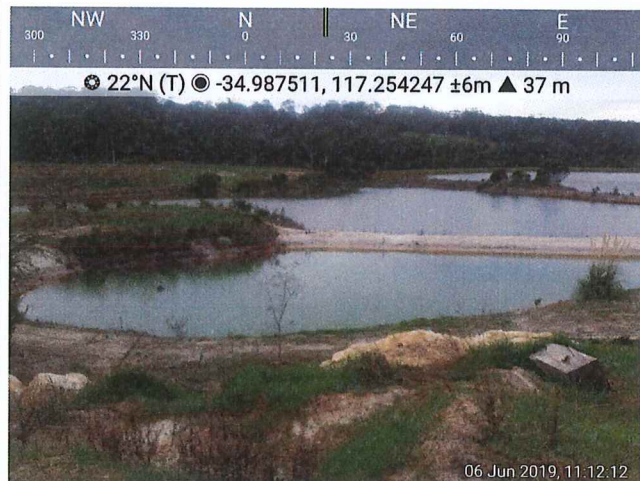
DIRECTION: NW



Cleared area around building plus adjacent dams. View to NW with grazed pasture beyond.

GROUND PHOTO 8

DIRECTION: N



View north from Retreat site across adjoining dams to South Coast Highway along the tree line.

Bushfire Management Plan – Complex Development Application

GROUND PHOTO 9

DIRECTION: **E**



79°E (T) -34.987677, 117.254514 ±8m ▲ 35 m



View east from Retreat site across adjoining dams to Wentworth Road along the tree line.

GROUND PHOTO 10

DIRECTION: **NW**



300°W (T) -34.988158, 117.254556 ±8m ▲ 48 m



Planted trees within the Denmark to Nornalup Rail Trail south of Lot 305.

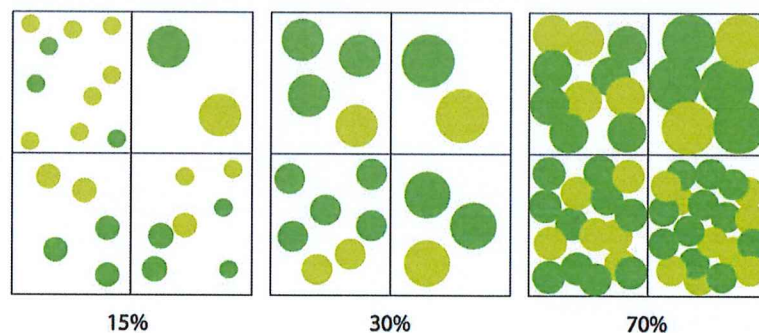
Appendices

Appendix 1 APZ specifications

Schedule 1 – Specifications for Asset Protection zones

- **Fences:** within the APZ are constructed from non-combustible materials (e.g. iron, brick, limestone, metal post and wire). It is recommended that solid or slatted non-combustible perimeter fences are used.
- **Objects:** within 10 metres of a building, combustible objects must not be located close to the vulnerable parts of the building i.e. windows and doors.
- **Fine Fuel load:** combustible dead vegetation matter less than 6 millimetres in thickness reduced to and maintained at an average of two tonnes per hectare.
- **Trees (> 5 metres in height):** trunks at maturity should be a minimum distance of 6 metres from all elevations of the building, branches at maturity should not touch or overhang the building, lower branches should be removed to a height of 2 metres above the ground and or surface vegetation, canopy cover should be less than 15% with tree canopies at maturity well spread to at least 5 metres apart as to not form a continuous canopy.

Figure 18: Tree canopy cover – ranging from 15 to 70 per cent at maturity



- **Shrubs (0.5 metres to 5 metres in height):** should not be located under trees or within 3 metres of buildings, should not be planted in clumps greater than 5m² in area, clumps of shrubs should be separated from each other and any exposed window or door by at least 10 metres. Shrubs greater than 5 metres in height are to be treated as trees.
- **Ground covers (<0.5 metres in height):** can be planted under trees but must be properly maintained to remove dead plant material and any parts within 2 metres of a structure, but 3 metres from windows or doors if greater than 100 millimetres in height. Ground covers greater than 0.5 metres in height are to be treated as shrubs.
- **Grass:** should be managed to maintain a height of 100 millimetres or less.

(Source WAPC Guidelines for planning in bushfire prone areas Version 1.3 Dec 2017 Appendices)

Bushfire Management Plan – Complex Development Application

Appendix 2 Vehicle access technical requirements

“Table 6”- Vehicle access technical requirements.

TECHNICAL REQUIREMENTS	1 Public road	2 Cul-de-sac	3 Private driveway	4 Emergency access way	5 Fire service access routes
Minimum trafficable surface (m)	6*	6	4	6*	6*
Horizontal clearance (m)	6	6	6	6	6
Vertical clearance (m)	4.5	N/A	4.5	4.5	4.5
Maximum grade <50 metres	1 in 10	1 in 10	1 in 10	1 in 10	1 in 10
Minimum weight capacity (t)	15	15	15	15	15
Maximum crossfall	1 in 33	1 in 33	1 in 33	1 in 33	1 in 33
Curves minimum inner radius (m)	8.5	8.5	8.5	8.5	8.5
*Refer to E3.2 Public roads: Trafficable surface					

Appendix 3: Shire of Denmark Fire Management Notice

A current version of the Shire of Denmark Fire Management Notice can be found online at <https://www.denmark.wa.gov.au/residents/local-emergency-management.aspx>

Shire of Denmark

953 South Coast Highway (PO Box 183), Denmark WA 6333

Phone: 9848 0300 • Email: enquiries@denmark.wa.gov.au • Website: www.denmark.wa.gov.au



2020/2021 FIREBREAK AND FUEL MANAGEMENT NOTICE Section 33 BUSH FIRES ACT 1954

FIRST and FINAL Notice to all owners and/or occupiers of land situated within Shire of Denmark.

As a measure to assist in the control of fires, or preventing the spread or extension of a bush fire, Notice is hereby given to all owners and/or occupiers of land within the Shire of Denmark that pursuant to the powers conferred in Section 33 of the *Bush Fires Act 1954*. Works in accordance with this notice must be carried out before the **1st day of December each year**, or within 14 days of becoming the owner or occupier of land if after this date. All work specified in this Notice is to be maintained up to, and including, the **30th day of April** in the following calendar year.

**FIRE PREPAREDNESS AND MITIGATION IS A SHARED RESPONSIBILITY
YOU OWN THE PROPERTY – YOU OWN THE RISK**

APPENDIX C - NOISE MANAGEMENT PLAN AND ENVIRONMENTAL NOISE IMPACT ASSESSMENT





RAINTREE FARM

**LOT 305 SOUTH COAST HIGHWAY
OCEAN BEACH**

**PROPOSED RESTAURANT / FUNCTION CENTRE
AND ACCOMMODATION**

**SPP5.4 NOISE MANAGEMENT PLAN
AND
ENVIRONMENTAL NOISE IMPACT ASSESSMENT**

MAY 2021

OUR REFERENCE: 27678-3-21127



DOCUMENT CONTROL PAGE

**ACOUSTIC ASSESSMENT
OCEAN BEACH**

Job No: 21127

Document Reference: 27678-3-21127

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APPENDICES

A	DEVELOPMENT PLAN
B	$L_{Aeq(16hr)}$ DAY - NOISE CONTOURS FOR SOUTH COAST HIGHWAY
C	NOISE CONTOURS FOR OPERATIONAL NOISE EMISSIONS
D	TRAFFIC FLOW DATA
E	NOISE MONITORING DATA

EXECUTIVE SUMMARY

Herring Storer Acoustics have been commissioned by Williams Consulting, on behalf of Steve Birkbeck, to carry out an acoustical assessment of noise emissions associated with the proposed development of a restaurant and function centre at Raintree Farm, Lot 305 South Coast Highway, Ocean Beach.

Additionally, as the proposal contains accommodation, an assessment of noise ingress into the development from traffic on the South Coast Highway has been undertaken with respect to State Planning Policy 5.4 (SPP 5.4).

Noise levels associated with functions at the proposed development have been calculated to comply with the relevant assigned noise levels for all time periods.

The results of the acoustic assessment indicate that noise received at one of the units (Unit A) located adjacent to South Coast Highway would exceed with the "Noise Targets" as outlined in SPP 5.4, therefore further noise amelioration, or considerations would be required.

For the closest proposed unit on the northern side of the development, future noise level could exceed the 55 dB(A) noise Target level by up to 3 dB(A), dependant on the location. Therefore, to ensure internal noise levels are complied with, Quite House design recommendations are required, with these being discussed further in Section 6.

1.0 INTRODUCTION

Herring Storer Acoustics have been commissioned by Williams Consulting, on behalf of Steve Birkbeck, to carry out an acoustical assessment of noise emissions associated with the proposed development of a restaurant and function centre at Raintree Farm, Lot 305 South Coast Highway, Ocean Beach.

Additionally, as the proposal contains accommodation, an assessment of noise ingress into the development from traffic on the South Coast Highway has been undertaken with respect to State Planning Policy 5.4 (SPP 5.4).

The objectives of the study were to:

- Measure existing noise levels at the proposed development from vehicles travelling on South Coast Highway.
- Determine by noise modelling the noise levels that would be received at residences (accommodation) within the development from vehicles travelling on the future South Coast Highway.
- Assess the predicted noise levels received at residence for compliance with the requirements of the WAPC State Planning Policy 5.4 "Road and Rail Noise" (SPP 5.4).
- If exceedances are predicted, comment on possible noise amelioration options for compliance with the appropriate criteria.
- Construct a predictive noise model for noise levels of associated with the proposed restaurant / function centre.
- Assess the predicted noise levels received at the closest noise sensitive premises, for compliance with the *Environmental Protection (Noise) Regulations 1997*.
- If exceedances are predicted, investigate possible noise control options that will reduce noise emissions to achieve compliance with the regulations.

The work was commissioned to accompany the development application.

2.0 CRITERIA

2.1 NOISE EMISSIONS FROM DEVELOPMENT

The allowable noise level at the surrounding locales is prescribed by the *Environmental Protection (Noise) Regulations 1997*. Regulations 7 & 8 stipulate maximum allowable external noise levels. For residential premises, this is determined by the calculation of an influencing factor, which is then added to the base levels shown below. The influencing factor is calculated for the usage of land within two circles, having radii of 100m and 450m from the premises of concern.

TABLE 2.1 – ASSIGNED NOISE LEVELS

Premises Receiving Noise	Time of Day	Assigned Level (dB)		
		L _{A10}	L _{A1}	L _{Amax}
Noise sensitive premises within 15 metres of a dwelling	0700 - 1900 hours Monday to Saturday	45 + IF	55 + IF	65 + IF
	0900 - 1900 hours Sunday and Public Holidays	40 + IF	50 + IF	65 + IF
	1900 - 2200 hours all days	40 + IF	50 + IF	55 + IF
	2200 hours on any day to 0700 hours Monday to Saturday and 0900 hours Sunday and Public Holidays	35 + IF	45 + IF	55 + IF

Note: The L_{A10} noise level is the noise that is exceeded for 10% of the time.
 The L_{A1} noise level is the noise that is exceeded for 1% of the time.
 The L_{Amax} noise level is the maximum noise level recorded.

It is a requirement that noise from the site be free of annoying characteristics (tonality, modulation and impulsiveness) at other premises, defined below as per Regulation 9.

“impulsiveness” means a variation in the emission of a noise where the difference between L_{Apeak} and $L_{Amax Slow}$ is more than 15dB when determined for a single representative event;

“modulation” means a variation in the emission of noise that –

- (a) is more than 3dB $L_{A Fast}$ or is more than 3dB $L_{A Fast}$ in any one-third octave band;
- (b) is present for more than 10% of the representative assessment period; and
- (c) is regular, cyclic and audible;

“tonality” means the presence in the noise emission of tonal characteristics where the difference between –

- (a) the A-weighted sound pressure level in any one-third octave band; and
- (b) the arithmetic average of the A-weighted sound pressure levels in the 2 adjacent one-third octave bands,

is greater than 3 dB when the sound pressure levels are determined as $L_{Aeq,T}$ levels where the time period T is greater than 10% of the representative assessment period, or greater than 8 dB at any time when the sound pressure levels are determined as $L_{A Slow}$ levels.

Where the above characteristics are present and cannot be practicably removed, the following adjustments are made to the measured or predicted level at other premises.

TABLE 2.2 – ADJUSTMENTS FOR ANNOYING CHARACTERISTICS

Where tonality is present	Where modulation is present	Where impulsiveness is present
+ 5 dB	+ 5 dB	+ 10 dB

Where the noise emission is music, then any measured level is adjusted according to Table 2.3 below.

TABLE 2.3 – ADJUSTMENTS TO MEASURED MUSIC NOISE LEVELS

Where impulsiveness is not present	Where impulsiveness is present
+10 dB(A)	+15 dB(A)

The nearest noise sensitive premises considered in our assessment are as shown in Figure 1 below.

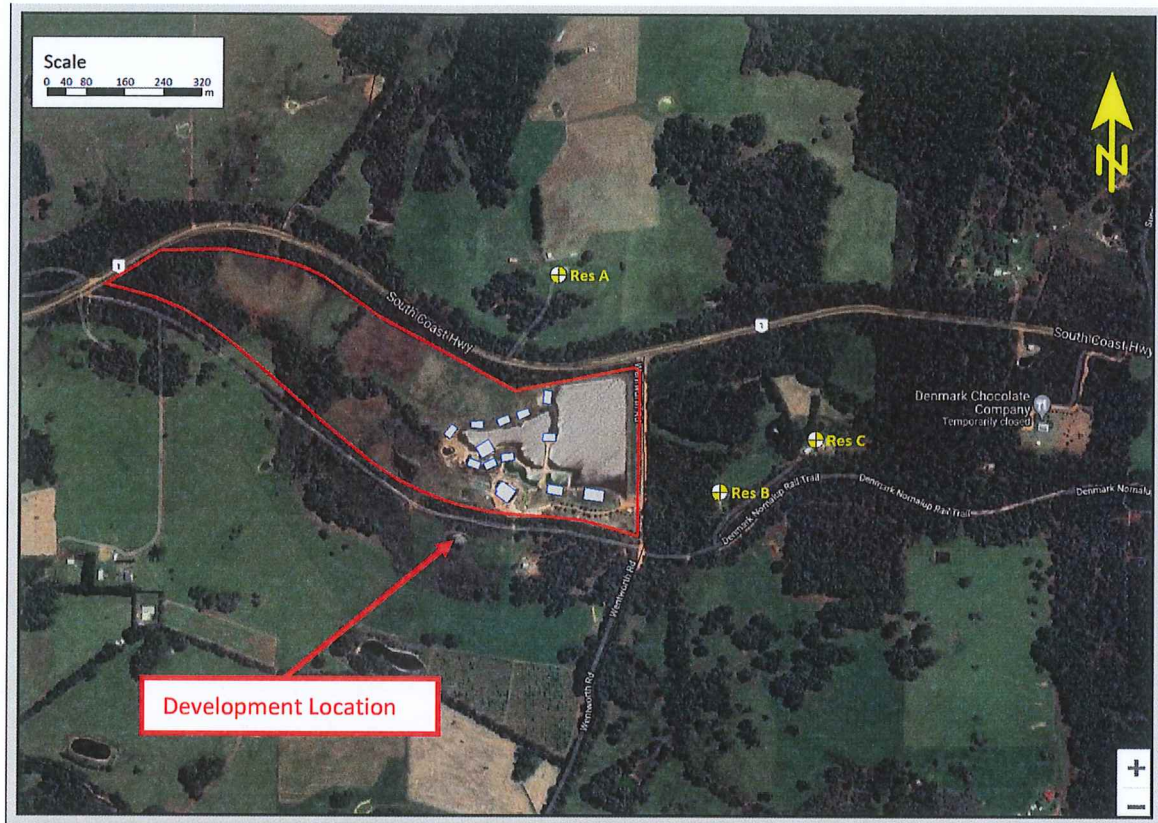


FIGURE 1 – DEVELOPMENT LOCATION AND SURROUNDS

The influencing factor at the identified noise sensitive premises has been determined as 0 dB as South Coast Highway is not considered a major road therefore, the assigned noise levels are listed in Tables 2.4.

TABLE 2.4 - ASSIGNED OUTDOOR NOISE LEVELS : R1

Premises Receiving Noise	Time of Day	Assigned Level (dB)		
		L _{A10}	L _{A1}	L _{Amax}
Noise sensitive premises within 15 metres of a dwelling	0700 - 1900 hours Monday to Saturday	45	55	65
	0900 - 1900 hours Sunday and Public Holidays	40	50	65
	1900 - 2200 hours all days	40	50	55
	2200 hours on any day to 0700 hours Monday to Saturday and 0900 hours Sunday and Public Holidays	35	45	55

Note: L_{A10} is the noise level exceeded for 10% of the time.
 L_{A1} is the noise level exceeded for 1% of the time.
 L_{Amax} is the maximum noise level.

2.2 NOISE INGRESS INTO DEVELOPMENT

The Western Australian Planning Commission (WAPC) released on 6th September 2019 State Planning Policy 5.4 "Road and Rail Noise". The requirements of State Planning Policy 5.4 are outlined below.

POLICY APPLICATION (Section 4)

When and where it applies (Section 4.1)

SPP 5.4 applies to the preparation and assessment of planning instruments, including region and local planning schemes; planning strategies, structure plans; subdivision and development proposals in Western Australia, where there is proposed:

- a) noise-sensitive land-use within the policy's trigger distance of a transport corridor as specified in **Table 1**;
- b) New or major upgrades of roads as specified in **Table 1** and maps (**Schedule 1, 2 and 3**); or
- c) New railways or major upgrades of railways as specified in maps (**Schedule 1, 2 and 3**); or any other works that increase capacity for rail vehicle storage or movement and will result in an increased level of noise.

Policy trigger distances (Section 4.1.2)

Table 1 identifies the State's transport corridors and the trigger distances to which the policy applies.

The designation of land within the trigger distances outlined in **Table 1** should not be interpreted to imply that land is affected by noise and/or that areas outside the trigger distances are un-affected by noise.

Where any part of the lot is within the specified trigger distance, an assessment against the policy is required to determine the likely level of transport noise and management/mitigation required. An initial screening assessment (**guidelines: Table 2: noise exposure forecast**) will determine if the lot is affected and to what extent."

TABLE 1: TRANSPORT CORRIDOR CLASSIFICATION AND TRIGGER DISTANCES

Transport corridor classification	Trigger distance	Distance measured from
Roads		
Strategic freight and major traffic routes Roads as defined by Perth and Peel Planning Frameworks and/or roads with either 500 or more Class 7 to 12 Austroads vehicles per day, and/or 50,000 per day traffic volume	300 metres	Road carriageway edge
Other significant freight/traffic routes These are generally any State administered road and/or local government road identified as being a future State administered road (red road) and other roads that meet the criteria of either >=23,000 daily traffic count (averaged equivalent to 25,000 vehicles passenger car units under region schemes)	200 metres	Road carriageway edge
Passenger railways		
	100 metres	Centreline of the closest track
Freight railways		
	200 metres	Centreline of the closest track

Proponents are advised to consult with the decision making authority as site specific conditions (significant differences in ground levels, extreme noise levels) may influence the noise mitigation measures required, that may extend beyond the trigger distance.

