



**Brighton  
Council**

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## **ATTACHMENTS**

**PLANNING AUTHORITY**

7th November 2023

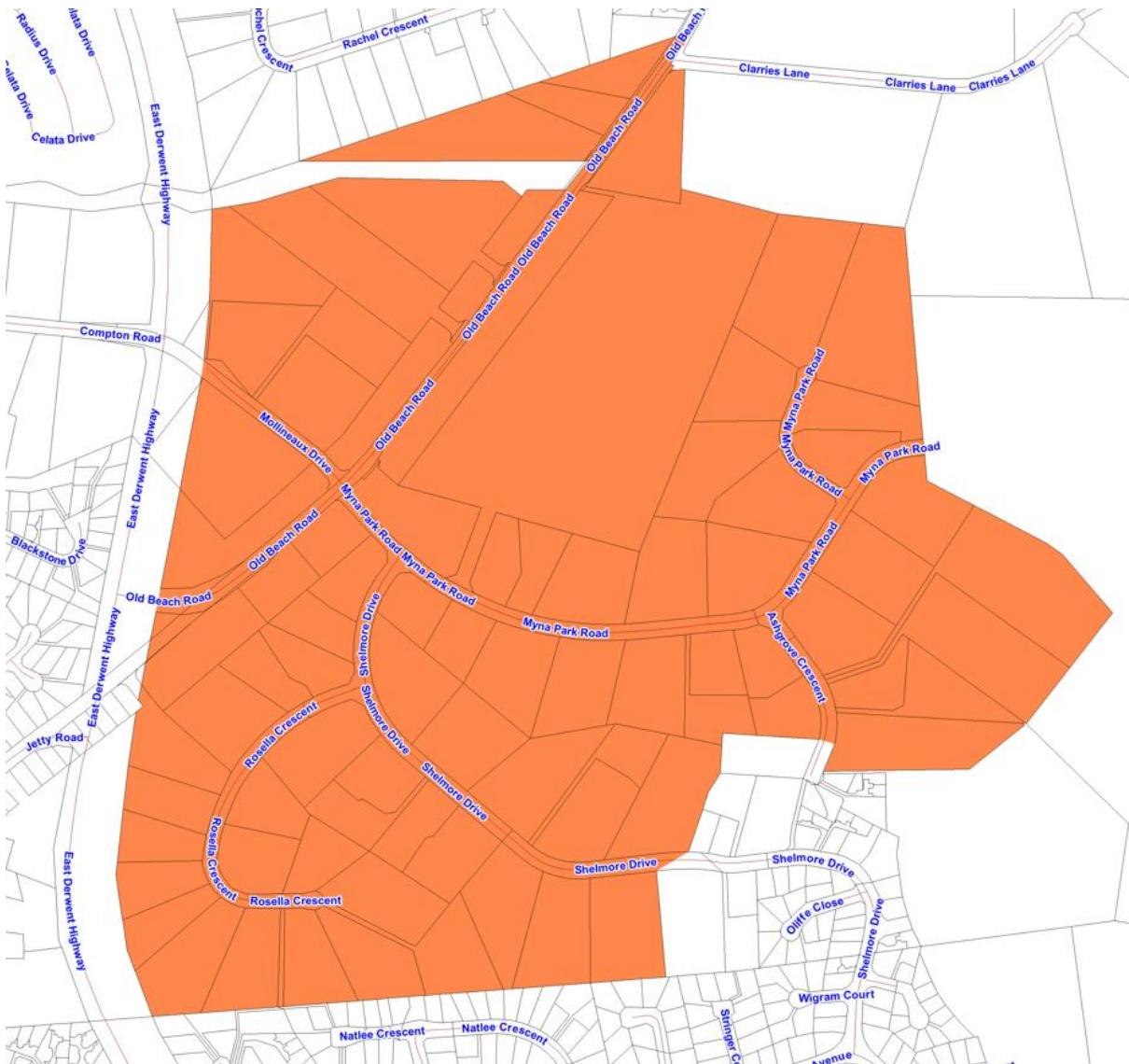


# Brighton Local Provisions Schedule

## Amendment RZ 2023-005

The Brighton Local Provisions Schedule is amended as follows:

1. Rezone the properties shown in the figure below and as described in Table 1 from Rural Living A to the Future Urban Zone.
2. Remove the Urban Rural Interface Specific Area Plan from the properties shown in the figure below and as described in Table 1.



30.0

Future Urban Zone



Red 255, Green  
135, Blue 75

Table 1 Property Details

CT	Area_ha	Address
115837/2	0.61	14 ROSELLA CRESCENT OLD BEACH TAS 7017
43050/8	1.01	4 OLD BEACH ROAD OLD BEACH TAS 7017
115837/7	0.88	9 ROSELLA CRESCENT OLD BEACH TAS 7017
173628/2	0.50	20 OLD BEACH ROAD OLD BEACH TAS 7017
179418/3	0.51	17 ROSELLA CRESCENT OLD BEACH TAS 7017
173751/2	0.50	2 SHELMORE DRIVE OLD BEACH TAS 7017
26806/3	1.77	38 OLD BEACH ROAD OLD BEACH TAS 7017
179823/1	0.97	9 SHELMORE DRIVE OLD BEACH TAS 7017
179823/2	0.50	7 SHELMORE DRIVE OLD BEACH TAS 7017
53748/3	0.85	
100656/25	1.00	15 MYNA PARK ROAD OLD BEACH TAS 7017
100656/29	1.12	18 MYNA PARK ROAD OLD BEACH TAS 7017
140717/4	1.37	19 ASHGROVE CRESCENT OLD BEACH TAS 7017
115837/4	0.57	12 ROSELLA CRESCENT OLD BEACH TAS 7017
110431/1	0.12	2 OLD BEACH ROAD OLD BEACH TAS 7017
115837/1	0.81	15 ROSELLA CRESCENT OLD BEACH TAS 7017
115837/14	0.61	2 ROSELLA CRESCENT OLD BEACH TAS 7017
127210/1	0.99	4 MOLLINEAUX DRIVE OLD BEACH TAS 7017
28243/10	1.22	1 OLD BEACH ROAD OLD BEACH TAS 7017
173628/1	0.50	30 OLD BEACH ROAD OLD BEACH TAS 7017
31068/2	1.16	2 MOLLINEAUX DRIVE OLD BEACH TAS 7017
115837/10	0.92	6 ROSELLA CRESCENT OLD BEACH TAS 7017
44591/14	1.20	7 SHELMORE DRIVE OLD BEACH TAS 7017
181745/1	0.50	99 OLD BEACH ROAD OLD BEACH TAS 7017

100656/31	1.03	14 MYNA PARK ROAD OLD BEACH TAS 7017
7175/8	0.00	
115837/5	0.55	11 ROSELLA CRESCENT OLD BEACH TAS 7017
44591/11	1.02	1 ROSELLA CRESCENT OLD BEACH TAS 7017
173751/1	0.51	2 MYNA PARK ROAD OLD BEACH TAS 7017
115837/9	0.86	7 ROSELLA CRESCENT OLD BEACH TAS 7017
115837/11	0.98	5 ROSELLA CRESCENT OLD BEACH TAS 7017
176456/1	0.51	1 SHELMORE DRIVE OLD BEACH TAS 7017
103432/6	1.03	6 SHELMORE DRIVE OLD BEACH TAS 7017
100656/18	1.00	4 MYNA PARK ROAD OLD BEACH TAS 7017
175939/2	0.51	3 MYNA PARK ROAD OLD BEACH TAS 7017
64546/96	0.06	
180673/1	0.50	10 MYNA PARK ROAD OLD BEACH TAS 7017
173154/1	0.59	21 MYNA PARK ROAD OLD BEACH TAS 7017
100656/2101	1.01	
140717/2	1.83	11 ASHGROVE CRESCENT OLD BEACH TAS 7017
115837/15	0.08	
168406/1	1.02	16 ROSELLA CRESCENT OLD BEACH TAS 7017
236950/1	1.74	8 MOLLINEAUX DRIVE OLD BEACH TAS 7017
126934/1	1.24	5 MOLLINEAUX DRIVE OLD BEACH TAS 7017
31068/1	0.88	3 MOLLINEAUX DRIVE OLD BEACH TAS 7017
60978/94	2.06	57 OLD BEACH ROAD OLD BEACH TAS 7017
27139/2	0.29	59 OLD BEACH ROAD OLD BEACH TAS 7017
175775/1	0.76	4 SHELMORE DRIVE OLD BEACH TAS 7017
181745/3	1.77	
103432/12	1.28	11 SHELMORE DRIVE OLD BEACH TAS 7017
100656/27	2.07	19 MYNA PARK ROAD OLD BEACH TAS 7017
55/6390	0.02	
64547/3	0.01	
173859/1	0.59	2 SHELMORE DRIVE OLD BEACH TAS 7017
26806/1	0.85	1 MOLLINEAUX DRIVE OLD BEACH TAS 7017
44591/15	1.00	5 SHELMORE DRIVE OLD BEACH TAS 7017
100656/17	1.00	6 MYNA PARK ROAD OLD BEACH TAS 7017

100656/16	1.00	8 MYNA PARK ROAD OLD BEACH TAS 7017
180673/2	0.50	10 MYNA PARK ROAD OLD BEACH TAS 7017
53748/22	1.05	9 MYNA PARK ROAD OLD BEACH TAS 7017
173154/2	0.77	21 MYNA PARK ROAD OLD BEACH TAS 7017
43050/7	0.00	
115837/3	0.53	13 ROSELLA CRESCENT OLD BEACH TAS 7017
44591/16	1.02	3 SHELMORE DRIVE OLD BEACH TAS 7017
60978/101	0.02	
44591/1	1.10	1 MYNA PARK ROAD OLD BEACH TAS 7017
175939/1	0.50	3 MYNA PARK ROAD OLD BEACH TAS 7017
60978/95	2.06	67 OLD BEACH ROAD OLD BEACH TAS 7017
136944/10	0.00	
110700/1	2.52	
53748/21	1.12	7 MYNA PARK ROAD OLD BEACH TAS 7017
103432/2000	0.56	
143708/2	11.43	1 MYNA PARK ROAD OLD BEACH TAS 7017
100656/24	1.16	13 MYNA PARK ROAD OLD BEACH TAS 7017
171870/1	0.50	12 MYNA PARK ROAD OLD BEACH TAS 7017
100656/26	1.85	17 MYNA PARK ROAD OLD BEACH TAS 7017
180777/2	0.50	15 ASHGROVE CRESCENT OLD BEACH TAS 7017
100656/30	1.12	16 MYNA PARK ROAD OLD BEACH TAS 7017
115837/13	0.69	3 ROSELLA CRESCENT OLD BEACH TAS 7017
179418/4	0.50	17 ROSELLA CRESCENT OLD BEACH TAS 7017
115837/16	0.75	
115837/8	0.78	8 ROSELLA CRESCENT OLD BEACH TAS 7017
175774/1	0.54	2 SHELMORE DRIVE OLD BEACH TAS 7017
176456/2	0.50	2 MYNA PARK ROAD OLD BEACH TAS 7017
60978/100	0.01	
44591/21	1.27	
27139/1	0.42	
103432/7	1.07	8 SHELMORE DRIVE OLD BEACH TAS 7017
181745/2	0.50	97 OLD BEACH ROAD OLD BEACH TAS 7017
103432/8	1.17	10 SHELMORE DRIVE OLD BEACH TAS 7017

143708/3	0.00	
143708/1	1.11	94 OLD BEACH ROAD OLD BEACH TAS 7017
171870/2	0.50	18 ASHGROVE CRESCENT OLD BEACH TAS 7017
100656/23	1.05	11 MYNA PARK ROAD OLD BEACH TAS 7017
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115837/6	1.07	10 ROSELLA CRESCENT OLD BEACH TAS 7017
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64545/99	0.07	
140717/100	0.39	
140717/1	2.31	9 ASHGROVE CRESCENT OLD BEACH TAS 7017

### **Instrument of Certification**

The Brighton Council Planning Authority resolved at its meeting held on 7<sup>th</sup> November 2023 that Amendment RZ 2023-005 of the Tasmanian Planning Scheme including the Brighton Local Provisions Schedule meets the requirements specified in Section 32 of the Land Use Planning and Approvals Act 1993.

The Common Seal of the Brighton Council is affixed below, pursuant to the Council resolution of 16<sup>th</sup> May 2006, in the presence of:

**General Manager**

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140717/1	2.31	9 ASHGROVE CRESCENT OLD BEACH TAS 7017

**Total 95.86**





# Old Beach zoning review

## **Brighton Council**

May 2023



**ERA Planning Pty Ltd trading as ERA Planning and Environment**

**ABN** 67 141 991 004

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# Contents

4	Acknowledgement of Country	55	<b>Section 4: Policy context</b>
4	Glossary	56	Policy context summary
5	Executive summary	56	Policy setting
<b>9</b>	<b>Section 1: Introduction</b>	56	Objectives of the RMPS
10	Purpose	57	State policies
10	Brighton is growing	57	Southern Tasmania Regional Land Use Strategy
11	Precinct A	57	Settlement and residential development policies
11	Precinct B	58	Tasmanian Planning Scheme – Brighton
11	Report structure	<b>63</b>	<b>Section 5: Potential residential yield</b>
<b>13</b>	<b>Section 2: Background</b>	64	Approach and methodology
14	Locational characteristics	65	Development potential
18	Economic growth	67	Results
23	Dwelling demand	<b>69</b>	<b>Section 6: Change scenarios</b>
<b>25</b>	<b>Section 3: Site analysis</b>	70	Overview
26	Summary of site analysis	72	Key facts and analysis assumption
27	Current planning controls	75	Option 1
30	Lot sizes	76	Option 2
30	Surrounding land uses and zones	78	Option 3
31	Tivoli Green	80	Implementation considerations
35	Land constraints and values	81	Summary
34	Topography	<b>83</b>	<b>Section 7: Subdivision design</b>
35	Bushfire management	84	Overview
35	Landslip	84	Broader area considerations
35	Flooding and coastal inundation	85	Study area considerations
35	Coastal erosion	85	Lot/subdivision area considerations
35	Ecology	<b>87</b>	<b>Section 8: Recommendations</b>
35	Scenic values	88	Recommendations
<b>43</b>	<b>Infrastructure and servicing</b>	<b>91</b>	<b>Section 9: Community engagement summary</b>
43	Community infrastructure	92	Early engagement methods and results
44	Water supply	93	Exhibition of draft report
47	Sewer servicing	93	Future engagement opportunities
47	Energy	<b>95</b>	<b>Section 10: Next steps</b>
47	Stormwater	96	Short term actions
<b>48</b>	<b>Transport network</b>	97	Medium term actions
48	Road transport	97	Long term actions
48	Public transport		
49	Movement network		
<b>52</b>	<b>Public open space and green space</b>		
<b>52</b>	<b>Activity centres network</b>		



## Acknowledgement of Country

We acknowledge and pay respects to the palawa/pakana people as the traditional owners and continuing custodians of lutruwita / Tasmania. We honour their 40,000 years of uninterrupted care, protection and belonging to these islands, before the invasion and colonisation of European settlement.

Tasmanian Aboriginal people's culture and language have been, and continue to be, based on a deep and continuous connection to family, community, and the land, sea, and waterways. This Local Area Settlement Strategy respects this connection and aims to celebrate and protect it for future generations.

We pay our sincere respects to Elders past, present and emerging, and to all Aboriginal people living in and around the Central Coast region. We acknowledge particularly the punnilerpanner tribe of the north nation of lutruwita.

We honour their stories, songs, art, and culture, and their aspirations for the future of their people and these lands.

## Glossary

Abbreviation	Definition
ABS	Australian Bureau of Statistics
BA	building approval
BSP	<i>Brighton Structure Plan 2018</i>
CBD	central business district
Council	Brighton Council
EOI	expression of interest
ERA	ERA Planning and Environment
FUZ	Future Urban zone
GRZ	General Residential zone
LDRZ	Low Density Residential zone
LGA	local government area
LPS	local provisions schedule
LUPAA	<i>Land Use Planning and Approvals Act 1993</i>
NEPM	National Environmental Protection Measures
RMPS	Resource Management and Planning System
SAP	specific area plan
SEIFA	socio-economic indexes for areas
STRLUS	<i>Southern Tasmania Regional Land Use Strategy 2010-2035</i>
Study area	comprises Precinct A and B
TIA	Traffic Impact Assessment
UGB	urban growth boundary

# Executive summary

The Brighton local government area (LGA) is experiencing strong population growth, resulting in increased pressure on residential land supply. The Department of Treasury and Finance (Treasury projections) in 2019 predicted that this growth will continue, with the Brighton LGA expected to be the fastest growing in Tasmania with an expected population growth of 33.4%, or 5,754 people between 2017 and 2042 under the medium growth scenario. This trend is examined in the Brighton Structure Plan 2018 (BSP), which expects 2,708 new dwellings will be required in the LGA by 2033, with half of this demand being in Old Beach.

Tasmania is currently experiencing unprecedented population growth and pressure for housing. The Greater Hobart area is the least affordable metropolitan area to rent in Australia and has been since 2019<sup>1</sup>, this combined with an increased cost of living, low vacancy rates across rentals, and an increase in housing prices is making it difficult for residents to secure safe, appropriate, and affordable housing. Both the Tasmanian Government and Brighton Council are committed to addressing this issue, and one way of doing that is to identify land inside the urban growth boundary that could be rezoned to support additional houses through infill development.

Two precincts – referred to as precinct A and precinct B – in Old Beach that are within the urban growth boundary identified in the Southern Tasmania Regional Land Use Strategy (STRLUS) were in the BSP as having the potential to accommodate infill development. These precincts which are currently zoned Rural Living A are the focus of this report which examines whether they have the capacity and policy support to accommodate residential growth.

A site analysis of the precincts was undertaken and considered the current planning controls, details of the site and surrounds, land constraints and values and the transport network in and around Old Beach. It was found that:

- There are minimal constraints that will limit the development potential of land in the precincts, taking into consideration topography, bushfire, landslip, flooding, coastal inundation, and coastal erosion. This means that the majority of lots have development potential.
- The existing movement network is considered adequate for the current conditions. It could be improved, however, by installing formal footpaths and increasing bus services along existing routes to facilitate active and public transportation options for residents. These upgrades will be required as the population increases in the area.
- The road network would need upgrades to accommodate an increased population in Old Beach that would be facilitated by any rezoning to the Precincts. It is highlighted that the road upgrades and the rezonings can be concurrently staged. The first tranche of upgrades includes the right turn movement from the Bowen Bridge onto the East Derwent Highway, and the highway link between the southern junction at Otago Bay and the Bowen Bridge. The second tranche includes upgrades to the Clives and Fouche Avenue roundabout, with the final tranche of upgrades requiring a detailed corridor study of East Derwent Highway and the associated junctions..
- The precincts are not currently well serviced by reticulated water or sewerage, but there is the potential to service these areas through upgrades to nearby infrastructure, as advised by TasNetworks and TasWater. These upgrades could be partially funded by a development contribution requirement. Overall, while a greater number of dwellings being added to the precincts will change the character of the area, it could also result in benefits for residents such as better access to shops and services, better provision of public open space and improvements to the movement network.

<sup>1</sup> Rental Affordability Index, key findings November 2022, prepared by SGS Economics and Planning.



Photo courtesy of Brighton Council

The policy context for the zoning review was also analysed and potential zoning options for the precincts considered. The State Policies will not restrict or limit the development potential of either precinct. The STRLUS identifies that residential growth for Greater Hobart is to occur through 50% infill development and 50% greenfield development, and 15% of Greater Hobart's residential infill growth should be in the Brighton LGA. Meanwhile, the BSP identifies that Old Beach will grow by an additional 3,000 people by 2033 and that more than 1,000 new dwellings will be required. Precincts A and B were identified in the BSP as appropriate locations to accommodate residential growth in Old Beach. In considering potential options for rezoning precincts A and B it was found that the Low Density Residential zone is not appropriate, and that the General Residential zone and the Future Urban zone are better suited.

Extensive community engagement work was undertaken with the communities in and around the two precincts. The engagement tools and methods included notification letters, information on the council website, an online survey, drop in sessions, and email and phone contact. The engagement found that there was a comparatively even split between respondents who want no change to existing planning controls (52%) and those who are open to change (48%). It also found that most people in the precincts have lived there for longer than 5 years, and that the main reason why people liked living in Old Beach was because of the privacy and serenity of the area.

Three change scenarios were subsequently developed for the study area. These include:

### Option 1

- No change to the current planning controls. The current zoning of Rural Living (Zone A) would be maintained across both precincts, with the current Urban Rural Interface SAP covering Precinct A.
- This option permits minimum lot sizes of 1 ha in Precinct B and 0.5 ha in Precinct A.
- Assumes no upgrades to the road network, and a growth rate of one lot per year, or in other words 10 new lots over the next 10 years.

## Option 2

- Rezone both Precinct A and B to Future Urban zone immediately, and simultaneously remove the Urban Rural Interface SAP currently applying to Precinct A and extend the UGB to include the entirety of Precinct A.
- Next, the road upgrades identified by Hubble Traffic should ideally occur, or at least a commitment is made that they will occur in a specific timeframe, prior to any further changes to planning controls (beyond the application of the Future Urban zone). The road upgrades should include traffic signals on the Bowen Bridge and construct an additional southbound traffic lane at the southern junction at Otago Bay and the Bowen Bridge. It is expected that DSC would take responsibility for the cost and construction of these upgrades, but this will need to be confirmed.
- It is then recommended that a master plan be developed by Council for the two precincts. This would include a detailed road and pathway layout, infrastructure assessment, and scenic landscape analysis. Providing this detail to the Tasmanian Planning Commission would give greater certainty around infrastructure delivery as part of rezoning considerations and provide landowners certainty around the process.
- Following this, 25 lots (or 31.2 ha) have been identified in part of Precinct A to be rezoned to the General Residential zone. The change in planning controls, should include the road layout and other key features of the master plan document in the form of a SAP to ensure an orderly pattern of subdivision. If all of these are then subdivided, it could theoretically result in approximately 580 lots.
- General Residential zone has a preferred minimum lot size of not less than 450 m<sup>2</sup> (although there is discretion for this to be varied), while the Future Urban zone does not have a minimum lot size but should only be subdivided for a Utilities use or the consolidation of lots to ensure that development does not compromise the potential for future urban use and development of the land.

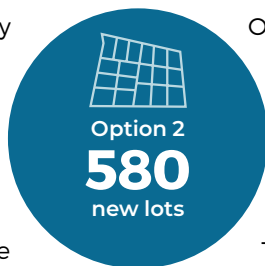
## Option 3

- Rezone both Precinct A and B to the Future Urban zone immediately. This will prevent subdivision occurring in a manner that might limit the future, development potential the Precincts.
- Remove the Urban Rural Interface SAP currently applying to Precinct A and extend the UGB to include the entirety of Precinct A<sup>2</sup>.
- It is recommended that a master plan be developed by Council for the precincts. The land can be serviced by infrastructure required for a general residential zone and at the assumed densities, however the practicalities of how and when this occurs would be determined via this master planning process. The master plan would include a detailed road and pathway layout, infrastructure assessment, and scenic landscape analysis. The infrastructure framework/study would determine the actual provision of infrastructure, who is responsible for paying for it, and when the trigger would be for the upgrades to occur. TasWater may contribute to the cost of the trunk infrastructure upgrades via their new headworks policy and then impose charges per lot, or the cost may be shared by developers.
- Once the above has been completed or is nearing completion, it is suggested that both Precincts A and B be rezoned to General Residential, with the master plan forming part of the change in planning controls through the application of a SAP (or similar).

<sup>2</sup> Amending the UGB would require a change to the STRLUS

To guide future subdivisions within the study area, subdivision standards have been developed. There is an added complexity to subdivision as the properties in the precincts are already developed with each title under separate ownership. The subdivision guidelines are provided to inform a future master plan prepared for the precincts to ensure best practice subdivision is achieved. The guidelines are provided at three different scales: the broader Old Beach / Brighton LGA scale, the study area scale (i.e. precincts A and B), and the lot/subdivision scale. It is suggested that a SAP be applied to the precincts that incorporates these guidelines and the outcomes such as the future road layout identified in the future master plan.

Based on the analysis undertaken, it is recommended that Option 2 is adopted, resulting in moderate change for the study area. This option has the potential to make a significant contribution to meeting the housing demand, and is also aligned with the planning policy environment.



Option 2 has the potential to result in 580 lots, noting this is not likely to be completely realised in the next ten years, due to factors, such as the timeframes associated with the planning scheme amendment process and construction, the multiple landowners involved and TasWater and TasNetworks needing to upgrade infrastructure in the precincts and surrounding area to service the additional dwellings. Furthermore, it is anticipated, based on the consultation stage, that some property owners will not opt to subdivide their property. Based on the results of the community engagement, 48% of property owners have an appetite for change in Old Beach. This option would align with the first tranche of upgrades including the right turn movement from the Bowen Bridge onto the East Derwent Highway, and the highway link between the southern junction at Otago Bay and the Bowen Bridge. Noting further, significant, upgrades would be required before Option 3 could be realised.

Further key recommendations include ongoing discussions to occur with TasWater, TasNetworks and the Department of State Growth to ensure infrastructure provision adequately supports future residential growth within the study area and continued engagement with the local community throughout the next phases of this project to ensure they are kept involved.



Photo courtesy of Brighton Council



The page features a solid teal background with abstract, semi-transparent shapes in a lighter shade of teal. A large circle is positioned in the upper left, and a wide, curved shape spans across the middle and lower left. The text 'Section 1 Introduction' is centered in white, with 'Introduction' in a larger, bold font.

# Section 1 **Introduction**

# Introduction

## Purpose

ERA Planning and Environment (ERA) was engaged by Brighton Council to review the zoning of two precincts located in Old Beach, both currently zoned Rural Living. The review examined whether there is capacity and policy support to accommodate further residential growth in the precincts, and it explored the community's appetite for such change.

This report makes zoning recommendations that are based on the suitability of the land for additional housing. The review relied on existing strategic documents (see Section 1.2) for growth and demand predictions.

## Brighton is growing

This study arises as the Brighton Local Government Area (LGA) has been experiencing rapid population growth and subsequent pressure on residential land supply in recent years. This has been examined in detail in the *Brighton Structure Plan 2018* (BSP). Population projections by the Department of Treasury and Finance (Treasury projections) in 2019 predicted that this growth will continue, with the Brighton LGA expected to be the fastest growing in Tasmania. Its expected population growth is 33.4% or 5,754 people between 2017 and 2042 under the medium growth scenario. Under the high growth scenario this increases to 43.3%<sup>3</sup> or 7,351 people between 2017 and 2042.

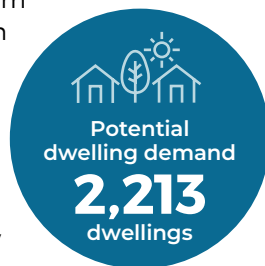
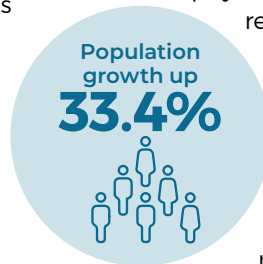
The predicted population growth in Brighton equates to a demand for 2,213 dwellings by 2042 under the medium growth scenario Treasury projections, and 2,708 dwellings by 2033 under the BSP. The BSP identifies that half of this dwelling demand for the LGA is to be in Old Beach, which is predicted to grow by an additional 3,000 people between 2018 and 2033.

The Greater Hobart Residential Strategy in the *Southern Tasmanian Regional Land Use Strategy* (STRLUS) seeks to manage future residential growth in Greater Hobart between 2012 and 2033 via a 50:50 ratio of greenfield to infill development. The STRLUS sets the

physical extent for a 20-year supply of residential land via urban growth boundaries (UGBs) and greenfield development precincts.

It is understood that the existing supply of appropriately residential zoned land and greenfield development sites in the Brighton LGA barely satisfies the Treasury medium projections but is well short of the BSP scenario.

Potential sites for infill development were identified in the BSP. Two, in Old Beach, were selected to be investigated for their suitability for changes to existing planning controls. These two 'precincts' are the focus of this review and are shown in Figure 1.



<sup>3</sup> Equivalent to an average annual growth rate of 1.3% under the medium growth scenario and 1.7% under the high growth scenario.



Figure 1: Study area showing precincts and urban growth boundary under STRLUS

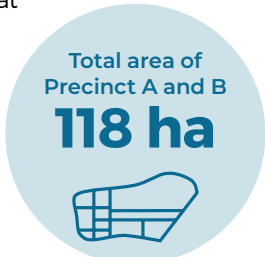
### Precinct A

Precinct A is located on the eastern side of the East Derwent Highway and is approximately 90 ha in size. The precinct comprises 84 properties which range in size from 1,287 m<sup>2</sup> to 11.43 ha. The precinct has two waterways that run through it – Claries Creek and another minor tributary. All properties comprise a single dwelling except for 11 vacant properties. Other than small hobby farms, there appears to be no non-residential use.



### Precinct B

Precinct B is clustered around Compton Road and located on the western side of the East Derwent Highway. It is approximately 28 ha and comprises 20 properties that range in size from 8,560 m<sup>2</sup> to 2.076 ha. There is one vacant property, while all others comprise single dwellings and some hobby farms. The precinct directly abuts the River Derwent to the west.



## Report structure

This report is structured to articulate the relevant inputs and analysis. Section 2 examines the background data while sections 3 and 4 provide a site analysis and the existing policy context. From there, Section 5 summarises the community engagement process, and Section 6 looks at the potential residential yield that can be achieved in the study area. Section 7 suggests three change scenarios for the study area, and Section 8 details what good subdivision design should achieve.



# Study area map



**Precinct B**

**Precinct A**

**LEGEND**

-  Study area
-  Greater Hobart Urban Growth Boundary

# Section 2 **Background**

# Background

## Locational characteristics

The Brighton LGA is located in southern Tasmania, approximately 20 kilometres north-east of Hobart CBD, and has a land area of 170.9 km<sup>4</sup>.

Brighton LGA was formerly a predominately agricultural area with some outlying dormitory suburbs and townships. However, over the past few decades it has been transformed into a bustling urban growth area. The LGA now has a population of approximately 18,595<sup>3</sup>.

It offers residents a unique location situated between the Derwent River, rolling hills covered by bush, and river valleys traversing the settlement areas. Urban areas are primarily clustered by the river and on the plateau west of the Jordan River, with the valleys and lower hill slopes still being used for rural purposes. The main townships, Brighton and Pontville, and the suburbs of Bridgewater, Old Beach, Herdsmans Cove and Gagebrook are serviced by the Midland and East Derwent highways.