POLICY MEASURES (Section 6)

The policy applies a performance-based approach to the management and mitigation of transport noise. The policy measures and resultant noise mitigation will be influenced by the function of the transport corridor and the type and intensity of the land-use proposed. Where there is risk of future land-use conflict in close proximity to strategic freight routes, a precautionary approach should be applied. Planning should also consider other broader planning policies. This is to ensure a balanced approach takes into consideration reasonable and practical considerations.

Noise Targets (Section 6.1)

Table 2 sets out noise targets that are to be achieved by proposals under which the policy applies. Where exceeded, an assessment is required to determine the likely level of transport noise and management/mitigation required.

In the application of the noise targets the objective is to achieve:

- indoor noise levels as specified in Table 2 in noise sensitive areas (for example, bedrooms and living rooms of houses, and school classrooms); and
- a reasonable degree of acoustic amenity for outdoor living areas on each residential lot. For non-residential noise-sensitive developments, for example schools and child care centres the design of outdoor areas should take into consideration the noise target.

It is recognised that in some instances, it may not be reasonable and/or practicable to meet the outdoor noise targets. Where transport noise is above the noise targets, measures are expected to be implemented that balance reasonable and practicable considerations with the need to achieve acceptable noise protection outcomes.

TABLE 2: NOISE TARGETS

Proposals	New/Upgrade	Noise Targets		
		Outdoor		Indoor
		Day (L _{Aeq} (Day) dB) (6 am-10 pm)	Night (L _{Aeq} (Night)dB) (10 pm-6 am)	(L _{Aeq} dB)
Noise-sensitive land-use and/or development	New noise sensitive land use and/or development within the trigger distance of an existing/proposed transport corridor	55	50	L _{Aeq} (Day) 40(Living and work areas) L _{Aeq} (Night) 35 (bedrooms)
Roads	New	55	50	N/A
	Upgrade	60	55	N/A
Railways	New	55	50	N/A
	Upgrade	60	55	N/A

Notes:

- *The noise target is to be measured at one metre from the most exposed, habitable façade of the proposed building, which has the greatest exposure to the noise-source. A habitable room has the same meaning as defined in State Planning Policy 3.1 Residential Design Codes.*
- *For all noise-sensitive land-use and/or development, indoor noise targets for other room usages may be reasonably drawn from Table 1 of Australian Standard/New Zealand Standard AS/NZS 2107:2016 Acoustics – Recommended design sound levels and reverberation times for building interiors (as amended) for each relevant time period.*
- *The 5dB difference in the criteria between new and upgrade infrastructure proposals acknowledges the challenges in achieving noise level reduction where existing infrastructure is surrounded by existing noise-sensitive development.*
- *Outdoor targets are to be met at all outdoor areas as far as is reasonable and practical to do so using the various noise mitigation measures outlined in the guidelines. For example, it is likely unreasonable for a transport infrastructure provider to achieve the outdoor targets at more than 1 or 2 floors of an adjacent development with direct line of sight to the traffic.*

Noise Exposure Forecast (Section 6.2)

*When it is determined that SPP 5.4 applies to a planning proposal as outlined in Section 4, proponents and/or decision makers are required to undertake a preliminary assessment using **Table 2**: noise exposure forecast in the guidelines. This will provide an estimate of the potential noise impacts on noise-sensitive land-use and/ or development within the trigger distance of a specified transport corridor. The outcomes of the initial assessment will determine whether:*

- *no further measures is required;*
- *noise-sensitive land-use and/or development is acceptable subject to deemed-to-comply mitigation measures; or*
- *noise-sensitive land-use and/or development is not recommended. Any noise-sensitive land-use and/ or development is subject to mitigation measures outlined in a noise management plan.”*

3.0 **NOISE MONITORING**

Noise monitoring was undertaken as part of the study with the results used to calibrate the noise model.

In summary, the monitoring was undertaken over seven-day period commencing Monday 29th March 2021. Monitoring was conducted at corner of Wentworth Road and South Coast Highway. The monitor was placed 20m from the nearest running edge of respective road of interest.

The results of this monitoring are summarised in Table 3.1.

TABLE 3.1 : SUMMARY OF MEASURED ROAD TRAFFIC NOISE LEVELS (dB(A))

Date	South Coast Highway Monitor		
	L _{A10} (18hour)	L _{Aeq,day} (6am to 10pm)	L _{Aeq,night} (10pm to 6am)
AVERAGE	58.1	58.1	45.7

Note: Based on the results of the noise monitoring the difference between the L_{Aeq} (Day) and L_{Aeq} (Night) is greater than 5 dB(A) (ie; 12.4 dB(A)). Hence, achieving compliance with the day period criteria would also result in compliance with the night period criteria and the day period has been used for the assessment.

For information, the results of the monitoring are shown graphically in Appendix E with Figure 3.1 showing the location map, and Figure 3.2 showing the monitor in situ and the South Coast Highway surface.



FIGURE 3.1 - NOISE MONITOR LOCATION PLAN

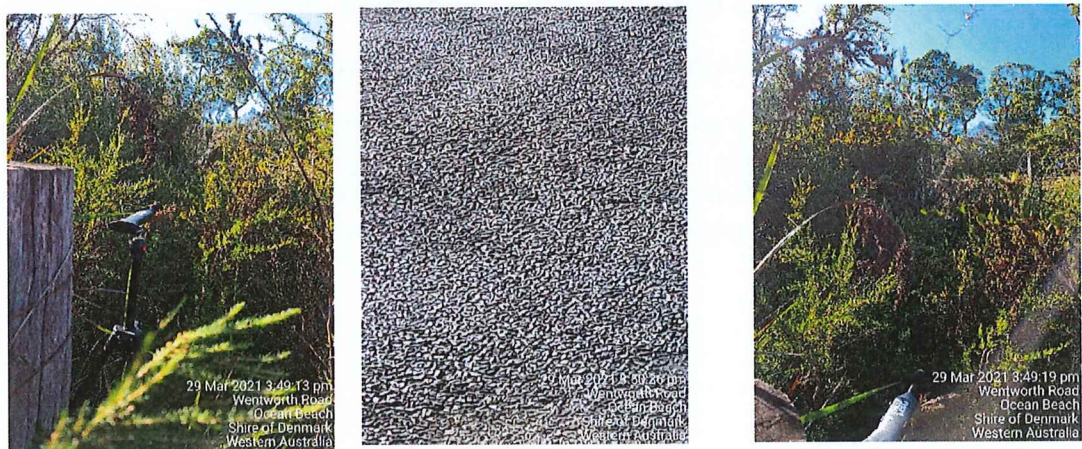


FIGURE 3.2 - NOISE MONITOR IN SITU AND ROAD SURFACE

4.0 METHODOLOGY

4.1 ROAD TRAFFIC

The future road traffic volumes were based on information provided on the MRWA traffic web site for current traffic flows. For the future proposed traffic volumes, an increase of 2.5% per annum was used.

Predictive noise modelling has allowed for 3,600 vpd in the future (2041) which is around a 2.5 % annual increase. This equates to a 2 dB(A) increase in noise levels for the future road traffic volumes which is inline with the requirements of SPP 5.4.

Other information relevant to the calculations are shown below in Table 4.1.

TABLE 4.1 - NOISE MODELLING INPUT DATA

Parameter	Current (2016)	Future (2040)
Traffic flows VPD South Coast Highway	2,424	3,600
Heavy Vehicles (%)	14.2%	14.2%
Traffic Speed km/hr	90	90
Road Surface	Chip Seal	Chip Seal
Façade Correction	+2.5	+2.5

Other input data for the model included:

- Traffic data from MRWA (<https://mrapps.mainroads.wa.gov.au/TrafficMap/>)
- Noise source heights for the three road source strings (Passenger Vehicles, Heavy Vehicles Engine and Heavy Vehicle Exhausts) are +0.5, +1.5 and +3.6m, with a noise correction of -0.8 and -8.0 applied to the heavy vehicles engine and exhaust noise sources.
- Topographical data, with the ground level within the development based on natural ground levels as surveys conducted.
- A +2.5 dB adjustment to allow for façade reflection.
- Development receiver heights at 1.4m above ground level.

To determine the noise that would be received within the development from the surrounding road network, acoustic modelling was carried out using the computer program 'SoundPlan'. The receiver location relates to the proposed accommodation. The receiver locations are shown in Figure 4.1 for information purposes.



FIGURE 4.1 – RECEIVER LOCATIONS

The following scenario was modelled:

1. Future traffic volumes, without any noise amelioration.

Based on the above, the noise contours plot for day period for the above modelling scenario is attached in Appendix B.

4.2 NOISE EMISSIONS

Noise modelling of the noise propagation from the proposed development was carried out using the environmental noise modelling computer program, “SoundPlan”.

Input data for computer modelling included:

- Design of development as per drawings in Appendix A.
- EPA standard weather condition for the day and night periods (see Table 6.1).
- Sound power levels, as summarised in Table 6.2 and noise levels attributable to music at the outside function area.

TABLE 6.1 - WEATHER CONDITIONS

Condition	Day Period	Night Period
Temperature	20 °C	15 °C
Relative humidity	50%	50%
Pasquil Stability Class	E	F
Wind speed	4 m/s*	3 m/s*

* From source to receiver

TABLE 6.2 – SOUND POWER LEVELS OF DELIVERY VEHICLES

DESCRIPTION	dB(A)
Patrons	66/m2
Music	93 dB(A)

It is understood that general operations entail restaurant / bar activities during day and night periods. The above noise source for the restaurant includes background music at a level that does not affect the ability for patrons to talk comfortable. The patron noise source has been located outside on the deck of the main building, and around the area to the east which may contain outside dinner etc.

For the function events, i.e., weddings etc, which entail music and crowd noise, the noise sources have been located outside as a worst-case situation, however it is understood that generally the functions would be held inside.

It is noted that the construction of the main building utilises dense masonry materials for the walls and upgrade glazing in the form of 10.5mm glass. This construction would be deemed to control any noise sources located within the building.

For the above sound power levels, calculations were undertaken for the following scenarios :

Scenario 1 : Patrons on external areas of function centre (conversation level music).

Scenario 2 : Ceremony centred around the outdoor area adjacent lake (music located adjacent function centre on rock area).

5.0 RESULTS

5.1 ROAD TRAFFIC

Under the WAPC State Planning Policy 5.4, for this development, the appropriate “Noise Targets” to be achieved under SPP 5.4, external to a residence are:

External

Day Maximum of 55 dB(A) L_{Aeq}

Night Maximum of 50 dB(A) L_{Aeq}

The policy states that the “outdoor targets are to be met at all outdoor areas as far as reasonable and practical to do so using the various noise mitigation measures outlined in the guidelines”. The Policy also states, under Section 6 – Policy Measures that “a reasonable degree of acoustic amenity for living areas on each residential lot”. The policy recognises that “it may not be practicable to meet the outdoor noise targets”.

The Policy states the following acceptable internal noise levels:

Internal

Living and Work Areas $L_{Aeq(Day)}$ of 40 dB(A)

Bedrooms $L_{Aeq(Night)}$ of 35 dB(A)

For this development, compliance with the requirements of SPP 5.4, noise modelling and assessment are based on the day period for accommodation units located adjacent to South Coast Highway.

The results of the acoustic assessment indicate that noise received at one of the units (Unit A) located adjacent to South Coast Highway would exceed with the “Noise Targets” as outlined in SPP 5.4, therefore further noise amelioration, or considerations would be required. Figure 6.1 shows the future noise contour plot showing the spread of noise into the development.

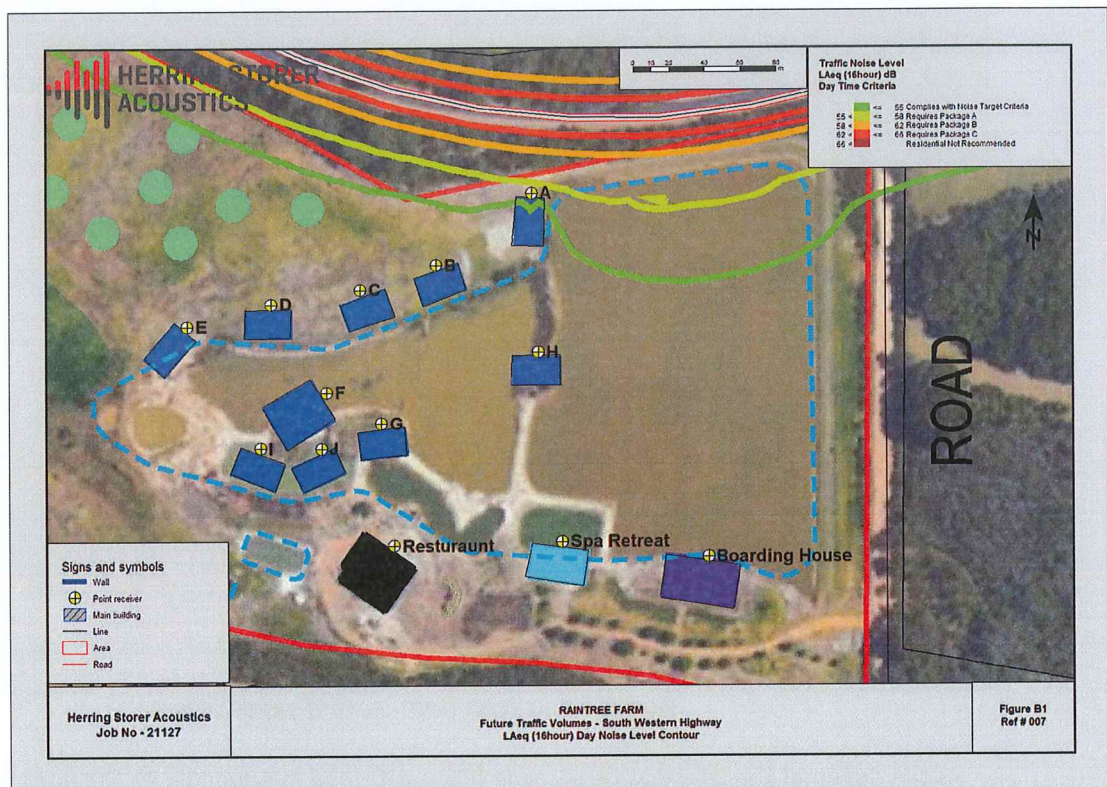


FIGURE 5.1 – FUTURE NOISE LEVELS

Based on the development plan, it is proposed that units are to be constructed for the purpose of accommodation. As per Figure 5.1 above, all units, with the exception of Unit A, which are located on the development are all outside the 55 dB(A) noise Target, hence require no acoustic considerations.

For Unit A on the northern side of the development, future noise level could exceed the 55 dB(A) noise Target level by up to 3 dB(A), dependant on the location. Therefore, to ensure internal noise levels are complied with, quite house design recommendations are required, with these being discussed further in Section 6.

6.0 QUIET HOUSE DESIGN REQUIREMENTS

Figure 6.1 details the noise levels received at the units. As can be seen, it is the façade of the units facing South Coast Highway which are the subject of the higher noise levels, with noise levels reducing to below 55 dB(A) at the rear.

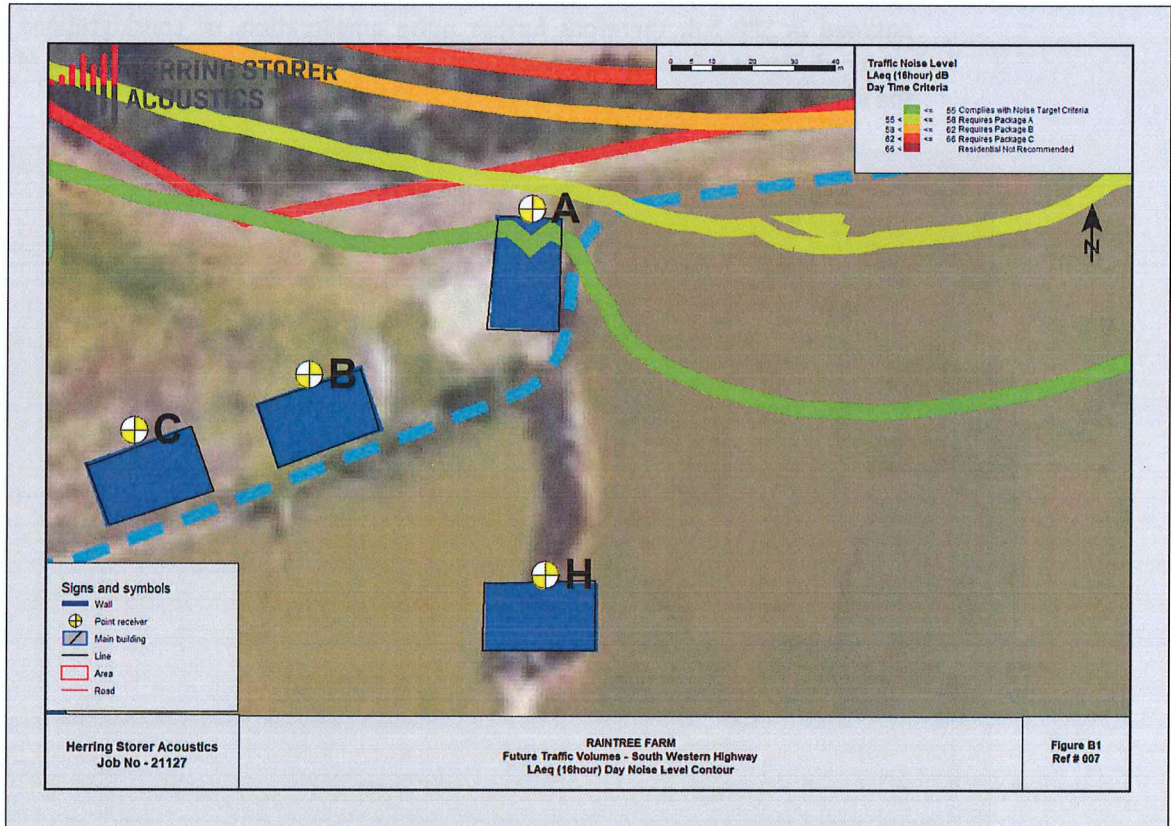


FIGURE 6.1 – FRONT UNIT - FUTURE NOISE LEVELS

As the design of the units has been made (Plans Attached in Appendix A), the quiet house design requirements can be established, and individually tailored to each unit. Therefore, Table 6.1 contains the detailed design requirements for the unit as shown above.

It is noted that all requirements pertain to only acoustic advice in regards to *State Planning Policy 5.4* and may be superseded by other requirements (BAL, Thermal, etc).