Outside the main urban areas and townships there are also extensive tracts of low density and rural residential development. Brighton includes the state-significant employment precincts at the Brighton Transport Hub and Industrial Estate and Boral Quarry. The Bridgewater and Brighton townships also contain light industrial areas. The main shops and services for residents are provided in the Brighton township and in Green Point Plaza and Cove Hill in Bridgewater.

The *Brighton Socio-Economic Profile and Opportunity Assessment 2019* provides economic data and analysis to establish a consistent set of baseline data to inform strategic decision-making at a local government and regional level. The assessment had the following key findings:

- *Brighton's population tends to be younger than the other LGAs in Greater Hobart but has lower socio-economic outcomes with lower educational attainment and lower household incomes than the Greater Hobart average.*
- *Brighton has a low proportion of skilled workers which is likely contributing to the high unemployment rate in the Brighton LGA, the highest in the state (at 11.9%).*

<sup>4</sup> ABS 2021 Estimated Residential Population



Photo courtesy of Samuel Shelley and Brighton Council

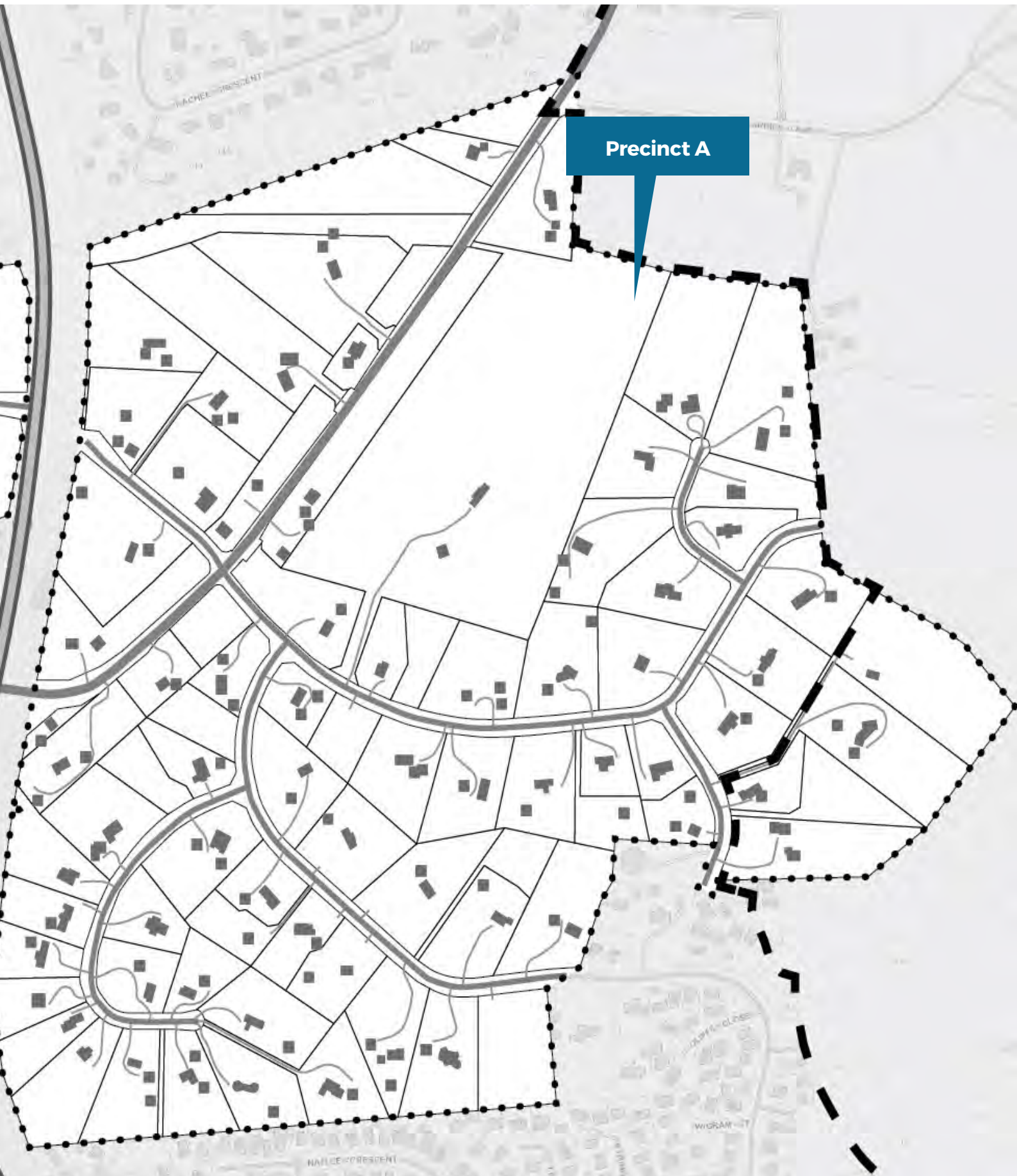
# Precincts - topographic

**Precinct B**

## LEGEND

- • • Precinct
- — Greater Hobart Urban Growth Boundary





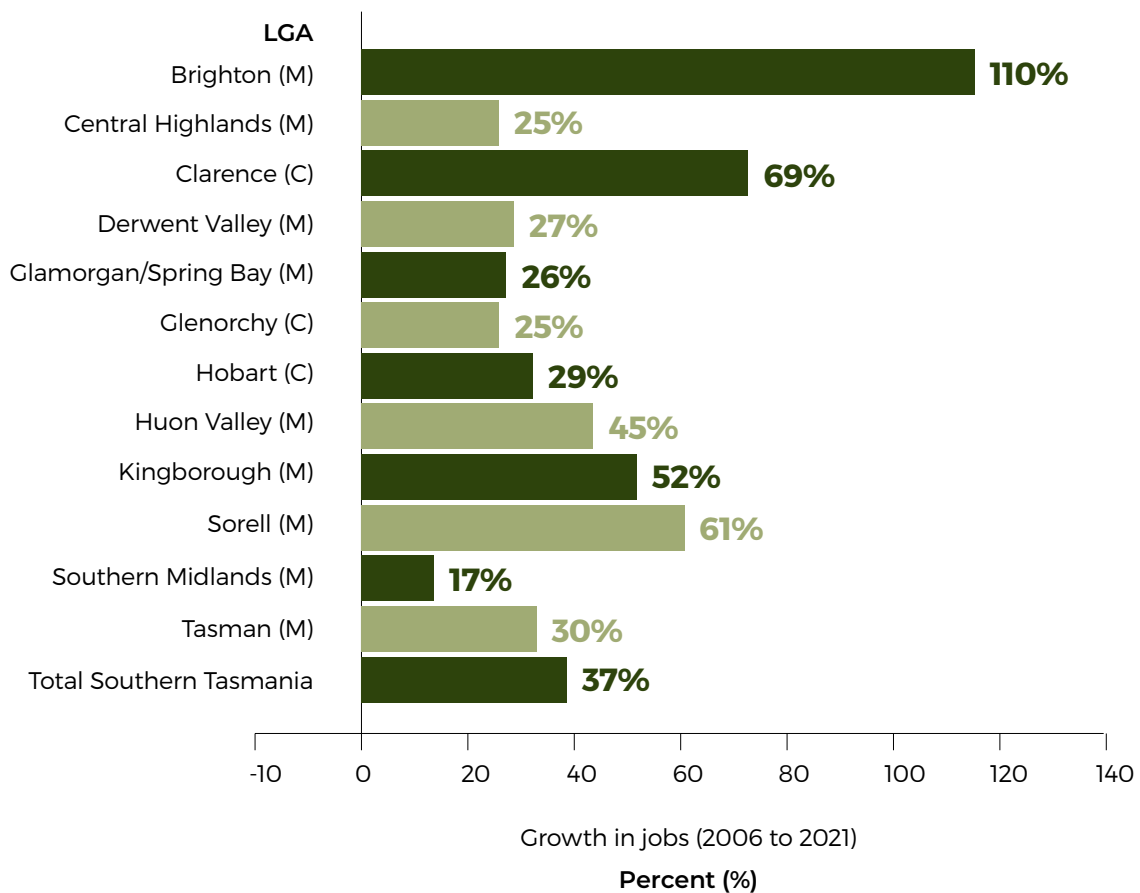
Precinct A

## Economic growth

Brighton now has the largest provision of industrial zoned land in Southern Tasmania<sup>5</sup>, and the demand for this is projected to increase. The Brighton Industrial Estate is the major transport interchange for southern Tasmania and provides significant employment opportunities for Brighton residents. Between 2006<sup>6</sup> and 2021, the Brighton LGA experienced a 110% increase in jobs (31% of which were in the last 5 years), with most new jobs in the transport, postal and warehousing, construction, and accommodation and food services industries. The period between 2016 and 2021 saw some noticeable changes in jobs and industry of employment, particularly in retail trade, which is likely a consequence of the COVID-19 pandemic.



### Growth in jobs by LGA in Southern Tasmania region (2006 to 2021)



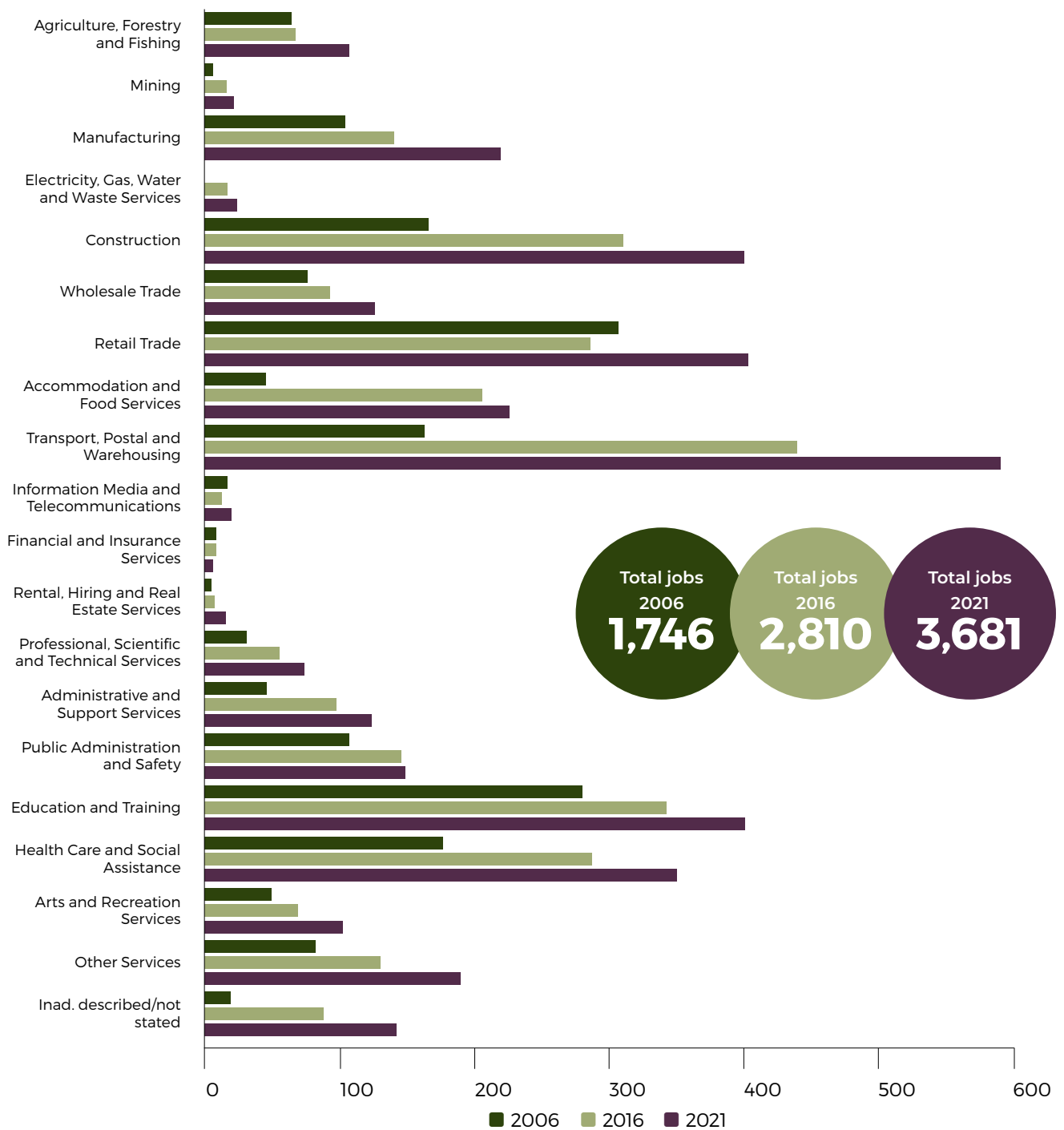
Approximately 60% of the Brighton LGA population is in the labour force (as of 2021 Census) with 16.4% of those people living and working in the area, a figure which is steadily increasing as Brighton LGA becomes more self-sufficient: at the 2011 Census about approximately 15.3% of the working population lived and worked locally. That said, just over half the working population continue to travel to the Hobart and Glenorchy LGAs for employment (around 26% to Glenorchy and 27% to Hobart). Residents primarily work in the health care and social assistance, retail and construction industries.



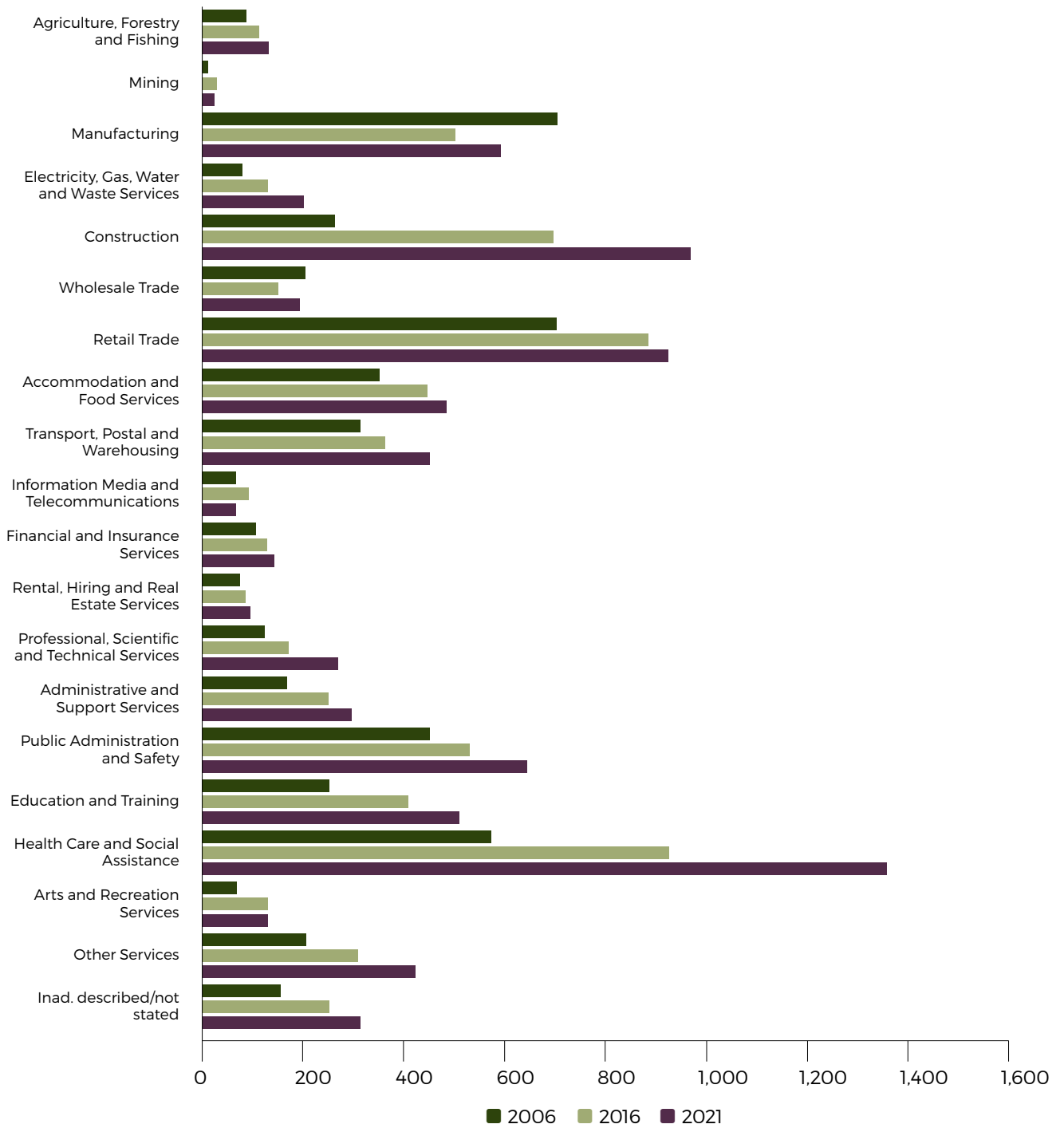
<sup>5</sup> As identified in the Economic Assessment completed for the Brighton Structure Plan 2018

<sup>6</sup> The Southern Tasmania Regional Land Use Strategy is based on 2006 census data.

## Jobs by industry for Brighton LGA: 2006, 2016 and 2021



## Industry of employment for Brighton LGA residents: 2006, 2016 and 2021



The population growth in the Brighton LGA from 2020 to 2021 was 2.68%<sup>7</sup>. Brighton LGA has consistently had a higher growth rate compared to Greater Hobart since 2007 (with the single exception of 2016). It is also Tasmania's fastest growing LGA. This growth is expected to continue with an expected increase of 5,754 people by 2042, with Old Beach growing by an additional 3,000 people by 2033<sup>8</sup>.

Old Beach is located in the southern part of the Brighton LGA and is approximately 10 km south of the town of Brighton. It is generally older and less disadvantaged than the Brighton LGA overall, as shown in Table 1 and Figure 2. The study area in particular includes the most advantaged areas for the Brighton LGA in terms of people's access to material and social resources and their ability to participate in society.

**Table 1: Comparison of key statistic data over time based on 2006, 2016 and 2021 Census for Brighton LGA and Old Beach**

	Brighton LGA			Old Beach		
	2006	2016	2021	2006	2016	2021
Median age	31	34	35	36	39	40
<b>Household composition</b>						
Family households	76.8%	75.4%	75.3%		80.4%	79.0%
Single person households	16.4%	22.2%	22.2%		17.8%	18.6%
Group households	2.2%	2.4%	2.5%		1.8%	2.4%
Average household size	2.8	2.6	2.6	2.8	2.6	2.6
Number of dwellings	5,087	6,474	7,213		1,433	1,630
Proportion dwellings rented	31.4%	32.8%	32.6%		13.1%	11.8%
<b>Employment</b>						
Worked full-time	55.5%	54.5%	54.3%		60.3%	59.9%
Worked part-time	28.3%	32.0%	32.9%		31.1%	30.8%
Unemployed	8.9%	8.0%	6.6%		3.7%	3.4%
Median weekly household income	\$805	\$1,111	\$1,352	\$1,187	\$1,589	\$1,865
Median weekly rent	\$117	\$215	\$280	\$220	\$315	\$400
Average motor vehicle per dwelling		1.9	2.1		2.1	2.3

<sup>7</sup> ABS Regional population statistics 2020-21 financial year (released 29 March 2022)

<sup>8</sup> Brighton Structure Plan – Final (August 2018), Echelon Planning

# Index of Relative Socio-economic Advantage and Disadvantage (IRSAD)

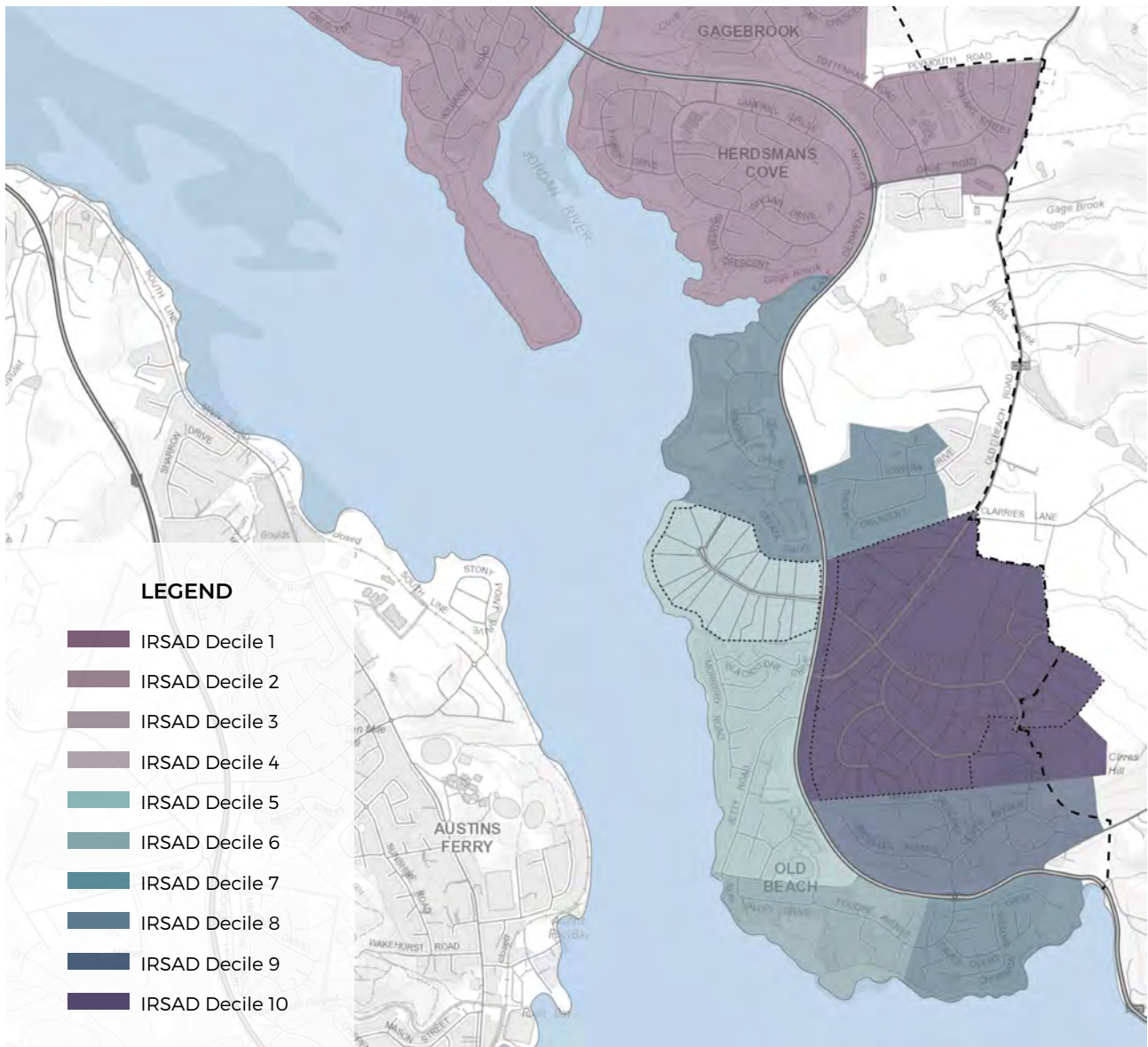
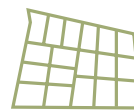


Figure 2: Index of Relative Socio-economic Advantage and Disadvantage (IRSAD) for Old Beach area. Source: ABS 2016.

Since 1 January 2012, the following has been approved in Old Beach:



**Building applications issued for dwellings**



**Lots created<sup>9</sup>**

<b>Old Beach</b>	490	388
<b>Brighton</b>	1,725	626

<sup>9</sup> Including 270 new lots in Tivoli Green

## Dwelling demand

The Greater Hobart area, including Brighton, is experiencing population and demographic changes which are impacting how and where Hobart residents are living. These changes include a growing and aging population, demand for housing diversity, transport and infrastructure constraints, an increase in severe weather and natural hazard events due to climate change, and managing the impacts of the COVID-19 pandemic. There is a significant increase in demand for dwellings in the Greater Hobart area which is putting increased pressure on the market and driving the cost of rent and house prices upwards.

In November 2022, the average rental household in Greater Hobart had a gross income of \$84,613 per annum<sup>10</sup>. The 2021 ABS Census found that the median weekly rent for the Greater Hobart area was \$350. SGS Economics and Planning state in their Rental Affordability Index (RAI) report, that the Greater Hobart area is the least affordable metropolitan area in Australia to rent and has been since 2019. With an RAI score of 102, they also found that the average rental household in Greater Hobart is close to being in rental stress (defined as a RAI score of 100), with 29% of their total income going to rent, if renting at the median rate. The report further states that the median rental rate in Hobart has increased by 60% from 2016 to 2022, and is now 11% higher than the Melbourne median, despite the average rental household income being 18% lower.

In February 2023, Hobart had a rental vacancy rate of 0.9%, an increase from January 2022 when it was 0.7%<sup>11</sup>. The vacancy rate in over the past few years has increased pressure on social housing, with 4,557 applications on the housing register in February 2023<sup>12</sup>; a number that is increasing each month. Some applications are prioritised, however priority applications still have an average wait time of 79.2 weeks.

To help address the increased demand for housing, the Tasmanian Government has committed to building 10,000 social and affordable dwellings by 2032. At the end of February 2023, 800 of these homes were completed, and there is a target to deliver 1500 homes by June 2023. The Tasmanian Government is also currently developing a 20-year Tasmanian Housing Strategy, which aims to build a sustainable housing system and identify solutions to the current housing market challenges.

Brighton Council is committed to addressing the housing need of Brighton's residents. The BSP identifies the relationship between a growing population and the pressure this has on residential land supply and housing. For example, Old Beach is anticipated to grow by an additional 3,000 people by 2033, resulting in a need for more than 1,000 new dwellings. To address this housing demand, the BSP includes actions such as reviewing the urban growth boundary in places like Old Beach, rezoning land to accommodate greater density, supporting infill development, and increasing housing diversity to provide a range of options for residents.

<sup>10</sup> Rental Affordability Index, key findings November 2022, prepared by SGS Economics and Planning.

<sup>11</sup> Residential Vacancy Rates, SQM Research

<sup>12</sup> Housing Dashboard, February 2023, prepared by Homes Tasmania



Photo courtesy of Samuel Shelley and Brighton Council



# Section 3

## **Site analysis**

# Site analysis

## Summary of site analysis

A detailed site analysis taking into account planning scheme controls, existing physical characteristics, and provision of infrastructure and its capacity has been undertaken and is outlined below. In summary:

- The precincts are in the Rural Living zone and subject to a number of overlays. There are predominately residential uses in and surrounding the precincts, with rural and agricultural uses to the east, outside the UGB.
- The precincts form one of only three discrete areas of Rural Living zoned land in the Brighton LGA that is located inside the UGB. Most Rural Living zoned land in the Brighton LGA is outside the UGB, as expected by the STRLUS.
- There is a development rate of Rural Living zoned land of approximately 4.5 new lots per year in Old Beach (excluding Tivoli Green).
- There are minimal constraints that will limit the development potential of land in the precincts, taking into consideration topography, bushfire, landslip, flooding, coastal inundation, and coastal erosion.
- The precincts do have some potential to support both threatened flora and fauna, in particular the areas that have existing native vegetation.
- The precincts are well served by nearby state and local connector roads, however, as advised by a Traffic Engineer, the operational performance of East Derwent Highway will decline with any further increase in population around Old Beach. Subsequently, upgrades to the road network would be required to accommodate additional traffic generated on the highway by any rezoning of land that increases the density of residential development.
- The precincts are not well served by public transport. Advice provided by the Department of State Growth indicates that it is unlikely additional bus stops or services would be provided to support an increased population in Old Beach. Instead, it would be preferred to increase the frequency of existing routes in the area to create a stronger public transport corridor, to support the growing population.
- The existing movement network in the precincts is considered adequate for the current conditions. The roads in the precincts are rural roads with swales on each side for water capture. Roads would need to be upgraded as the population grows, including the addition of kerb and channel to better manage stormwater. Formal footpaths and cycle lanes in the precincts would also be encouraged to promote active transport in the area and improve last mile connections to public transport routes.
- The precincts are not well serviced by reticulated water or sewerage, but there is the potential to service these areas through upgrades to nearby infrastructure.
- TasNetworks has identified there are constraints in the electricity supply network and updates would be required to support additional houses in the area.
- The public open space provision is limited in the Old Beach precincts but could be improved by requiring land be set aside as part of subdivision applications. Suggested areas for public open space are provided in the open space map.
- Old Beach is well serviced by nearby activity centres but could benefit from convenience / neighbourhood level shops in the local area to support the anticipated growth of another 3,000 residents in Old Beach in the next 10 years.
- A Development contributions requirement could assist in improving roads and footpaths in the precincts, and in providing public open space and services in Old Beach for residents to access rather than going to nearby activity centres for basic needs.

Overall, while a greater number of dwellings being added to the precincts will change the character of the area, it could also result in benefits for residents such as better access to shops and services, better provision of public open space and improvements to the movement network.