TABLE 6.1 – QUIET HOUSE DESIGN REQUIREMENTS

Quiet House Design Requirements	
Item	Unit A
Noise Level	55-58 (Package A)
Walls	$R_w + C_{tr}$ 45 dB
External Doors	Fully glazed hinged door with certified $R_w + C_{tr}$ 28dB rated door and frame including seals and 6mm glass
Windows	Total external door and window system area up to 40% of room floor area: Sliding or double hung with minimum 10 mm single or 6mm-12mm-10mm double insulated glazing ($R_w + C_{tr}$ 28 dB). Sealed awning or casement windows may use 6 mm glazing instead
Roofs and Ceilings of Highest Floors	$R_w + C_{tr}$ 35 dB
Outdoor Living Area	External noise level at all "Alfresco Areas" $L_{Aeq(Day)}$ are less than 55 dB(A) as a result comply with the requirement of State Planning Policy 5.4.
Mechanical Ventilation	Mechanical ventilation to not compromise the performance of any of the façade elements.
Notification on Title	Required

6.1 NOISE EMISSIONS

Noise levels at the identified noise sensitive premise associated with the proposed function centre operations are as listed below in Table 4.1.

TABLE 6.2 – CALCULATED NOISE LEVELS AT NOISE SENSITIVE PREMISES

Location	Scenario	
	1 : Restaurant / Bar Activities	2 : Patrons On Function Centre Deck And Music
R1	29	30
R2	28	28
R3	26	25

7.0 ASSESSMENT

Noise levels associated with the various scenarios considered have been examined for the potential to contain annoying characteristics in accordance with the *Environmental Protection (Noise) Regulations 1997*.

Reference has been made to the monitored noise levels conducted as a part of the traffic assessment. As noted in Table 3.1 the average night time noise level as a result of the South Coast Highway is around 46 dB(A) at each receiver considered. Given the background noise, is over 10 dB(A) higher than the calculated noise of the Raintree Farm activities, it has been considered that the noise emission would not contain any annoying characteristics as they would be masked by the road noise.

Hence, the following adjusted calculated noise level emissions are applicable for assessment purposes.

TABLE 7.1 – ADJUSTED CALCULATED NOISE LEVELS AT NOISE SENSITIVE PREMISES

Location	Scenario	
	1 : Restaurant / Bar Activities	2 : Patrons On Function Centre Deck And Music
R1	29	30
R2	28	28
R3	26	25

Therefore, Tables 7.2 and 7.3 summarises the assessment of the calculated noise levels against the pertinent Assigned Noise Levels.

TABLE 7.2 – ASSESSMENT – SCENARIO 1

Location	Assessable Noise Level, dB(A)	Applicable Times of Day	Applicable L _{A10} Assigned Level (dB)	Exceedance to Assigned Noise Level (dB)
R1	29	Day	45	Complies
		Sunday / Public Holiday Day Period	40	Complies
		Evening	40	Complies
		Night	35	Complies
R2	28	Day	45	Complies
		Sunday / Public Holiday Day Period	40	Complies
		Evening	40	Complies
		Night	35	Complies
R3	26	Day	45	Complies
		Sunday / Public Holiday Day Period	40	Complies
		Evening	40	Complies
		Night	35	Complies

TABLE 7.3 – ASSESSMENT – SCENARIO 2

Location	Assessable Noise Level, dB(A)	Applicable Times of Day	Applicable L _{A10} Assigned Level (dB)	Exceedance to Assigned Noise Level (dB)
R1	30	Day	45	Complies
		Sunday / Public Holiday Day Period	40	Complies
		Evening	40	Complies
		Night	35	Complies
R2	28	Day	45	Complies
		Sunday / Public Holiday Day Period	40	Complies
		Evening	40	Complies
		Night	35	Complies
R3	25	Day	45	Complies
		Sunday / Public Holiday Day Period	40	Complies
		Evening	40	Complies
		Night	35	Complies

8.0 CONCLUSION

Based on the above assessment, noise level emissions associated with the restaurant and function centre are able to comply with the relevant assigned noise levels stipulated by the *Environmental Protection (Noise) Regulations 1997*.

The results of the acoustic assessment indicate that noise received at one of the units (Unit A) located adjacent to South Coast Highway would exceed with the “Noise Targets” as outlined in SPP 5.4, therefore further noise amelioration, or considerations would be required.

APPENDIX A

Development Plans



LEGEND

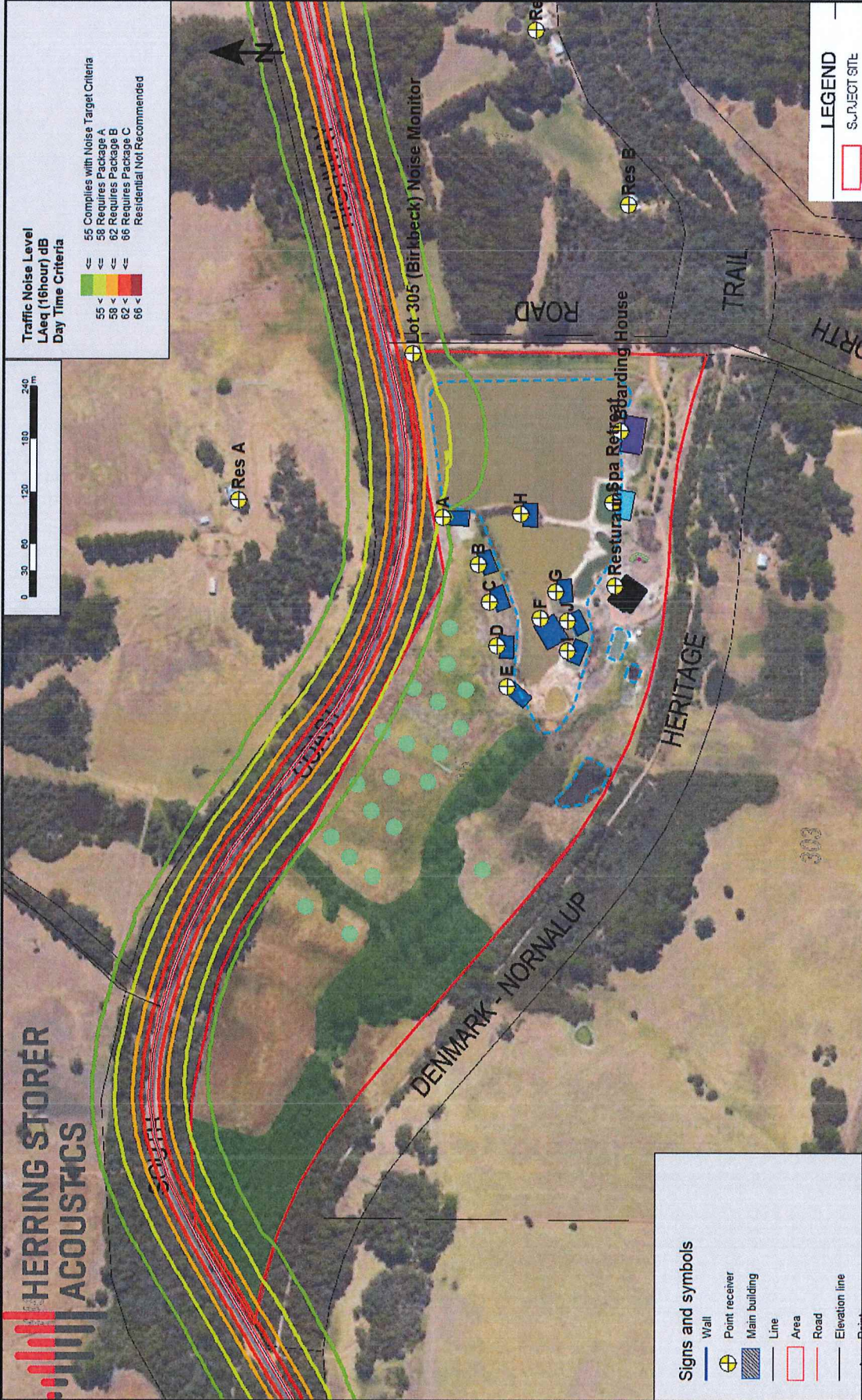
- SUBJECT SITE
- ↔ SPA RETREAT
- ↔ TOURIST DEVELOPMENT, TAVERN, SHOP, RESTAURANT, WINERY AND DISTILLERY
- ↔ ACCESS/EGRESS POINTS
- ⊞ FIRE REFUGE/MULTI-PURPOSE BUILDING
- ⊞ ENTRY TO THE DAM
- ⊞ EXISTING MAN/PAN/TREE ACCESS
- ⊞ EMERGENCY FIRE EVACUATION
- ↔ PRIMARY SITE ACCESS

WILLIAMS CONSULTING | TOWN PLANNING & PROJECT MANAGEMENT
 ph: 0418 116216 | email: samwilliams@westnet.com.au
 date - 23 April 2021 | ref - 19-007-005C
 scale - 1:5000 @ A3

**LOCAL DEVELOPMENT PLAN
 LOT 305 WENTWORTH ROAD, OCEAN BEACH**

APPENDIX B

$L_{Aeq(16hr)}$ DAY
NOISE CONTOURS FOR SOUTH COAST HIGHWAY



**Traffic Noise Level
LAeq (16hour) dB
Day Time Criteria**

≤ 55	≤ 58	≤ 62	≤ 66
55 <	58 <	62 <	66 <
≤ 55	≤ 58	≤ 62	≤ 66
55 <	58 <	62 <	66 <

55 Complies with Noise Target Criteria
58 Requires Package A
62 Requires Package B
66 Requires Package C
Residential Not Recommended



Signs and symbols

- Wall
- Point receiver
- Main building
- Line
- Area
- Road
- Elevation line

LEGEND

- SUBJECT SITE

**Herring Storer Acoustics
Job No - 21127**

**RAINTREE FARM
Future Traffic Volumes - South Western Highway
LAeq (16hour) Day Noise Level Contour**

**Figure B1
Ref # 007**

APPENDIX C

NOISE EMISSION CONTOUR PLOTS



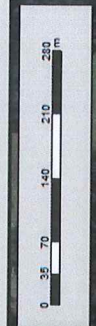
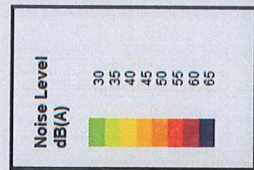
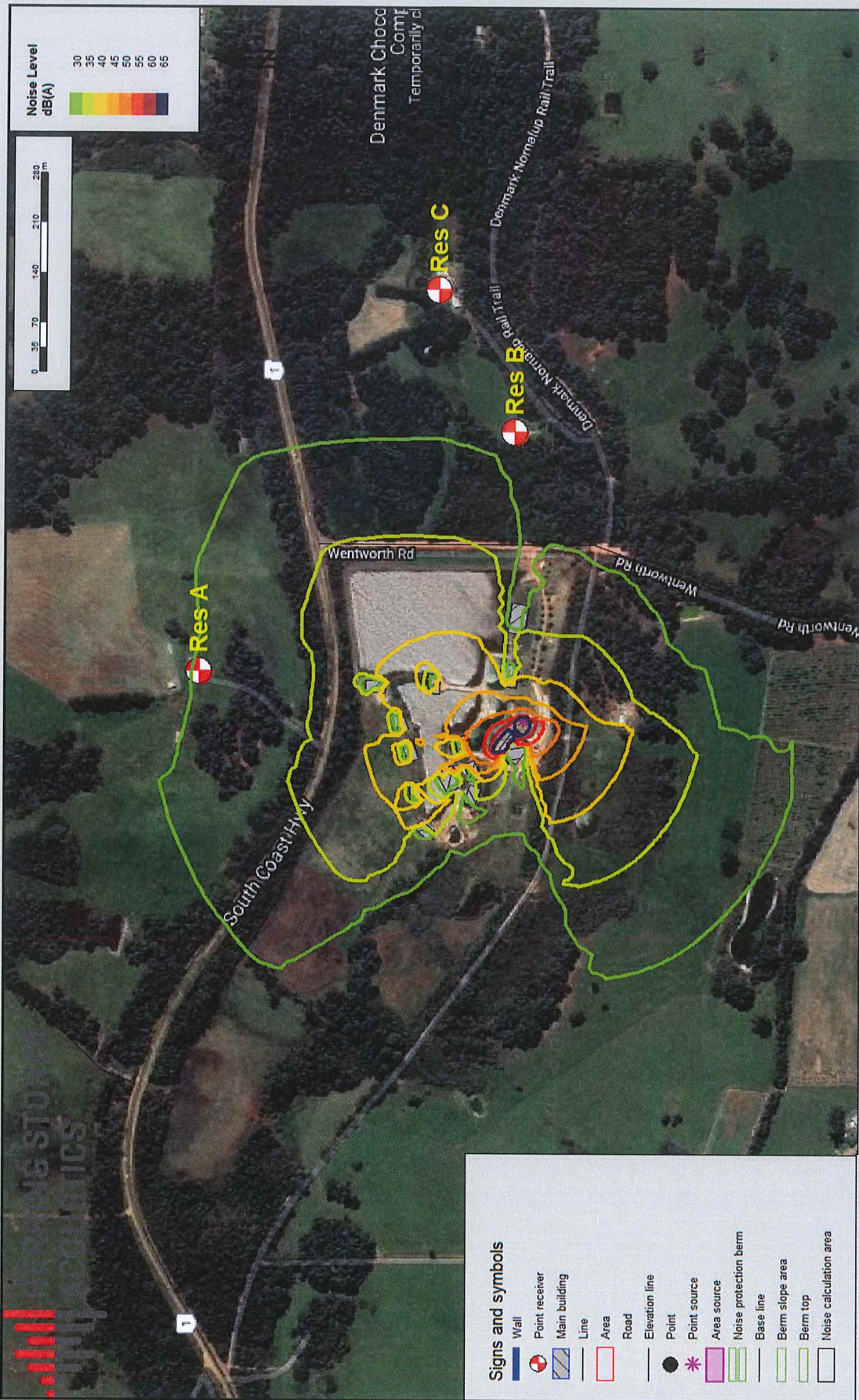
Signs and symbols

- Wall
- Point receiver
- Main building
- Line
- Area
- Road
- Elevation line
- Point
- Point source
- Area source
- Noise protection berm
- Base line
- Berm slope area
- Berm top
- Noise calculation area

Herring Storer Acoustics
Job No - 21127

RAINTREE FARM
RESTAURANT OPERATIONS
Night Noise Level Contour

Figure C1
Ref # 006



- Signs and symbols**
- Wall
 - Point receiver
 - Main building
 - Line
 - Area
 - Road
 - Elevation line
 - Point
 - Point source
 - Area source
 - Noise protection berm
 - Base line
 - Berm slope area
 - Berm top
 - Noise calculation area

Figure C2
Ref # 004

**RAINTREE FARM
RESTAURANT AND OUTDOOR FUNCTION OPERATIONS
Night Noise Level Contour**

**Herring Storer Acoustics
Job No - 21127**

APPENDIX D

TRAFFIC FLOW VOLUMES – SOUTH COAST HIGHWAY



Hourly Volume

South Coast Hwy (H009)

2020/21
Monday to Friday

East of William Bay Rd (SLK 449.84)

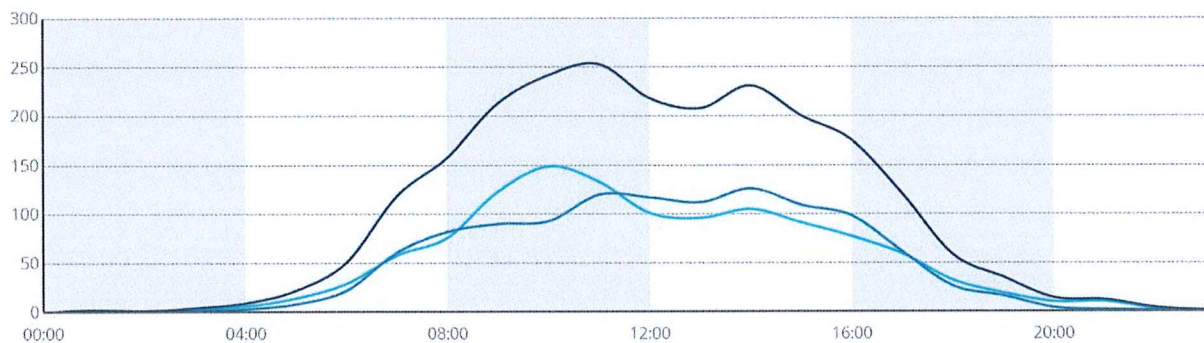
	All Vehicles			Heavy Vehicles				%
	→ E	EB	← W	WB	↔ Both	Truck		
00:00		0		0		0		0.0
01:00		1		1		0		0.0
02:00		0		1		0		0.0
03:00		3		1		1		25.0
04:00		6		3		3		33.3
05:00		14		8		4		18.2
06:00		29		22		11		21.6
07:00		58		61		24		20.2
08:00		76		82		25		15.8
09:00		123		90		36		16.9
10:00		149		93		41		16.9
11:00		133		120		38		15.0
12:00		101		117		37		17.0
13:00		96		112		33		15.9
14:00		105		126		37		16.0
15:00		91		109		36		18.0
16:00		77		98		21		12.0
17:00		59		61		12		10.0
18:00		32		26		6		10.3
19:00		19		16		2		5.7
20:00		10		4		1		7.1
21:00		10		2		1		8.3
22:00		3		1		0		0.0
23:00		1		0		0		0.0
TOTAL		1196		1154		369		15.7



Peak Statistics

AM	TIME	09:45	11:30	11:00	10:00	11:30	10:00
	VOL	155	126	253	23	20	41
PM	TIME	13:45	14:00	14:15	13:45	15:00	12:15
	VOL	108	126	231	18	24	38

Volume



— Eastbound — Westbound — Both Directions

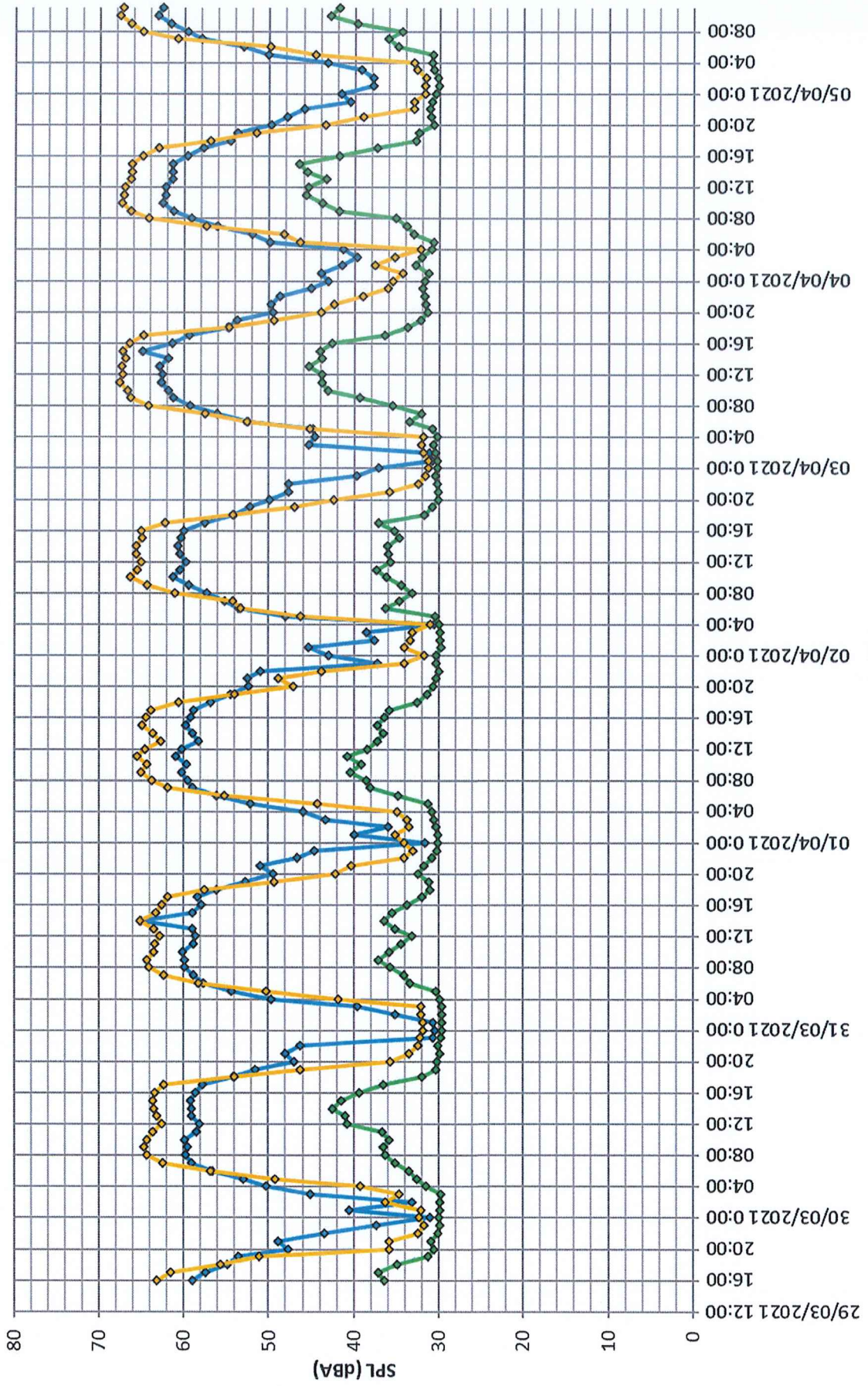
APPENDIX E

MONITORING DATA



Noise Logging - Lot 305 South Coast Highway, Ocean Beach

LAeq LA10 LA90



APPENDIX D - SITE AND SOIL ASSESSMENT



17 November 2020

Steve and Karen Birkbeck
Raintree Estate
PO Box 332
DENMARK WA 6333

Dear Steve and Karen

RE: SITE AND SOIL EVALUATION – LOT 305 SOUTH COAST HIGHWAY, OCEAN BEACH, SHIRE OF DENMARK

Background

Aurora Environmental has carried out a site and soil evaluation for Lots 304 and 305 South Coast Highway, Ocean Beach in the Shire of Denmark (the Site; Attachment A) to determine suitability for on-site effluent disposal. It is proposed that Lot 305, which comprises 26.8270 ha, be developed to accommodate a tourist centre and holiday chalets, with irrigation of secondary treated waste water on adjacent Lot 304. The subject land is outside the current service zone for the reticulated sewer system so on-site effluent disposal is proposed.

Scope

The scope of this assessment involved the review of publicly available information and assessment of on-site landform, soil and groundwater to characterise the subject land with respect to the ability of the site to support on-site effluent disposal and advise which system(s) would be appropriate, as outlined in:

- *Government Sewerage Policy (GSP; Government of Western Australia, 2019);*
- *Guidance on Site and Soil Evaluation for On-site sewage Management (Department of Health, 2019);*
and
- *Australian/ New Zealand Standard - On-site Domestic Wastewater Management (AS/NZS 1547:2012).*

A discussion with a member of the Shire of Denmark Environmental Health Team (23 September, 2020) indicated that the scope was an appropriate approach to the site and soil evaluation.

Site Description

A description of the site is included in Table 1.

TABLE 1: SITE DESCRIPTION

Land Feature	Description
General Description	The site comprises gently sloping land with pasture and native vegetation, with a valley floor running west to east centrally. A tributary of the Little River runs along the valley floor. A large dam has been constructed in the eastern portion of Lot 305, adjacent to Wentworth Road. Lot 304 contains several dams (Attachment A).
Topography:	Lot 305 slopes gently to the east (lowest point 72 mAHD) from the western boundary (100 mAHD) and southern boundary (Attachment B). Lot 304 slopes down to the north from a high point of 125 m AHD.
Climate	The Denmark area has a Mediterranean climate, characterised by warm, dry summers and cool, wet winters. The long-term mean annual rainfall is 1037.4 mm with a median of 1071.3 mm (Bureau of Meteorology, 2020; 1961 – 1990 ¹). Most of the rain falls between May and September.
Soil	Illustrated in Attachment C, broad soil description for the site are: 254WhHA: Hazelvale Subsystem which comprises narrow sandy plains, slight stream incision, humus podzols on crests of spurs, yellow duplex soils on valley flanks and peaty podzols on minor valley floors. Generically, this soil type has a moderate risk of phosphorus export and waterlogging. 254WhKYy: Keystone yellow duplex Phase. Gravelly yellow duplex soils; Jarrah-Marri forest. Source: (Soil Landscape Mapping – Best Available (DPIRD-027) South Coast and Hinterland Landforms and Soils).
Evaporation	Annual average evaporation is 1300 mm (BOM, 2020 ²).
Rainfall – Year to Date	Rainfall to the end of September 2020 for Denmark (Weather Station: 9531) was 979.5 mm (Attachment D). This is above average which indicates that groundwater measurements are likely to reflect a genuine maximum level.
Catchment	The site is part of in the Wilson Inlet catchment.

¹ Bureau of Meteorology, 2020:
http://www.bom.gov.au/jsp/ncc/cdio/weatherData/av?p_nccObsCode=139&p_display_type=dataFile&p_startYear=&p_c=&p_stn_num=009531

² Water Corporation (2004) Denmark River Catchment Area Drinking Water Source Protection Assessment
https://www.water.wa.gov.au/data/assets/pdf_file/0006/5397/81821.pdf

Watercourses/ Wetlands	A tributary of the Little River flows along the valley floor of Lot 305 (Attachment E). There are dams on both Lots 304 and 305 (Attachment A).
Groundwater	The subject land is within the 'Forested Hills' division of the south west of Western Australia and is characterised by moderately high to high rainfall and an undulating landscape. Hydrology usually comprises seepage from sediments and over bedrock with perched water tables in upland sediments (Tille et al., 2001 ³).
Contaminated Sites Database	There are no contaminated sites associated with the subject land (Source: Contaminated Sites Database, DWER-059).

Testing Methodology and Results

A site inspection was conducted on 14 October 2020 after a period of relatively wet weather (Attachment D).

During the site inspection, the following was undertaken at RTE007 (Attachment A):

1. Soil profile characterisation.
2. Installation of a piezometers to a depth of 0.7 m below ground level (BGL).
3. Permeability measured.
4. Soil samples were taken for phosphorus retention testing.

Photographs of the site are included in Attachment F.

Soil Profile

A hand auger was used to extract sand to a depth of 0.7 m BGL in the area of the site proposed to accommodate discharge of treated waste water. The soil profile comprises:

- 0 – 0.3 m: Dark brown loamy sand with gravel and organic matter;
- 0.3 – 0.8 m: Light brown loamy sand with gravel, fine, medium and coarse grained;
- 0.7 m: Orange clayey sand/sandy clay.

Ground Water

A piezometer was installed at RTE007 to a depth 0.7 m below ground level with ground surface at approximately 110 mAHD. No groundwater was detected to 0.7 m BGL. Groundwater is likely to be seasonal in this area, with perching on clays and granite during wet seasons with a flow generally north, towards the Little River.

³ Tille, P J, Mathwin, T W, and George, R J. (2001), South west hydrological information package: understanding and managing hydrological issues on agricultural land in the south west of Western Australia. Department of Agriculture and Food, Western Australia, Perth. Bulletin 4488.

Phosphorus Retention Index

Water Quality Protection Note 22: Irrigation with Nutrient Rich Wastewater (DoW, July 2006) indicates that soils with Phosphorus Buffering Index (PBI) ratings higher than 10^4 have a reduced risk of leaching nutrients through the soil profile and into the groundwater. The Department of Health, (DoH) published *Code of Practice for the Design, Manufacture, Installation and Operation of Aerobic Treatment Units* (DoH, 2001) specifies that surface irrigation disposal areas need to contain soils with Phosphorus Retention Index (PRI) values greater than 20. If soil PRI is less than 20, then high-PRI amended irrigation areas or a nutrient removing system are recommended for the site.

Two soil sample were taken from RTE007 (with soil from 0 cm to 30 cm BGL and 50 cm to 70 cm BGL) to test for phosphorus retention index (PRI). The sample was sent to CSBP Laboratories (ASPAC accredited) for analysis. Results are shown in Attachment G. The PRI for the soil samples was between 63.7⁵ and 85.8, which indicates that there is a high ability to sorb phosphorus in the sampled soil profile.

Soil Permeability, Drainage Classification and Design Loading Rates

An infiltration test was undertaken at RTE007 to determine the permeability of the soil to a depth of 0.5m BGL. A CL26100 well permeameter which is designed to meet the requirements set out in AS/NZS 1547:2012 (Standards Australia, 2012) was used for the investigation. This method is a constant head test, whereby water that infiltrates an unlined test hole is replenished at the same rate from a reservoir, keeping the level of water in the hole constant (i.e. constant head). Field records are taken to measure the loss of water from the reservoir over time, which are then used to calculate the coefficient of permeability (K_{SAT}) for the particular soil profile. The test hole was created using a hand auger. The permeability calculations, based on field measurements are detailed in Attachment H. The K_{SAT} results and interpreted soil categories are summarised in Table 2.

TABLE 2: CALCULATED K_{SAT} VALUES AND DRAINAGE CLASSIFICATION

LOCATION	K_{SAT} (M/DAY)	SOIL CATEGORY*	SOIL TYPE	SOIL TEXTURE/UNIT	PERMEABILITY
RTE007	0.53	3	Loams	Weakly Structured or Massive	Low permeability

* Soil Category as per AS 1547:2012.

Based on infiltration testing results, the calculated K_{SAT} value is 0.53 m/day which equates to 'low permeability'. Based on field observations and permeability, the soils at the site fall into Category 3, a sandy loam (Standards Australia, 2012). This permeability rating is considered to be adequate for on-site effluent disposal.

The Australian Standard AS/NZS 1547:2012 (Standards Australia, 2012) provides guidelines on recommended Design Loading Rates (DLRs) for disposal of wastewater to land via irrigation. The DLR is

⁴ PBI of 10 approximately equates to PRI of -1.75 (i.e. desorbing soil). Bolland M. D. A., Windsor D. P. (2007) Converting reactive iron, reactive aluminium, and phosphorus retention index (PRI) to the phosphorus buffering index (PBI) for sandy soils of south-western Australia. *Australian Journal of Soil Research* 45, 262-265.

⁵ Equates to PBI of 138 and 145, respectively.

based on the identified soil characteristics at the site, including soil permeability as summarised in Table 3. Table 3 shows that the soil category present on site is suitable for leach drains or irrigation of treated waste water as there is sufficient depth to maximum winter groundwater. The exact specifications for onsite effluent disposal will ultimately depend on the scale of the development (based on maximum occupants).

TABLE 3: RECOMMENDED DESIGN LOADING RATES

SOIL CATEGORY	TEXTURE/ STRUCTURE	INDICATIVE PERMEABILITY	DISPOSAL METHOD – DESIGN IRRIGATION LOCATING RATE (DIR/DLR) MM/ DAY		
			TRENCHES AND BEDS		
			PRIMARY TREATED EFFLUENT CONSERVATIVE/ MAXIMUM	SECONDARY TREATED EFFLUENT	DRIP AND SPRAY IRRIGATION
3	Loams, weakly structured or massive	0.5 – 1.5 K_{SAT} m/d	10/ 15 mm/day	30 mm/day	4 mm/day

Source: Table 5.2 Soil Categories and Recommended Design Irrigation/Loading Rates for Land Application Systems. Australian Standard AS/NZS 1547:2012 (Standards Australia, 2012)

Government Sewerage Policy

The *Government Sewerage Policy* (GSP, Government of Western Australia, 2019) states that on-site effluent disposal will be considered where the responsible authority is satisfied that:

- Each lot is capable of accommodating on-site sewage disposal without endangering public health or the environment; and
- The minimum site requirements can be met as per Schedule 2 of the GSP.

Sewage sensitive areas include environments that would be degraded by nutrient enrichment and associated impacts. A list of these areas is included in Attachment I. The subject land is not located in a sewage sensitive area.

Minimum site requirements for primary treatment units are outlined in Table 4. An area of 2 ha associated with test site RTE007 is nominated for irrigation of treated waste water (Attachment J).

TABLE 4: MINIMUM REQUIREMENTS FOR ON-SITE EFFLUENT DISPOSAL

Location/ Land Use	
Sewerage sensitive zone	No
Public Drinking Water Source Area	No
Separation from Water Resources: On-site Effluent Disposal	

Site and Soil Evaluation – Lot 305 South Coast Highway, Ocean Beach – Shire of Denmark

Resource	Distance Requirement	Comment
Wellhead protection zone or on Crown land within a reservoir protection zone	Not to be located within zone	The proposed irrigation area is not within a wellhead or reservoir protection zone.
High water mark of a reservoir	100 m	The proposed irrigation area is not within 100 m of a reservoir.
Bore used for public drinking water supply	100 m	The proposed irrigation area is not within 100m of a public drinking water supply bore
Private bore used for household/ drinking water purposes	30 m	The proposed irrigation area is not within 30 m of private bores used for drinking water (Water Information Reporting: http://wir.water.wa.gov.au/Pages/Water-Information-Reporting.aspx)
Waterway or significant wetland and not within a waterway foreshore area or wetland buffer	100 m for primary treatment Minimum of 30 m for secondary treatment with nutrient removal.	The subject land contains a tributary of Little River and several dams (Attachments A and E). The proposed irrigation area is not within 100m of a waterway, significant wetland, foreshore area or wetland buffer. The <i>Department of Health Code of Practice for ATUs</i> (2001) ⁶ recommends a minimum separation of 30 m of secondary treatment systems from wells, bores, dams or water courses. This minimum separation can be achieved on the subject land.
Drainage system that discharges directly into a waterway or significant wetland without treatment	100 m	There are no drainage systems which directly discharge into a waterway or significant wetland.
Area subject to inundation and/or flooding in a 10% Annual Exceedance Probability (AEP) rainfall event		The area tested on the subject land is not subject to flooding.
Groundwater – Vertical separation from leach drain/ irrigation area		
Public drinking water source area	2 m	There is no PDWSA associated with the subject land
Sewage sensitive area	1.5 m	This is not applicable to the subject land

⁶ Department of Health (2001) Code of Practice for the Design, Manufacture, Installation and Operation of Aerobic Treatment Units (ATU's) https://ww2.health.wa.gov.au/~/_/media/Files/Corporate/general%20documents/water/Wastewater/ATU-COP-2001.pdf

All other areas, depending on soil type and the treatment system used	0.6 – 1.5 m	The test site (RTE007) did not have groundwater to a depth of 0.7 m BGL. The minimum of 0.6 m BGL can be met.
Slopes		
Gradient of the land application area	The subject land has gentle slopes (steepest is 1:7) that do not exceed one in five (1:5). Therefore, waste water application areas do not need to be engineered to prevent run-off.	

Source: Government Sewerage Policy (State Government of WA, 2019).

WASTE WATER GENERATION AND LAND APPLICATION AREAS

The premises established on site are likely to produce waste water as shown in Table 5.

TABLE 5: WASTE WATER GENERATION

Type of Premises/Use	People/ day	L/day/ person	L/Day/ premises/ use	Number of Premises	L/day*
Chalet (2 people)	2	140	280	10	2800
Lodge (20 people)	20	140	2800	1	2800
Spa Retreat (6 people)	6	140	840	1	840
Caravan/ Campsites (3 people per bay)	3	140	420	20	8400
Tourist Centre	500	30	15000	1	15000
Office staff (non showering)	10	30	300	10	3000
			Total:		30040
Based on: Supplement to Regulation 29 and Schedule 9 - Wastewater system loading rates https://ww2.health.wa.gov.au/Articles/S_T/Supplement-to-Regulation-29-and-Schedule-9-Wastewater-system-loading-rates					

Recommendations for application areas of treated waste water are outlined in Table 6.

TABLE 6: LAND APPLICATION AREAS

Land Application Areas
Land application areas for treated waste water are to be used only for that purpose and should be kept free of any temporary or permanent structures.
Activities within the land application area shall not interfere with the function of the current and future land application system and people should avoid potential contact with effluent residues. Unless allowed for in the design, the land application area) should: <ul style="list-style-type: none"> • not be built on or paved in a manner which precludes reasonable access; • not be subject to vehicular traffic (other than a pedestrian-controlled lawnmower); • not be subject to regular foot traffic such as pathways and clothes line areas; and • should be kept in a manner which enables servicing and maintenance of the disposal system.
The size of the land application area should be determined in accordance with the conversion factors prescribed in the GSP and <i>AS/NZS 1547 On-site domestic wastewater management</i> as follows: <ol style="list-style-type: none"> 1. Estimate hydraulic load (L/day): Occupancy rate (persons) x design loading rate (L/person/day) 2. Calculate land application area (m²): Hydraulic load (L/day) x conversion factor from GSP

Using the calculations above, the red text in Table 7 applies for the subject land.

TABLE 7: MINIMUM REQUIRED LAND APPLICATION AREA TREATED WASTE WATER DISPOSAL (BASED ON 56,640L/DAY)

Minimum required land application area treated waste water disposal					
Soil Category	Soil Texture	Conversion Factor and Square Metres Required			
		Primary Treatment	Area (m ²)	Secondary Treatment	Area (m ²)
1	Gravels and sands	0.377	11,325	0.2	6,008
2	Sandy loams	0.377	11,325	0.2	6,008
3	Loams	0.477	14,329	0.25	7,510
4	Clay loam	0.689	20,698	0.286	8,591
5	Light clays	1.284	38,571	0.333	10,003
6	Medium to heavy clays	Special design requirements and distribution techniques or soil modification procedures will be necessary		0.5	15,020

Note: From GSP, 2019. Schedule 2 Table 2. Conversion factors based on a hydraulic load of 1 L/day

Type of On-site Treatment System

The attributes of the subject land, when compared to the minimum requirements, indicate that onsite effluent disposal can be managed on the subject land.

As the proposed irrigation area will be in duplex soils with a separation to clay of 0.7 m, a secondary treatment system is recommended. Nutrient removal is not necessary, due to the high ability of the soil to sorb phosphorus.

Secondary treatment units require an agreement for quarterly servicing to ensure they are maintained in good working order.