## Current planning controls

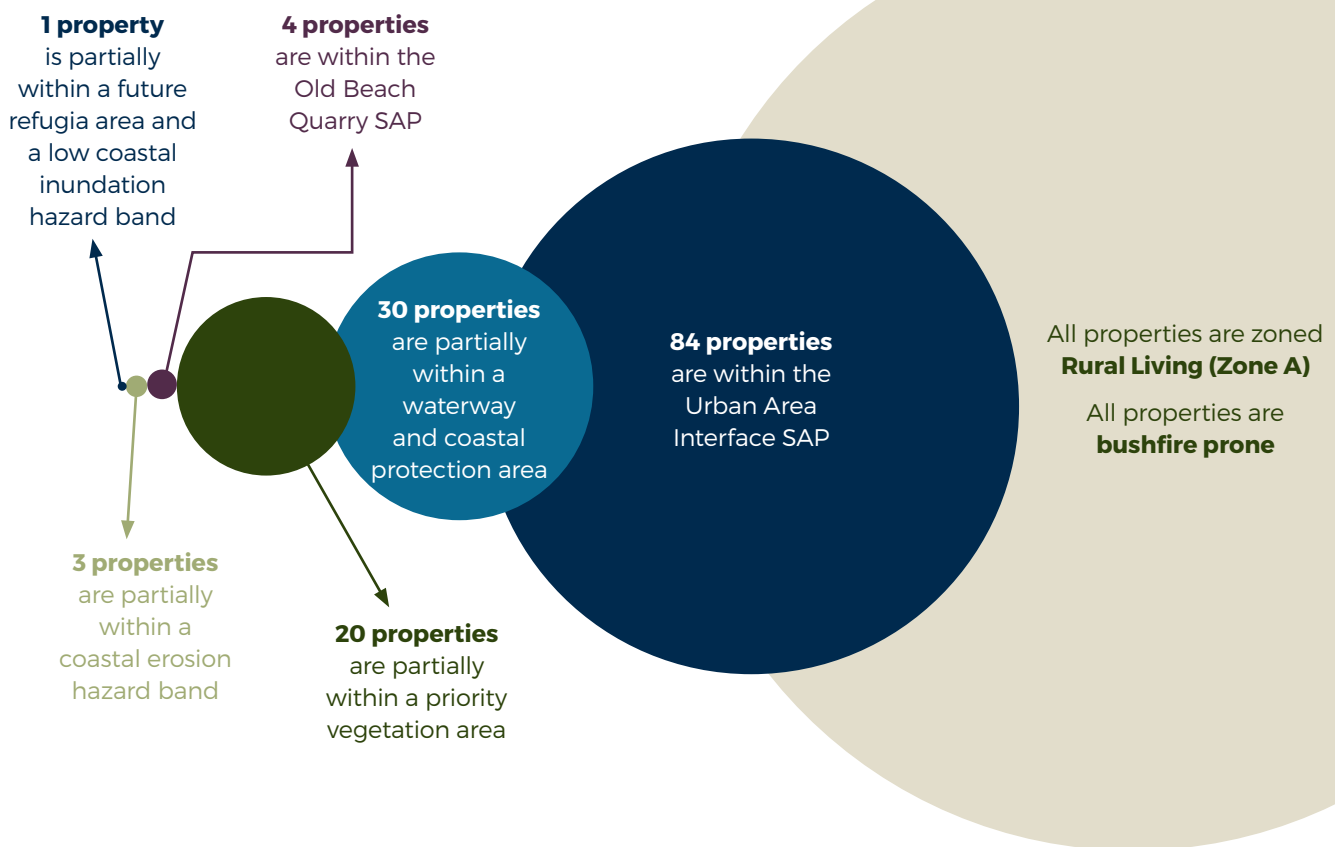
All land parcels in the precincts are zoned Rural Living (Zone A) except for one. That one is zoned Environmental Management and is in the northern portion of Precinct A, covering Clarries Creek (CT 245178/1). This lot has been excluded from consideration under this review, however, given its limited development potential.

Two specific area plans (SAPs) apply to properties in Precinct A:

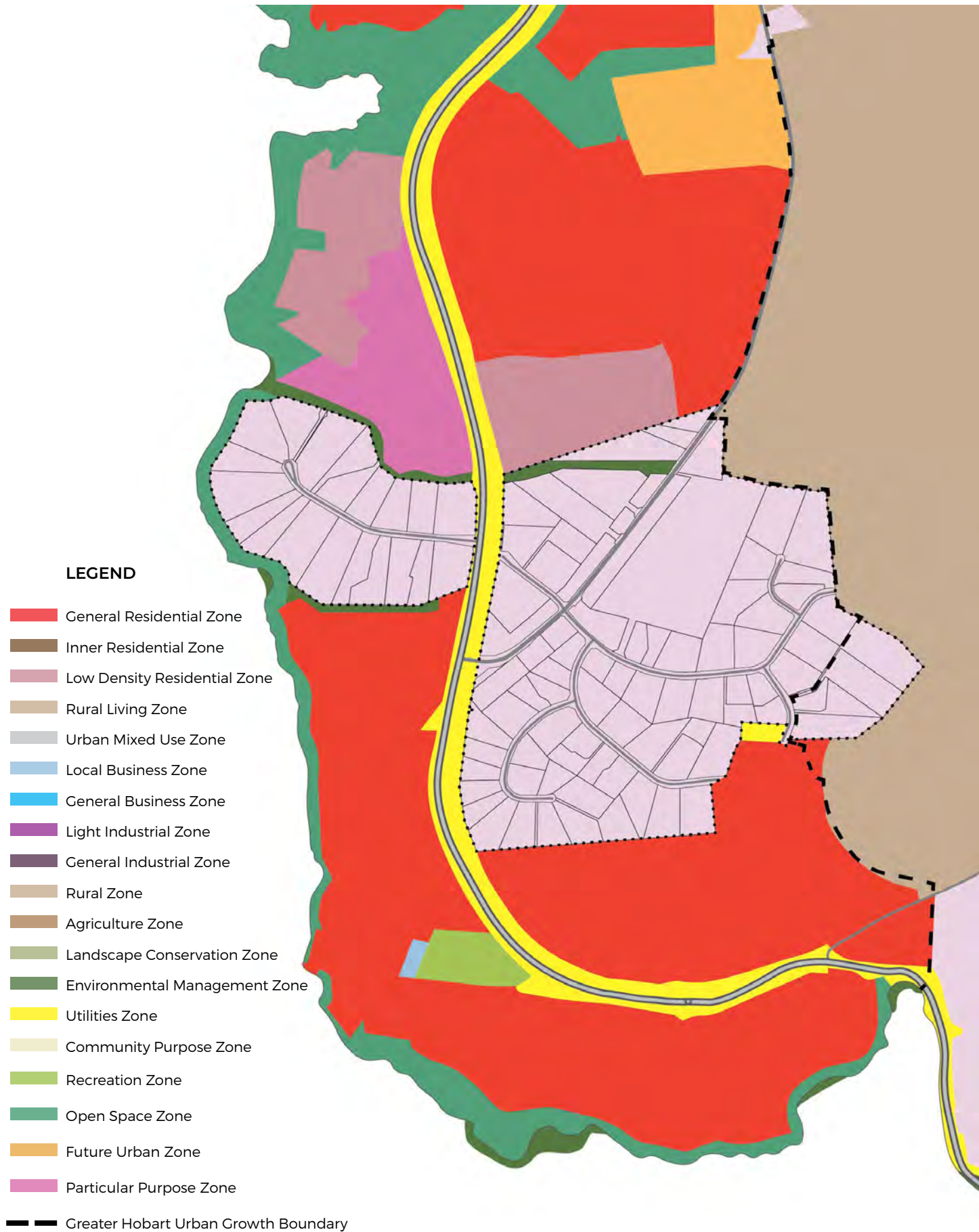
- The Urban Rural Interface SAP applies to the entirety of Precinct A.
- The Old Beach Quarry SAP partially applies to four lots in Precinct A.

The following codes apply to properties in precincts A and B:

- The Bushfire Prone Areas Code applies to all of precincts A and B.
- The Natural Assets Code (waterway and coastal protection area) partially applies to 30 properties.
- The Natural Assets Code (priority vegetation area) partially applies to 20 properties.
- The Natural Assets Code (future coastal refugia area) partially applies to one property.
- The Coastal Inundation Hazard Code partially applies to one property.
- The Coastal Erosion Hazard Code partially applies to three properties.



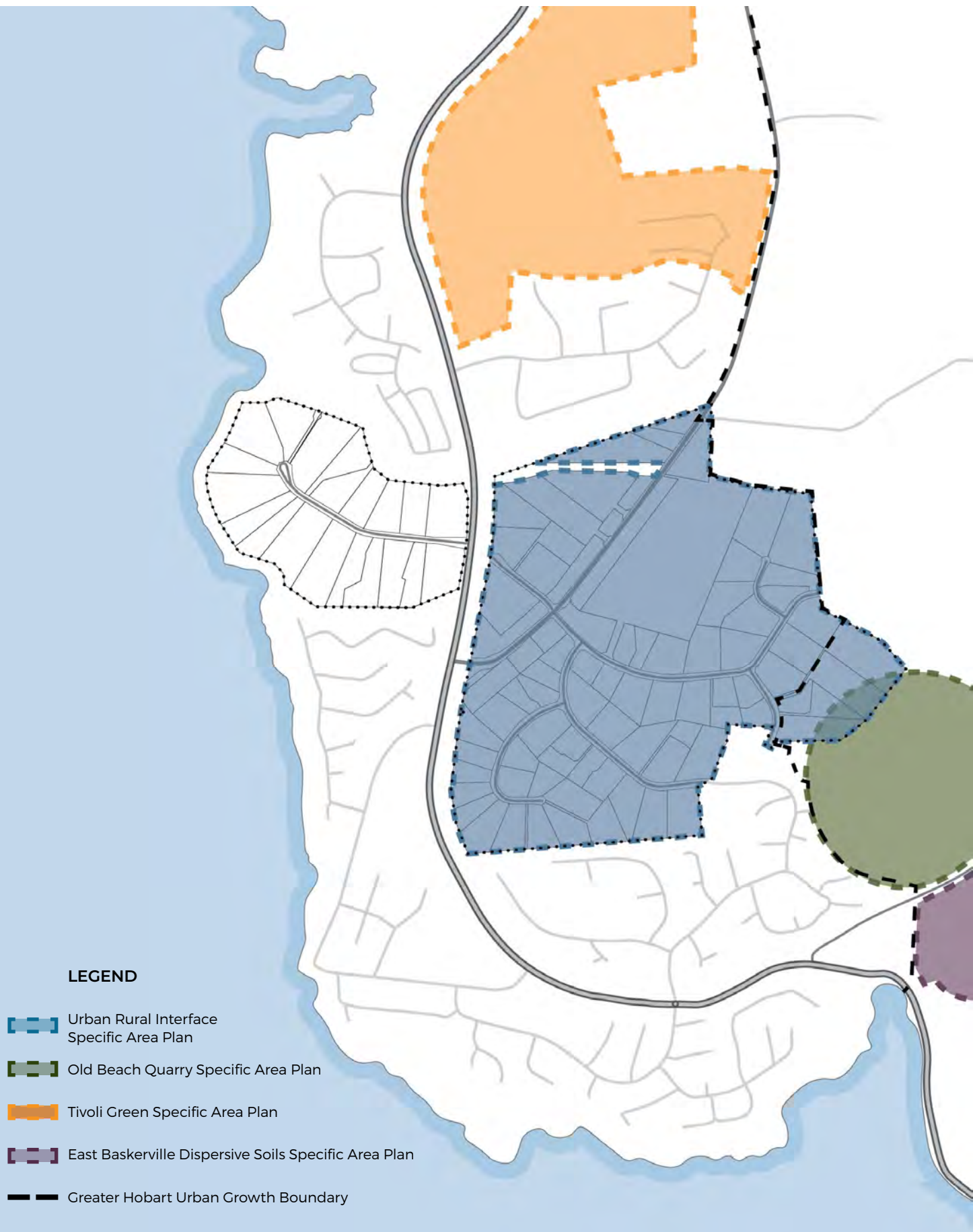
# Zoning



## LEGEND

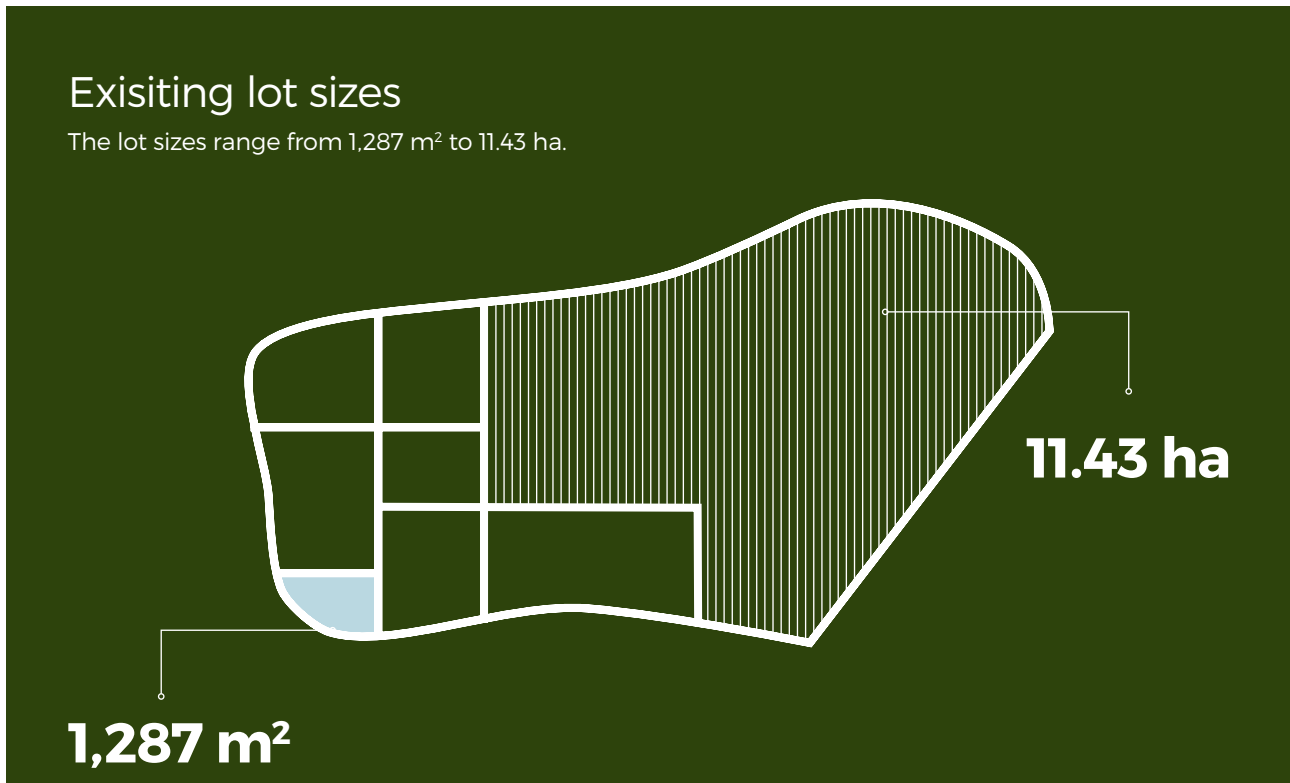
- General Residential Zone
- Inner Residential Zone
- Low Density Residential Zone
- Rural Living Zone
- Urban Mixed Use Zone
- Local Business Zone
- General Business Zone
- Light Industrial Zone
- General Industrial Zone
- Rural Zone
- Agriculture Zone
- Landscape Conservation Zone
- Environmental Management Zone
- Utilities Zone
- Community Purpose Zone
- Recreation Zone
- Open Space Zone
- Future Urban Zone
- Particular Purpose Zone
- Greater Hobart Urban Growth Boundary

## Specific area plans



## Lot sizes

The lot sizes range from 1,287 m<sup>2</sup> to 11.43 ha.



## Surrounding land uses and zones

There is existing residential land to the south and north of the study area. To the south is General Residential zoned land that is predominantly characterised by detached single dwellings on lots of approximately 800 m<sup>2</sup>. To the north is the St Ann's retirement village, which is zoned Particular Purpose, and Low Density Residential zoned land that forms the start of the Tivoli Green estate (see Section 3.5).

To the west is the River Derwent and the coastal reserve, which is zoned Open Space. To the east is agricultural land in the Agriculture Zone. The Agriculture Zone includes the Old Beach Quarry situated to the south-east of Precinct A and is land outside the UGB identified in the STRLUS.

In the broader area, residential land is typically clustered around the River Derwent and the East Derwent Highway. The Tivoli Green subdivision is situated to the north of the precincts, along with land zoned Future Urban. The only other land zoned Future Urban in the Brighton LGA is land east of Bridgewater, off Boyer Road. Land further east is typically zoned and used for rural and agricultural purposes.

## Tivoli Green

The Tivoli Green estate is located to the north of Precinct A. The Tivoli Green Specific Area Plan (SAP) applies to much of the estate, other than the very early stages. The estate is mostly zoned General Residential, with land in the southern section zoned Low Density Residential, and land near Gage Brook zoned Open Space. The SAP does, however, provide for higher densities near the open space zoning along Gage Brook to allow for small lot subdivision (minimum lot size of 300 m<sup>2</sup>).

The early stages of subdivision that are not located in the SAP are now mostly developed and comprise approximately 137 dwellings across both the General Residential and Low Density Residential zones. Some of the lots in Stage 8 of the SAP are currently under construction, while the rest of the land in the SAP is currently undeveloped. Once completed, there will be approximately 600 lots in the area covered by the Tivoli Green SAP. Approximately 300 of these currently have subdivision approval. After the development is completed, the lots in the Tivoli Green estate will access the East Derwent Highway via Tivoli Road/Gage Road, Old Beach Road or Riviera Drive.

The Traffic Assessment undertaken by Hubble Traffic has identified that once the Tivoli Green development has been completed it will place sections of the East Derwent Highway under pressure. In particular:

- In the evening peak, the right turn movement from the Bowen Bridge onto the East Derwent Highway will become oversaturated with long traffic queues. These queues have the potential to create an unwarranted safety risk to through traffic users.
- In the morning peak, the highway link between the southern junction at Otago Bay and the Bowen Bridge will likely reach lane capacity, making it difficult for motorists turning right out of Otago Bay Road.

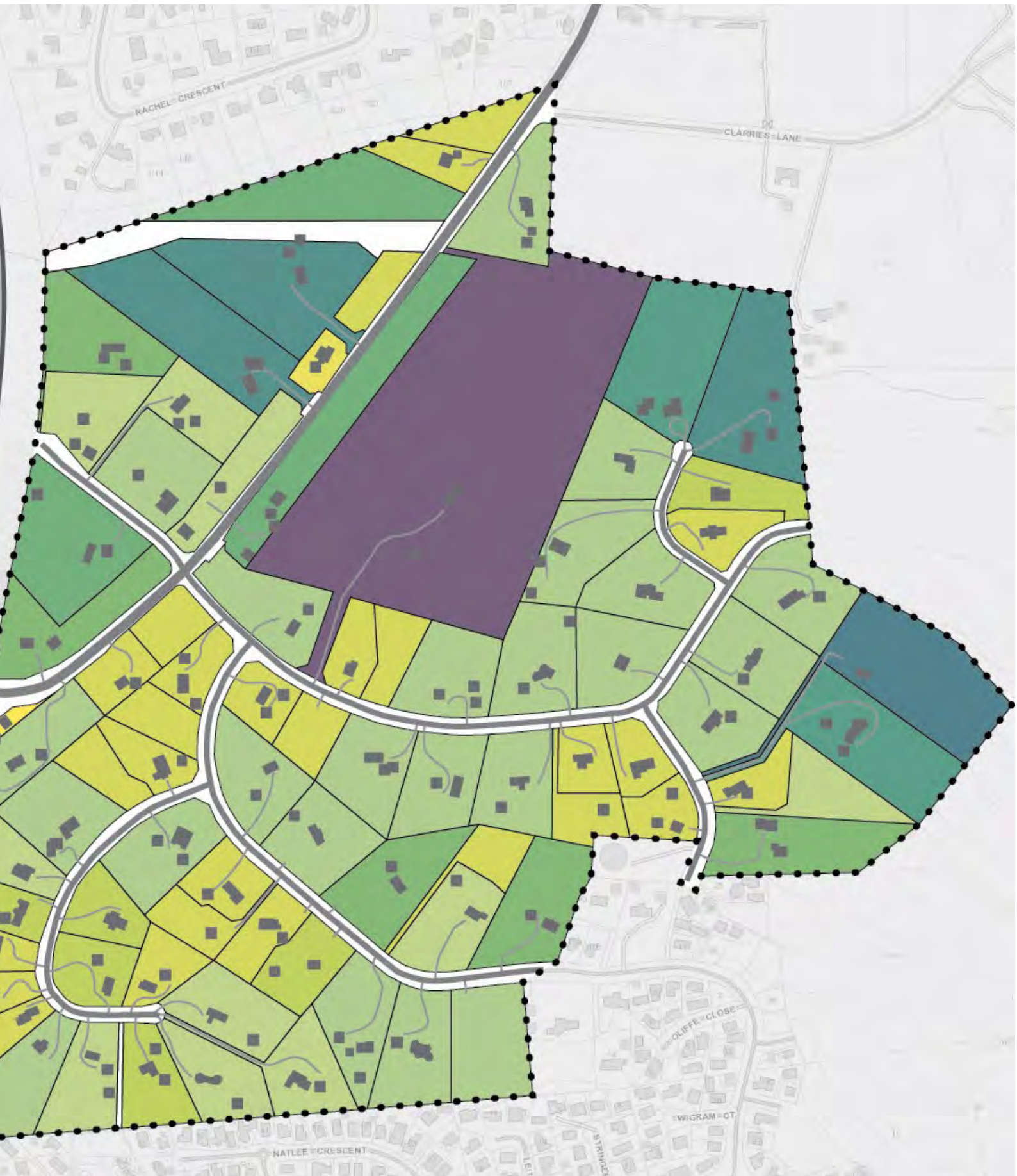
The Traffic Assessment suggested mitigation measures to overcome these issues, to allow additional residential development occur in Precincts A and B. These are discussed further in Section 3.9 of this report.



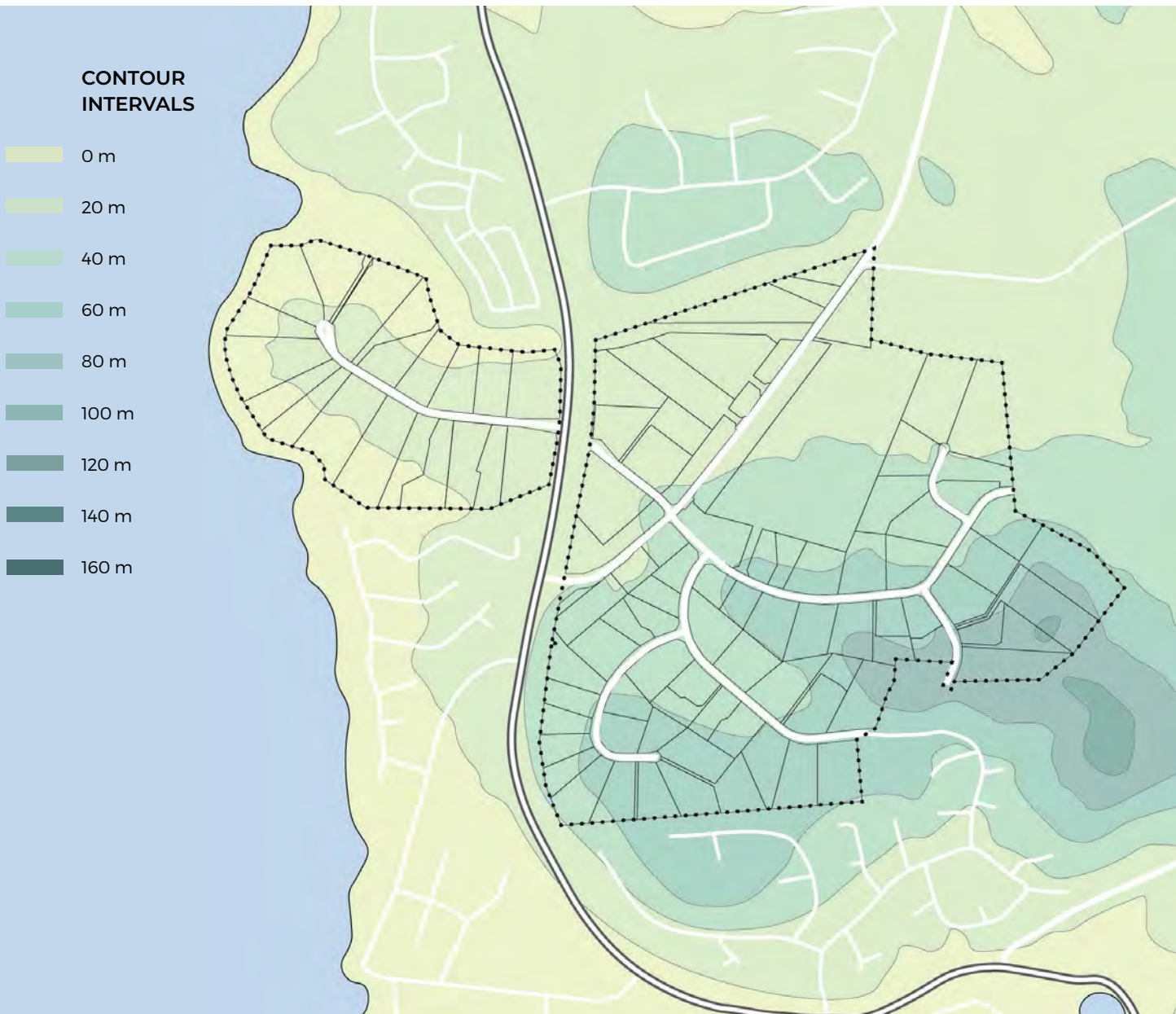
# Density heat map







# Topography



## Topography

Properties directly next to the River Derwent in Precinct B are relatively low lying and slope up towards Compton Road, with a maximum elevation of approximately 20 m. In Precinct A, properties in the north-eastern section of the precinct have an elevation of approximately 20 m, and the land slowly rises towards the south-east to elevations of 60-100 m. Those properties sitting at higher elevations are afforded views over the River Derwent and Mount Wellington.

## Land constraints and values

### **Bushfire management**

All properties in the study area are identified by the TPS as being bushfire-prone land. As a result, a Bushfire Hazard Management Plan would need to be prepared by a suitably qualified person for any proposed subdivision. It must show adequate hazard management areas in relation to the proposed building areas and take into consideration any existing vegetation.

### **Landslip**

There are no properties in either of the two precincts that are in a landslip hazard band. There are small areas in proximity, including a section of the East Derwent Highway and in the Old Beach Quarry area, that are in the medium landslip hazard band.

### **Flooding and coastal inundation**

The River Derwent is not flood prone near Precinct B; however, it is prone to flooding further upstream, particularly on the eastern shore from approximately Otago. There are two waterways that extend through the study area – Clarries Creek and another minor tributary. Both are in a waterway and coastal protection area but are not flood prone. The banks of the River Derwent are prone to coastal inundation; however, the coastal inundation hazard band (low) only impacts one property in Precinct B.

Flooding and inundation events, including coincident events between riverine and coastal inundation, will likely increase in the future due to a greater number of storm events expected because of climate change. While the additional risk from climate change is factored in to current coastal inundation predictions, this is not the case with riverine flooding. Spatial planning around coincident events has also not yet occurred.

### **Coastal erosion**

Coastal erosion is a known issue for sections of land that directly adjoin the River Derwent. In Precinct B, there are three properties that are identified as being partially subject to coastal inundation.

### **Ecology**

The precincts do have some potential to support both threatened flora and fauna, and in particular the areas that have existing native vegetation. Precinct B is bordered by both threatened flora and threatened vegetation and wetlands. Should this area be considered in any future increase in residential density, management of surface water runoff via stormwater discharges will be needed to protect the integrity of the wetland system.

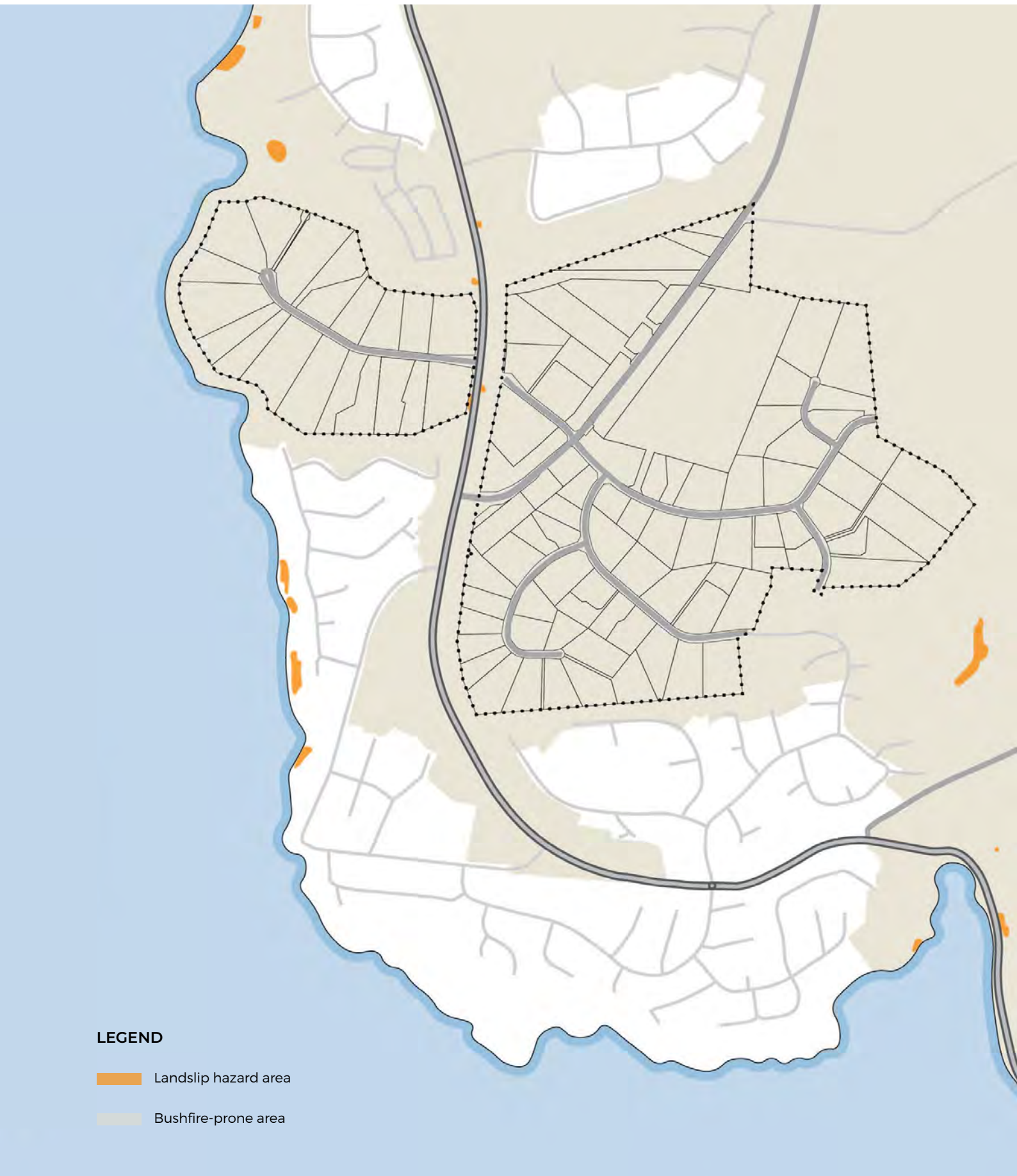
Prior to any rezoning, a natural values assessment should be undertaken. If significant values are found, consideration of appropriate zoning allocation should be based on the significance of the values identified. This may include either a zone that specifically protects environmental values or a zone to which the Priority Vegetation Overlay can be applied<sup>13</sup>.

### **Scenic values**

The precincts were assessed and determined not to hold any significant scenic value. This is reinforced by the overlay mapping of the Tasmanian Planning Scheme – Brighton, which does not apply the Scenic Protection Code to any lots in the Precincts. This Code was introduced into the Tasmanian Planning Scheme specifically to protect scenic values.

<sup>13</sup> Under the State Planning Provisions, the Priority Vegetation overlay is not effective on land zoned General Residential except where for subdivision.