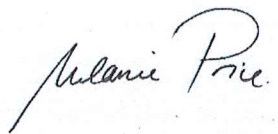
Key Findings

A review of site characteristics indicates that Test Location RTE007 is suitable for on-site effluent disposal when considering criteria of the *Government Sewerage Policy 2019*. The following points are noted:

- The Site is not located within a Sewage Sensitive Area.
- The Site contains a water way (Little River) and several dams, all of which are separated from RTE007 by at least 100m.
- Depth to groundwater during winter testing was at least 0.7 m BGL.
- Phosphorus export risk is low, so a nutrient removing system is not likely to be required.
- A secondary treatment system is recommended.
- The largest concept of the proposed development will require an irrigation area of 7,510 m². The area associated with RTE007 comprises 2 ha (20,000 m²) (Attachment J).

If you have any queries regarding this assessment, please contact the undersigned on 0447 446 343 or melanie.price@auroraenvironmental.com.au.

For and on behalf of Aurora Environmental



Melanie Price
Principal Environmental Scientist



Kate McCormack
Senior Environmental Engineer

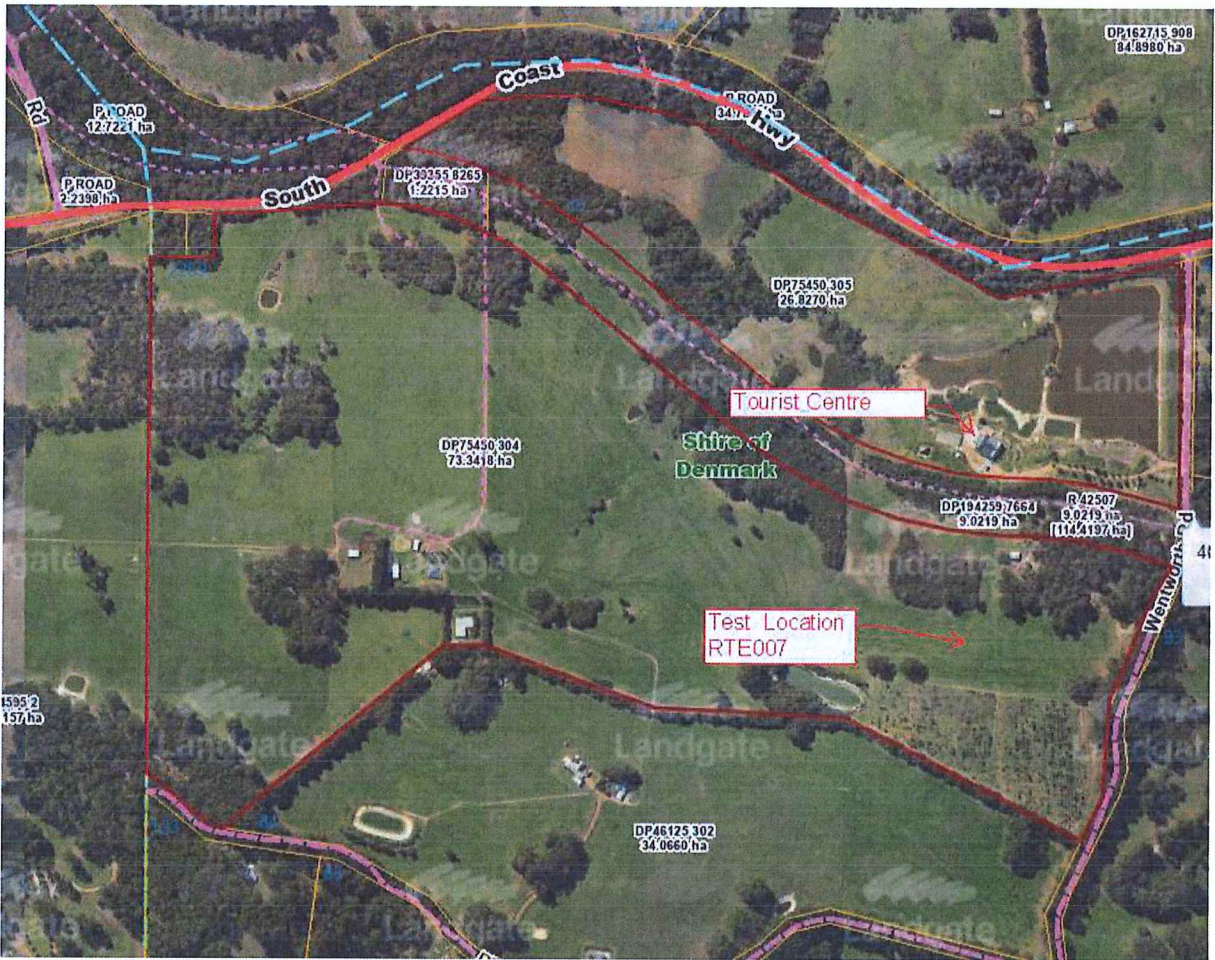
Attachments

- A. Subject Land and Testing Location
- B. Topography
- C. Soils

Site and Soil Evaluation – Lot 305 South Coast Highway, Ocean Beach – Shire of Denmark

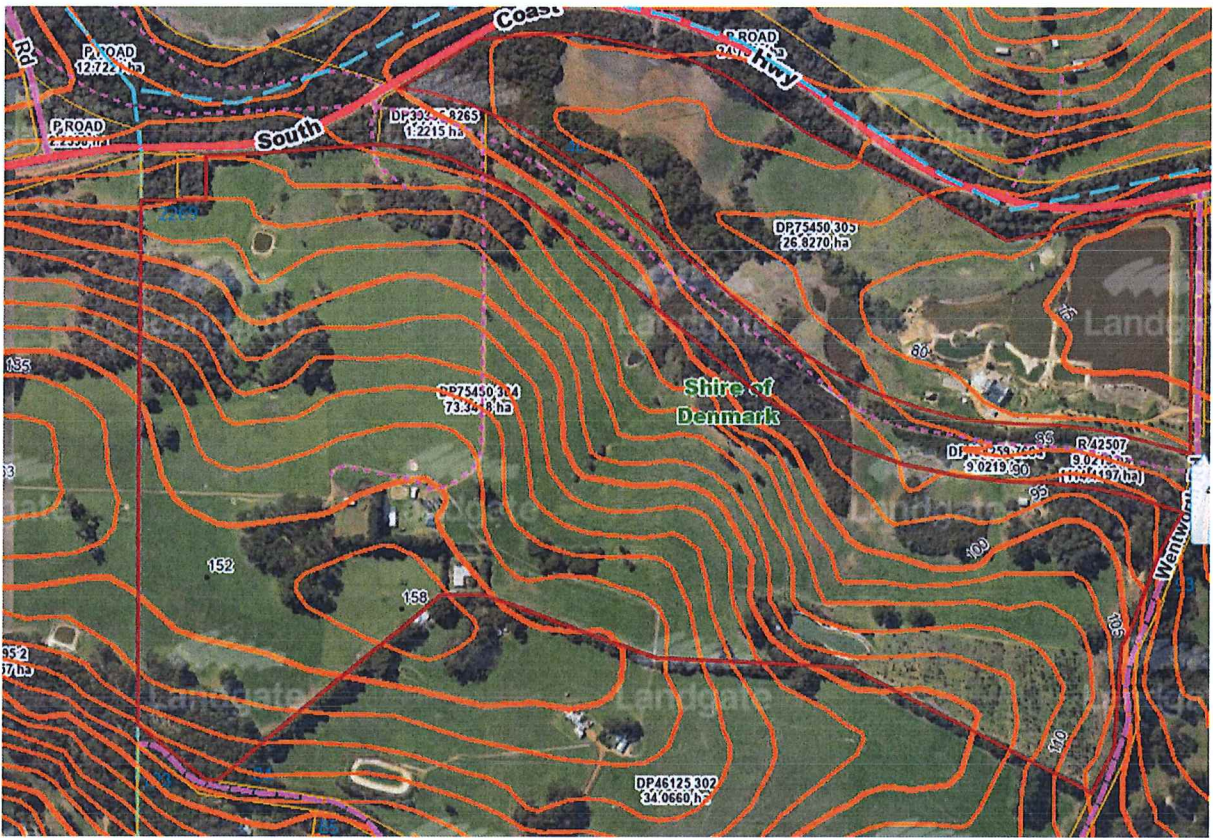
- D. Year to Date Rainfall
- E. Topography and Water Courses
- F. Site Photographs
- G. PRI Results
- H. Permeability
- I. Sewage Sensitive Areas

ATTACHMENT A
Subject Land and Testing Location



ATTACHMENT B

Topography



ATTACHMENT C

Soils



ATTACHMENT D
Year to Date Rainfall

Rainfall Data

Rainfall: Mean and Median for Denmark by Month (mm)

Statistic	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
Mean	30.1	25.6	34.4	80.3	133.6	143.9	169.8	137.9	102.9	93.8	58.2	27	1037.4
Median	20	20.3	27.8	75.4	115.1	126.9	165.9	139.1	94.5	88.6	49.8	19	1071.3
2020	47.7	22	53.4	48.2	159.3	145.2	148.2	217.2	138.3				

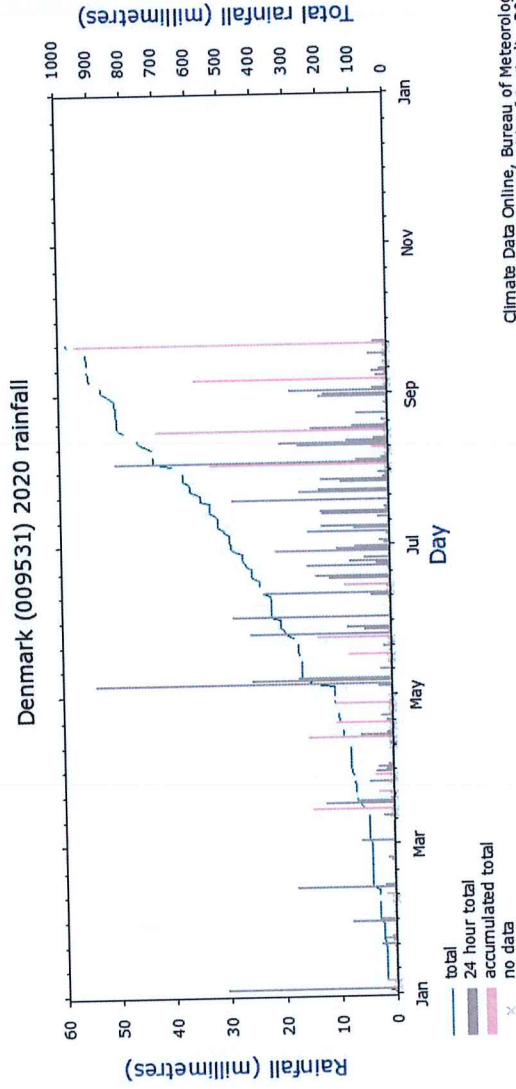
Source: Bureau of Meteorology (2020).

http://www.bom.gov.au/isp/ncc/cdio/weatherData/av?p_display_type=dataDGraph&p_stn_num=009531&p_nccObsCode=136&p_month=13&p_startYear=2020

Mean rainfall to end of September: 858.5 mm

Median rainfall to end of September: 785 mm

Rainfall: Year to Date 2020 (to the end of September): 979.5 mm

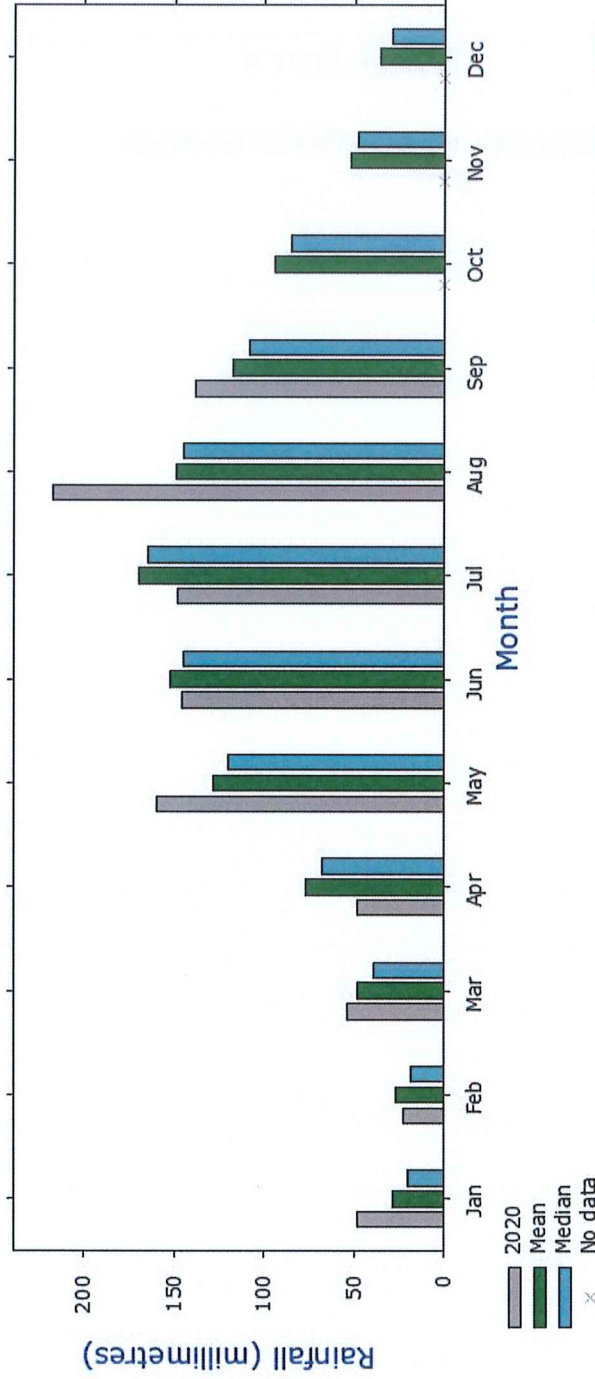


Note: Data may not have completed quality control.

http://www.bom.gov.au/jsp/ncc/cdio/weatherData/av?p_display_type=dataGraph&p_stn_num=009531&p_nccObsCode=136&p_month=13&p_startYear=2020

Rainfall: Year to Date: Comparison with Denmark Mean and Median

Denmark (009531) 2020 Rainfall (millimetres)



Climate Data Online, Bureau of Meteorology
Copyright Commonwealth of Australia, 2020

Note: Data may not have completed quality control

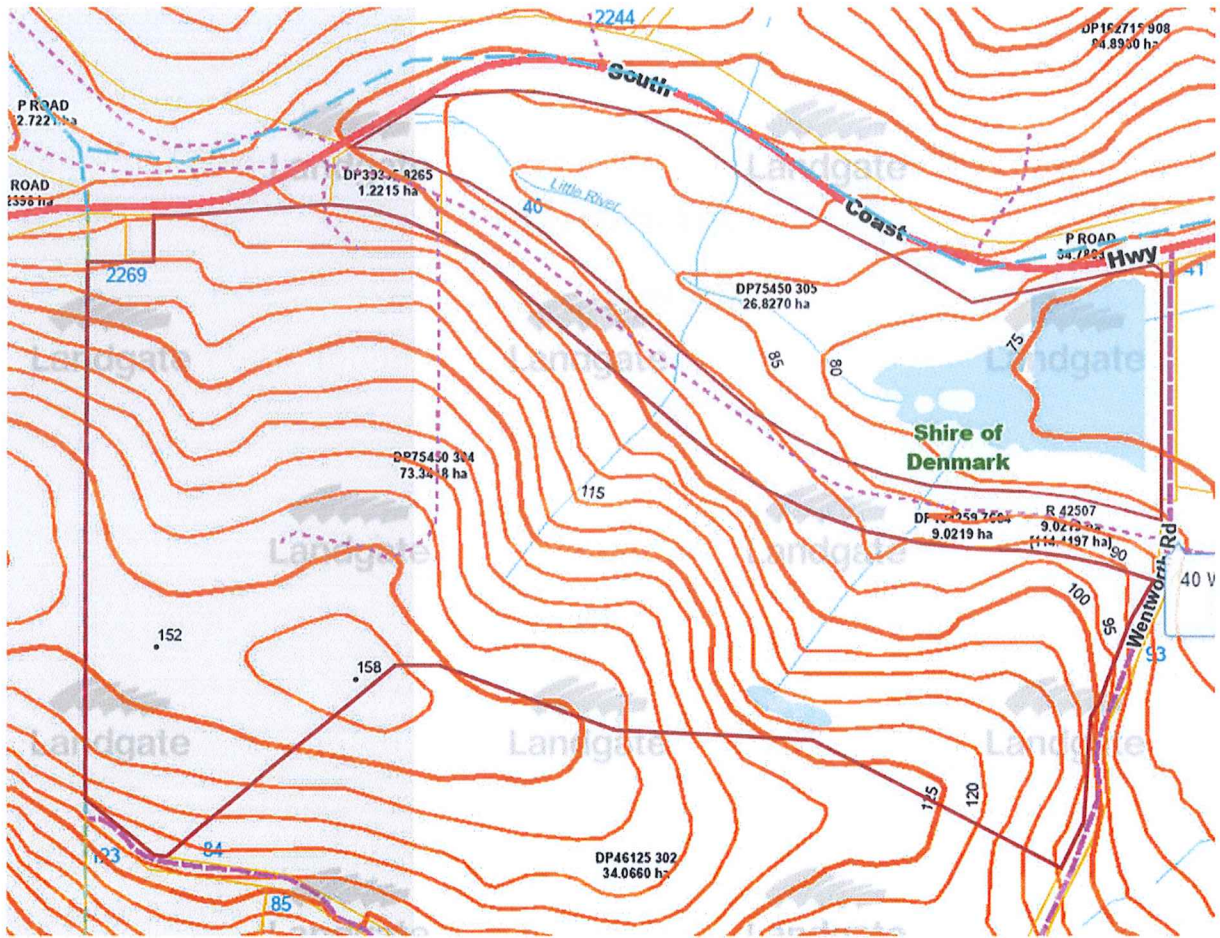
http://www.bom.gov.au/jsp/ncc/cdio/weatherData/av?p_display_type=dataGraph&p_stn_num=009531&p_nccObsCode=136&p_month=13&p_startYear=2020

These data indicate that 2020 has experienced above average rainfall, to the end of September and that groundwater levels are likely to represent maximum levels for the site.

ATTACHMENT E

Topography and Water Courses





ATTACHMENT F

Site Photographs



Photograph 1 (14/10/20)

Looking north from RTE007 towards Lot 305



Photograph 2 (14/10/20)

Test Site RTE007 is on a gentle slope with an orchard to the south (up hill) and pasture to the east.