# Landslip hazard and bushfire prone overlays



# Coastal inundation and erosion hazard overlays



## Waterway, coastal and informal reserve protection areas



# Vegetation (TASVEG 4.0)



## LEGEND

- DAD
- DAS
- DGL
- DVG

# Tree cover and protected vegetation

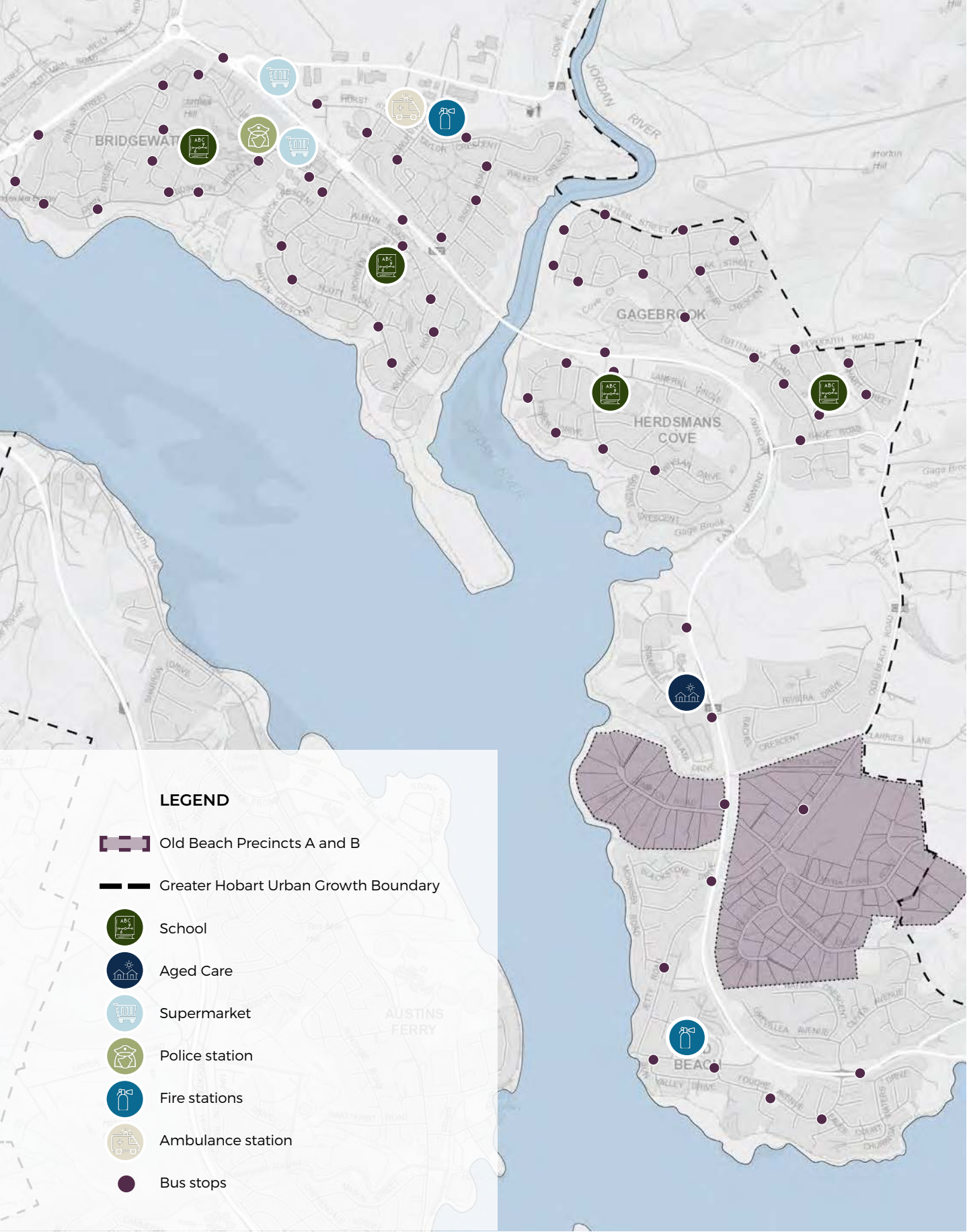






**Precinct A**

# Services



## Infrastructure and servicing

The planning, provision and management of infrastructure, services and facilities is an essential consideration in land use planning, and an important factor in supporting a liveable and accessible community. Infrastructure includes systems for drainage and disposal of sewage and stormwater; water storage, treatment and supply; waste management; energy generation, transmission and supply; communication and digital information; passenger and freight transport and transit; and associated control facilities. It also includes infrastructure requirements for community service facilities, including for education, health and community care. Community infrastructure may also involve arrangements for access to affordable and accessible housing, to cultural, open space and recreation opportunities, and for protection and conservation of natural and cultural assets.

A development contributions requirement could be implemented to assist in improving infrastructure and servicing in the precincts. A contribution to Council could be required when a subdivision is proposed and then that pool of money be used to improve the public realm in Old Beach by improving roads, footpaths, public open space, services, and the like.

## Community infrastructure

Old Beach has minimal community and social infrastructure compared to other settlements of its size in Tasmania. There is a neighbourhood store offering small grocery items and takeaway food, sports grounds, a Scout hall, and some other small businesses. However, Cove Hill and Green Point Plaza in Bridgewater are less than a 10-minute drive from precincts A and B, and offer a range of shops and services. More broadly, there are hospitals, public and private schools, recreational facilities, airports and seaports, and larger retail offerings within a 30-minute drive.

Comments provided in both the survey and at the drop-in session often involved the provision, or lack thereof, of community infrastructure in Old Beach. The survey results showed that 41.3% of respondents would like to see more medical services provided, 38% wanted to see improved local shopping options, 13% wanted to see more sports facilities, and 12% more schools in the area. Similarly, at the drop-in sessions, it was evident that there was an enthusiasm for more development in areas such as services (shopping and cafes) and general infrastructure (roads and parks).

In the Brighton LGA, Bridgewater and Brighton particularly provide daily requirements for employment, retail, education, health and social opportunities. Outside the LGA, Glenorchy would be the most frequented activity centre by Brighton residents as it provides a wide range of services and facilities to serve the sub-region, with a strong focus on the retail and commercial sector. Hobart is the economic and social centre for the region and state, and provides all the higher order administrative, political and commercial functions, and provides a significant proportion of all employment opportunities for the Greater Hobart area.

## Water supply

The urban water supply in Old Beach is managed by TasWater, which has responsibility to source, store and treat raw water and distribute it for domestic, commercial and industrial use.

All land in the two precincts is water serviced land. Clives Hill Reservoir and the Clives Hill Water Pumping Station (WPS) are located at Ashgrove Court (CT 49927/1) in Precinct A. The Baskerville Road WPS is located nearby, at 70 Baskerville Road, Old Beach (CT 9472/1).

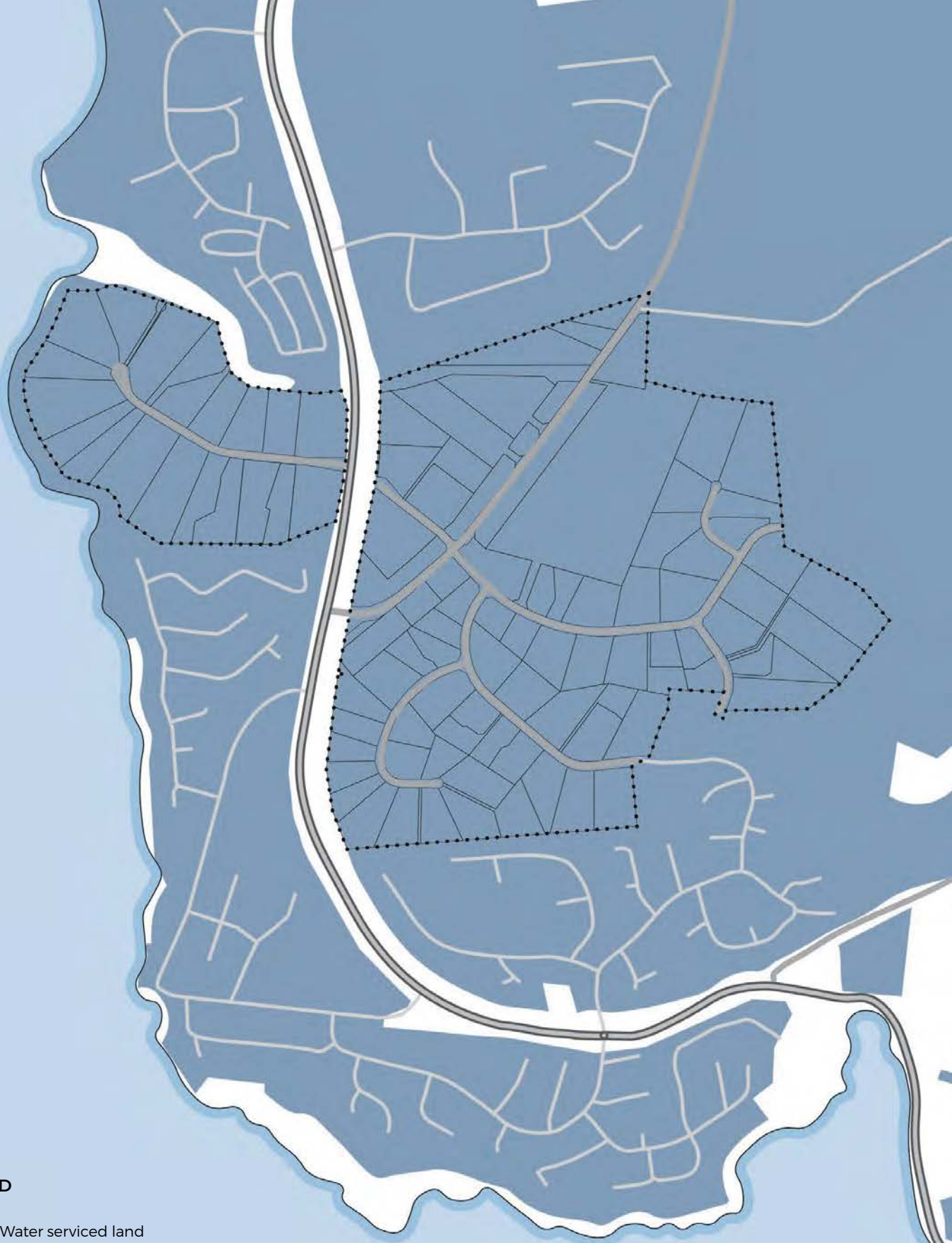
TasWater provided the following comments regarding the potential further development of the two precincts:

- The existing water mains that supply Compton Road and Mollineux Drive would need to be upgraded to allow the provision of adequate pressure to additional connections (assuming the housing density would be similar to nearby General Residential zoning).
- Depending on the number of new connections, water tanks (i.e. Clives Hill Reservoir) which service the supply zones may need to be upgraded.
- If more than approximately 500 new lots are created, a new trunk main constructed from the existing tank at Clives Hill to the intersection of Old Beach Road and Molineux Drive, following Ashgrove Crescent and Myna Park Drive, would be required. This would probably be 200-250mm diameter depending on the option and result of hydraulic modelling. This main would complete the loop that currently includes (roughly) the 200mm main in Clives Avenue, Fouche Avenue, Jetty Road and Old Beach Road. All lots created below about the 55m contour should be connected to this system. This main would ideally be a headworks (Developer Charges) funded asset with all lots developed contributing. This pipe would cost approximately \$1000 per metre.
- Depending on the subdivision pattern that occurs, the pipelines would need augmentation, which would likely happen somewhat organically as the density changes and new roads are constructed.

- The lots above the 55m contour the current higher-pressure zone should be upgraded, most likely along Ashgrove Crescent, with a 150mm main. Depending on the number of lots to be serviced in this zone a new tank may be required, this would need to be located where it would have a top water level at approximately 140-140m AHD, as this would likely be on the hill to the east and the supply from the tank to the service properties would need significant reconfiguration. This would also allow for a greater area of currently rural land to be developed.
- The existing tank currently serves both the high and low level zones, it has capacity for approximately 2000ET. There are currently 1288 connections, a reasonable number of these (maybe about 250) are large rural blocks that would have higher usage than a standard residential lot, which means that in effect it is probably equivalent to about 1500ET connected to the tank. If the total effective ET connected to the tank exceeds 2000ET then a new storage tank will be required

TasWater further advised that headworks charges will come into effect in approximately mid to late 2023. This will involve a blanket headworks charge per lot for water and sewer, and a separate additional bulk infrastructure charge in addition when required. The exact details of how the fee will be calculated and when it will need to be paid is yet to be determined. This may assist in contributing to the ongoing costs of providing new services and upgrading existing services to support population increase.

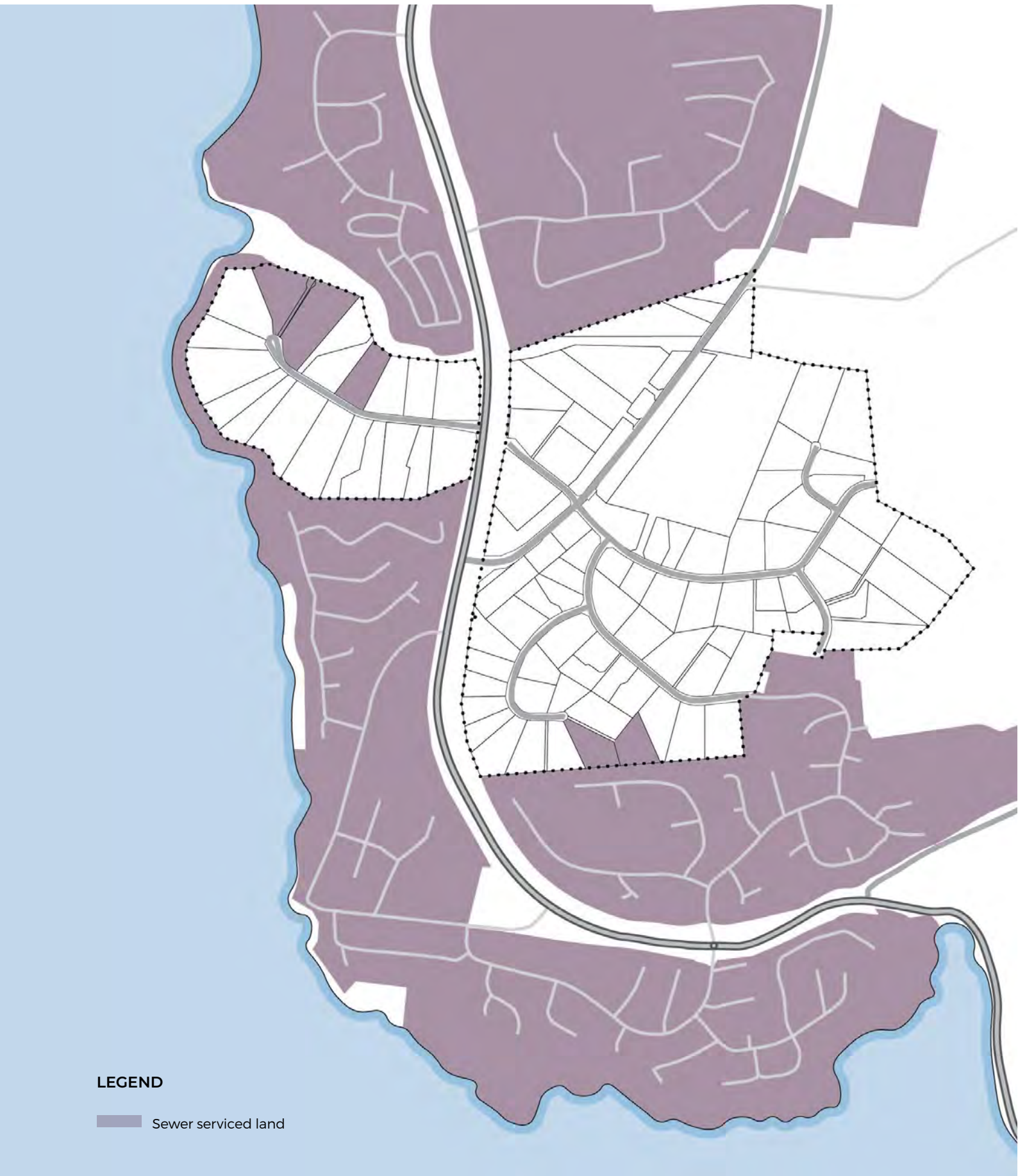
# Water serviced land



## LEGEND

Water serviced land

# Sewer serviced land



## LEGEND

■ Sewer serviced land

## Sewer servicing

There are five properties in the two precincts that are on sewer serviced land, two in Precinct A and three in Precinct B. Land directly to the south and north is fully serviced by sewer, while the agricultural land to the east is not. There are two sewage pump stations (SPS) near Precinct B – Blackstone Drive No 3 SPS and Compton Road No 2 SPS.

TasWater provided the following comments regarding the potential further development of the two precincts:

- The sewer catchment servicing Precinct B (Compton Road) would need to be upgraded to accept any more flows.
- Upgrading Compton Road No.2 SPS would not be feasible and a new sewage pump station (SPS) would need to be constructed nearby (possibly near the East Derwent Highway). The total cost of this new SPS would be approximately \$3-5 million. TasWater would contribute towards the cost of this new asset.
- The sewer catchment servicing Precinct A (Myna Park Road area) would need an assessment to determine capacity and whether new sewage pump stations could be connected.
- A new rising main would be required, which would connect to the Brighton STP (approximately 5.2km away). The cost of this rising main would be approximately \$10-15 million.

## Energy

All properties in the two precincts have power connections. TasNetworks provided the following comments regarding the potential further development of the two precincts:

- If the precincts were subdivided to their full potential, then it would likely mean that additional 11 kV support in the area would be needed.
- Further analysis of the area to support additional dwellings is likely required, particularly given the Bridgewater Substation to the north is nearly at full capacity.
- Should upgrades be required, a monetary contribution from the developer would be required and would be based on the number of lots being connected at that time, not on the total development of the precincts.
- Should the entirety of both precincts be developed, the total estimated cost would be between \$1.5 million and \$4.8 million. The augmentation rate is based on 4 kVA per lot.

## Stormwater

Stormwater in the municipal area is managed by Council's engineers and via Brighton Council's Stormwater Asset Management Plan – December 2020. The management of stormwater is becoming a more significant issue for Brighton Council due to increased development and an increased number of storm events due to climate change. Future management of stormwater will be via managing existing assets, upgrading assets and providing new assets to meet demand, and insuring against risks and managing failures. Appropriate management of stormwater for new developments is managed by Council at the building and plumbing stage.

It is suggested that as development occurs in the precincts, roads are upgraded to include formal kerb and channel for stormwater management, rather than relying on swales per the current conditions. While this will change the character of the area, it will allow for positive improvements such as formal footpaths adjacent to roads to allow for safer pedestrian movements and also improve stormwater management in the area resulting lessening impacts of water flow over properties.

# Transport network

## Road transport

The East Derwent Highway and the Midland Highway are the two primary roads servicing Old Beach and the broader Brighton LGA area. The East Derwent Highway is a Category 3 Road and is the major north-south route connecting to the Tasman Highway in the south and the Midland Highway in the north, providing access between Bridgewater and Hobart. The Midland Highway is a Category 1 Road, being one of the primary freight and passenger roads connecting Tasmania. It provides access to the north of the state, between Bridgewater and Perth.

In Old Beach there are a number of local roads to provide access to dwellings in the two precincts. These are all single-carriageway, sealed roads with no kerb and guttering. There are no footpaths or cycle paths on or adjacent to any of the roads, which is typical for the Old Beach area. Per comments above, there is an opportunity as the population grows in the area and lots are subdivided, for formal kerb and guttering be provided on new and existing roads, and footpaths provided for pedestrians. While this will change the rural nature of the area it will have benefits for the population in other ways.

## Public transport

There are three bus routes that service Old Beach, which travel to/from Glenorchy, Rosny Park, and Hobart CBDs, including:

- Glenorchy service (route 530) runs approximately every hour with no Sunday services.
- Rosny Park service (route 696) is infrequent with five inbound and outbound services each on a weekday and no weekend services.
- Hobart service (route X30) is infrequent with three morning inbound services before 9am and four outbound services from 3:30pm.

For those living in the two precincts they would need to use the bus stops on the East Derwent Highway, located opposite Compton Road and Old Beach Road. For majority of residents in the precincts these are more than a 400 m walk. Only 10 properties in Precinct B and seven in Precinct A are 400 m from a bus stop. The bus stops are also provided on the side of the highway with no bus shelter. Therefore, use of public transport by residents in the precincts is likely to be low.

During the community engagement phase of this project, residents expressed their desire for improved transport options in Old Beach. When asked what they would like to see more of in the area, more than half of the survey respondents, 54.4%, wanted to see a ferry to the city from Old Beach, 48.9% of respondents wanted safe active transport options, and 32.6% wanted improved bus services for the area.





The Department of State Growth were consulted about this project, and have advised that the following key planning principles are used in public transport planning, including:

- Recognising areas of high demand and community needs to offer fair service coverage.
- Providing consistent and, where possible, frequent services.
- Making routes simple and direct.
- Providing more cost-effective services.
- Better integrating services for improved connection.
- Linking smaller areas to their nearest major centre.

Subsequently, the Department of State Growth, Transport and Infrastructure Group have provided the following comments regarding the potential further development of the two precincts:

- Generally, people are only willing to walk 400m for a bus service, as this is typically the most equitable and accessible distance for the community as a whole. Therefore, increasing residential density in the areas within 400 m from the existing bus stops on the East Derwent Highway is supported from a passenger transport perspective. This would create a stronger public transport corridor using existing infrastructure.
- A good pedestrian and cycling network in the area should be provided for any redevelopment or subdivision, with site-through links designed to reduce distances required to walk/cycle to places of interest, such as bus stops, existing and future cycleways, or the river edge.
- It is noted that existing bus stops are on the East Derwent Highway, which is currently a two-lane road with a speed limit of 80 km/h, and crossing may be difficult for some. This could pose a barrier to potential, future residents to walking to the bus stop or back home. Consideration should be given to ways of improving pedestrian and cycling access across the highway, without affecting the function of the road. Options for improving access across the highway should be discussed with the Department.
- Discussions should continue with Infrastructure Tasmania about future corridor studies along this section of the East Derwent Highway.

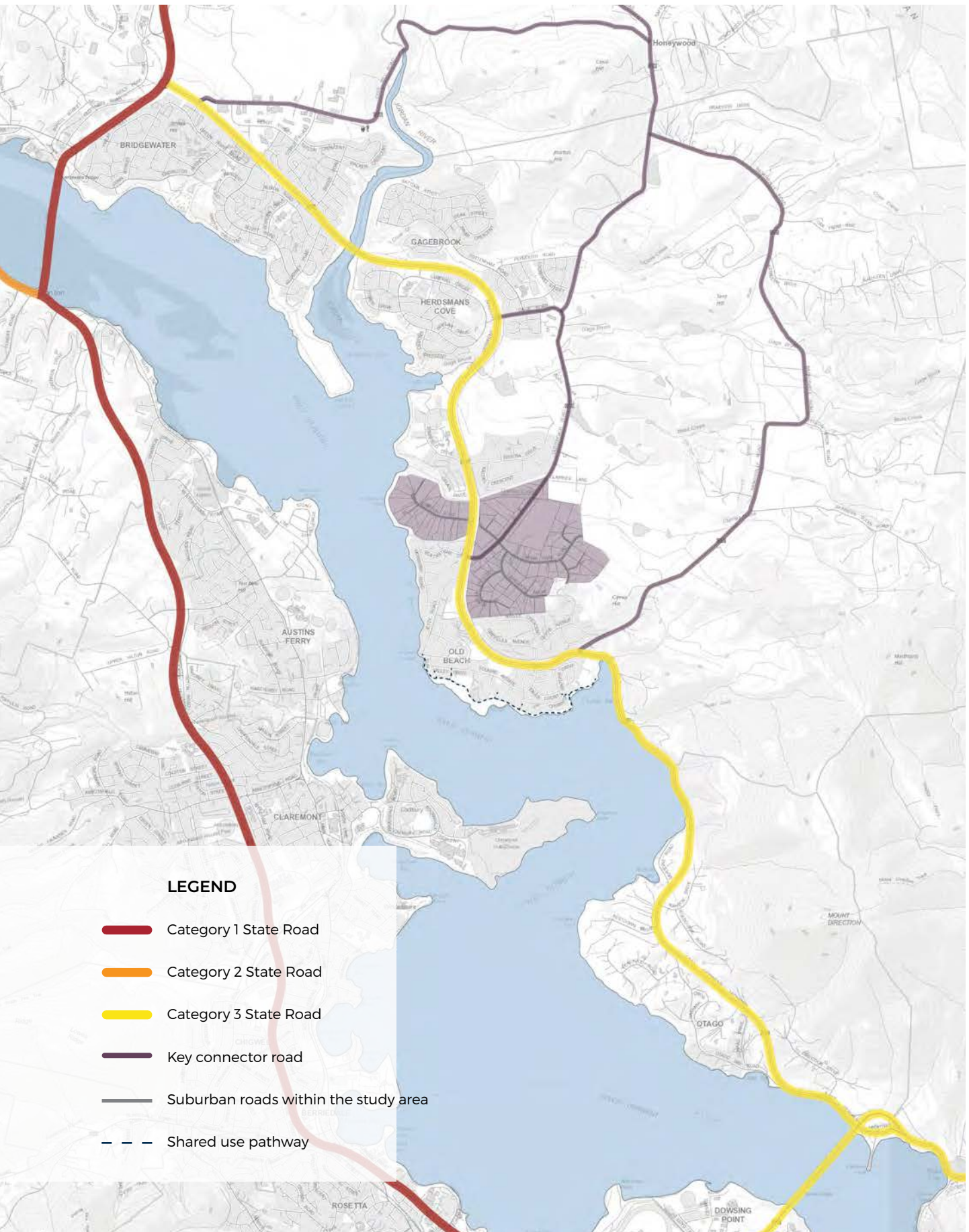
Due to the existing bus routes and existing road network north of the precincts it is unlikely any bus routes would penetrate this residential area in the future.

## **Movement network**

Movement network principles inform the overall form and layout of streets, roads and paths, taking into account existing and future considerations of the built and natural environment. They allow for safe usage by pedestrians, cyclists, public transport and vehicles. A well-functioning movement network will provide optimal access to destinations such as activity centres, places of employment, schools, public transport and public open space, and has high levels of legibility, convenience, amenity and safety for users. It should effectively link people to places and activities and allow people to move between locations efficiently and easily by any mode of transport. This ensures equitable access to facilities, services and public transport, and can affect people's mobility and travel options.

The movement network in Old Beach is considered adequate for the existing population given the rural-residential nature of the area. However, as Old Beach is expected to see a considerable increase in population in the next 10 years, upgrades to the existing movement infrastructure and the introduction of more contemporary infrastructure to facilitate modal choice will need to be made. This may change the character of the area; however it is considered that the upgrades will have great benefits for the residents. The engagement results also show that these changes would be welcomed by residents, with 57% of people who attended the drop-in sessions stating that they would like to see infrastructure upgrades in the area, like road, sewer, water upgrades; and 43% of people wanting walking tracks in the area. For those who answered the survey, nearly 49% of people wanted to see safe active transport options

# Road hierarchy



Hubble Traffic provided input regarding traffic, the road and movement network in Old Beach and surrounds. The following findings on how additional dwellings in precincts A and B might impact the movement network were identified:

- The Tivoli Green residential expansion, which has already been approved, will generate additional traffic movements on the highway over the next few years, intensifying the commuter peak periods. Once this development is completed, the level of service along the highway route would decline, but overall, motorists are expected to continue to receive an appropriate level of traffic performance.
- The following two locations are likely to become busy and will require appropriate mitigations to maintain efficient traffic flow:
  - In the evening peak, the right turn movement from the Bowen Bridge onto the East Derwent Highway will become oversaturated with long traffic queues. These queues have the potential to create an unwarranted safety risk to through traffic users. Traffic modelling indicates that changing traffic control at this junction to traffic signals, could be a suitable mitigation, and would accommodate future traffic growth.
  - In the morning peak, the highway link between the southern junction at Otago Bay and the Bowen Bridge will likely reach lane capacity, making it difficult for motorists turning right out of Otago Bay Road, as they must select a suitable gap in the two-way traffic stream. A possible mitigation would be an additional southbound traffic lane, to segregate southbound highway traffic with right turning traffic.
- The traffic assessment advises that the two mitigation measures detailed above would likely need to be implemented prior to the rezoning and subdivision of land in precincts A and B.
- A third mitigation measure to further minimise traffic impacts would be to convert the roundabout at Clives and Fouche Avenues to traffic signals or additional localised traffic lanes through the roundabout. This location is identified as another point along the highway that will likely have increased traffic delays and queues unless mitigation measures are implemented. This measure is anticipated to be required if more than

580 lots were created by rezoning land.

- The traffic assessment advises that an additional 580 residential lots in addition to the Tivoli Green development could be accommodated in the road network once the upgrades at the right turn movement from the Bowen Bridge onto the East Derwent Highway and the highway link between the southern junction at Otago Bay and the Bowen Bridge have occurred.
- It is projected that an increase past these additional 580 residential lots (and once the upgrades have occurred), would increase highway commuter traffic demand to a volume that exceeds available lane capacity, causing an unacceptable reduction in traffic performance for highway users, with junctions having insufficient traffic capacity to provide a suitable level of performance. Accordingly, to rezone additional land that provides for more than 580 lots (approximately) would require an extensive level of infrastructure investment to provide dual traffic lanes and improvements to all junctions along the East Derwent Highway.

A meeting and subsequent discussions were had with the Department of State Growth, Transport, and Infrastructure Group, about this study and the recommended mitigation measures that are likely required to facilitate additional residential growth in Old Beach. The Department agreed that upgrades to the road network were required and are therefore considering the mitigation measures proposed at the right turn movement from the Bowen Bridge onto the East Derwent Highway, and the southern junction at Otago Bay and the Bowen Bridge. They also recommended that discussions continue with Infrastructure Tasmania about future corridor studies along this section of the East Derwent Highway to ensure that the highway does not limit future residential growth in Old Beach.

## Public open space and green space

Public open spaces are areas in the public realm that are publicly accessible to everyone and provide a public use or recreation function, such as public parks and street spaces. They are typically managed by a level of government or a public agency. A good opportunity for new public open spaces to be created is during the subdivision of land, but they can also be formed by a change of land use. Well-functioning public open spaces would be accessible to all members of the public, provide connections to the surrounding pedestrian network, and be used for a range of activities. If they are safe and enjoyable spaces for people to use, they can facilitate social interaction in communities and offer a place for both relaxation and recreation.

There is currently no public open space in Precinct A or B. In the wider Old Beach area, there is a public share-use track that runs next to the River Derwent, and is popular with pedestrians and cyclists. Old Beach also has a public dog park and cricket ground, and further public open spaces are provided in nearby suburbs.

The current feel in Old Beach of open spaces is a result of the larger rural lifestyle lots, and the 'borrowing' of private vegetated space. This was reinforced in the survey results, with 48% of respondents saying that the proximity to open space and associated amenity was one of the main reasons why they liked living in Old Beach. This is despite the lack of public open space that is provided. Another survey question response triggered 32.6% of respondents to state that they would like to see more public landscaping in Old Beach, 30.4% of respondents wanted more parks and public recreation spaces, 20.7% wanted more children's playgrounds, and 13% wanted more sports facilities.

Future subdivision in the precincts would be a good opportunity to require land to be set aside for public open space for the benefit of residents and visitors to the area. These could be connected to future footpaths to encourage active transport when accessing public open space.

## Activity centres network

Activity centres provide a focus point for services and facilities, employment opportunities and social interaction for communities. They enable clustered uses and activities, maximising agglomeration benefits for retail and commercial uses, and in turn provide social, environmental and economic benefits. Ideally they should have good connections to public transport, public spaces, and pedestrian access to facilities. They should be safe and enjoyable places to spend time. An activity centre can accommodate a wide variety and scale of uses and should be adaptable to the needs of residents, visitors and businesses.

The nearest activity centre to Old Beach is in Bridgewater, with Brighton and Glenorchy slightly further away. Given these activity centres are all a 10-20 minute drive from precincts A and B, it would be beneficial to establish convenience/neighbourhood level shops in the local area to support the anticipated growth of another 3,000 residents in Old Beach in the next 10 years. It is understood that the Tivoli Green subdivision may provide this offering in the future; however, if this is not realised, then it would be prudent to encourage such uses in Precinct A to service local residents.

# Activity centres

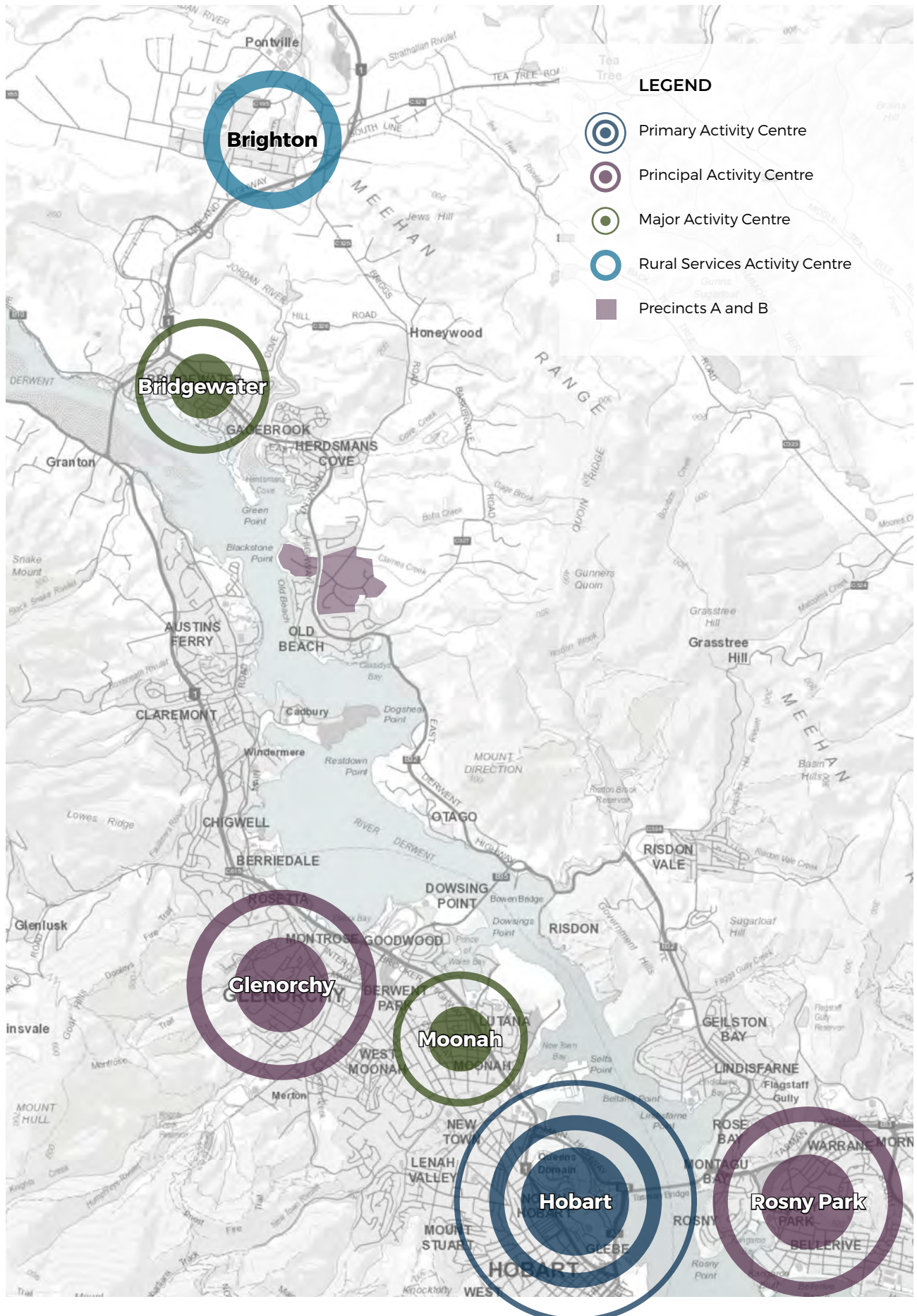




Photo courtesy of Samuel Shelley and Brighton Council

# Section 4

## **Policy context**

# Policy context

## Policy context summary

Consideration of the legislated policy context for the zoning review is outlined in detail in the following sections. In summary:

- The State Policies will not restrict or limit the development potential of either precinct.
- The STRLUS identifies that:
  - Residential growth for Greater Hobart is to occur through 50% infill development and 50% greenfield development.
  - 15% of Greater Hobart's residential infill growth should be in the Brighton LGA.
  - Urban growth should be managed through the urban growth boundary, with land inside the UGB most suitably zoned for urban purposes or put into a holding zone.
- The BSP identifies that:
  - Old Beach will grow by an additional 3,000 people by 2033 and that more than 1,000 new dwellings will be required.
  - There is likely to be an under supply of residential zoned land.
  - Precincts A and B are appropriate locations to accommodate residential growth in Old Beach.
- In considering potential options for rezoning precincts A and B:
  - The General Residential zone would be the most appropriate zoning for the study area, providing properties within it are connected to a reticulated water supply service and a reticulated sewerage system. There are minimal constraints that impact the land's development potential.
  - The Low Density Residential zone is only appropriate for land that is not capable of being connected to reticulated infrastructure services and is affected by significant environmental constraints that limit development. This is not the case for the study area.
  - The Future Urban zone could be applied if it is considered that the precincts require further structure or master planning before they are released for urban development. However, it will limit use and development of land in the meantime, more than the existing Rural Living zone.

## Policy setting

The policy setting for this report is guided by two legislative frameworks: the Resource Management and Planning System (RMPS) and the *Local Government Act 1993*.

The RMPS is an integrated environmental and planning approval system formed by a suite of legislation linked by common objectives focused on sustainable development.

The core legislation in the RMPS is the *Land Use Planning and Approvals Act 1993 (LUPAA)*, the *Environmental Management and Pollution Control Act 1994*, the *State Policies and Projects Act 1993*, the *Resource Management and Planning Appeal Tribunal Act 1993*, the *Tasmanian Planning Commission Act 1993* and the *Historic Cultural Heritage Act 1995*.

Key planning documents, including the *Southern Tasmania Regional Land Use Strategy 2010-2035 (STRLUS)* and the *Tasmanian Planning Scheme – Brighton*, are statutory documents under the RMPS.

Councils under the *Local Government Act 1993* are recognised as local planning authorities in the RMPS. Additionally, the *Local Government Act 1993* provides for the making of municipal level strategic and community plans, including the *Brighton Structure Plan 2018* and the *Brighton Strategic Plan 2019-2029*.

## Objectives of the RMPS

The objectives of the RMPS are outlined in Schedule 1 of the LUPAA. Changing the planning controls of the study area will meet the objectives of the RMPS, as it will allow additional infill development in an area that has a high demand for additional housing and has limited land constraints.



## State policies

There are four (4) State Policies that planning decisions must be consistent with:

- Tasmanian State Coastal Policy 1996
- State Policy on Water Quality Management 1997
- State Policy on Protection of Agricultural Land 2009
- National Environmental Protection Measures (which are recognised as State Policies under LUPAA).

All State Policies are applicable to the study area or nearby land. However, as this land has already been identified for urban purposes through the STRLUS that spatially applies the State Policies, it is considered that the requirements of the State Policies will be unaffected by any potential rezoning of the land. In particular:

- While the study area is in the coastal zone, the land is within an established settlement and therefore meets the requirement that urban and residential development in the coastal zone will be based on existing towns and townships.
- Residual coastal-related issues such as coastal hazards and riparian values are sufficiently safeguarded through the existing planning scheme provisions and use of the open space zone along the coastline.
- The study area is not agricultural land as defined under the State Policy on Protection of Agricultural Land 2009, as it is already used for residential purposes.
- The National Environment Protection Measures (NEPMs) are statutory instruments that specify national standards for a variety of environmental issues and are relevant to the more detailed planning stage.

All of the State Policies are relevant to Old Beach. Of particular relevance is the importance of ensuring that any development of the two precincts does not conflict with or fetter agricultural land and avoids coastal areas with natural and coastal values.

## Southern Tasmania Regional Land Use Strategy

The STRLUS guides land use, development, and infrastructure decisions. It sets out the strategy and policy basis for facilitating and managing change, growth, and development to 2035.

The STRLUS was originally declared in October 2011. A minor review was undertaken in 2013, and the latest amendment to the strategy was declared on 24 November 2021. The latest amendment was to adjust the UGB to include 69 Brighton Road, Brighton. The extension of the UGB to cover this land was identified by Council as a logical extension of the Brighton township and would effectively replace the 10 ha of land on Elderslie Road acquired by the Department of Education, which is to accommodate the new Brighton High School.

Under the activity centre hierarchy, Bridgewater/Green Point shopping district is identified as a Major Activity Centre and the Brighton township is identified as a Rural Services Centre, along with Huonville, New Norfolk and Sorell township. Greater Hobart is the only major urban area. Old Beach is identified in the STRLUS as a Greenfield Development Precinct, being a location to accommodate greenfield land for residential purposes.

### Settlement and residential development policies

The STRLUS describes a Regional Settlement Strategy to provide a framework that defines the future role and function of each of the region's settlements. A two-tier classification system has been developed whereby either a suburb or settlement is part of Greater Hobart (and therefore subject to the Greater Hobart Settlement Strategy) or its role and function is categorised as Major District Centre, District Town, Township, Village, Other Small Settlement or Locality.

The study area is within the Greater Hobart area. Additionally, as the land is already developed, it is not considered to be 'greenfield land'. Therefore, the key policies relevant to this study are detailed below:

- Use the Low Density Residential Zone only where it is necessary to manage land constraints in settlements or to acknowledge existing areas.
- Residential growth for Greater Hobart is to occur through 50% infill development and 50% greenfield development.
- Manage greenfield growth through a UGB, which sets a 20-year supply limit and associated growth limits on dormitory suburbs.
- Distribute residential infill growth across the existing urban areas for the 25-year planning period, with 15% being in Brighton LGA (1,987 dwellings).

The STRLUS assumes that land zoned Rural Living is located outside settlement boundaries, including the UGB.

# Tasmanian Planning Scheme – Brighton

In 2015, the Tasmanian Parliament enacted amendments to the LUPAA to enable the Tasmanian Planning Scheme to be established, consisting of State Planning Provisions and Local Provisions Schedules.

The State Planning Provisions provide a consistent set of planning rules for 23 generic zones and 16 codes, making up a suite of controls that can be applied by local councils. The Local Provisions Schedule indicates how the State Planning Provisions (zones and codes) will apply in each local municipal area. Guideline No. 1 – Local Provisions Schedule (LPS): zone and code application, issued under Section 8A of the *Land Use Planning and Approvals Act 1993*, provides a reference guide for applying zones and codes under the LPS.

The zones under consideration for the precincts are detailed in the below table.

Zoning	Zone purpose	Zone application guidelines
<b>General Residential Zone</b>	<p><b>8.1.1</b> To provide for residential use or development that accommodates a range of dwelling types where full infrastructure services are available or can be provided.</p> <p><b>8.1.2</b> To provide for the efficient utilisation of available social, transport and other service infrastructure.</p> <p><b>8.1.3</b> To provide for non-residential use that:            a) primarily serves the local community; and            b) does not cause an unreasonable loss of amenity through scale, intensity, noise, activity outside of business hours, traffic generation and movement, or other off site impacts.</p> <p><b>8.1.4</b> To provide for Visitor Accommodation that is compatible with residential character.</p>	<p><b>GRZ 1</b> The General Residential Zone should be applied to the main urban residential areas in each municipal area which:            a) are not targeted for higher densities (see Inner Residential Zone); and            b) are connected, or intended to be connected, to a reticulated water supply service and a reticulated sewerage system.</p> <p><b>GRZ 2</b> The General Residential Zone may be applied to green-field, brown-field or grey-field areas that have been identified for future urban residential use and development if:            a) in the General Residential Zone in an interim planning scheme;            b) in an equivalent zone under a section 29 planning scheme; or            c) justified in accordance with the relevant regional land use strategy, or supported by more detailed local strategic analysis consistent with the relevant regional land use strategy and endorsed by the relevant council; and            d) is currently connected, or the intention is for the future lots to be connected, to a reticulated water supply service and a reticulated sewerage system</p> <p><i>Note: The Future Urban Zone may be used for future urban land for residential use and development where the intention is to prepare detailed structure/precinct plans to guide future development.</i></p> <p><b>GRZ 3</b> The General Residential Zone should not be applied to land that is highly constrained by hazards, natural values (i.e. threatened vegetation communities) or other impediments to developing the land consistent with the zone purpose of the General Residential Zone, except where those issues have been taken into account and appropriate management put into place during the rezoning process.</p>

## Comments

The General Residential zone would be the most appropriate zoning for the study area, providing properties within it are connected to a reticulated water supply service and a reticulated sewerage system. There are minimal constraints that impact the land's development potential. This zoning would also allow for more efficient use of existing infrastructure and servicing in the area.

Zoning	Zone purpose	Zone application guidelines
<p><b>Low Density Residential Zone</b></p>	<p><b>10.1.1</b> To provide for residential use and development in residential areas where there are infrastructure or environmental constraints that limit the density, location or form of development.</p> <p><b>10.1.2</b> To provide for non-residential use that does not cause an unreasonable loss of amenity, through scale, intensity, noise, traffic generation and movement, or other off site impacts.</p> <p><b>10.1.3</b> To provide for Visitor Accommodation that is compatible with residential character.</p>	<p><b>LDRZ 1</b> The Low Density Residential Zone should be applied to residential areas where one of the following conditions exist:</p> <ul style="list-style-type: none"> <li>a) residential areas with large lots that cannot be developed to higher densities due to any of the following constraints: <ul style="list-style-type: none"> <li>i. lack of availability or capacity of reticulated infrastructure services, unless the constraint is intended to be resolved prior to development of the land; and</li> <li>ii. environmental constraints that limit development (e.g. land hazards, topography or slope); or</li> </ul> </li> <li>b) small, residential settlements without the full range of infrastructure services, or constrained by the capacity of existing or planned infrastructure services; or</li> <li>c) existing low density residential areas characterised by a pattern of subdivision specifically planned to provide for such development, and where there is justification for a strategic intention not to support development at higher densities.</li> </ul> <p><b>LDRZ 2</b> The Low Density Residential Zone may be applied to areas in a Low Density Residential Zone in an interim planning scheme or a section 29 planning scheme to lots that are smaller than the allowable minimum lot size for the zone, and are in existing residential areas or settlements that do not have reticulated infrastructure services.</p> <p><b>LDRZ 3</b> The Low Density Residential Zone should not be applied for the purpose of protecting areas of important natural or landscape values.</p> <p><b>LDRZ 4</b> The Low Density Residential Zone should not be applied to land that is targeted for green-field development unless constraints (e.g. limitations on infrastructure, or environmental considerations) have been identified that impede the area being developed to higher densities.</p>

**Comments**

The Low Density Residential zone is only appropriate for land that is not capable of being connected to reticulated infrastructure services and is affected by significant environmental constraints that limit development. This is not the case for the study area. Accordingly, this zoning is not considered appropriate.

Zoning	Zone purpose	Zone application guidelines
Rural Living Zone	<p><b>11.1.1</b> To provide for residential use or development in a rural setting where:</p> <ul style="list-style-type: none"> <li>a) services are limited; or</li> <li>b) existing natural and landscape values are to be retained.</li> </ul> <p><b>11.1.2</b> To provide for compatible agricultural use and development that does not adversely impact on residential amenity.</p> <p><b>11.1.3</b> To provide for other use or development that does not cause an unreasonable loss of amenity, through noise, scale, intensity, traffic generation and movement, or other off site impacts.</p> <p><b>11.1.4</b> To provide for Visitor Accommodation that is compatible with residential character.</p>	<p><b>RLZ 1</b> The Rural Living Zone should be applied to:</p> <ul style="list-style-type: none"> <li>a) residential areas with larger lots, where existing and intended use is a mix between residential and lower order rural activities (e.g. hobby farming), but priority is given to the protection of residential amenity; or</li> <li>b) land that is currently a Rural Living Zone within an interim planning scheme or a section 29 planning scheme, unless RLZ 4 below applies.</li> </ul> <p><b>RLZ 2</b> The Rural Living Zone should not be applied to land that is not currently within an interim planning scheme Rural Living Zone, unless:</p> <ul style="list-style-type: none"> <li>a) consistent with the relevant regional land use strategy, or supported by more detailed local strategic analysis consistent with the relevant regional land use strategy and endorsed by the relevant council; or</li> <li>b) land is within the Environmental Living Zone in an interim planning scheme and the primary strategic intention is for residential use and development within a rural setting and a similar minimum allowable lot size is being applied, such as, applying the Rural Living Zone D where the minimum lot size is 10 ha or greater.</li> </ul> <p><b>RLZ 3</b> The differentiation between Rural Living Zone A, Rural Living Zone B, Rural Living Zone C or Rural Living Zone D should be based on:</p> <ul style="list-style-type: none"> <li>a) a reflection of the existing pattern and density of development within the rural living area; or</li> <li>b) further strategic justification to support the chosen minimum lot sizes consistent with the relevant regional land use strategy, or supported by more detailed local strategic analysis consistent with the relevant regional land use strategy and endorsed by the relevant council.</li> </ul> <p><b>RLZ 4</b> The Rural Living Zone should not be applied to land that:</p> <ul style="list-style-type: none"> <li>a) is suitable and targeted for future greenfield urban development;</li> <li>b) contains important landscape values that are identified for protection and conservation, such as bushland areas, large areas of native vegetation, or areas of important scenic values (see Landscape Conservation Zone), unless the values can be appropriately managed through the application and operation of the relevant codes; or</li> <li>c) is identified in the 'Land Potentially Suitable for Agriculture Zone' available on the LIST (see Agriculture Zone), unless the Rural Living Zone can be justified in accordance with the relevant regional land use strategy, or supported by more detailed local strategic analysis consistent with the relevant regional land use strategy and endorsed by the relevant council.</li> </ul>

**Comments**

It is not appropriate to retain the current rural living zone given the land is earmarked for future residential development and is within the UGB. The land is also capable of being connected to services, and appears to have limited natural values.


Zoning	Zone purpose	Zone application guidelines
<b>Future Urban Zone</b>	<p><b>30.1.1</b> To identify land intended for future urban use and development.</p> <p><b>30.1.2</b> To ensure that development does not compromise the potential for future urban use and development of the land.</p> <p><b>30.1.3</b> To support the planned rezoning of land for urban use and development in sequence with the planned expansion of infrastructure.</p>	<p><b>FUZ 1</b> The Future Urban Zone should be applied to land identified for future urban development to protect the land from use or development that may compromise its future development, consistent with the relevant regional land use strategy, or supported by more detailed local strategic analysis consistent with the relevant regional land use strategy and endorsed by the relevant council.</p> <p><b>FUZ 2</b> The Future Urban Zone should be applied to land in an interim planning scheme Particular Purpose Zone which provides for the identification of future urban land.</p> <p><b>FUZ 3</b> The Future Urban Zone may be applied to land identified in an interim planning scheme code or specific area plan overlay which provides for future urban land.</p> <p><b>FUZ 4</b> The Future Urban Zone may be applied to sites or areas that require further structure or master planning before its release for urban development.</p>

#### Comments

The Future Urban zone should be applied to the Precincts to ensure that the future development of the area is not compromised. This ensures that further structure or master planning for the precincts can be prepared before they are released for urban development.



Photo courtesy of Samuel Shelley  
and Brighton Council

The graphic features a solid teal background. A large, semi-transparent circle is positioned in the upper left quadrant. Below it, a large, semi-transparent wave-like shape spans across the middle and lower portions of the page. The text 'Section 5 Potential residential yield' is centered in white, with 'Potential' and 'residential yield' in bold.

Section 5  
**Potential**  
**residential yield**

# Potential residential yield

This section of the report will identify the extent of developable residential land in the two precincts identified by Brighton Council and provide an estimate of the potential dwelling yield. The approach and results of the supply analysis are presented below.

## Approach and methodology

All land is currently zoned Rural Living (Zone A). The options for planning scheme control changes are the General Residential zone, Future Urban zone, or the application of a SAP. The Future Urban zone would, however, be a long-term option and does not present an immediate increase in yield potential. The Low Density Residential zone was found to be an unsuitable option, as detailed in Section 4.6 of this report.

An assessment was undertaken of all sites individually to calculate the likely potential development yield. The assessment involved a review of the site's opportunities and constraints in the context of the development requirements of the Tasmanian Planning Scheme – Brighton Local Provisions Schedule. Typical constraints that were considered included planning scheme overlays (as discussed above), threatened species/vegetation, topography, scenic values, access to transportation options, and the absence or presence of infrastructure/services. Typical opportunities included the ability to consolidate adjoining development sites, and the capacity for subdivision or development of multiple dwellings afforded by the relevant planning scheme zone requirements.

The following assumptions and exclusions were made during the assessment of yield stage:

### Assumptions:

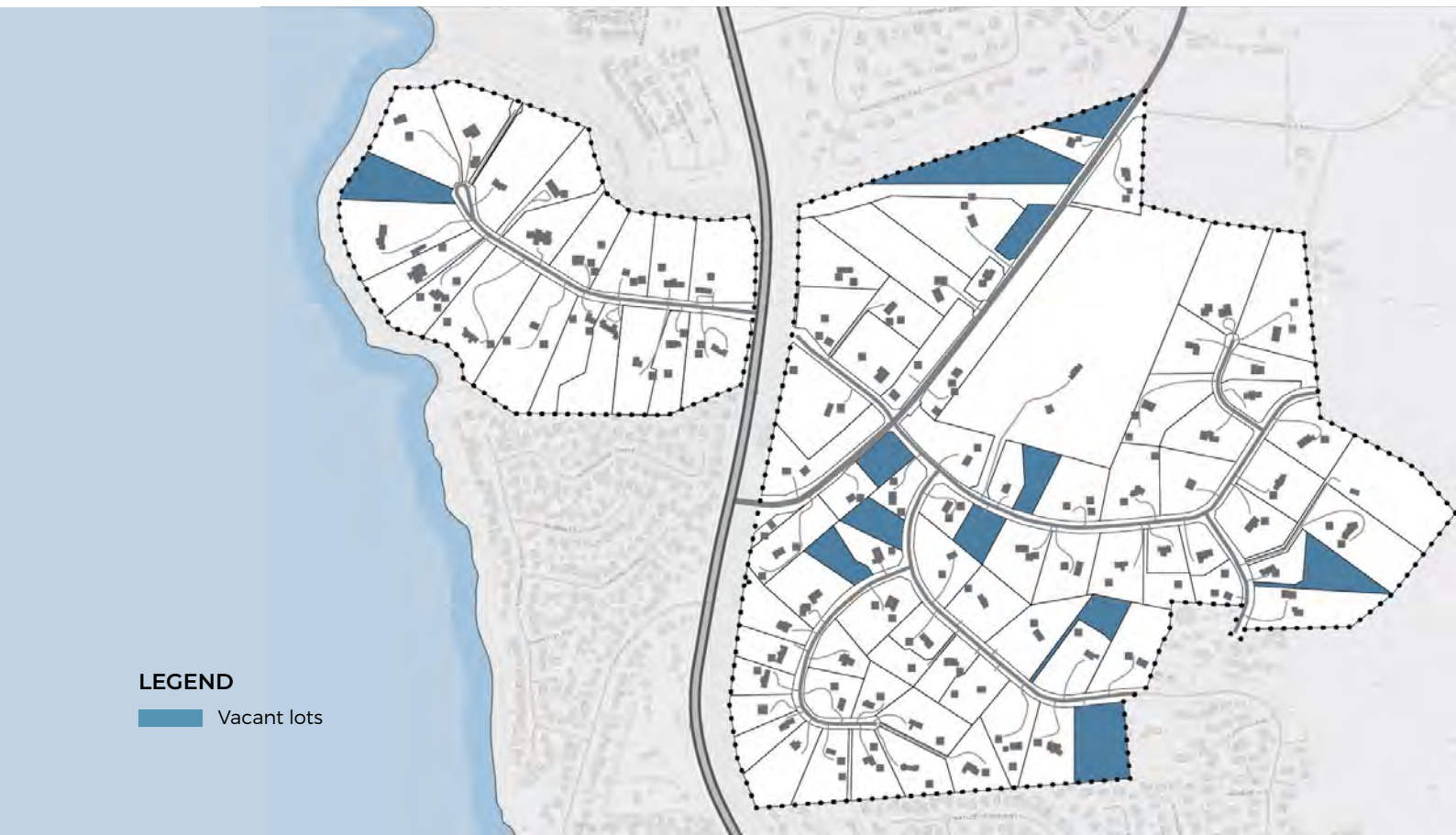
- Existing dwellings would be retained but outbuildings and derelict buildings could be removed.
- Constraints may reduce but not necessarily negate the development potential of a site; professional judgement is required.
- Analysis is based on lots being 500 m<sup>2</sup>. It is unlikely that all lots developed will be this size, however this size was decided on to account for the likelihood that some lots could be developed with multiple dwellings in a strata arrangement (which would result in smaller 'lots' than 500 m<sup>2</sup>), and for lots larger than 500 m<sup>2</sup>.

- Vacancy rate of 10% (in regard to total estimated residents. This was used for the purposes of the traffic assessment)
- Sites smaller than 1 ha with subdivision potential will lose 12.5% of land to roads, servicing and open space.
- Sites larger than 1 ha with subdivision potential will lose 20% of land to roads, servicing and open space.
- Rate of subdivision calculated according to the size of both precincts and current rate of subdivision of Rural Living zoned land. This was hence determined to be 0.76 lots per year, rounded up to 1 lot per year
- All lots in both precincts are identified as being bushfire-prone, however, it is assumed that this will not impact development potential, as risks can be appropriately mitigated through design.

### Exclusions:

- Developable area or vehicle access subject to more complex constraints such as threatened species/vegetation, coastal inundation and flooding.
- Slope greater than 20% and no precedent of development on similar slope of adjoining sites.
- Land that is adjacent to waterways, including Clarries Creek, and impacted by the Natural Assets Code.
- Land that comprises priority vegetation and therefore also impacted by the Natural Assets Code. Where a property is almost entirely covered by this overlay, it is excluded from the yield calculations. An example is 10 Rosella Court.





## Development potential

Of the 104 properties within the study area, 13 are considered vacant, meaning they either comprise no built form or only outbuildings. The remaining properties (91) all comprise single dwellings.

There are six properties which have been completely excluded from the yield assessment as they have been assessed to be undevelopable due to meeting one of the exclusions listed above. These include 10 Compton Road, 13A Compton Road, 15 Compton Road, 9 Rosella Crescent, 10 Rosella Crescent, and 11 Rosella Crescent.

As shown on the exclusions map, there are 45 other properties that are partially constrained and will have limited development potential. These have been factored into the yield analysis.

The remaining 53 properties are considered unconstrained, and the entire lots are capable of being subdivided or of accommodating multiple dwellings.



**LEGEND**

■ Areas excluded from yield calculations



**LEGEND**

- Existing open space connection
- Potential open space connection
- Proposed footpath along existing road
- Existing and potential footpath connection



## Results

All sites in both Precinct A and Precinct B were analysed, and the following results were found:

- There are 13 vacant lots and 91 lots comprising single dwellings. There are no lots comprising multiple dwellings.
- There are six lots in total that are considered undevelopable due to meeting one of the exclusions listed above. All other lots are either only partially constrained, or completely unconstrained.
- The lots range in size from 1,287 m<sup>2</sup> (2 Old Beach Road) through to 11.43 ha (1B Myna Park Road).
- All lots were covered by one or more overlays that may further restrict development potential, as discussed in previous sections. It was found that all lots are in a Bushfire Prone Area, 40 lots are in a Waterway and Coastal Protection Area, and 20 lots are in a Priority Vegetation Area.
- The total size of all 104 lots is 114.94 ha.
- Eliminating site constraints, the total developable area (*including* space for roads, servicing and public open space) of all 104 sites sites is approximately 94.95 ha.
- The net developable area (*excluding* space for roads, servicing and public open space) of all 104 sites is approximately 79.13 ha.



- 1B Myna Park Road has the greatest subdivision potential of all of the 104 sites, which can theoretically accommodate 169 lots of 500 m<sup>2</sup> each.

- This assessment only considers subdivision potential to accommodate single dwellings. It has not considered multiple dwellings developed on sites through strata schemes. It therefore represents a conservative yield assessment.

The potential theoretical yields of the net developable area are considered against each of the change scenarios in Section 7 and are summarised below:

Change scenario	Total lots	Comments
Scenario 1	114	The total number comprises 10 new lots over 10 years and 104 existing lots.
Scenario 2	580	The total number comprises 501 new lots (at 500 m <sup>2</sup> ) and 79 existing lots remaining unchanged.
Scenario 3	1,544	Accounts for all 98 developable lots being subdivided at 500 m <sup>2</sup> per lot).



Photo courtesy of Samuel Shelley and Brighton Council

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# Section 6

## **Change scenarios**

# Change scenarios

## Overview

The analysis in the previous sections of the report have resulted in the following three change scenarios.