**SITE AND SOIL EVALUATION – LOT 305 AND 306 SOUTH COAST
HIGHWAY, OCEAN BEACH, SHIRE OF DENMARK**





Photograph 3 (14/10/20)

Test pit RTE007 showing indicative soil profile – karri loam



Photograph 4 (14/10/20)

Looking west from test pit RTE007

**SITE AND SOIL EVALUATION – LOT 305 AND 306 SOUTH COAST
HIGHWAY, OCEAN BEACH, SHIRE OF DENMARK**



ATTACHMENT G

PRI Results

Analysis Results

CSBP Soil and Plant Laboratory



86486
Aurora Environmental (Albany)

Lab No	3PS20070	3PS20071
Name	RTE007	RTE007
Code	RTE-2020-001	RTE-2020-001
Customer	Aurora Environmental	Aurora Environmental
Depth	0-30	50-70
Phosphorus Retention Index	85.8	63.7

ATTACHMENT H

Permeability

Job No.: RTE2019-001
Site: Lot 304 & 305 South Coast Highway, Ocean Beach
Location ID: RTE007 **Northing:** 0
Operator: MP **Easting:** 0
Date: 14/10/2020 **Slope:** Slope down to north



Elevation approximately 110 m AHD

Vegetation: Pasture - Surrounding areas tea tree

Soil structure: Depth	Soil Description
0-0.3	Dark grey fine to medium grained sand with organic matter
0.3-0.80	Dark grey sand grading to light grey sand, medium grained
0.8	Refusal (coffee rock)

Average time to fall 10cm: sec

Depth of water in hole: cm
 Diameter of test hole: cm
 Depth to impermeable layer: cm

Diameter of water reservoir: cm
 Diameter of air inlet tube: cm

The method of calculation is taken from AS 1547:2000 On-site Domestic Wastewater Management

$$K_{sat} = \frac{4.4Q \left[0.5 \sinh^{-1} \left(\frac{H}{2r} \right) - \sqrt{\left(\left(\frac{r}{H} \right)^2 + 0.25 \right) + \frac{r}{H}} \right]}{2\pi H^2}$$

where

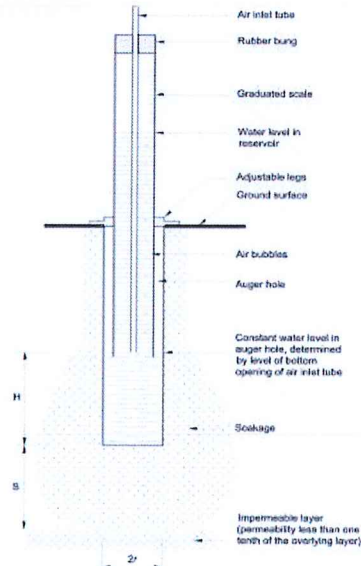
- K_{sat} = saturated hydraulic conductivity of the soil in cm/min
- 4.4 = correction factor for a systematic under-estimate of soil permeability in the mathematical derivation of the equation
- Q = rate of loss of water from the reservoir in cm³/min
- H = depth of water in the test hole in cm
- r = radius of the test hole in cm

Rate of water loss

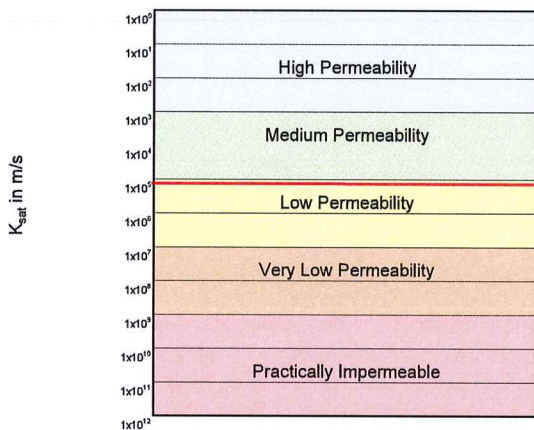
Q = 0.0026 L/sec
 Q = 155.0 cm³/min

Saturated hydraulic conductivity

K_{sat} = 0.04 cm/min
 K_{sat} = 0.53 m/day
 K_{sat} = 6.11E-06 m/sec



NOTE -
 H = depth of water in the test hole
 S = the depth to an underlying impermeable layer
 r = radius of the test hole



ATTACHMENT F
Sewage Sensitive Areas

SEWAGE SENSITIVE AREAS

Defined in *Government Sewerage Policy (2019)* as:

- a) estuary catchments on the Swan and Scott Coastal Plains;
- b) the Brockman River catchment;
- c) land that drains to and is within two kilometres of Irwin Inlet, Wilson Inlet, Torbay Inlet, Manarup Lagoon, Lake Powell, Princess Royal Harbour and Oyster Harbour
- d) land that drains to and is within two kilometres of the estuarine areas of the following:
 - Dampier Creek (Broome)
 - Hill River
 - Irwin River (Mid West)
 - Margaret River (South West)
 - Murchison River
 - Hardy Inlet
 - Chapman River
 - Walpole-Nornalup Inlet
 - Wellstead Estuary
 - Greenough River
- e) land that drains to and is within two kilometres of the following coastal embayments: Cockburn Sound, Coral Bay, Cowaramup Bay, Flinders Bay, Geographe Bay, Jurien Bay, Koombana Bay, Mangles Bay, Peaceful Bay, Roebuck Bay, Shark Bay (south of the northern tip of Peron Peninsula) and Warnbro Sound;
- f) within one kilometre up-groundwater- gradient and 250 metres down-groundwater-gradient of a significant wetland; or where the groundwater gradient is unknown or seasonably variable within one kilometre of the significant wetland;
- g) habitats of specially protected water-dependent fauna and the area within one kilometre of groundwater-dependent threatened ecological communities and groundwater dependent priority ecological communities; and
- h) wild rivers catchments.

APPENDIX E - LOCAL DEVELOPMENT PLAN (INDICATIVE ONLY)



**LOCAL DEVELOPMENT PLAN - INDICATIVE ONLY
LOT 305 WENTWORTH ROAD, OCEAN BEACH**

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

date - 23 April 2021 | ref - 18-007-005C
 scale - 1:5000@A3



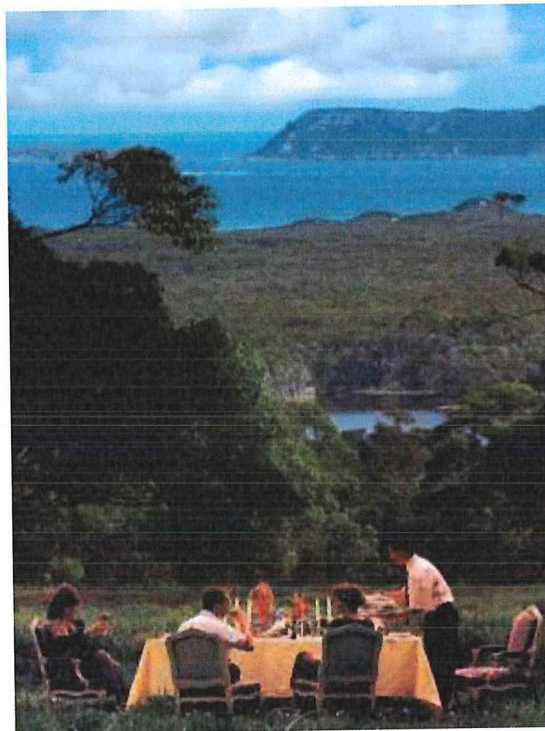
APPENDIX F -ALCOHOL MANAGEMENT PLAN



THE DAM

Raintree Estate

ALCOHOL MANAGEMENT PLAN



ENTRÉE

DENMARK PRODUCE & TRAILS

HOMEGROWN PRODUCE with a green footprint
Adjoining the William Bay National Park, Raintree's water reserves totalling 200 million litres are fed from pristine limestone filtered springs. These reserves supply the 332 hectares of prime farmland to grow premium local produce for food and beverages.

PRESENTING

Premium foods and beverages – Produced from Paddock to plate & bottle.

Beverages contain over 95% of RAINTREE farm produce (eg water, ethanol and crop flavours).

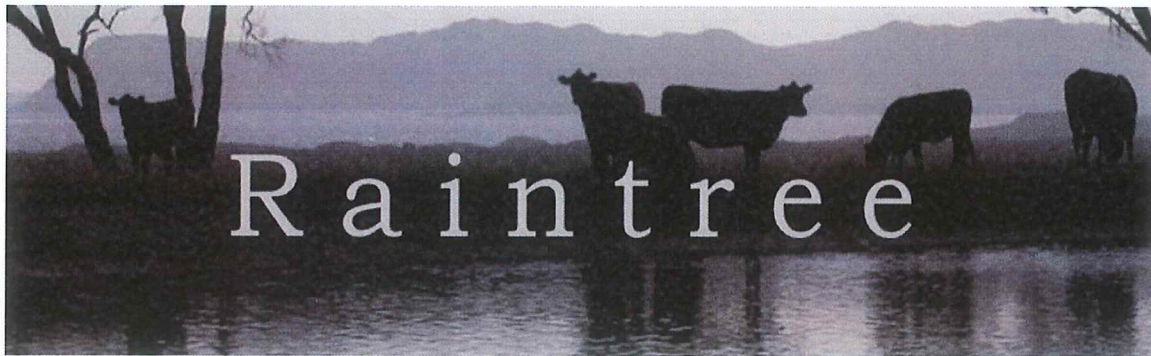


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APPENDIX 1.	BUILDING PLANS
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APPENDIX 5.	RAINTREE BENEFIT ANALYSIS MATRIX TO MCGOWAN GOVERNMENT POLICIES.

1. INTRODUCTION

THE DAM is applying for a 'TAVERN' licence in accordance with the Liquor Control Act 1988. The definition is as follows: *Authorises the sale and supply of liquor for consumption on and off the licensed premises. A holder of a tavern licence does not need to provide accommodation.*

Racing Gaming and Liquor (RG & L) have reviewed Location 305, Wentworth Roads plans and Raintree Estates Development Application and their advice is that THE DAM is best suited to submit an application for a Tavern license that will be Licensed under Raintree Estate Pty Ltd, with C.B. Distillery and other regional/local beverage producers selling spirits, wine and beer to Raintree, and for Raintree to showcase these local products.

The Tavern license would take the place of a producer's license and a licensed restaurant in a 'Boutique Bar' trading as THE DAM

THE DAM is seeking approval for a 'TAVERN' licence as an "SA" use defined under the Shire of Denmark Local Planning Scheme No.3 (LPS3) requiring a section 40 signed by the Local Authority (Denmark Shire) in support of the Tavern License.

2. UNIQUE POINT OF DIFFERENCE

THE DAM will showcase boutique and luxury alcoholic and non-alcoholic beverages.

The Bar area at THE DAM will act as cellar door for the C.B. Distillery. - C.B. Distillery will be using crops grown on the Raintree Farm landholding / Denmark Shire / Great Southern / Manjimup Shire to produce ethanol. It will do this in the way of cocktail and mixed beverage creations. The Tavern license will grant Raintree the ability to sell wine and beer beverages to compliment distillery. The ethanol made by C.B distillery will also be used as a solvent on key extractive crops to compliment steam distillation and to also be used as a perfume and beverage excipient base.

A Tavern license will allow THE DAM to showcase regional beverages and brands that use Raintree flavour concentrates in their product offerings e.g. Truffle ethanol extract will be exported for use in vodka. Today THE DAM represents nine Great Southern enterprises in the Albany and Denmark shires and expects to grow it's local representation once open.

THE DAM will complement the current primary production, processing and Agri-tourism activities of the Raintree Farm landholding and realize the dynamic vision of the C.B. Distillery and Raintree farms to grow, harvest and process carbon and nitrogen fixing crops on it's landholding.

The FLAGSHIP RURAL SHOWCASE will promote a low carbon farming approach, producing a unique range of ethanol beverages that have a unique + 95% farm content, thereby minimising the products footprint while also being a carbon sink.

3. PHILOSOPHY AND ETHOS

THE DAM specializes in offering low carbon footprint alcohol beverages.

THE DAM will showcase a range of Raintree Estate's home grown produce.

We need a new economy that addresses, not accelerates climate change. We seek to promote farm produce (food and beverages) that provide local communities and Indigenous peoples with fair agreements, long term benefits and financial incentives to promote sustainable practices.

4. THE SITE - LOCATION 305 Deposited Plan 75450 Volume 2809 Folio 900

The site is located approximately 10 km to the west of the Denmark Town Centre, and is accessed via Wentworth Road.

The site is currently zoned "Rural" under the Shire of Denmark's Town Planning Scheme No.3 (TPS3) and makes up a 26.8049 Ha. The main infrastructure on Lot 305 is a 1,000 square metre building perched above 5 ha of dams with 2 ha of landscaped grounds that is approved for rural processing and as a showcase for farm produce via a retail shop and café. At the request of the Denmark Shire, the land is being submitted for Tourism rezoning and is adjoined by Raintree Estate (Rural zoned) to the west and south.

+ 400 m of Buffer Zone from other farm residences

The proposed indoor & alfresco seated area is 530 Sq m, made up of 380 Sq. m indoors and 150 Sq of alfresco dining (Appendix 3). The outdoor area is a stone Ampitheatre of 470 Sq m with an additional 1,380 Sq m spill over (Appendix 4).

The total licensed area is 2,380 Sq m. that is fenced off from landscaped grounds (2ha) and water bodies (5 ha).

The building has significant distance buffers from local farms. The northern boundary is the South Coast Highway and the eastern boundary is Wentworth Road. The nearest farm residences are 464 m (across the Highway to the North) and 435 m and 472 m to the East (across Wentworth Road).

APPENDIX 3 – LICENSED INDOOR AREAS 380 Sq m.

APPENDIX 4 – ALFRESCO (150 Sq m) & PERMITTED ACCESS / LICENSED OUTDOOR AREAS 1,850 Sq m = 2,000 Sq m.

5. THE DAM COMPLEX

Is retained by 50 metres of massive 2-10 tonne granite rocks inlaid into a 4 m dry retaining wall overlooking to the north a kaolin clay lined 5,000,000 litre TURQUISE / GREEN POOL with a Heart Island set in the middle of it and to the east a 500 tonne stone Ampitheatre with monolithic feature rocks that will be the backdrop to amplify it's new economy messaging.

APPENDIX 1 – BUILDING PLANS

6. RAINTREE ESTATE DETAILS

Raintree Estate Pty Ltd

- 141 Richardson Rd, Ocean Beach, Denmark, 6333.
- 08 98 409695
- Raintree2@westnet.com.au

Directors / Senior Management :

- Matthew Beaton
 - Raintree Estate
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7. RAINTREE HISTORICAL PERSPECTIVE

The Raintree essential oils distillery has been operational in the Denmark Shire since 2000.

Industrial hemp is renowned for its ability to have over 50,000 uses. In 2016 Karen Birkbeck and Daughters Pty Ltd (KBD) were granted a WA license to grow and process industrial hemp (low THC Cannabis sativa) from the Department of Primary Industry and Regional Development (DPIRD).

In 2019 DPIRD provided Raintree Pearls and Perfumes Pty Ltd (RPP) with a \$ 40,000 grant to work with Industrial hemp growers to develop unique Hemp extraction processes. This resulted in a range of discoveries and in February 2020 DPIRD approved Western Australia's first processing license for the manufacturing of ethanol from Industrial hemp resulting in the formation of the Cannabis Botanical Distillery (CB Distillery).

The distillery processing facility was commissioned in June 2020. It does not generate excessive noise levels, noxious odours or waste streams. There are 2 X staff members employed that is expected to grow to 6.

The CB Distillery will use crops grown on the Raintree Farm landholding / Denmark Shire / Great Southern / Manjimup Shire / Central Deserts / Kimberley's for the production of flavours to compliment crops grown in the Denmark Shire for ethanol. The ethanol will be used as a solvent on key extractive crops to compliment steam distillation and also use as a perfume and beverage excipient base.

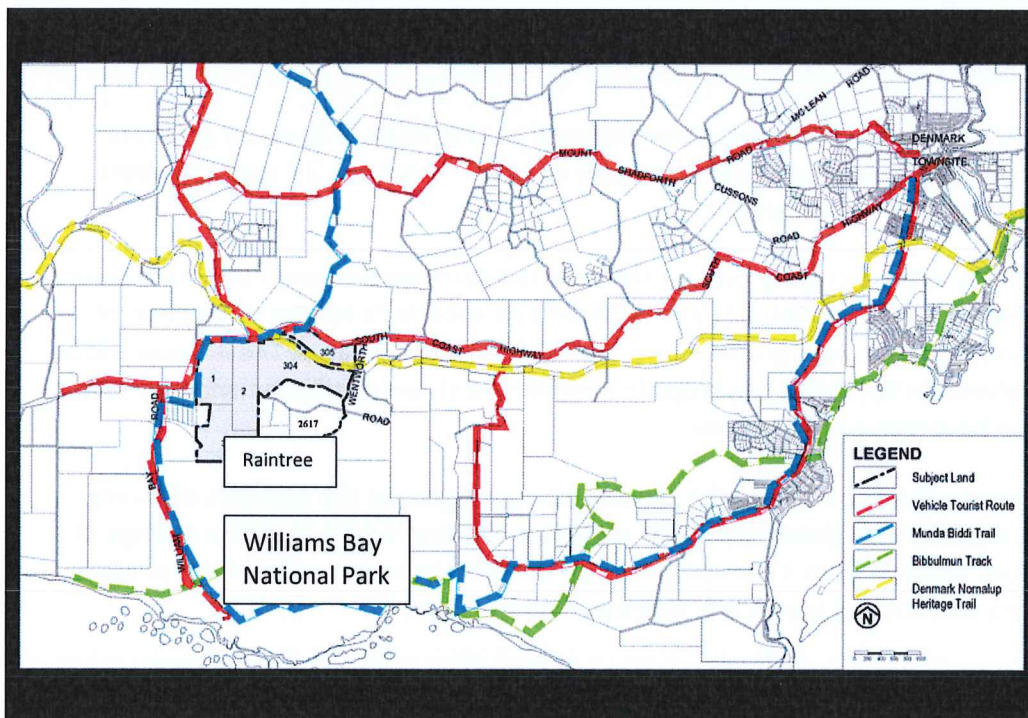
The initial focus will be to build on the families 40 year legacy as the pioneers of luxury fragrances, working with global specialists of flavour and fragrances to create a range of unique flavour extracts from its crops grown on the farm to be infused with its pristine spring waters and ethanol grown and processed on the farm.

8. RAINTREE LAND HOLDINGS – 332 Ha

The entire landholding owned by the applicants is referred to as Raintree Estate and comprises seven titles, with Lot numbers 1, 2, 304, 305, 2617, 2618 and 3468 (refer to Location Plan). AS the DEFS overhead bush fire map illustrates Raintree Holdings has large areas of low bush fire cleared pasture and large water bodies.



9. OCEAN BEACH / WILLIAMS BAY AREA



Raintree land holdings stretch from Ocean Beach into the Williams Bay districts of the Denmark Shire. To the west and north are various rural residential enclaves.

Raintree Estate has a 3 km frontage to the William Bay National Park to the south and is unique in the Denmark Shire as it is Central to the Bibbulmun, Munda Biddi and Denmark Heritage Trail. The Park had 100,000 visitors in December 2019 (DBCA traffic count) and is the most frequented National Park in the region.

As per the above 2012 image, Raintree is the key LINK for the Greens Pool / William Bay National Park to the Karri Hinterlands and a key cog to creating a trail circuit for renowned regional trails;

- 1) Greens Pool.

- 2) Williams Bay National Park.
- 3) Bibbulmun walking trail.
- 4) Munda Biddi bike trail.
- 5) Denmark – Nornalup heritage trail.
- 6) Karri Hinterlands.