These take into account the following considerations:

- The Low Density Residential zone is not an appropriate zoning, given the precincts are capable of being connected to reticulated infrastructure services and are not affected by environmental constraints that limit development.
- It is not appropriate for the precincts to remain zoned Rural Living into the future given the land is identified for future residential development. The land is also capable of being connected to services, and has limited natural values.
- The General Residential zoning is appropriate to apply as it will facilitate residential development of the precincts, enabling them to provide additional housing and meet the anticipated growth rate of Old Beach.
- The purpose of the Future Urban zone is to identify land intended for future urban use and development, ensure that development does not compromise the potential for future urban use and development of the land, and support the planned rezoning of land for urban use and development in sequence with the planned expansion of infrastructure. Applying this zoning immediately and prior to road and infrastructure upgrades occurring will protect the land from being developed in way that might not be consistent with the future master plan prepared for the precincts and ensure the Precincts are development in an efficient and orderly manner.
- The Future Urban zone and the General Residential zone are appropriate zonings for the two precincts.



### Option 1

- No change to the current planning controls. The current zoning of Rural Living (Zone A) would be maintained across both precincts, with the current Urban Rural Interface SAP covering Precinct A.
- This option permits minimum lot sizes of 1 ha in Precinct B and 0.5 ha in Precinct A.
- Assumes no upgrades to the road network
- Assumes a growth rate of one lot per year (10 new lots over the next 10 years).

14 Amending the UGB would require a change to the STRLUS

15 Amending the UGB would require a change to the STRLUS

## Option 2

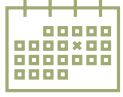
- Rezone both Precinct A and B to Future Urban zone immediately. This will prevent subdivision occurring in a manner that might limit the development potential of adjoining lots.
- It suggested that the Urban Rural Interface SAP currently applying to Precinct A be removed, and the UGB be extended to include the entirety of Precinct A<sup>14</sup>.
- It is recommended that Council develop a master plan for the area, which would include a detailed road and pathway layout, infrastructure assessment and natural values assessment. This would also determine the actual provision of infrastructure, who is responsible for paying for it once the land is rezoned, and when the trigger would be for the upgrades to occur.
- It is recommended that the road upgrades identified by Hubble Traffic either be undertaken at this point or at least a commitment is made that they will occur in a specific timeframe, ideally prior to any further changes to planning controls. The road upgrades should include traffic signals on the Bowen Bridge and construct an additional southbound traffic lane at the southern junction at Otago Bay and the Bowen Bridge.
- An area of 25 lots (or 31.2 ha) have been identified in part of Precinct A to be rezoned to the General Residential zone (refer to accompanying maps). The change in planning controls should include the inclusion of key features of the master plan such as the road layout in the form of a SAP, to ensure an orderly pattern of subdivision. If all of these lots are subdivided, it could theoretically result in approximately 580 new lots.
- The General Residential zone has a preferred minimum lot size of not less than 450 m<sup>2</sup> (although there is discretion for this to be varied), while the Future Urban zone does not have a minimum lot size but should only be for a Utilities use or the consolidation of lots.

## Option 3

- Rezone both Precinct A and B to the Future Urban zone immediately. This will prevent subdivision occurring in a manner that might limit the development potential of the Precincts.
- Remove the Urban Rural Interface SAP currently applying to Precinct A and extend the UGB to include the entirety of Precinct A<sup>15</sup>.
- It is recommended that Council develop a master plan for the precincts, which would include a detailed road and pathway layout, infrastructure assessment and natural values assessment. This would also determine the actual provision of infrastructure, who is responsible for paying for it once the land is rezoned, and when the trigger would be for the upgrades to occur.
- Discussions should then be continued with the Department of State Growth to complete road upgrades. In addition to transport network upgrades identified in Scenario 2, any rezoning that increases the additional residential lots for both Precincts past 580 is expected to increase highway commuter traffic demand to a volume that exceeds available lane capacity. This would cause an unacceptable reduction in traffic performance for highway users, with junctions having insufficient traffic capacity to provide a suitable level of performance. Accordingly, upgrades to East Derwent Highway would need to be established with Infrastructure Tasmania prior to or concurrently with any rezoning application.
- Once road and infrastructure upgrades have been completed or are nearing completion to a point that the authorities deem satisfactory, both Precincts A and B could be rezoned to General Residential, with the master plan forming part of the change in planning controls through the application of a SAP. Theoretically, this could result in a total of 1,544 lots across both precincts.

## Key facts

The following facts are known about the two precincts:



Change period under review:  
**2022 to 2032**



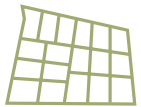
Existing dwellings across both precincts:  
**91**



Current vacant lots:  
**13**



BAs issued for dwellings in Brighton Council:  
**47.3 per year**



Rate of subdivision of Rural Living land zoned in Old Beach:  
**4.5 lots per year**



Target number of new dwellings for Old Beach:  
**400 over 10 years**

## Analysis assumption

The following assumptions have been used to determine the outcomes of the change scenarios:



Average people per household:  
**2.6**



**236**  
Existing residents



General Residential lot calculations based on  
**500 m<sup>2</sup> lots**



Vacancy lot rate of  
**10%**



Sites with  
**constraints excluded**  
as detailed in Section 6



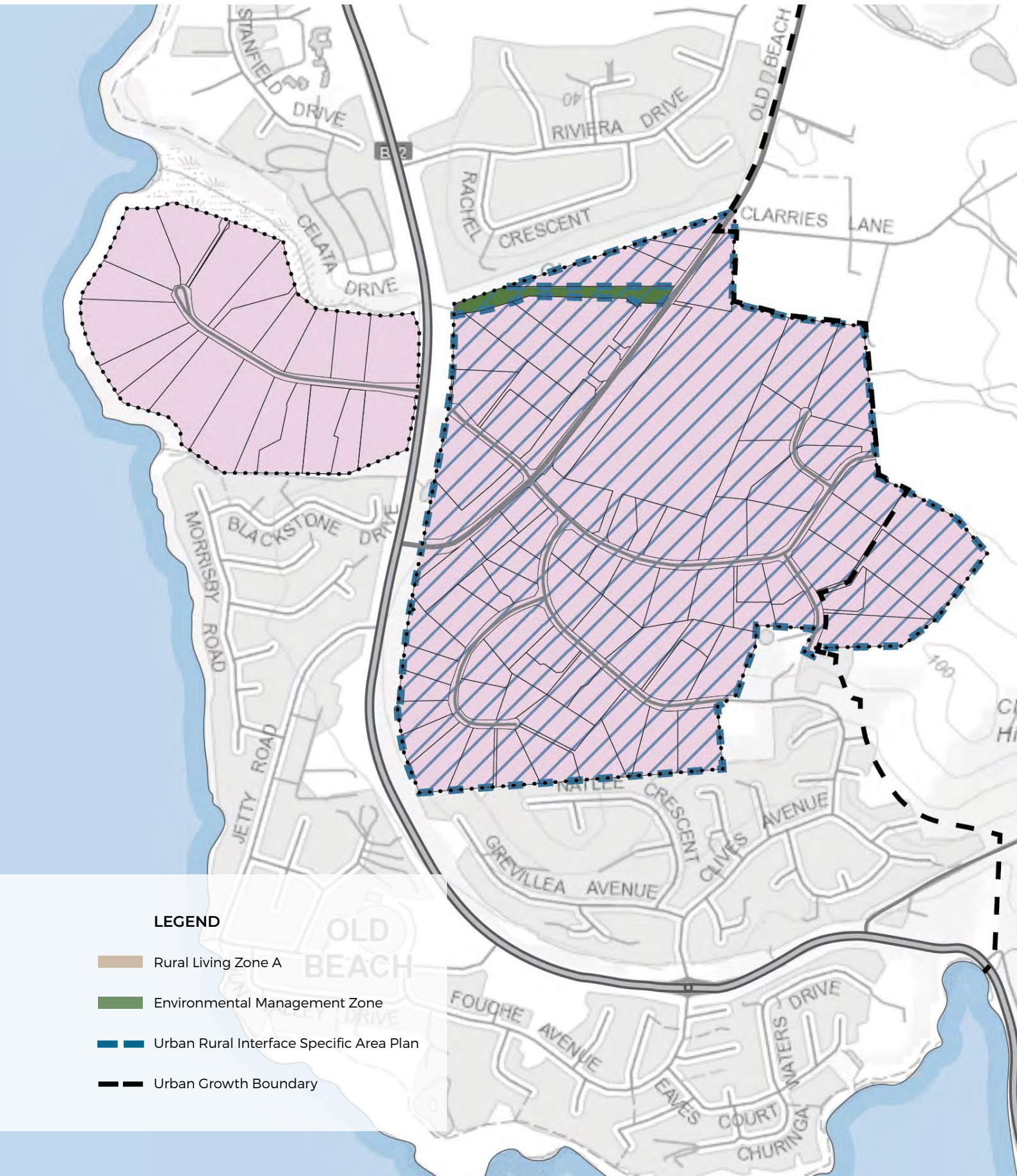
Rate of subdivision (rounded up from 0.76):  
**1 lot per year**





Photo courtesy of Samuel Shelley and Brighton Council

# Zoning - Option 1



## Option 1

This option is to maintain the current planning controls that apply to both precincts. In other words, the current zoning, Rural Living (Zone A) would remain, with the Urban Rural Interface SAP across Precinct A. This allows for a minimum lot size of 1 ha for Precinct B and a minimum lot size 0.5 ha for Precinct A. Based on the history of the area, there would only be incremental subdivision change occurring in the precincts, likely at a rate of approximately one lot per year, or 10 lots over the next 10 years.

### Opportunities and constraints

- A no change scenario would result in the housing demand for Brighton LGA having to be located elsewhere, which could result in additional pressure outside the UGB and the leakage of potential residents to other LGAs.
- There would likely be no additional community infrastructure, public open space provision or upgrades to the movement network occurring under this scenario. There would be a minimal additional impact on the surrounding road network and on nearby activity centres.

## Results

Total lots  
**114**

Total lots: 114  
(10 new lots over 10 years  
and 104 existing lots)

Total residents  
**266**

Total estimated residents:  
266 (30 new residents)

**Low**

Impact on  
community

**Low**

Alignment  
with STRLUS

**Low**

Opportunity to  
meet anticipated  
housing demand



## Option 2

Option 2 involves a number of steps, including:

- Rezoning both Precinct A and B to the Future Urban zone immediately. This will prevent subdivision occurring in a manner that might limit the development potential of adjoining lots.
- Remove the Urban Rural Interface SAP currently applying to Precinct A and extend the UGB to include the entirety of Precinct A<sup>16</sup>.
- Next, it is recommended that the road upgrades identified by Hubble Traffic be undertaken or at least a commitment is made that they will occur in a specific timeframe, prior to any further changes to planning controls. The road upgrades should include traffic signals on the Bowen Bridge and construct an additional southbound traffic lane at the southern junction at Otago Bay and the Bowen Bridge, and would be needed to support additional traffic movements caused by increased residents in the area. These are discussed further in Section 3 of this report. It is anticipated that DSC would take responsibility for the cost and construction of these upgrades, but this will need to be confirmed.
- It is recommended that a master plan then be developed by Council for the area. The land can be serviced by infrastructure required for a general residential zone and at the assumed densities, however the practicalities of how and when this occurs would be determined via this master planning process. Providing this detail to the Tasmanian Planning Commission would give greater certainty around infrastructure delivery as part of rezoning considerations, and also provide landowners certainty around the process. The master plan would include a detailed infrastructure assessment and natural values assessment. The infrastructure framework/study would determine the actual provision of infrastructure, who is responsible for paying for it, and when the trigger would be for the upgrades to occur. TasWater may contribute to the cost of the trunk infrastructure upgrades via their new headworks policy and then impose charges per lot, or the cost may be shared by developers.

- Finally, the part of Precinct A identified in the mapping opposite should be rezoned to the General Residential zone. The change in planning controls should include key features of the master plan such as the road layout in the form of a SAP, to ensure an orderly pattern of subdivision. If all of these lots are subdivided, it could theoretically result in approximately 580 new lots. This area equates to 25 lots or 31.2 ha. Assuming all of these lots are then subdivided, it could theoretically result in approximately 580 new lots.

It is not suggested that any further rezonings occur other than what is identified above without further infrastructure upgrades occurring. Ongoing discussions should be had with the Department of State Growth and Infrastructure Tasmania to appropriately manage traffic impacts, and ideally a corridor study should be undertaken along this section of the East Derwent Highway.

### Opportunities and constraints

- This change scenario would result in moderate changes for Precinct A and B.
- A benefit of rezoning part of Precinct A would be residents receiving connections to reticulated water and sewerage services, along with the likely provision of public open space and improvements to infrastructure such as bus services, footpaths and stormwater management. Upgrades such as the addition of formal footpaths, kerb and guttering, additional public open space and improved servicing will result in a change to the character of the area. However, residents expressed their desire for these types of upgrades to occur in Old Beach during the engagement phase of this project, and these upgrades will be necessary to support an increased population in the area.
- The rezoning of Precinct A to General Residential would mean additional lots in the area, likely around 500, resulting in more housing.
- The additional houses that could be accommodated in that part of Precinct A would contribute to addressing the housing demand of 400 new dwellings over the next 10 years that is anticipated for Old Beach and the Brighton LGA more generally.
- To meet the housing demand, 80% of properties would need to subdivide and build dwellings over the next 10 years. This is considered unlikely based on the current subdivision rate of Rural Living land in Old Beach of 1 lot per year.

<sup>16</sup> Amending the UGB would require a change to the STRLUS

## Results

**Total lots**  
**580**

Total potential lots: 580  
(assumes 501 total potential new lots in Precinct A and the 79 existing lots)

**Total residents**  
**1,357**

Total residents: 1,357  
(new and existing residents in precincts A and B)

**Moderate**

Impact on community

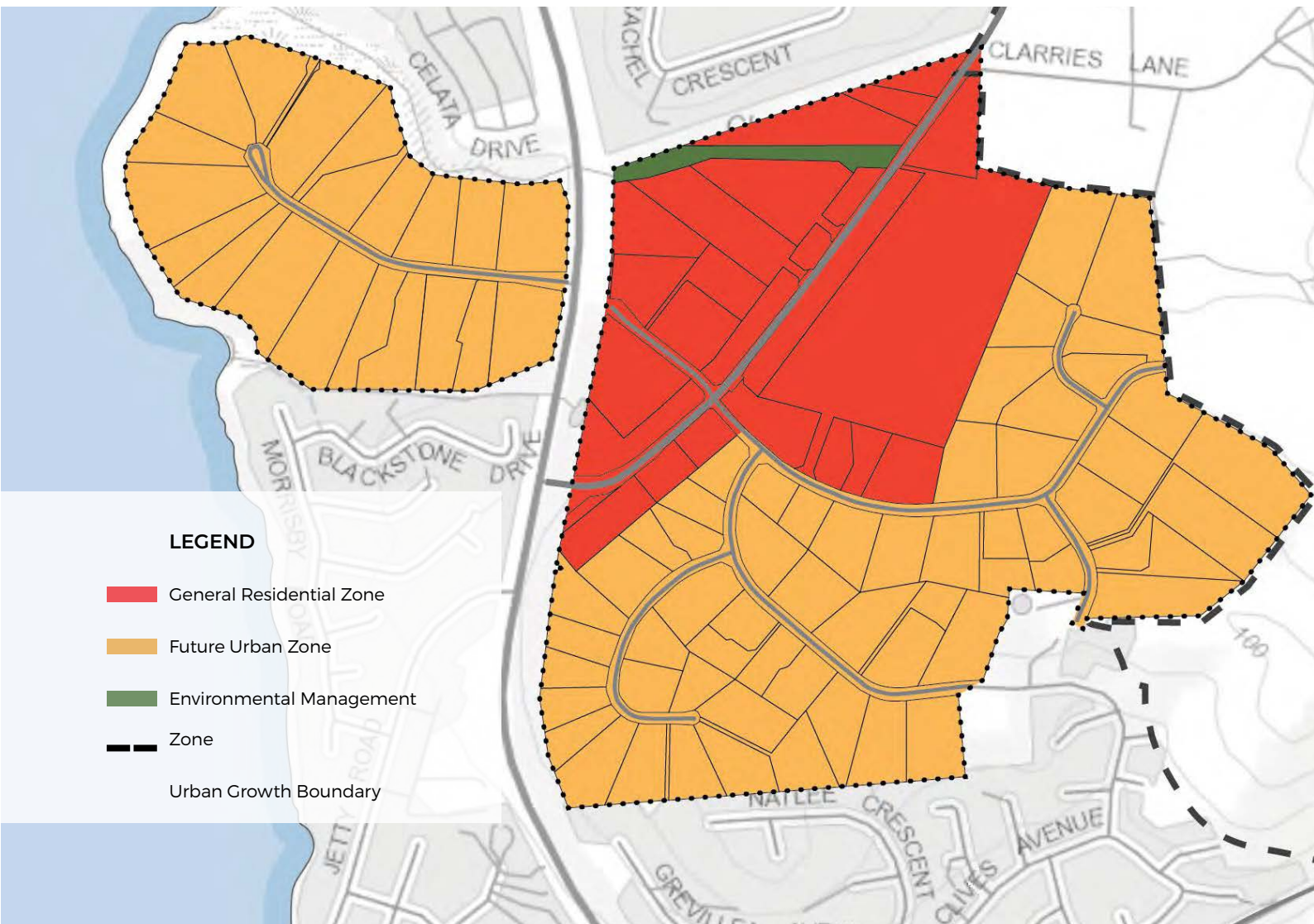
**High**

Alignment with STRLUS

**Moderate**

Opportunity to meet anticipated housing demand

## Zoning - Option 2



## Option 3

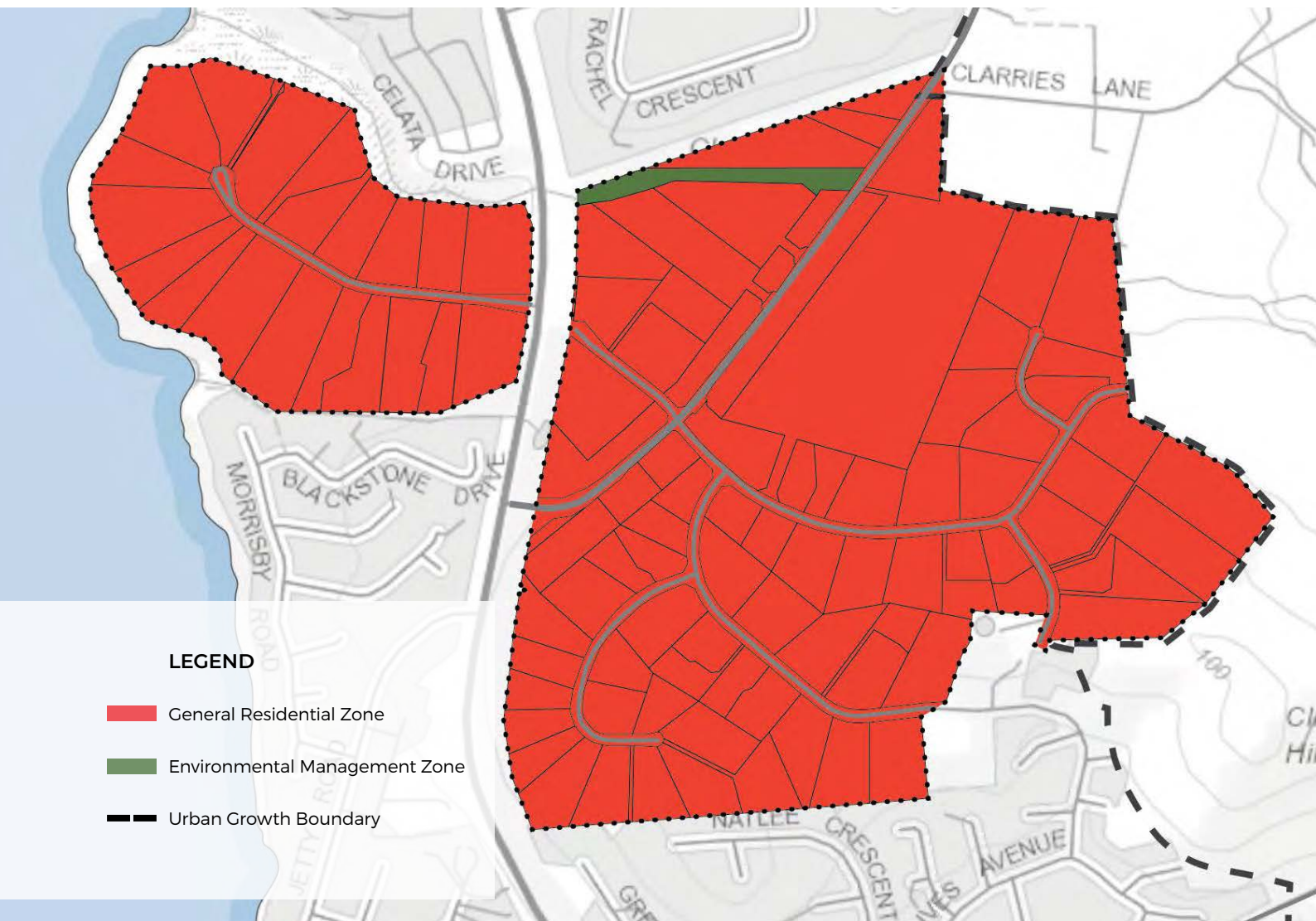
Option 3 proposes the following steps:

- Rezone both Precinct A and B to the Future Urban zone immediately. This will prevent subdivision occurring in a manner that might limit the development potential of adjoining lots.
- Remove the Urban Rural Interface SAP currently applying to Precinct A and extend the UGB to include the entirety of Precinct A<sup>17</sup>.
- Next, it is recommended that the road upgrades identified by Hubble Traffic either be undertaken or at least a commitment is made that they will occur in a specific timeframe, prior to any further changes to planning controls. The road upgrades would need to include traffic signals on the Bowen Bridge, an additional southbound traffic

lane at the southern junction at Otago Bay and the Bowen Bridge, and upgrades to the Clives Avenue and Fouche Avenue roundabout. It is expected that DSC would take responsibility for the cost and construction of these upgrades, but this will need to be confirmed. Discussions should also be had with Infrastructure Tasmania about undertaking corridor studies along this section of the East Derwent Highway.

- It is recommended that a master plan be developed by Council for the area. The land can be serviced by infrastructure required for a general residential zone and at the assumed densities, however the practicalities of how and when this occurs would be determined via this master planning process. Providing this detail to the Tasmanian Planning Commission would give greater certainty around infrastructure delivery as

## Zoning - Option 3



part of rezoning considerations, and also provide landowners certainty around the process. The master plan would include a detailed road and pathway layout, infrastructure assessment and natural values assessment. The infrastructure framework/study would determine the actual provision of infrastructure, who is responsible for paying for it, and when the trigger would be for the upgrades to occur. TasWater may contribute to the cost of the trunk infrastructure upgrades via their new headworks policy and then impose charges per lot, or the cost may be shared by developers.

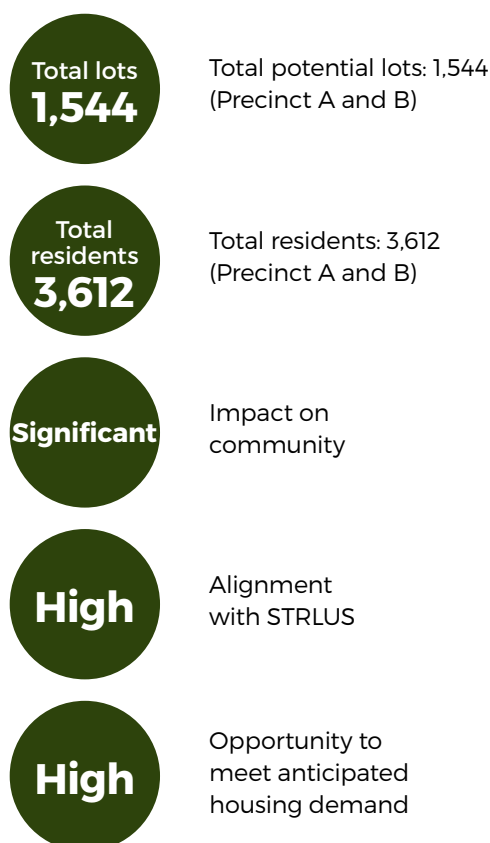
- Once the above has been completed, it is suggested that both Precincts A and B be rezoned to General Residential, with the change in planning controls including key elements of the master plan such as the road layout in the form of a SAP.

### Opportunities and constraints

- This change scenario would result in significant changes for Precinct A and B.
- A benefit of rezoning the precincts would mean both precincts would receive connections to reticulated water and sewerage services, along with the likely provision of public open space and potential improvements to infrastructure such as bus services, footpaths and stormwater management. This will result in significant changes to the character of the area. However, it is likely that these changes will occur progressively as subdivision occurs, not all at once. These upgrades are necessary to support an increased population and will benefit residents in terms of servicing their day-to-day needs. It is noted that many residents expressed their desire for better footpaths, transportation options and public open space when consulted on this project, therefore it is likely that some residents will be supportive of these changes. Nevertheless, prior to these changes occurring residents should continue to be consulted.
- The rezoning to General Residential would mean additional lots in the area, resulting in more housing and a subsequent increase in traffic movements in the area, affecting key points in the traffic network, particularly at the Bowen Bridge interchange, the Clives Avenue Roundabout and the intersection of Old Beach Road and the East Derwent Highway. These upgrades must occur prior to the precincts being rezoned to General Residential or there will be significant traffic issues on the East Derwent Highway.





- The additional houses that could be accommodated in Precinct A and B from this rezoning would likely meet the housing demand anticipated for Old Beach, provided implementation constraints don't have considerable impacts on development.
- Based on the results of the community engagement, 48% of property owners have an appetite for change in Old Beach. Therefore, if approximately half of the residents in Precincts A and B decided to subdivide their properties, then the projected housing demand of 400 new dwellings over the next 10 years that is anticipated for Old Beach and the Brighton LGA more generally could be met.

### Results



17 Amending the UGB would require a change to the STRLUS

## Implementation considerations

	Option 1	Option 2	Option 3
Addition of a SAP to both precincts to ensure best practice subdivision guidelines are implemented. The SAP would need to be informed by a master plan for each of the precincts, which could take approximately 6 months to prepare in addition to the 12-month approval period for a planning scheme amendment.			
Rezoning and removing the existing SAP from Precinct A could take approximately 12 months to gain approval.			
Extension of the UGB to include those five properties not currently included would require an amendment to the STRLUS.			
TasWater to provide reticulated water and sewerage services to new lots and likely upgrade existing infrastructure in the area to accommodate this. Upgrades may also be required to TasNetworks infrastructure. This would impact on timeframes and costs for subdivisions.			
The timeframes for design to construction have lengthened in recent years and can now take as long as 12-24 months. This is due to factors such as increased housing stock demand in greater Hobart, the flow-on effects of home-builder grants, the residential construction industry being at capacity, increased cost of materials and decreased availability, and many public infrastructure projects being in the pipeline.			
There are significant land constraints that would be barriers to redeveloping some lots. Specialist consultant advice may need to be sought to provide input on development potential.			
Landowners will be encouraged to redevelop their properties in collaboration with their neighbours to improve the pattern of development. The more people involved in the process, the longer the timeframes may be.			
It is anticipated based on the consultation stage that many property owners will not opt to subdivide their property. Based on the results of the community engagement, only 48% of property owners have an appetite for change in Old Beach.			

The above factors will impact on the timeframe from commencement to construction of new dwellings, and thus impact on meeting the housing demand predictions for Old Beach in the next 10 years. It is not likely that the potential lots that could be achieved under options 2 and 3 would be realised in a 10-year timeframe.






## Summary

It is noted that in Precinct A and B there are currently 104 lots (84 in Precinct A and 20 in Precinct B), a total of 91 houses in both precincts, and an estimated population of 236 people.

Taking into account the lots provided by Tivoli Green, these precincts should aim to facilitate the development of at least 400 new lots in order to meet the anticipated housing demand expected for Old Beach by the BSP and STRLUS.

The results and potential impacts of the three change scenario options are summarised in the following table.

	Total potential lots	Total additional residents	Impact on road capacity	Community services and infrastructure demand	Impact on character of Old Beach	Meeting the housing demand
 Option 1	114	226	Low	Low	Low	Low
 Option 2	580	1,357	High	High	Moderate	Moderate
 Option 3	1,544	3,612	High	High	High	High



# Section 7

## **Subdivision design**

# Subdivision design

## Overview

There is scope to change the current planning controls, such as rezoning to Future Urban and General Residential, in the study area to facilitate additional subdivision and construction to meet the anticipated housing demand for Old Beach. However, there is an added complexity to subdivision given that the properties in the precincts are already developed with each title under separate ownership. Best practice subdivision standards should therefore guide future subdivisions to ensure optimal outcomes for the area. The risk of allowing for smaller lot sizes without additional controls that guide the redevelopment at a precinct level will likely result in a neighbourhood with a lack of permeability through the use of cul-de-sacs, a reduced ability for shared pathway connections, an inefficient lot layout, a lack of diversity in lot size and the potential to impact on good passive surveillance and solar access outcomes.

The following subdivision guidelines are provided to inform a future master plan prepared for the precincts to ensure best practice subdivision is achieved. The guidelines are provided at three different scales: the broader Old Beach / Brighton LGA scale, the study area scale (i.e., precincts A and B), and the lot/subdivision scale. It is suggested that a SAP be applied to the precincts that incorporates these guidelines.

## Broader area considerations



Respect and positively contribute to the existing and future character of Old Beach



Ensure the efficient utilisation of social, transport and other service infrastructure



Consider the Aboriginal and historic heritage of the area



Continue ongoing discussions with the Department of State Growth regarding increasing the frequency of bus services on existing bus routes passing through Old Beach to meet the needs of residents



Allow for non-residential uses providing they primarily serve the local community and do not negatively impact on nearby activity centres and community facilities



## Study area considerations



Consider natural features of the site, such as topography, flora and fauna



Be functional, safe and attractive



Integrated with the surrounding built form pattern



Factor in future subdivision potential of surrounding lots



Consider walking and cycling networks that link with community facilities in the broader area



Subdivide lots at a higher density or have lots that allow for multiple dwellings within 400 m of an existing or proposed bus stop

## Lot/subdivision area considerations



Maintain existing vegetation where possible, particularly as required by the Natural Assets Code



Provide public open space in subdivision layouts per proposed locations



Contribute offerings to the public realm in larger subdivisions, such as improved street outcomes



Factor in safety through urban design principles



Avoid the use of cul-de-sacs where possible and focus on connecting streets through to major roads to improve the permeability of Old Beach. Refer to indicative road layout plan for suggested design.