The area is undergoing rapid transformation due to the States large financial commitment to upgrading the William Bay National Park and linking Trails (eg + \$ 12 m trail announcement for the Great Southern in August). With emerging tourist attractions such as Caravan Parks, Air B & B, Chalets and Micro-resorts, this is resulting in the rezoning of land in the Williams Bay precinct to Tourism to support this public investment

10. COVID 19 STANDARDS

Density Provision

THE DAM has an approved 70 cap for guest + 10 staff. These patron numbers will be increased once the site is zoned tourism. Today they equate to COVID 19 density rulings of + 6.625 Sq. m per person for the indoors/alfresco) and + 25 sq m pp for the total licensed area of 2,000 Sq m).

VIRUS Friendly Premises - 2,000 SQ M by 80 PEOPLE = 25.0 SQ M PER PERSON GUESTS & STAFF.

380 Sq m INDOORS + 150 Sq m ALFRESCO + 1,850 SQ M OUTDOORS = 25.5 Sq m pp.

Appendix 3 and 4.

11. TRADING HOURS

The maximum proposed opening hours are as follows:

- 11am to 10 pm Monday to Thursday.
- 11am to 10 pm Friday and Saturday.
- 11am to 9 pm Sunday.

12. EVENTS

The applicant is proposing an intimate luxury venue for dining and socialising with the facilities for private functions and events.

THE DAM will assess the various logistics of specific events with relevant stakeholders, in order to determine if any additional procedures are needed event by event to minimise any risk.

Information to be assessed on an event by event basis:

- Type of event and demographic.

- Expected numbers.
- Main times for ingress and egress.
- Crowd control measures ensuring we are adhering to the correct security numbers.
- Any additional information that need to be passed onto patrons (e.g. additional license requirements should an occasional or altered license be in place, timings, or offering for the day).
- Responsible promotion of alcohol at all times.
- Food offerings in line with the style of event and demographics.

13. ALCOHOL PLAN

13.1 Culture Eco Chic Luxury

To create a sophisticated environment that is exploring new frontiers in taste.

THE DAM will offer low carbon footprint alcohol beverages through C.B distillery and will actively search for other beverage producers that have the synergistic philosophies as Raintree.

C.B distillery also aims to provide Low alcoholic spirit options eg 1-5%, 5-10% & 20% options. The 0-5% options will be available in cans as a seltzer for customers looking for a lower alcohol option.

Food is available when the bar is open.

13.2 Staff Training

Sections 33 and 103A of the Liquor Control Act 1988 ('the Act') impose mandatory training requirements on licensees, approved managers, supervisory staff, bar staff and crowd controllers in relation to the management of licensed premises and the responsible service of alcohol.

As required by Section 103AA of the Act, the applicant will maintain a training register that records employee information and their training compliance.

In addition to the required "Provide Responsible Service of Alcohol" (SITHFAB002) unit, all staff will be trained using an in-house Policy and Procedure manual which sources units of competency from relevant Training packages. For example:

- Interact with Customers
- Manage conflict.
- Managing incidents
- Managing unacceptable behaviour
- Monitor individual and crowd behaviour

13.3 Patrons

In order to minimise the potential for undue harm or ill-health the applicant proposes the following;

- Creating and maintaining high quality premises in all respects, both physically and operationally since studies conducted have indicated poorly lit, badly maintained premises have a higher likelihood of violence and trouble;
- Supporting and promoting various government campaigns to minimise harm / ill health by displaying posters;
- Having a strong food focus and making food available during all hours of trade;
- Pricing drinks at levels high enough to discourage rapid and excessive consumption;
- Prohibiting the sale of energy drinks mixed with liquor;
- Prohibiting the sale of liquor by way of an emotive title that may encourage rapid consumption of liquor;
- Not providing any TAB facilities;
- Providing more than ample seating for patrons;
- Providing a very clear training program for staff on all appropriate matters including responsible service of liquor;
- Creating a warm, relaxed and inviting atmosphere;
- Public health and safety messaging;
- responsible service of alcohol messages.

13.4 Crowd Control

Not permitting more than an acceptable number of patrons to be present on the premises at any given time;

Adhering to RSA principles thus reducing the likelihood of patrons causing noise and participating in other anti-social activities;

Not allowing violent, quarrelsome or disruptive conduct on or near the premises.

13.5 Outdoor Licensed Area

There will be clearly delineated fencing to prevent the public wandering into the rural processing areas and grounds and for safety purposes where there is water or ledges.

APPENDIX 4 - PERMITTED LICENSED OUTDOOR AREAS

13.6 Safe Transport

THE DAM is developing close working relationships with Denmark wine lovers tour and busy blue bus operator's and local taxi drivers to ensure transport is available for individuals and events at THE DAM.

THE DAM understands and accepts its responsibility to the safety of our guests.

Staff shall encourage members and visitors to make alternate safe transport arrangements if they are considered to exceed .05 blood alcohol concentration (or .00 if probationary driver).

Telephone calls will be made free of charge to arrange Taxi services or alternate modes of transport.

Contact telephone numbers for taxi services will be clearly displayed.

Staff will monitor patron's consumption.

In specific cases, where a designated driver nominated by a group of + 6 has accepted the responsibility to drive others home safely, THE DAM will provide non-alcoholic drinks free of charge.

THE DAM may provide transport at events.

THE DAM may assist pre-order taxis to arrive at the venue at the conclusion of events.

13.7 ANTI-SOCIAL BEHAVIOUR

CCTV cameras throughout the venue and in addition at all entrance and exits points. All Licensed areas (interior and exterior) will be well lit.

There will be a zero-tolerance policy on rowdy and aggressive behaviour and bad language.

Staff will be trained in the areas of:

- risk identification;
- risk control procedures;
- warning signs;
- appropriate responses;
- interpersonal/ diffusing aggression skills;
- recognising signs of potential trouble (e.g. nonverbal behaviour); and
- how to deal with bad behaviour.

14. UNDERAGE DRINKING

Alcohol will NOT be served to persons aged under 18.

Staff will ask for proof of age whenever necessary or whenever in doubt of guests age.

Only photo IDs will be accepted as 'proof of age'.

A register will be kept of instances where underage persons attempt to purchase/consume alcohol at THE DAM.

15. NOISE CONTROL

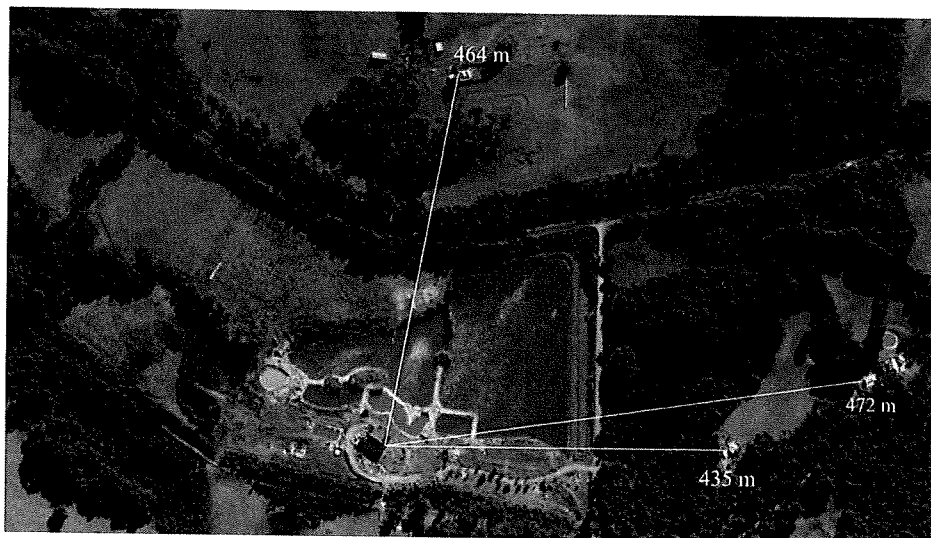
Noise is defined under the *Environmental Protection Act 1986* (EP Act) as a "vibration of any frequency, whether transmitted through air or any other physical medium."

The primary focus of our venue is to provide a first-class experience with little or no effect of surrounding communities. The South Coast Highway has significant noise at 90 d B(A) and is 200 m from THE DAM. As such background waterfalls, fountains and music are important to mask this sound.

THE DAM is committed to monitoring noise during all live music or planned entertainment to ensure that all reasonable and practicable measures are taken to minimise the overall sound level and low frequency noise at noise-affected premises.

In house background recorded music and venue provided entertainment will be monitored (decibel levels versus distance) to ensure they meet standards set by existing Taverns in a rural setting (E.g. Denmark tavern, Boston brewery and Singlefile wines).

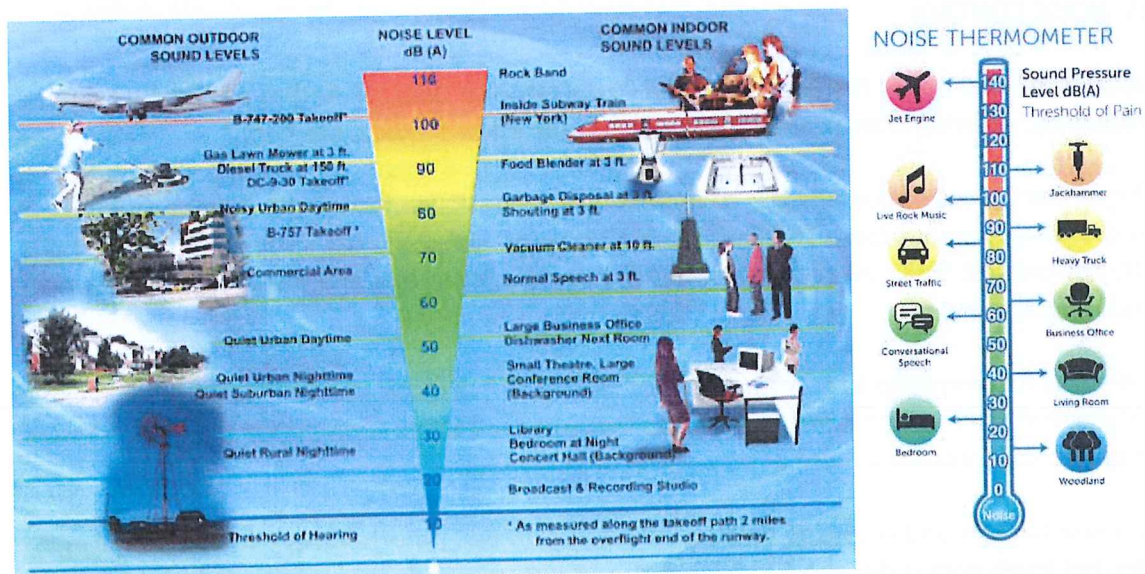
THE DAM will provide live entertainment to patrons in the warmer months of the year and will monitor decibel levels to ensure they do not cause harm or annoyance to adjoining 3 farm homesteads taking into account the distance is + 400 M across heavily forested areas, Highways and roads.



16. NOISE CONTROL PROCEDURES & STANDARDS

PROCEDURES

- THE DAM will abide by all imposed noise limits, and manage and monitor noise levels at all times required.
- Should a noise complaint be made, will follow the Complaint Resolution Procedure.
- Refer to 'THE DAM Noise management' plan for more information on noise from the venue.
- Appropriate signage requesting patrons to be mindful of exiting the area quietly.



The main agency for dealing with noise complaints relating to liquor licensed premises is the Department of Racing, Gaming and Liquor (the Director) under Section 117 of the Liquor Control Act 1988 (LCA). Under this section, the Director, may have regard to prescribed noise levels under the EP Act. However, Local Government have enforcement powers to deal with domestic, commercial and general industry noise under the EP Act. This includes liquor licensed premises. WA Police have powers to deal with such activities as noisy parties, using the 'unreasonable noise' provisions of the EP Act, instead of the Regulations.

17. RESPONSIBLE SERVICE OF ALCOHOL

THE DAM & its staff are committed to the principles of responsible service of alcohol and to taking all reasonable steps to minimise the harm caused by the abuse of alcohol. We expect the same commitment from our patrons. Measures will be implemented *including but not limited to:*

- Free drinking water available and actively promoted to patrons.
- Action is taken to make sure that patrons are aware of the availability of non-alcoholic and low strength alcoholic beverages.
- Action is taken to make sure that patrons are aware of the food offerings.

Our key objective is to ensure that our guests can enjoy themselves in a safe environment

- All alcohol will also be served in accordance with the Liquor Control Act 1988
- We aim to provide an environment that encourages responsible drinking decisions and reduce the risk of inappropriate and illegal service of alcohol.
- The Licensee (or representative) and Approved Manager will be accredited through the completion of the mandatory liquor licensing training
- It is our policy to train all our service staff in responsible server practices. This will normally be achieved by completing in-house and RSA training and through the Staff Induction provided to each staff member.
- Staff are encouraged to be alert for the signs of intoxication of guests.
- Staff members will be made aware of the Director of Liquor Licensing's policies on the Responsible Promotion of Liquor.
- All staff are authorised to refuse patrons if they believe they may commit an offence under the Act. Their decision to do so is always supported by the management team who are strongly committed to responsible service of alcohol principles.
- An incident register will be maintained which will document any incidence during an event as required to comply with the Act.
- We will discourage any activity that could result in excessive consumption of alcohol (such as drinking competitions) or the promotion of alcohol involving excessive or rapid consumption of alcohol.
- Low and non-alcoholic beverages are available.
- Food will be available at this venue at all times when liquor is offered to purchase.
- Advertise or promote in any way that could lead to excessive consumption of liquor.
- We will not use drink wares that encourage rapid consumption.
- We do not encourage the stockpiling of drinks by the consumer.
- We do not condone or encourage excessive drinking or inappropriate behaviour.

18. SITE MANAGEMENT

18.1 Main Roads

Raintree is securing the services of a Civil Engineer and Transport Planners as part of the Tourism Rezoning to review the current road junction to ensure the safe egress and access from THE DAM to understand the implications as numbers increase.

18.2 Wentworth Road

It is envisaged that signage and culture will ensure orderly egress from THE DAM.

18.3 Disturbance or Inconvenience to Local Residents

Any business has the potential to cause some offence, annoyance, disturbance or Inconvenience. However, the applicant is both the owner, operator and will have a hands-on role to ensure it is run responsibly, tightly managed and without causing annoyance, disturbance or inconvenience.

It is in the applicant's best interests to ensure other patrons and residents are not offended by the venue's patrons. Strategies include:

- Staff will be trained in warning signs, appropriate response interpersonal/ diffusing aggression skills, recognising signs of potential trouble via nonverbal behaviour and how to deal with bad behaviour.
- It will be stressed to staff that failure in dealing with, or reporting, bad behaviour / language may cause offence, annoyance, disturbance or inconvenience to other patrons.
- Mid strength and non-alcoholic drinks will be available in addition to side dishes encouraging the consumption of food with drinks.
- A Parking management plan has been developed and transport including taxis and charter buses will be available and arranged by the applicant for larger groups.
- Large boisterous groups such as buck's nights or sporting club 'pub crawls' will not be permitted entry. This combined with the manner of trade will serve as a deterrent to the troublesome element in the community likely to cause annoyance, disturbance or inconvenience to local residents or business operators.
- A complaints file will be available for all staff to record any complaints received in person or by any other means.

- Closed Circuit TV (CCTV) installed throughout the venue including all entrance and exit points. This system will provide vision / footage that enables identification, as defined by the current Australia and New Zealand Policing Advisory Agency (ANZPAA) ANZPAA Recommendations for CCTV Systems and the WA Police Local Interpretation Guide for the ANZPAA Recommendations for CCTV Systems.

Finally, the applicant's style of operations and the family friendly focus will be some form of a deterrent to anti-social behaviour. Additionally, the family are part of running the business.

19. BUSH FIRE MANAGEMENT PLAN

This plan should be read in conjunction with THE DAMS Bush fire plan.

Emergency Evacuation plans will be clearly marked and bush fire sense conveyed in the farm tours.

20. SOCIAL IMPACT

20.1 RAINTREE ESTATE

Trails : Raintree will donate land to link the regions major trails.

Indigenous Empowerment : With a 40 year celebrated history in supporting Indigenous through the UNDP, THE DAM will continue to support and empower Indigenous people.

New Economy : As the inaugural UNCBD winner of the Cradle to Grave Award, Raintree will continue to promote a new low carbon community.

International flagship to build brand WA. Communication systems will be used to showcase regional WA to the world in the post COVID era.

20.2 THE DAM

Will benefit the community in ways both directly and indirectly through employment, a 'shop local' policy and by attracting visitors to the region. Some of the specific reasons are given below:

- The current lack of family friendly outdoor venues for dining out, small events etc ensure THE DAM will appeal to many residents and visitors to the locality;
- Increased amenity to the area adding to the evolving local precinct which is developing in the area;
- Increased employment opportunities;
- Increased tourism activity, such as the applicants proposes, will provide economic benefits to the local community by leveraging existing infrastructure and amenity and encouraging a higher quality of retail, supporting existing local accommodation and public infrastructure that would not otherwise be supported by local residential expenditure alone.

THE DAM will generate and contribute to the local area in a considerable range of positive benefits including:

- By establishing an enjoyable socialising venue which provides food, drink and function options. A safe environment for families and groups to whom would like a change of scenery.
- By providing a sophisticated environment not solely focused on alcohol consumption but dining in relaxing surroundings.
- By providing a link to the regions trails.
- By providing a destination venue for groups.
- As a meeting point and function venue (e.g. annual general meetings) for the private and public sector.
- By attracting visitors to the area who will utilise other businesses. E.g. accommodation, retail, other goods and services. This creates a flow on effect promoting the region and assisting in stimulating economic growth. Essential action in a regional area such as the Great Southern.

20.3 FUTURE PLANS

Raintree Estate is working closely with Government (DBCA, Denmark Shire GSDC, GS CORE) to provide a range of tourism support for the William Bay National Park to provide an alternative non vehicle entry to the Park that is getting overwhelmed with visitations from cars.

This has resulted in an intensive review of land use and future services from Raintree that will impact THE DAM's services to the public.

4 x 4 off road Mini-Bus x 10 people.

Raintree will support it's local bus operators for day tours but has a need for a 10 seat specific farm tours and transport for FIT's (Free independent travellers). Once established this will provide the facility with the ability to shuttle small amounts of guests to and from events.

APPENDIX G - TRAFFIC ASSESSMENT

Lot 305 SOUTH COAST HIGHWAY, DENMARK
PROPOSED RESTAURANT / TAVERN FACILITY
TRAFFIC STATEMENT

June 2021



Riley Consulting (WA) Pty Ltd

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Issued on	216 June 2021	Amendments
Version	V4	V2 Update for future development
Reference	1078	V3 Edits requested by planner
		V4 Additional planner edits

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1. EXECUTIVE SUMMARY

- 1.1. This traffic statement has been prepared to consider the traffic impacts of a tavern / restaurant development on Lot 305 South Coast Highway, Denmark. The proposal is Stage 1 of potential development of the subject site. Development of Stage 2 will be assessed at the time a development application is made. The key findings of the traffic assessment for Stage 1 are:
- 1.2. The traffic assessment is based upon recognised trip rate sources of the RTA and ITE. The proposal is based on the application to accommodate 250 persons within the development.
- 1.3. Based on the trip generation sources, it is estimated the development would generate up to 316 vehicle movements per day.
- 1.4. Assessment of the forecast traffic demands indicates that under the WAPC *Transport Impact Assessment Guidelines for Developments* the proposed development would have no material traffic impact.
- 1.5. Access to the site is taken from Wentworth Road. There are no indications that changes to the local road network are required.
- 1.6. Assessment of the Wentworth Road / South Coast Highway intersection indicates that no road layout changes are required to support the proposed development.
- 1.7. The proposed development is not expected to impact the operation or safety of the surrounding road network.