Provide a range of lot sizes that will encourage housing diversity and the potential for non-residential uses that will support residents' day-to-day needs



Maximise solar access for future dwellings through good solar orientation of lots



Increase surveillance to, and visibility of, the local street networks by fronting lots directly to roads and streets where possible and avoiding internal, battle-axe lots



Provide connections for each new lot in the General Residential zone to a reticulated water and sewerage network



Ensure stormwater is appropriately managed on each lot in accordance with Council requirements



Provide electricity and telecommunications connections to each new lot



Photo courtesy of Samuel Shelley  
and Brighton Council

# Section 8 **Recommendations**

# Recommendations

The following recommendations are made:

- Option 2 is the preferred change scenario, resulting in moderate change. It is the option that has the potential to meet the anticipated housing demand, will not have a significant impact on existing infrastructure and servicing, specifically the road network, and is aligned with the planning policy environment.

This option involves rezoning both Precinct A and B to Future Urban zone immediately, removing the Urban Rural Interface SAP currently applying to Precinct A, and extending the UGB to include the entirety of Precinct A. Next, the road upgrades identified by Hubble Traffic, should be undertaken to support residential growth. If for some reason they cannot be completed at this point, then a commitment should be made to the upgrades occurring in a suitable timeframe that will mitigate traffic congestion, ideally prior to any rezoning<sup>18</sup>.

- Next, it is recommended that a master plan be developed by Council for the area. This would include and address the following:
  - A detailed road and pathway layout for the precinct
  - Infrastructure assessment
  - Natural values assessment
  - Assessment of scenic qualities
  - Landscape assessment, including identifying significant trees for protection and an assessment of scenic values
  - Subdivision guidelines

Providing this detail to the Tasmanian Planning Commission would give greater certainty around infrastructure delivery as part of rezoning considerations, applicable overlays – such as the priority vegetation overlay and also provide landowners certainty around the process. The STRLUS<sup>19</sup> states that a master plan is required to be completed and relevant aspects incorporated into planning schemes through the Specific Area Plan mechanism, which then triggers the rezoning process. Once the area is rezoned, Brighton Council would then have the ability to consider subdivision applications.

- Once the above has been completed, it is recommended that the 25 lots (or 31.2 ha) that have been identified in part of Precinct A be rezoned to the General Residential zone (refer to accompanying maps); with the change in planning controls including key features of the master plan such as the road layout, in the form of a SAP. If all of these lots are subdivided, it could theoretically result in approximately 580 new lots. The result of the rezoning providing 580 new lots in Precinct A is not likely to be realised given the appetite for change among residents in the area, and factoring in implementation considerations which will likely result in time delays throughout the process. Nevertheless, it will make a significant contribution to meeting the housing demand.

<sup>18</sup> Regarding traffic, due to the incremental subdivision of individual lots, the planning scheme controls would not consider/require significant upgrades to highways or similar. Therefore, significant changes to mitigate traffic congestion will need to form part of the planning scheme amendment stage, rather than the development application stage.

<sup>19</sup> Refer specifically to Section 19.6 Greater Hobart Residential Strategy of the STRLUS. This process is further grounded by SRD 1.2 of the STRLUS.





- To ensure future subdivisions are designed appropriately, subdivision guidelines have been provided within this report. It is further recommended that a master plan be prepared in accordance with the guidelines for each of the precincts to inform a SAP that is applied across both precincts.
- Council should consider introducing a development contributions requirement for subdivision applications. This would assist in improving roads and footpaths in the precincts, along with public open space provision and more shops and services in Old Beach for residents to access rather than going to nearby activity centres for basic needs.
- Further discussions should be had with TasWater and TasNetworks regarding the upgrading of infrastructure occurring at appropriate times, and the provision of reticulated water and sewerage services to properties in the study area.
- Discussions between Brighton Council and the Department of State Growth will need to be continued to discuss the implementation of the proposed upgrades to the road network, and future upgrades required in addition to undertaking a future corridor study. These will be required to support a General Residential zoning of both Precincts.
- A natural values assessment is recommended above to be conducted as part of the master plan. This should address concerns raised in the submissions and clarify whether natural values will be a constraint for the subdivision of certain sites. Through any future rezoning processes, this data would then inform the potential modification of the Priority Vegetation overlay to correspond with the findings of the study, and subsequently give greater clarity on the subdivision potential of lots for residents.
- Further engagement should be undertaken with residents in the Old Beach area to ensure they are kept involved with this process, and to further discuss and ideally alleviate concerns raised during the consultation process undertaken for this study. A key aspect of this would be educating the community of the unprecedented population growth and demand for housing that the Greater Hobart area is currently experiencing, the specific demand for new dwellings in Brighton, and that Council has a responsibility for land in the urban growth boundary Council to be zoned appropriately to facilitate denser development. Moreover, rezoning the land is supported by the regional land use strategy and the Brighton Structure Plan. Council will also need to explain further the ecology study that is recommended and what the outcomes of the study will mean in terms of development opportunities.



Photo courtesy of Samuel Shelley and Brighton Council

# Section 9 **Community engagement summary**

# Community engagement

## Early engagement methods and results

Brighton Council sought stakeholder engagement with the communities in and around these precincts at the commencement of this project. The engagement team used five different tools and methods to notify the community about the study and receive feedback. These are shown below.



**Notification letters**



**Council website information**



**Online Community Survey**

(Key feedback mechanism)



**Drop-in sessions**



**Email and Phone contact**

Approximately 200 letters were sent to property owners in and surrounding the precincts, and information was placed on Council's website. This information directed recipients and interested parties to an online community survey and to register their interest to attend one of the drop-in sessions. Stakeholders also had the opportunity to contact consultants via email and phone, to ask questions, clarify details and give their feedback.

The online survey was open from Friday 25 February 2022 to Sunday 20 March 2022. The drop-in sessions were held at the Old Beach Cricket Club on Tuesday 15 March between 11am and 2pm, and on Wednesday 16 March between 4pm and 7pm.

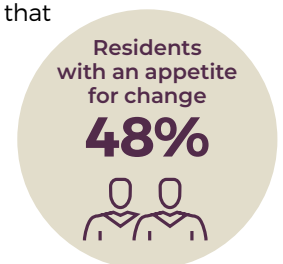
The engagement was successful in reaching a large proportion of residents in the two precincts. There are 104 properties (including 13 vacant lots) in the study area and 92 responses were received for the survey. Nineteen people also attended the drop-in sessions in 14 separate sittings.

The engagement found that there was a comparatively even split between respondents who want no change to existing planning controls and those who are open to change. The split slightly favoured those who want no change by a margin of 4% (52% to 48%). Of those who are open to change, about half are open to minor changes (for example a small reduction in the allowable lot size). The other half are open to greater changes and are less concerned about potential block sizes.

Respondents' main concerns about potential future growth were focused on increases in traffic and the loss of privacy and rural amenity. Having space and not being crowded were emblematic of the broad concerns that respondents had with increasing housing in the precincts.

Another concern raised was around rate raises associated with improved infrastructure services. Brighton Council has a flat rate structure, where all property owners pay the same annual rates to Council. Rates therefore wouldn't change if for example properties were serviced by reticulated water in the future.

The other concern that seemed to be underlying for many residents was the fear of high-density housing and/or social housing. Along with a more crowded community, there is a perception that this would also bring increased risk for anti-social behaviour and crime to the study area.





## Exhibition of draft report

Brighton Council publicly exhibited the draft version of this report on Council's website between 23 January and 24 February 2023. Council also posted letters to all landowner/ tenants of properties within the study area and adjoining streets informing them the consultation was occurring and how to make submissions. An article was also published in the Brighton Community News.

Council received a total of 87 submissions via the Council website, post, email and in person. Submissions were received from both private landowners/tenants of properties and also from State and Local Government.

The submissions were analysed and it was found that there were three key issues raised:

1. 39% of submissions had concerns related to natural values, wildlife and climate change.
2. 41% of submissions had concerns related to infrastructure, traffic, road layout and services.
3. 29% of submissions had concerns related to the character of the area, privacy and scenic qualities.

Other issues raised were regarding crime and social impacts, that survey results from the previous community engagement were not reflected in the recommendations, that there were issues with the methodology, and others wanted to express their support.

## Future engagement opportunities

It is recommended that Council continue engaging with the local community, particular residents that live in the study area and nearby areas, to facilitate community preparedness. Increased levels of preparedness support greater acceptance of urban growth and change within the communities' local environment. As a minimum, Residents should be informed of any decisions made by Council, and the next steps resulting from this study.



Photo courtesy of Samuel Shelley and Brighton Council



# Section 10 **Next steps**



## Short term actions

### Community Engagement

Engagement with the local community should continue throughout the life of the project.

### Further studies

Given the top three issues raised during the public exhibition period, as detailed above, it is recommended that Council undertake the following studies:

- Natural values report, which includes an on-site ecological assessment across the entire study area, to identify natural values, the presence of threatened or protected flora and fauna in the study area, assess the riparian corridor along Clarries Creek, and identify significant trees that should be protected and retained. The report should also ensure any recommendations are aligned with Brighton Council's 2050 vision.
- Infrastructure and services assessment of the study area. It is understood that the Department of State Growth has already commissioned a corridor study of the East Derwent Highway between Bridgewater and the Bowen Bridge, and the associated junctions in this area. To build on this, an assessment of internal roads and pathways in the study area is recommended to be undertaken by a Traffic Engineer. Continued conversations should also be had with TasWater and TasNetworks regarding the provision of reticulated water and sewerage services to properties in the study area.
- Landscape assessment, including identifying significant trees for protection and an assessment of scenic values in the study area. This would provide greater clarity for residents and decision-makers regarding the developability of land.

### Planning scheme amendment

It is recommended that Brighton Council apply for a planning scheme amendment to include the following:

- Precincts A and B to be rezoned to the Future Urban zone
- Removal of the Urban Rural Interface SAP currently applying to Precinct A
- Support the extension of the UGB to include the entirety of Precinct A.

By applying the Future Urban zone it will protect the land from being developed in a way that might not comply with the future master plan that is to be prepared for the study area.

In March 2023, the Tasmanian Government proposed that the STRLUS be amended to extend the UGB to include the remainder of Precinct A. The area was identified as a logical extension as it is already zoned and developed for residential use.

### Road upgrades

The road upgrades identified by Hubble Traffic should be undertaken to support residential growth. If for some reason they cannot be completed at this point, then a commitment should be made to the upgrades occurring in a suitable timeframe that will mitigate traffic congestion. It is likely that this would be a requirement for any rezoning which enables higher densities, to be approved by the Tasmanian Planning Commission.

Discussions between Brighton Council and the Department of State Growth will need to be continued to discuss the implementation of the recommended upgrades to the road network and ensure an alignment between the rezoning stages and the road infrastructure upgrades.





## Medium term actions

### Preparation of a master plan

A master plan should be developed by Council for the study area. This would include and address the following:

- A detailed road and pathway layout for the precinct
- Infrastructure assessment
- Natural values assessment
- Landscape assessment, including identifying significant trees for protection and an assessment of scenic values
- Subdivision guidelines.

The master plan would then be incorporated into the planning scheme in the form of a SAP via the planning scheme amendment process.

### Planning scheme amendment

Once the abovementioned actions are complete or substantially commenced, including the required road upgrades, it is recommended that the 25 lots (or 31.2 ha) that have been identified in part of Precinct A be rezoned to the General Residential zone (refer to accompanying maps); with the change in planning controls including key features of the master plan such as the road layout, in the form of a SAP.

### Development contributions requirement

It is recommended that Council explore the options of introducing development contribution requirements for subdivision applications within the precincts and part of future planning scheme amendments to facilitate improved community infrastructure and facilities.

## Long term actions

### Planning scheme amendment (option 3)

Any rezoning that increases the additional residential lots for both Precincts past 580 is expected to increase highway commuter traffic demand to a volume that exceeds available lane capacity. This would cause an unacceptable reduction in traffic performance for highway users, with junctions having insufficient traffic capacity to provide a suitable level of performance. Upgrades to East Derwent Highway would therefore need to be established with Infrastructure Tasmania prior to or concurrently with any rezoning application that facilitates increased number of dwellings.

Once road and infrastructure upgrades have been completed or are nearing completion to a point that the authorities deem satisfactory, both Precincts A and B could be rezoned to General Residential, with the master plan forming part of the change in planning controls through the application of a SAP.



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# OLD BEACH REZONING

## TRAFFIC ASSESSMENT

Hubble Traffic

November 2022

# Table of Contents

1. Executive summary .....	2
2. Introduction .....	4
3. Site Description .....	5
4. Existing traffic flows .....	6
4.1 Link traffic flows .....	6
4.2 Link traffic capacity .....	7
4.3 Node traffic flows .....	7
5. Existing traffic performance for the highway links and nodes .....	8
5.1 Existing link traffic flows along the highway .....	8
6. Traffic generation from Tivoli Green new residential development .....	10
7. Assessment of network performance with Tivoli Green development .....	12
7.1 Level of service of additional trips from Tivoli Green .....	12
7.2 Lane capacity assessment from additional Tivoli Green trips .....	14
7.3 Traffic impact from Tivoli Green development .....	14
8. Highway mitigations to accommodate Tivoli Green development .....	16
9. Traffic impact from rezoning existing rural properties .....	17
9.1 Highway lane capacity performance under the different rezoning Options .....	18
9.2 Compton Road and East Derwent Highway junction .....	19
9.3 Old Beach Road and East Derwent Highway junction .....	19
9.4 Clive/Fouche and East Derwent Highway roundabout .....	20
9.5 Bowen Bridge junction one .....	22
9.6 Bowen Bridge junction two .....	22
10. Conclusion .....	23
11. Appendix A – Traffic analysis of existing highway conditions .....	24
11.1 Compton Downs and East Derwent Highway junction .....	24
11.2 Old Beach Road and East Derwent Highway junction .....	26
11.3 East Derwent Highway roundabout with Fouche and Clives Avenues .....	28
11.4 East Derwent Highway and Bowen Bridge interchange .....	29
11.5 Distribution of trips arriving or leaving the residential catchments .....	31
11.6 Trip distribution – generating southbound or northbound vehicle movements .....	32

## 1. Executive summary

The operational performance of East Derwent Highway (highway), between Old Beach and Bowen Bridge has been assessed using a theoretical capacity methodology, which compares the theoretical lane capacity against the current and predicted peak hour traffic demands. Traffic modelling software has also been used to assess the junctions along the highway, to quantify the level of service for users. The information provided within this assessment is of the predicted outcomes and possible mitigations.

The Tivoli Green residential expansion, which has already been approved, will begin to generate additional traffic movements on the highway over the next few years, intensifying the commuter peak periods. Once this development is completed, the level of service along the highway route would decline, but overall, motorists are expected to continue to receive an appropriate level of traffic performance. The following two locations are to become busier, and will require further investigation and appropriate mitigations to maintain efficient traffic flow:

- In the evening peak, with the additional Tivoli Green traffic returning back to their properties using the Bowen Bridge, the right turn movement from the Bowen Bridge onto the East Derwent Highway will become oversaturated, with long traffic queues. As queued vehicles extend beyond the length of the dedicated right turn lane, it has the potential to create an unwarranted safety risk to through traffic users. Traffic modelling indicates that changing traffic control at this junction to traffic signals, could be a suitable mitigation, and would accommodate future traffic growth.
- The highway link between the southern junction at Otago Bay and the Bowen Bridge (approximately 400 metres) is shown to reach lane capacity in the morning peak hour, making it difficult for motorists turning right out of Otago Bay Road, as they must select a suitable gap in the two-way traffic stream. A possible mitigation would be an additional southbound traffic lane, to segregate southbound highway traffic with right turning traffic.

This assessment predicts that the additional traffic generated on the highway by the rezoning of some rural properties within Old Beach, could be accommodated by implementing appropriate mitigation measures at these two locations.

An additional 580 residential lots in addition to the Tivoli Green development are expected to be accommodated by the highway. There is one location at the Clives and Fouche Avenues roundabout, which is shown to have increased traffic delays and queues, with possible mitigations to convert the roundabout to traffic signals or additional localised traffic lanes through the roundabout.

With a modest level of infrastructure investment at key locations, the highway is expected to provide users with an appropriate level of service to support a further 580 residential lots through land rezoning. It is projected that an increase past these additional residential lots, would increase highway commuter traffic demand to a volume that exceeds available lane capacity, causing an unacceptable reduction in traffic performance for highway users, with junctions having insufficient traffic capacity to provide a suitable level of performance. This would require an extensive level of infrastructure investment to provide dual traffic lanes and improvements to all junctions.

This assessment found that the recent extensive residential development at Old Beach, is generating significant commuter peak hour traffic flows, with the function of the highway changing to an urbanised arterial, with peak commuter flows continuing to grow as Tivoli Green develops. As this highway integrates into the Hobart urban arterial network, it is understandable for the level of performance to decline, as the urban arterial network struggles to provide sufficient lane capacity to meet intense commuter peak traffic demands, affecting travel times. This deterioration in the level of service is accepted by users.

When an urban arterial network becomes busier, some motorists with the ability to change their travel patterns, are likely to avoid travelling in the intense commuter peak periods, which is known as peak spreading. This occurs naturally as the pattern of traffic demand changes overtime, it increases the highway traffic capacity, and delays the need for infrastructure improvements. It is not possible to forecast the level of peak spreading that may occur along the highway as the traffic demand increases, but based on other parts of the network, peak spreading is likely to occur.

## 2. Introduction

ERA Planning have engaged Hubble Traffic Consulting to undertake an independent traffic assessment, to consider the impact of rezoning two parcels of land within Old Beach to higher density residential, to increase the supply of land for residential development.

The two parcels of land under consideration are adjacent to Compton Road, and Old Beach Road, with both relying on the East Derwent Highway (highway) as the main arterial connecting road.

The assessment includes the:

- evaluation of the current traffic conditions on the surrounding State Road network during the peak morning and evening periods,
- evaluation of additional traffic flow generated from the approved Tivoli Green development,
- prediction of the increase in traffic movements generated by each land parcel, based on yields quantified by ERA Planning, and
- consideration of possible infrastructure improvements to accommodate higher traffic demand.

SIDRA Intersection modelling software has been used in this assessment, which uses gap acceptance theory, including traffic flow, delays, and queues, to determine the level of traffic performance. The software predicts the degree of saturation (DOS), level of service (LOS), average delay, and maximum length of traffic queues.

The assessment will refer to Austroads Guide to Road Design and the RTA Guide to Traffic Generating Developments (RTA Guide).

### 3. Site Description

The two parcels of land under consideration are defined in the diagram below, with Precinct B to have access to Compton Road, and Precinct A to Old Beach Road. The nearest arterial road is the highway, which is part of the State Road network managed by the Department of State Growth (Department).

Diagram 3.0 – Land parcels under consideration for rezoning





## 4. Existing traffic flows

Traffic performance for links and intersections are primarily determined based on peak hour traffic flows, with peak hour traffic flows from the State Road network obtained for this assessment.

### 4.1 Link traffic flows

The Department maintains a database of traffic flows for the State Road network, with permanent stations that collect traffic flow data every day of the year, and short-term traffic collection sites that collect data for two to four weeks every few years.

For this assessment, the term link, means a section of roadway between intersections or junctions, and node means an intersection or junction.

Interrogation of the Department's traffic database found the following traffic flows for the surrounding State Road links.

Table 4.1 – Link traffic flows from the Department traffic database

Road	Location	Survey date	ADDT	Morning peak hour		Evening peak hour	
				NB/WB	SB/EB	NB/WB	SB/EB
East Derwent	South of Jordan Bridge	Jun 21	11,700	422	483	766	550
East Derwent	North of Old Beach Rd	Jun 21	9,600	266	494	700	364
East Derwent	West of Bowen Bridge	Jun 21	14,800	310	1,061	1,089	440
East Derwent	West of Grass Tree Roundabout	Nov 18	18,200	972	848	1,053	960
Bowen Bridge	South of East Derwent	Nov 21	21,300	636	1,471	1,433	790

## 4.2 Link traffic capacity

Section 5.1.1 of the Austroads Guide to Traffic Management Part 3: Transport Study and Analysis Methods, provides guidance on calculating operational lane capacity.

The operational capacity of a single lane for uninterrupted flow (links) is 1,800 passenger cars per hour, with the capacity affected by the pavement width, lateral clearance to roadside features and hazards, and the presence of heavy vehicles and vertical grades.

In respect to pavement width and lateral clearance, the highway has 3.5-metre-wide lanes supported by sealed shoulders and wide verges, with the adjustment factor for pavement width and lateral clearance determined to be 0.97, as per the Austroads Guide.

The highway has one section with steep vertical grades, with climbing lanes provided in each direction to mitigate any decrease in flow caused by slow moving vehicles. The remaining sections of highway have relatively flat vertical grades, and for this capacity analysis are considered as level.

Using the Department traffic database, the average heavy vehicle content for the highway between Bowen Bridge and Compton Road is estimated between 5 and 10 percent.

Having consideration to the road characteristics and applying the relevant adjustment factors, the calculated single lane traffic operational capacity is 1,650 vehicles per hour, per direction, which means vehicles are operating with a headway gap of 2.25 seconds.

## 4.3 Node traffic flows

Traffic flows at intersections and junctions have been collected using manual traffic surveys, undertaken in the morning and evening weekday peak commuter periods. The surveys were undertaken on Wednesday and Thursday 16 and 17 February 2022, primarily between 7:30am to 9:00am and 4:00pm to 6:00pm.

## 5. Existing traffic performance for the highway links and nodes

Traffic models of the nodes were developed in SIDRA modelling software to determine the level of traffic performance and were based on the road layout, the number of turning lanes, and the peak hour traffic data collected from the recent manual traffic surveys. The traffic modelling software analysed the traffic flow, junction layout, and traffic control, to determine the Degree of Saturation (DOS) and Level of Service (LOS), to predict average delays, and traffic queues.

The modelling indicates the nodes operating along the highway are operating at LOS C or higher and providing motorists with an appropriate level of service. The modelling also indicates there is spare traffic capacity at most nodes, except for vehicles returning to Old Beach from the Bowen Bridge, turning right onto the East Derwent Highway, where the junction is operating at DOS of 0.825, or 82 percent of the junction capacity. Further traffic growth at this location will intensify the traffic queues, causing the queue to extend beyond the length of the right turn lane into the through lane.

The table below is a summary of the traffic modelling, with the complete analysis of the existing traffic conditions available in appendix A of this assessment.

Table 5.0 – Summary of traffic modelling for existing traffic conditions at highway nodes

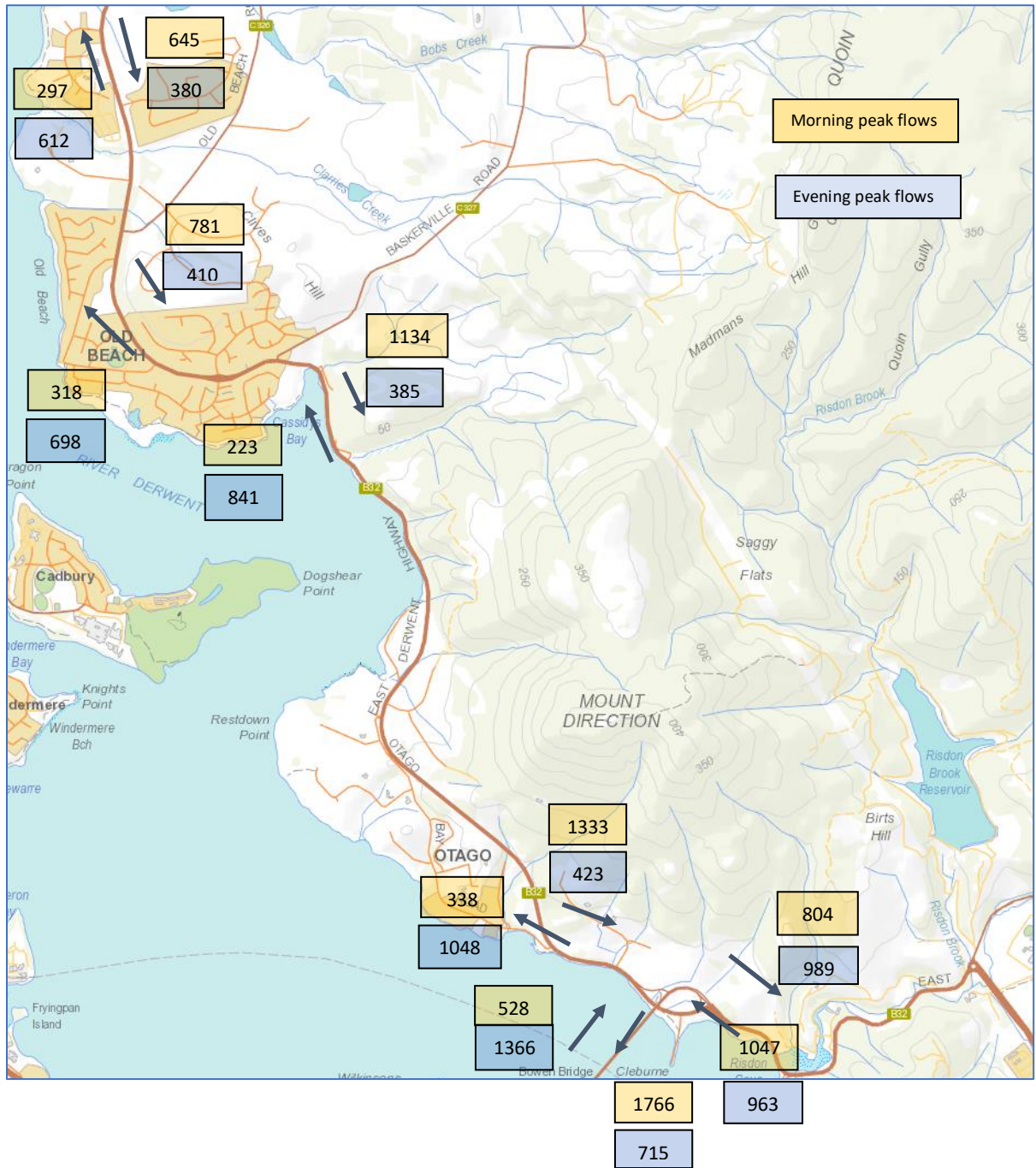
Location	Period	Total Vehicles	DOS	LOS	Worst Ave Delay	Max queue length
Compton Road	Morning	943	0.294	C	15.5 secs	0.6 metres
	Evening	996	0.327	C	16.8 secs	0.6 metres
Old Beach Road	Morning	1106	0.352	C	18.4 sec	5.1 metres
	Evening	1128	0.338	C	19.6 sec	1.5 metres
Clive and Fouche Aves	Morning	1403	0.675	A	6.9 sec	51.5 metres
	Evening	1345	0.571	A	5.3 sec	39 metres
Bowen Bridge junction One	Morning	1103	0.155	A	7 sec	16.3 metres
	Evening	1617	0.350	A	9.6 secs	10.3 metres
Bowen Bridge junction Two	Morning	160	0.327	C	15.5 secs	11.2 metres
	Evening	628	0.825	C	17.8 secs	77.4 metres

### 5.1 Existing link traffic flows along the highway

It is evident that the highway has a significant peak commuter function, with the morning peak being slightly higher, and traffic flow intensifying around the Bowen Bridge. The highest morning directional peak hour flow of 1,333 vehicles was recorded north of the Bowen Bridge, with 1,048 recorded in the evening peak.

At these traffic flow levels, highway users are receiving an appropriate level of traffic performance, with the existing directional peak hour flows provided in diagram 5.1.

Diagram 5.1 – Existing peak hour traffic flows from the available traffic survey data



## 6. Traffic generation from Tivoli Green new residential development

Tivoli Green is an approved large residential development located north of Old Beach Road, which will generate additional vehicle trips onto the highway over the next few years. It is important to consider the impact on the highway network from these approved residential properties, to evaluate if spare traffic capacity on the highway is available when this development is completed.

According to a Traffic Impact Assessment prepared by Milan Prodanovic in 2017, the subdivision is expected to yield 577 residential lots, and generate an additional 324 vehicle trips in the peak periods.

These 577 residential lots, are in addition to the existing residential lots, currently operating from Riviera Drive, with new trips from the residential subdivision expected to enter and leave the highway using Old Beach Road, Riviera Drive or Gage Road.

As determined earlier from the manual traffic surveys, during the morning period the majority of trips generated from the residential catchments travel along the highway towards the Bowen Bridge, while in the evening the percentage of trips arriving home from the Bowen Bridge is slightly less.

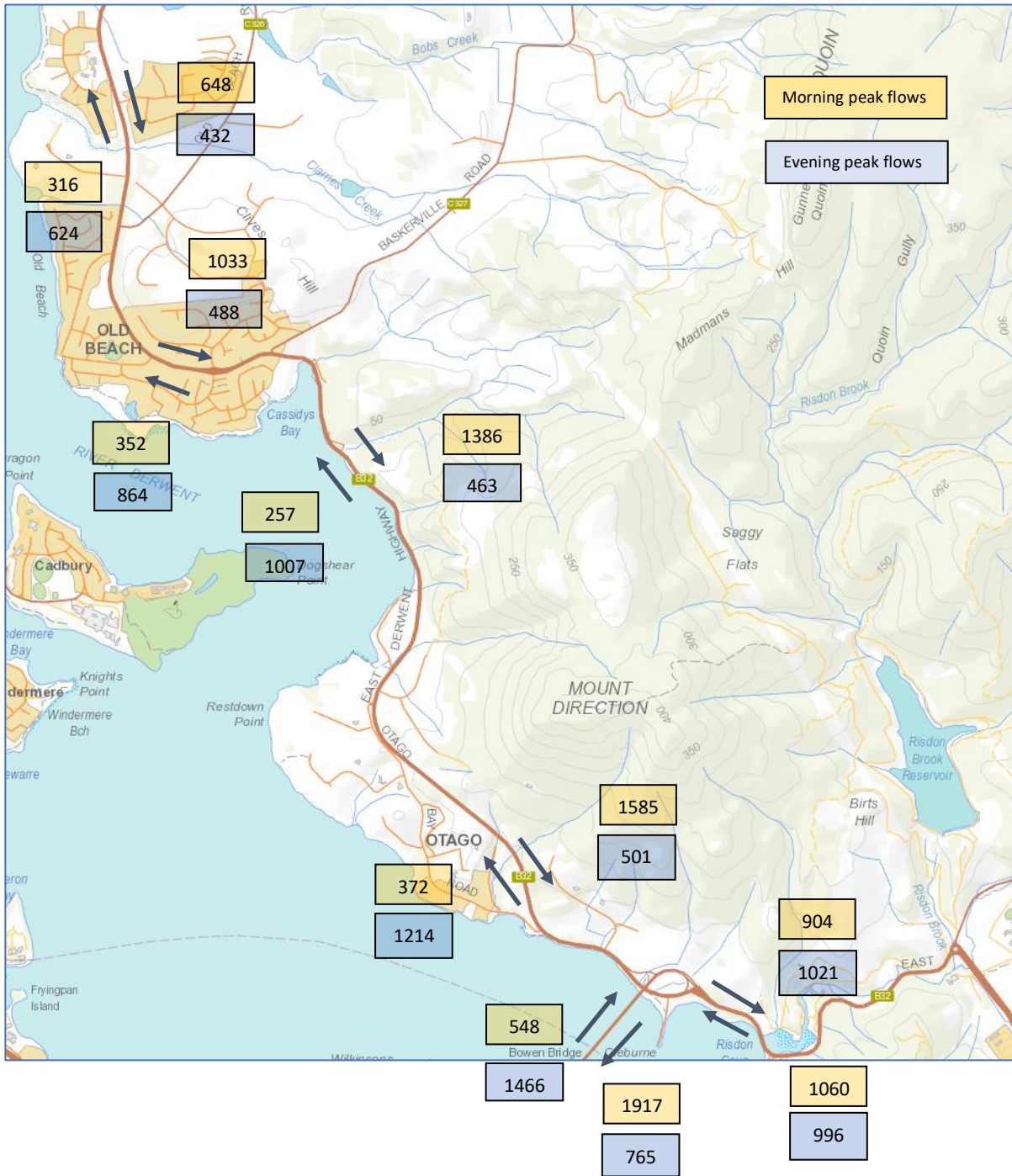
A small portion of up to five percent of the users are expected to use public transport as a transport mode, which equates to 16 trips from the 577 new residential properties.