2. CHECKLIST

Item	Comments/Proposals
Proposed development	
proposed land uses	Restaurant / tavern (Stage 1). Day spa, chalets and camp ground (Stage 2)
existing land uses	As above
context with surrounds	Rural tourist area
Vehicular access and parking	
access arrangements	From Wentworth Road
public, private, disabled parking set down / pick up	At 1 bay per 4 persons accommodated
Service vehicles	
access arrangements	On site
rubbish collection and emergency vehicle access	On site
Hours of operation (non-residential only)	Wednesday to Sunday 11am – 11pm Stage 1 Stage 2 hours to be determined at time of future DA
Traffic volumes	
daily or peak traffic volumes	316vpd – Stage 1 Stage 2 demand to be determined at time of future DA
type of vehicles (eg cars, trucks)	Cars
Traffic management on frontage streets	
Public transport access	
nearest bus stops/train stations	N/A
pedestrian/cycle links to bus stops/train station	N/A
Pedestrian access/facilities	
existing pedestrian facilities within the development (if any)	None
proposed pedestrian facilities within development	Appropriate paths where needed
existing pedestrian facilities on surrounding roads	N/A
proposals to improve pedestrian access	N/A
Cycle access/facilities	
existing cycle facilities within the development (if any)	None
proposed cycle facilities within development	Cycle rack suggested
existing cycle facilities on surrounding roads	Rail trail in close proximity
proposals to improve cycle access	Cycle access to rail trail
Site specific issues	Addressed
Safety issues	None

3. THE SITE AND SURROUNDING ROAD NETWORK

3.1. The site is located on Lot 305 South Coast Highway, Denmark. It lies to the south side of South Coast Highway and abuts Wentworth Road. Figure 1 shows the location of the site.

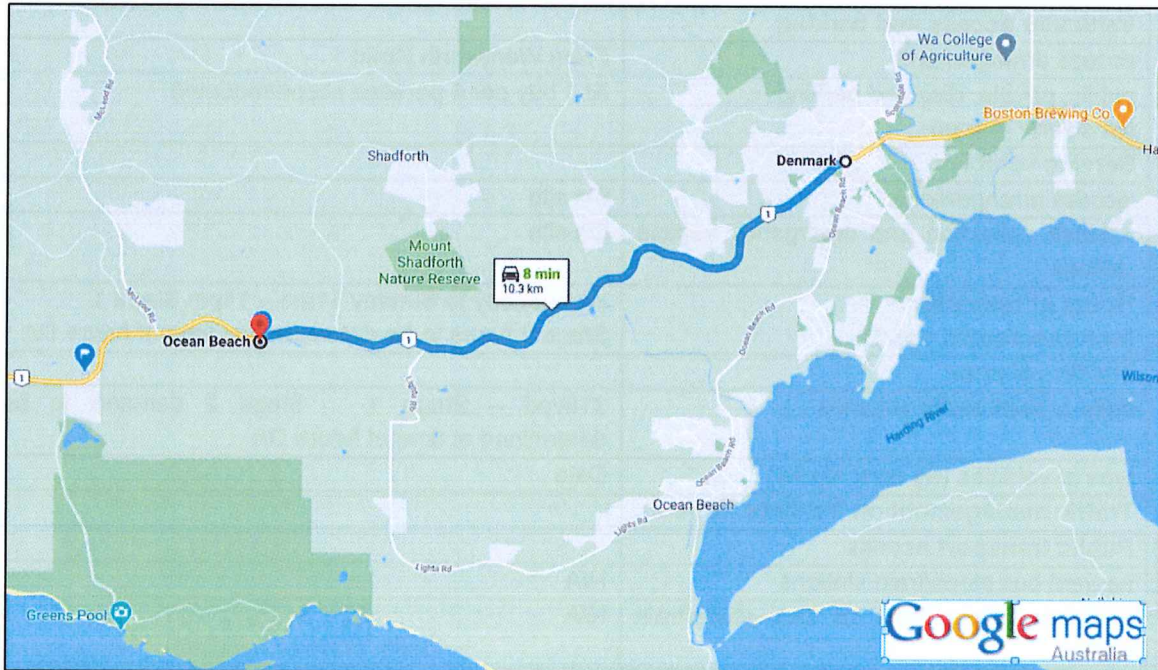


Figure 1 Site Location

South Coast Highway

- 3.2. South Coast Highway is a primary regional road falling under the control of Main Roads Western Australia (MRWA). It is constructed with a single pavement of approximately 10.0 metres, including shoulders. There are no footpaths or cycle lanes provided.
- 3.3. Traffic data available on the MRWA Traffic Map shows 2,325 vehicles per day (vpd) east of William Bay Road. As a primary distributor road, South Coast Highway would have capacity to carry up to 22,900vpd). However, to provide a desirable operating environment a daily demand up to 13,500vpd would be deemed acceptable to maintain a Level of Service D.
- 3.4. South Coast Highway is subject to a 90kph speed limit adjacent to the subject land and beyond.

Wentworth Road

- 3.5. Wentworth Road is classified a local access road in the MRWA *Functional Road Hierarchy*. It is constructed with a single pavement of about 9 metres for

approximately 20 metres south of South Coast Highway. Further south it is a gravel road.

- 3.6. A local winery / cidery and 3 chalets are accessed from Wentworth Road.
- 3.7. No traffic data is available.

4. PROPOSED DEVELOPMENT

- 4.1. The subject site is currently under construction and has approval for a restaurant / tavern (brewery) accommodating 70 persons.
- 4.2. It is proposed to expand the facility to accommodate 250 persons. A second stage of development to provide accommodation will be the subject of a future development application.
- 4.3. In the longer term additional development is anticipated to provide for tourist and worker accommodation and a day spa (Stage 2). These land uses would be considered complimentary to the restaurant / tavern use of the site. As no scale of development is known. It is not possible to predict future traffic movements. However, tourist accommodation would not generate a significant level of traffic movement and generated movements would not be expected to coincide with the peak activity of the brewery.
- 4.4. The day spa proposal would also generate little traffic movements as it can be expected that reciprocal use to the accommodation and brewery would occur.
- 4.5. Future land uses would need to be assessed in regard to traffic movement at the time if any development application.

5. VEHICLE ACCESS AND PARKING

- 5.1. All vehicles will access the site from Wentworth Road using a dedicated access.
- 5.2. Car parking at a rate of 1 bay per 4 persons accommodated is proposed for Stage 1 and will be located adjacent to the main building. Based on an application for capacity of 250 patrons, 63 parking bays will be required.
- 5.3. Parking requirements for Stage 2 will be addressed at the time of the future development application.
- 5.4. There are limited opportunities for local taxi and bus drop offs, however a drop off bay is to be located adjacent to the main entry. Over flow parking is also provide to accommodate tourist buses (if a local business operates).

6. PROVISION FOR SERVICE VEHICLES

- 6.1. Service vehicles will utilise the same access as all other vehicles. A loading area is located to the rear of the building. Garbage vehicle will use the same area for collection of waste.
- 6.2. As a large area site, there is ample room to accommodate larger vehicles.

7. HOURS OF OPERATION

- 7.1. It is expected that the Stage 1 facility (restaurant / tavern) will open by 11am and close between 7pm and 11pm, depending on the time of year and local attraction. It is expected to be open for 5 days per week, with closure on Mondays and Tuesdays.
- 7.2. It is noted that similar venues in the Margaret River region are typically closed at 5pm or 6pm at weekends.

8. DAILY TRAFFIC VOLUMES AND VEHICLE TYPES

- 8.1. There are no recognised trip generation sources for the proposed land use proposed in Stage 1, which will be a restaurant with a tavern licence. The venue would not operate as a traditional tavern, but can be expected to operate a little busier than a local restaurant.
- 8.2. Local conditions and population will limit the venue patronage and large fluctuations can be expected throughout the week. Similar facilities in the Margaret River region (currently 10) are shown to experience peak patronage on Saturdays with a reduction of about 40% on Sundays and about 60% on weekdays.
- 8.3. The proposed venue is located several kilometres west of Denmark and will be competition to the existing Boston Brewery and winery, located east of Denmark.
- 8.4. Reference to the RTA *Guide to Traffic Generating Developments* suggests a restaurant can be expected to generate 60 trips per day per 100m² of floor area with 5 trips per 100m² during the evening peak period. Based on the Metric Handbook, a table for 4 persons will require 5m². It can therefore be derived that the RTA trip rate suggests 0.75 trips per seat per day with 0.063 peak trips per seat.
- 8.5. Based on the RTA trip rate the development with capacity for 250 seats would be expected to generate 188 trips per day with .
- 8.6. The American ITE Trip Generation data suggests the peak time of “restaurant” activity would attract about 12% of the daily demand.

- 8.7. By comparison the ITE suggests a “drinking place” can be expected to generate about 12.2 peak trips per 100m², which equates to a peak demand of 0.15 trips per seat. On this basis 250 seats would generate 38 peak trips.
- 8.8. With the peak equating to 12% of the daily demand, as a “drinking Place” the development could generate about 316 vehicle movements per day.
- 8.9. The traffic generation of Stage 2 will be addressed at the time of the future development application.

Table 1 Traffic Generation

Capacity	Rate	Peak (12%)	Daily
70 Persons	0.15 / seat	11 trips	100 trips
250 Persons	0.15 / seat	38 trips	316 trips

Distribution

- 8.10. Traffic attracted to the proposed development will be drawn from South Coast Highway. It would be expected that the majority of movement would be to and from Denmark, where locals live and tourist accommodation is readily available.
- 8.11. A high level of pass-by trips can be expected during the peak tourism months with tourists visiting local attractions such as the tree tops walk and William Bay and stopping at the venue on the way home.
- 8.12. It is anticipated that during peak tourism periods some 70% of traffic would be to / from the east.

9. TRAFFIC IMPACTS

- 9.1. Reference to the WAPC Transport Assessment Guidelines for Developments states that:

“As a general guide, an increase in traffic of less than 10% of capacity would not normally be likely to have a material impact on any particular section of road, but increases over 10% may. All sections of road with an increase greater than 10% of capacity should therefore be included in the analysis. For ease of assessment, an increase of 100 vehicles per hour for any lane can be considered as equating to around 10% of capacity. Therefore any section of road where traffic would increase flows by more than 100 vehicles per hour for any lane should be included in the analysis. An intersection may be considered materially affected if flows on any leg increase by more than 10% or

any individual movement by more than 20%”.

- 9.2. Table 2 considers the traffic impact of the development based on the capacity of 250 persons. Table 2 does not include reductions for pass-by traffic, which could be as high as 50%.

Table 2 Peak Day Traffic Impacts

Approach	Flow	Capacity*	Increase	% Capacity
South Coast Highway east	2,325	13,500	+221	1.6%
South Coast Highway west	2,325	13,500	+95	<1%

*Capacity is based on reaching Level of Service F or LN threshold for residential streets.

- 9.3. Table 2 indicates that Stage 1 of the proposed development can be expected to increase traffic on South Coast Highway by less than 2% of capacity and based on the WAPC *Transport Assessment Guidelines for Developments*, the proposed development would be deemed to have no material traffic impact.

Peak Period Impact

- 9.4. During the peak period of development activity up to 38 vehicle movements can be expected with Stage 1. It can be expected that approaching the peak eating time of 1pm, some 80% of traffic would be expected to enter the site. As a result 9 vehicles would turn right into the site and 19 would turn left in.
- 9.5. With a peak weekend demand on South Coast Highway of 259 vehicles during the expected peak, the expected turning movements would not warrant any changes to the current intersection layout of South Coast Highway and Wentworth Road (based on Austroads).
- 9.6. During the late afternoon, assuming the same peak demand of 38 trips, about 80% could be departures. This suggests 21 vehicles would turn right and 9 would turn left.
- 9.7. Reference to Austroads Table 4.1 attached at Appendix C indicates that a major road with a flow of <400 vehicles can accommodate a side road demand up to 250 vehicles with uninterrupted flow conditions with. It can be seen that both major road and minor road demands are lower than the thresholds and uninterrupted flow conditions will prevail. On this basis Austroads advised that no further assessment would be warranted.
- 9.8. With uninterrupted flow conditions minimal delay is expected and very good Levels of Service will be provided.

Impact to Wentworth Road (Stage 1)

- 9.9. Wentworth Road is currently sealed for a distance of about 20 metres south of South Coast Highway. The seal provides a good base for vehicle negotiating the intersection and provides safety in terms of braking and acceleration.
- 9.10. Beyond the seal, Wentworth Road is a gravel road. The latest edition of Austroads is silent on gravel roads and no advice is provided in regard to when a gravel road should be sealed and why. Whilst the benefits of sealing are obvious for major roads (better traction, higher speeds possible etc) for Wentworth Road, the threshold is significantly different.
- 9.11. Internet research has found a guide produced in Queensland (published July 2015) that considers unsealed low traffic roads. In that technical advice low traffic is defined as an AADT (Annual Average Daily Traffic) of 300 vehicles per day with 50 being up to class 12 (heavy vehicles). Beyond this threshold the guide indicates that sealing is appropriate.
- 9.12. From Table 2 it can be seen that the current application for 250 persons would be expected to generate 316 trips per peak operational day. However, over the week, the average daily flow would be (316vpd x 5 days trading / 7days) 226 vehicles per day. The average daily flow would be further reduced by seasonal variations, but these can be ignored for the purpose of this assessment.
- 9.13. It is considered therefore that the current construction of Wentworth Road could be considered acceptable for the proposed stage 1 tourist development. Any upgrade to Wentworth Road will be based upon the lodgement of any future development application.
- 9.14. Future development (Stage 2) of the subject site will be reviewed at the time of a future development application.

10. PUBLIC TRANSPORT ACCESS

- 10.1. There are no public transport services in the local area.
- 10.2. Tourist buses may provide a future service along South Coast Highway and it is suggested that parking for buses should be provided.

11. PEDESTRIAN ACCESS

- 11.1. There are no footpaths in the local area expected the rail trail passing adjacent to the property. Given the location of the subject site a pedestrian demand is not expected.

- 11.2. Appropriate footpaths are provided within the property to assist customers between the car park and feature on the site.

12. CYCLE ACCESS

- 12.1. A rail trail is provided to the rear of the property that may attract some customers to arrive on bicycles. Cycling on South Coast Highway is possible but would not be encouraged.
- 12.2. It is suggested that cycle racks be provided for possible cyclists using the rail trail.

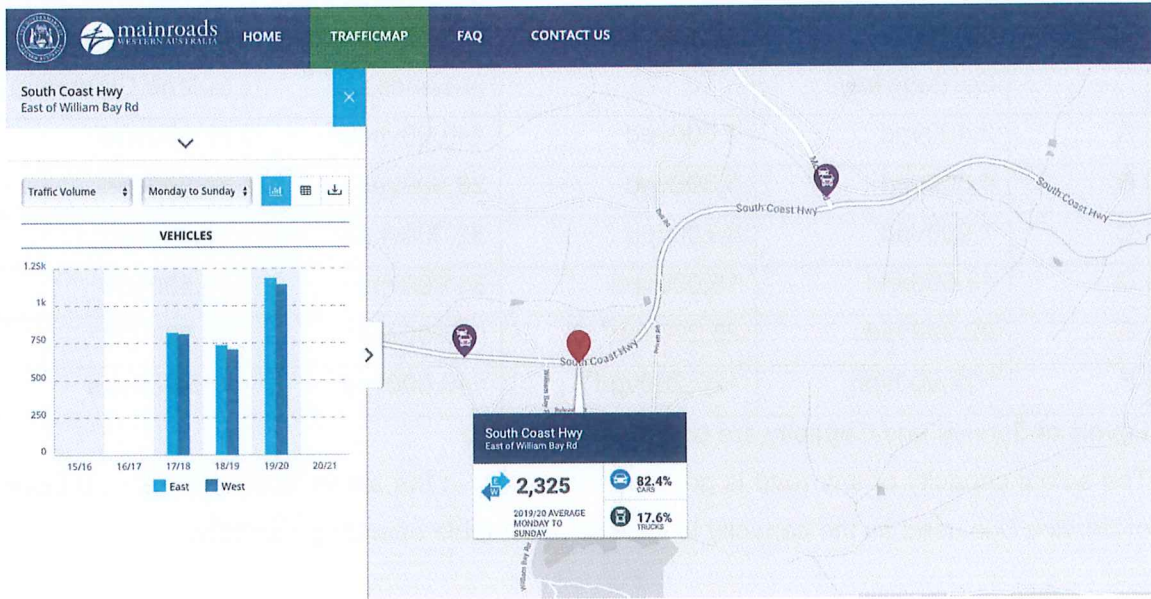
13. SITE SPECIFIC ISSUES

- 13.1. The internal access road has a gradient that obstructs forward visibility of traffic accessing the car park. It is understood that the gradient is to be adjusted to remove this issue.

14. SAFETY ISSUES

- 14.1. The traffic assessment has not identified any road safety issues as a result of the proposed development. Access to the South Coast Highway has visibility greater than minimum distances advised by Austroads and Wentworth Road is sealed at the intersection.

APPENDIX A TRAFFIC DATA



APPENDIX B DAILY LEVELS OF SERVICE

LOS	Single Carriageway	2-Lane Boulevard	Dual Carriageway (4-Lanes)	Dual Carriageway (4-lane Clearway)
A	2,400vpd	2,600vpd	24,000vpd	27,000vpd
B	4,800vpd	5,300vpd	28,000vpd	31,500vpd
C	7,900vpd	8,700vpd	32,000vpd	36,000vpd
D	13,500vpd	15,000vpd	36,000vpd	40,500vpd
E	22,900vpd	25,200vpd ⁴	40,000vpd	45,000vpd
F	>22,900vpd	>25,200vpd ⁴	>40,000vpd	>45,000vpd

Levels of Service and Capacity are based on Austroads

The actual capacity of any road is greater than shown in the above table. However, a Level of Service D is used as the capacity to provide acceptable operating conditions.

APPENDIX C AUSTRROADS

Published 2005 **Guide to Traffic Engineering Practice — Part 5: Intersections at Grade**

Table 4.1 — Intersection Capacity - Uninterrupted Flow Conditions

Major Road Type ¹	Major Road Flow (vph) ²	Minor Road Flow (vph) ³
Two-lane	400	250
	500	200
	650	100
Four-lane	1000	100
	1500	50
	2000	25

Notes:

1. Major road is through road (i.e. has priority).
2. Major road design volumes include through and turning movements.
3. Minor road design volumes include through and turning volumes.

Table 4.1 is no longer included in Austroads. However, the underlying principles of uninterrupted flow conditions are still valid.