Future trips from the new Tivoli Green residential development have been assigned to the highway, based on the trip distribution as specified in table 6.0, which is based on current trip distribution from the existing surrounding residential catchment areas, with the assigned traffic flows shown in diagram 6.0 below.

Table 6.0 – Estimation of future trip distribution to be generated by Tivoli Green development

Morning peak	Trips entering Tivoli Green (12%)		Trips leaving Tivoli Green (88%)		Total vehicles generated
	NB (93%)	SB (7%)	NB (7%)	SB (93%)	
	34	3	19	252	308
Evening peak	Trips entering Tivoli Green (71%)		Trips leaving Tivoli Green (29%)		
	NB (76%)	SB (24%)	NB (13%)	SB (87%)	
	166	52	12	78	308

Diagram 6.0 – Predicted peak hour traffic flows including future trips generated by Tivoli Green



## 7. Assessment of network performance with Tivoli Green development

The traffic impact of the additional trips generated from Tivoli Green development on the highway has been evaluated by three methods, level of service, lane capacity and node capacity.

### 7.1 Level of service of additional trips from Tivoli Green

Level of service is a qualitative assessment of the traffic conditions that considers speed, volume of traffic, delays, and freedom to manoeuvre, with six levels of service (LOS) described in the RTA Guide in Extract 7.1 below. Level of service LOS D to E is an acceptable performance level for State Roads operating during the peak periods. Many of the busy arterial highways, such as the Brooker Highway, Tasman Highway, and Southern Outlet, operate adequately at LOS E during peak periods, with users prepared to accept a reduced level of service.

Level of service is based on the two-way peak hour traffic flows and considers the opportunity for opposing vehicles to overtake on a two-way two-lane highway.

Extract 7.1A - RTA Guide for level of service for links

Level of service	
A	Highest level, traffic is free flowing, individual drivers are virtually unaffected by the presence of others in the traffic stream, with high level of comfort and convenience.
B	Traffic flow is stable, drivers have reasonable freedom to select their desired speed, to manoeuvre within the traffic stream, and maintains good level of comfort and convenience.
C	Stable traffic flow, with most drivers restricted to some extent in their freedom to select their desired speed and manoeuvre within the traffic stream, the level of comfort and convenience is declining.
D	The traffic flow is reaching its level of being stable, all driver severely restricted in their freedom to select their desired speed and to manoeuvre, the general level of comfort and convenience is poor.
E	Traffic volumes are nearing the lane capacity, there is no freedom to select desired speeds or manoeuvre within the traffic stream, minor disturbances within the traffic stream have the potential to cause traffic-jams.
F	The traffic is in a forced flow, with the amount of traffic approaching or exceeding saturation levels, operating speeds severely restricted, queuing and delays expected.

The RTA Guide provides the level of service for rural roads based on the terrain, the percent of heavy vehicles, and two-way peak hour traffic flows. For the purpose of this assessment, the terrain is considered level, as climbing lanes operate on vertical grades, and the heavy vehicle content is between 5 and 10 percent.

Extract 7.1B from RTA Guide for level of service for rural roads

**Table 4.5**  
**peak hour flow on two-lane rural roads (veh/hr)**  
**(Design speed of 100km/hr)**

Terrain	Level of Service	Percent of Heavy Vehicles			
		0	5	10	15
Level	B	630	590	560	530
	C	1030	970	920	870
	D	1630	1550	1480	1410
	E	2630	2500	2390	2290
Rolling	B	500	420	360	310
	C	920	760	650	570
	D	1370	1140	970	700
	E	2420	2000	1720	1510
Mountainous	B	340	230	180	150
	C	600	410	320	260
	D	1050	680	500	400
	E	2160	1400	1040	820

The level of service analysis shown in table 7.1 below indicates during the peak hour periods the opportunity for overtaking will be severely restricted, as some links are predicted to operate at LOS E. As discussed earlier, there are dedicated climbing lanes providing overtaking on the vertical inclines around Otago Bay, to ensure reasonable traffic flow is maintained and slow-moving vehicles can be passed. In an urban arterial environment overtaking is not as essential, as traffic generally moves in platoons.

With the highway already speed limited to 80 km/h, the traffic flow is expected to maintain a reasonable speed, noting the operating speed will be strongly influence by other vehicles in the traffic stream.

Table 7.1 – Level of service for links once Tivoli Green development is completed

Link		Existing traffic flows		Traffic flow including Tivoli Green	
		Morning peak	Evening Peak	Morning peak	Evening peak
Compton to Clive	Two-way Flow	942	992	1385	1352
	LOS	C	C	D	D
Clive to Otago	Two-way flow	1,357	1,226	1,643	1,470
	LOS	D	D	E	D
Otago to Bowen	Two-way flow	1,675	1,471	1,957	1715
	LOS	E	D	E	E
Bowen to Grass Tree	Two-way flow	1,851	1,952	1,964	2,017
	LOS	E	E	E	E
Bowen Bridge (dual lanes)	Two-way flow	2,294	2,231	2,465	2,231
	LOS	D	D	D	C



## 7.2 Lane capacity assessment from additional Tivoli Green trips

As described earlier, traffic lane efficiency can be measured by comparing the directional peak hour traffic flows against a theoretical operational capacity. The highway has a theoretical operational capacity of 1,650 vehicles per lane, per direction during the peak periods.

The table below provides the predicted directional traffic demand, comparing with the theoretical lane capacity, and indicates the highway will be able to accommodate the increase in demand generated from the Tivoli Green development.

The southbound lane capacity between Otago Bay Road (southern junction) and the Bowen Bridge is predicted to operate around 96 percent, and with this lane reaching capacity it will become difficult for vehicles to enter the traffic stream. Further investigation into providing a suitable mitigation for turning traffic should be considered for this section of the highway.

Table 7.2 – Lane capacity for the existing flows, and additional traffic from Tivoli Green

Link		Existing traffic conditions				Traffic conditions with Tivoli Green			
		Morning peak		Evening peak		Morning peak		Evening peak	
		NB	SB	NB	SB	NB	SB	NB	SB
Compton to Clive	Flow	318	718	698	410	352	1,033	864	488
	Capacity %	19%	47%	42%	25%	21%	62%	52%	30%
Clive to Otago	Flow	223	1,134	841	385	257	1,386	1,007	463
	Capacity %	14%	69%	51%	23%	16%	84%	61%	28%
Otago to Bowen	Flow	338	1333	1048	423	372	1585	1214	501
	Capacity %	20%	81%	64%	26%	23%	96%	74%	31%
Bowen to Grass Tree	Flow	1,047	804	963	989	1,060	904	996	1,021
	Capacity %	63%	49%	58%	60%	64%	55%	60%	72%
Bowen Bridge	Flow	528	1,766	1,366	715	548	1,917	1,466	765
	Capacity %	15%	49%	38%	20%	15%	53%	41%	21%

## 7.3 Traffic impact from Tivoli Green development

The Prodanovic Traffic Impact Assessment (TIA) indicated additional traffic trips generated from Tivoli Green are expected to enter and leave the highway at three existing junctions, Old Beach Road, Riviera Drive and Gage Road. While the traffic modelling undertaken with the Tivoli Green TIA, determined that each of the above junctions could operate at an appropriate level of traffic performance, the assessment did not consider the downstream impact, particularly around the Bowen Bridge.

The level of service and lane capacity assessment has determined that additional peak hour trips generated from Tivoli Green, is predicted to cause a deterioration in traffic performance along the highway route, where overtaking will not be possible, but sufficient lane capacity will be available to ensure traffic will flow efficiently. It is important to acknowledge that except for the roundabout at the Clive and Fouche intersection, highway motorists have an uninterrupted traffic flow to the Bowen Bridge, with southbound motorists having free flow onto the bridge. While motorists returning to Old Beach in the evening peak are required to give way at the end of the Bowen Bridge.

Traffic modelling of the highway nodes indicates that at the completion of the Tivoli Green development, the nodes will become busier, however motorists continue to receive an appropriate level of service, except for motorists returning in the evening period using the junction at the end of the Bowen Bridge. At this junction, the intensification of right turning traffic returning to Old Beach is predicted to operate at LOS F, and to cause excessive delays and unacceptable traffic queues that would extend back into the through traffic lane, creating an unacceptable crash risk.

Table 7.3A – Traffic Modelling comparison for the morning peak with Tivoli Green development

Location	Existing traffic conditions					Future traffic conditions with Tivoli Green				
	Vehicles	DOS	Highest delay	LOS	Max Queue	Vehicles	DOS	Highest delay	LOS	Max Queue
Old Beach Rd junction	1,106	0.352	18.4 sec	C	5.1m	1,362	0.474	31sec	D	7.9m
Clive/Fouche roundabout	1,403	0.675	17.7 sec	B	51.5m	1,689	0.873	42 sec	D	138m
Bowen Bridge site 1	1,103	0.404	7 sec	A	16.3m	1,224	0.487	7.6sec	A	25.3m
Bowen Bridge site 2	3,048	0.500	15.5sec	C	11.2m	3,082	0.500	16.6sec	C	13.6m

Table 7.3B – Traffic modelling comparison for the evening peak with Tivoli Green development

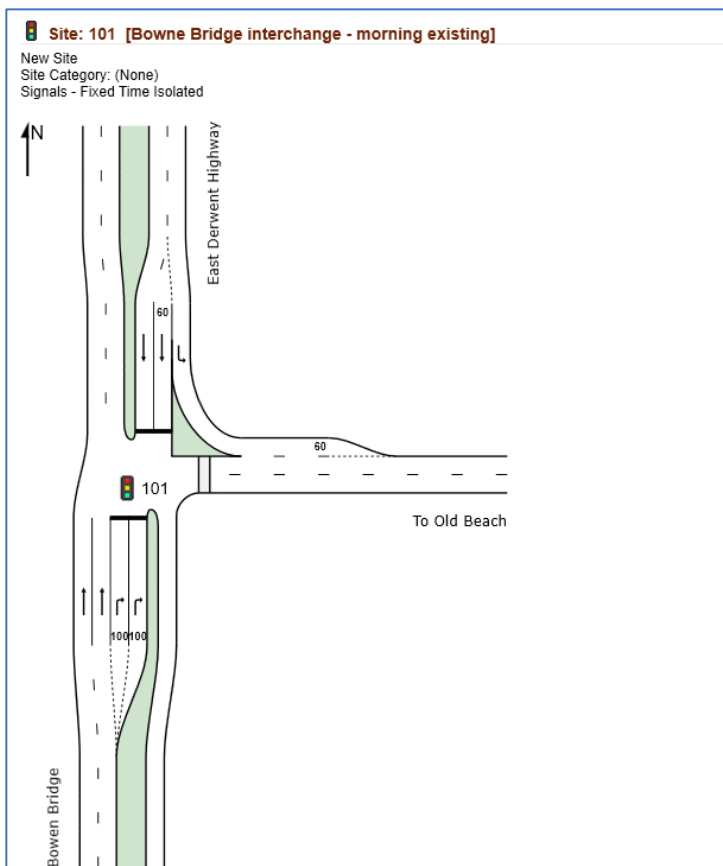
Location	Existing traffic conditions					Future traffic conditions with Tivoli Green				
	Vehicles	DOS	Highest delay	LOS	Max Queue	Vehicles	DOS	Highest delay	LOS	Max Queue
Old Beach Rd junction	1,128	0.38	19.6sec	C	8.1m	1,376	0.421	30.1sec	D	11.9m
Clive/Fouche roundabout	1,345	0.571	13.5sec	B	39m	1,593	0.679	15.7sec	B	57.8m
Bowen Bridge site 1	1,617	0.350	9.6sec	A	10.3m	1,749	0.391	10.6sec	B	13.5m
Bowen Bridge site 2	2,753	0.825	17.8sec	C	11.1m	2,919	1.05	141sec	F	527m

## 8. Highway mitigations to accommodate Tivoli Green development

Based on this analysis, the highest priority for highway improvements would be to improve the Bowen Bridge access to the East Derwent Highway during the evening peak, where the right turn capacity needs to be increased to address the queue length, which is predicted to extend beyond acceptable levels (500 metres) well back into the through lane, creating an unwarranted crash risk. Increasing traffic capacity at junctions is normally accomplished by providing additional traffic lanes, and in this case a second right turn lane can be achieved with implementing traffic signals.

A possible traffic signals layout is shown below, and traffic modelling of this layout indicates motorists will receive an appropriate level of traffic efficiency. The traffic signals will introduce a traffic delay for motorists travelling from Geilston Bay onto the Bowen Bridge.

Diagram 8.0 – Possible layout for traffic signals at end of the Bowen Bridge



Otago Bay Road (south) junction with the highway is the second priority, as the highway flow reaches lane capacity, it will become increasingly more difficult for vehicles to turn out of Otago Bay Road (southern junction) as they need to select a gap from two traffic streams. A possible improvement could be to commence an additional lane south of the junction, which creates two lanes for the short distance to the existing diverge at the Bowen Bridge, enabling right turning vehicles to turn out into their own traffic lane, then only needing to select a gap in the northbound traffic stream.

## 9. Traffic impact from rezoning existing rural properties

This section evaluates the highway capacity to absorb an increase in traffic from rezoning the rural residential properties at Old Beach, and assumes that Tivoli Green development is completed, and minor infrastructure improvements as outline in section 8 have been implemented.

Existing rural residential properties have the potential to be rezoned to increase the number of residential lots, with ERA Planning analysing the potential yield based on existing properties, and where each could be subdivided. Three options have been considered:

- Option one - no change in zoning and incremental development to continue to occur on vacant lots at the predicted rate of 4.5 dwellings per year, or total of 114 lots.
- Option two - rezone 25 rural residential lots to general residential to generate a potential yield of an additional 580 lots.
- Option three - rezone all available land identified in the two precincts to generate a potential yield of 1,544 lots.

Table 9.0 – ERA Planning prediction of additional lots

Location	Option One	Option Two	Option three
Precinct B	17	86	256
Precinct A	97	494	1,288
<b>Total</b>	<b>114</b>	<b>580</b>	<b>1,544</b>

As established previously, each dwelling could generate 0.71 peak hour trips, with 88 percent of these trips leaving the dwelling in the morning peak, and 71 percent of the trips returning to the dwelling during the evening peak. Also, in the morning 93 percent of generated trips are likely to travel in a southbound direction towards the Bowen Bridge, with 76 percent of the vehicles arriving from a southbound direction.

From this information the potential increase in highway directional traffic flows, can be predicted based on the potential land yields.

Table 9.0A – Prediction of increase in directional traffic flows based on land yield

Potential Yield (Option)	Morning peak					Evening peak				
	Total	Out	In	SB	NB	Total	Out	IN	SB	NB
	0.71	88%	12%	93%	7%	0.71	29%	71%	24%	76%
114	81	71	10	66	5	81	21	58	14	44
580	412	363	49	334	25	412	119	292	70	222
1,544	1096	965	132	898	67	1096	318	778	187	591

This predicted directional traffic flow data as determined in the above table, has been assigned to the existing State Road network to assess the impact under two methods, lane capacity and node performance.

### 9.1 Highway lane capacity performance under the different rezoning Options

Based on the directional lane capacity as shown in tables 9.1 below, it is evident that option one (no change in land zoning - incremental growth of 144 lots) can be accommodated without causing any significant decline in level of performance for motorists.

Based on directional lane capacity, option two (rezoning some properties to generate additional 580 lots) appears to be the threshold where highway links commence reaching the theoretical lane capacity. While motorists have limited freedom to select desired speeds or manoeuvre within the traffic stream, traffic is expected to maintain a reasonable flow.

Option three – (rezoning to achieve 1,544 new residential lots), this increase in traffic demand is predicted to cause highway links to exceed the theoretical lane capacity. The traffic is in a forced flow, with the amount of traffic exceeding saturation levels, operating speeds severely restricted, excessive queuing and delays expected, with any minor disturbance having the potential to create excessive delays, and these traffic conditions should be avoided.

The two tables below predict the directional lane flow under each option for the morning and evening peak hour periods, with the traffic flow presented as a percentage of the theoretical lane capacity.

Table 9.1A – Morning peak hour – predicted operational lane capacity (Note: Bowen Bridge has dual traffic lanes)

Link		Existing flows with Tivoli Green		Option One (114)		Option Two (580)		Option Three (1,544)	
		NB	SB	NB	SB	NB	SB	NB	SB
Compton to Clive	Flows	352	1,033	357	1099	377	1367	427	2023
	%	<b>21%</b>	<b>63%</b>	<b>22%</b>	<b>67%</b>	<b>23%</b>	<b>83%</b>	<b>29%</b>	<b>122%</b>
Clive to Otago	Flows	257	1,386	262	1452	282	1720	332	2376
	%	<b>16%</b>	<b>84%</b>	<b>16%</b>	<b>88%</b>	<b>17%</b>	<b>104%</b>	<b>20%</b>	<b>144%</b>
Otago to Bowen	Flows	372	1,585	377	1651	397	1919	447	2575
	%	<b>23%</b>	<b>96%</b>	<b>23%</b>	<b>100%</b>	<b>24%</b>	<b>116%</b>	<b>27%</b>	<b>156%</b>
Bowen to Grass tree	Flows	1,060	904	1062	925	1072	1011	1097	1221
	%	<b>64%</b>	<b>55%</b>	<b>64%</b>	<b>56%</b>	<b>65%</b>	<b>61%</b>	<b>66%</b>	<b>74%</b>
Bowen Bridge	Flows	548	1,917	550	1962	560	2144	585	2590
	%	<b>15%</b>	<b>53%</b>	<b>17%</b>	<b>61%</b>	<b>18%</b>	<b>67%</b>	<b>18%</b>	<b>81%</b>

Table 9.1B – Evening peak hour - existing and predicted operational lane capacity

Link		Existing flows with Tivoli Green		Option One (114)		Option Two (580)		Option Three (1,544)	
		NB	SB	NB	SB	NB	SB	NB	SB
Compton to Clive	Flows	864	488	908	502	1084	558	1517	572
	%	<b>52%</b>	<b>30%</b>	<b>55%</b>	<b>30%</b>	<b>64%</b>	<b>34%</b>	<b>92%</b>	<b>35%</b>
Clive to Otago	Flows	1,007	463	1051	477	1227	533	1660	547
	%	<b>61%</b>	<b>28%</b>	<b>64%</b>	<b>29%</b>	<b>74%</b>	<b>32%</b>	<b>100%</b>	<b>33%</b>
Otago to Bowen	Flows	1,214	501	1258	515	1434	571	1867	585
	%	<b>74%</b>	<b>30%</b>	<b>76%</b>	<b>31%</b>	<b>87%</b>	<b>35%</b>	<b>113%</b>	<b>35%</b>
Bowen to Grass tree	Flows	996	1,021	1014	1028	1084	1056	1282	1063
	%	<b>60%</b>	<b>62%</b>	<b>61%</b>	<b>62%</b>	<b>66%</b>	<b>64%</b>	<b>78%</b>	<b>64%</b>
Bowen Bridge	Flows	1,466	765	1492	772	1598	800	1857	807
	%	<b>41%</b>	<b>21%</b>	<b>47%</b>	<b>47%</b>	<b>50%</b>	<b>25%</b>	<b>58%</b>	<b>25%</b>

## 9.2 Compton Road and East Derwent Highway junction

SIDRA intersection modelling software has been used to evaluate the junctions along the highway, with the base case being the completed Tivoli Green development, then consideration of the rezoning options. As the morning peak generate the highest traffic flows along the highway, the modelling has only considered the morning peak as being the worst-case scenario.

For the Compton Road junction, the modelling predicts that the junction will provide an adequate level of traffic performance under the base case (Tivoli Green), and with options one and two, while option three cannot be tolerated.

Table 9.2 – Modelling comparison for Compton Road junction (morning peak)

Option	Total vehicles	DOS	Max delay	LOS	Max Queue
Tivoli Green	1,230	0.408	25 secs	D	0.1 metres
Option one	1,249	0.409	25.9 secs	D	3.1 metres
Option two	1,283	0.410	29.6 sec	D	7.3 metres
Option three	1,399	0.863	69.3 secs	F	41.4 metres

## 9.3 Old Beach Road and East Derwent Highway junction

Old Beach Road is expected to be the main route for the majority of the new traffic to enter and leave the highway, in the morning the left turn onto the highway is the predominant vehicle movement, while in the evening the right turn movement into Old Beach Road will intensify.

The current give way junction control is predicted to provide an adequate level of performance for the base case (Tivoli Green) traffic flows, with further intensification of traffic seeing the right turn out movement affect the junction performance. This can be easily alleviated by creating two exit lanes out of Old Beach Road, with one lane dedicated to right turners, allowing left turning traffic unimpeded access.

The following junction modelling is based on two exit lanes out of Old Beach Road and predicts option one and two can be accommodated by the junction, while option three could not be tolerated.

Table 9.3 – Modelling comparison for Old Beach Road junction (morning peak)

Period	Option	Total vehicles	DOS	Max delay	LOS	Max Queue
Morning peak	Tivoli Green	1,365	0.474	12.4 secs	B	7.9 metres
	Option one	1,454	0.475	13.4 secs	B	12.5 metres
	Option two	1,660	0.869	18.2 secs	C	33.1 metres
	Option three	2,376	1.803	1458 secs	F	3882 metres

### 9.4 Clive/Fouche and East Derwent Highway roundabout

Traffic modelling of the existing roundabout predicts traffic generated from the Tivoli Green development can be adequately managed, with the roundabout operating in the morning peak at level of performance LOS D. However, further traffic growth along the highway is predicted to cause the performance of the roundabout to quickly deteriorate beyond acceptable levels.

To increase capacity at the roundabout the provision of additional traffic lanes should be considered, these additional lanes only need to be localised, say 60 metres on the approach and departure of the roundabout. The following modelling is based on the roundabout having two localised traffic lanes along the highway as shown in diagram 9.4A below.

The modelling demonstrates the modified roundabout is reaching capacity at option two, and an increase in traffic growth beyond the 580 additional lots is expected to cause a deterioration in the level of traffic performance, with option three unable to be accommodated.

Diagram 9.4A – Localised dual lanes at the roundabout

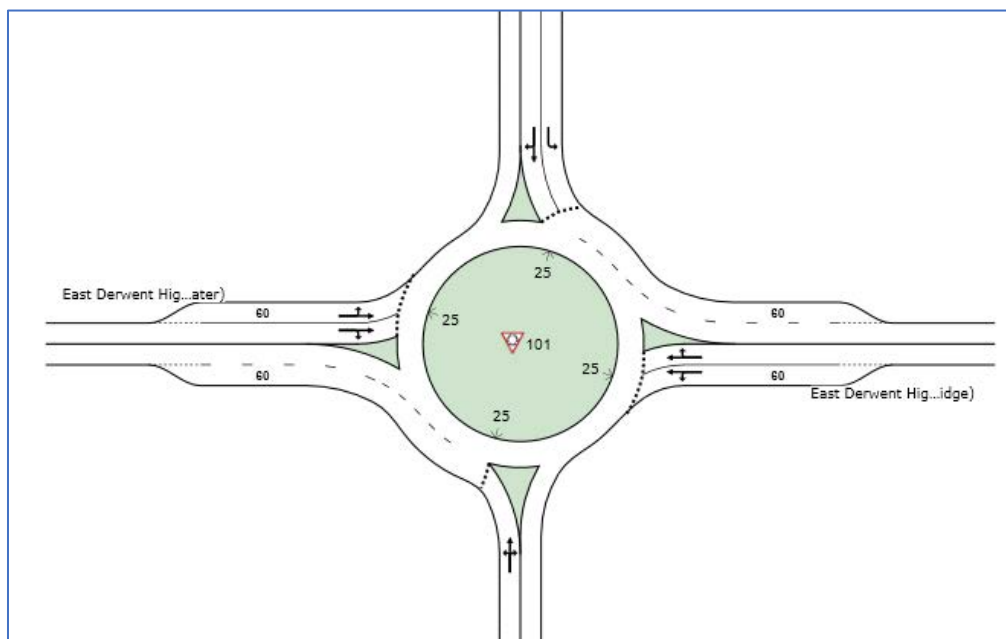


Table 9.4 – Modelling comparison for Clive and Fouche modified roundabout (morning peak)

	Option	Total vehicles	DOS	Max delay	LOS	Max Queue
Morning peak	Tivoli Green	1,689	0.873	42 secs	D	138 metres
	Option one	1,779	0.617	27.6 secs	D	44.3 metres
	Option two	2,026	0.715	65.8 secs	E	59.9 metres
	Option three	2,787	1.078	490 secs	F	1333 metres

Another way to increase traffic capacity, is to replace the roundabout with traffic signals, with a possible layout shown in diagram 9.4B below. The modelling predicts the traffic signals will provide a suitable level of traffic performance for option one and two, while the intensification of traffic from option three would generate significant delays and queues.

Diagram 9.4B – Possible traffic signals replacing the roundabout

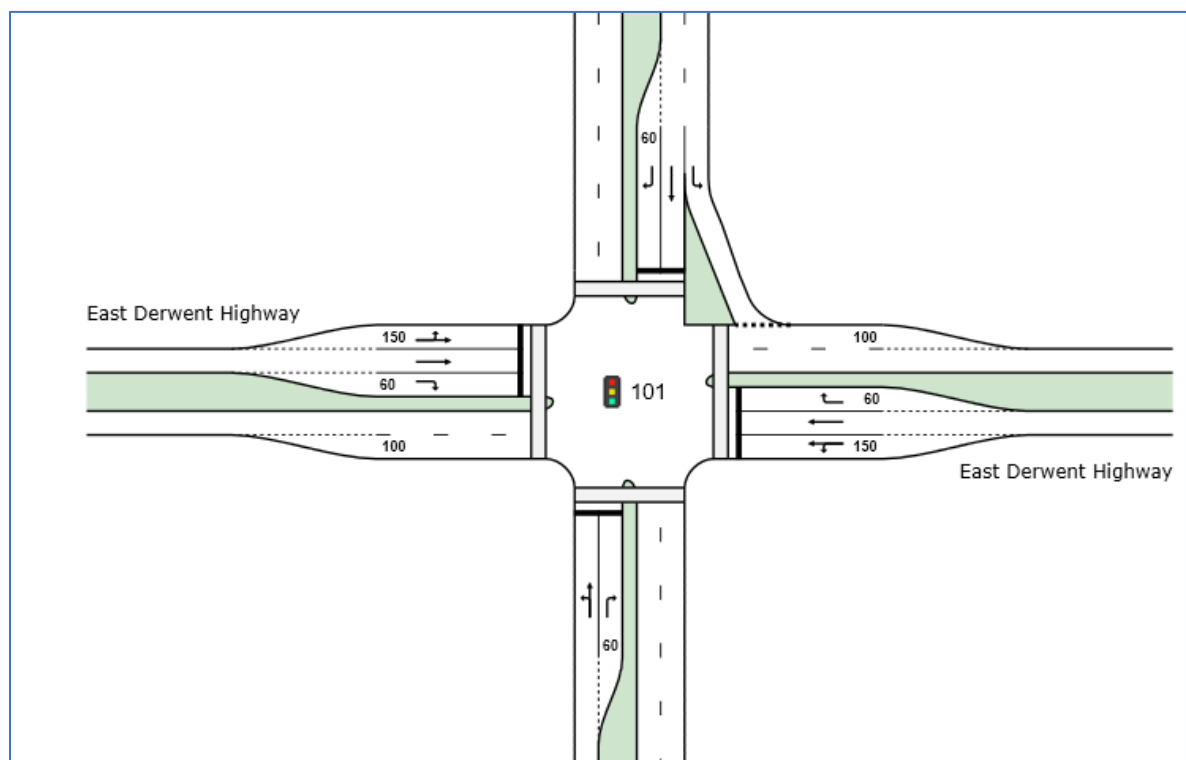


Table 9.4B – Traffic modelling of implementing traffic signals (morning peak)

	Option	Total vehicles	DOS	Max delay	LOS	Max Queue
Morning peak	Tivoli Green	1,689	0.835	31 secs	C	168 metres
	Option one	1,779	0.892	36.1 sec	D	204.6 metres
	Option two	2,026	0.842	32.6 secs	C	248 metres
	Option three	2,787	0.971	66.6 secs	E	752 metres



### 9.5 Bowen Bridge junction one

Junction one is the left slip lane from the highway onto the Bowen Bridge, on the carriageway leading to Grass Tree Hill Road. The modelling predicts all three options are expected to be accommodated, without causing any adverse traffic impact.

Table 9.5 – Modelling comparison for Bowen Bridge slip lane (morning peak)

Option	Total vehicles	DOS	Max delay	LOS	Max Queue
Tivoli Green	1,224	0.487	7.6 sec	A	25.3 metres
Option one	1,269	0.516	7.8 secs	A	28.8 metres
Option two	1,351	0.572	8.3 secs	A	36.5 metres
Option three	1,619	0.772	11.2 secs	B	83.8 metres

### 9.6 Bowen Bridge junction two

Junction two is the right turn from Bowen Bridge to the highway, for motorist returning to Old Beach. During the manual traffic surveys for the evening peak, the length of the right turn queue on occasions extended beyond the length of the right turn storage lane, spilling into the inside through lane. The queue was a moving queue, so the impact to through traffic was reasonably low, this indicates the right turn lane has limited spare capacity.

The modelling predicts that the base case (Tivoli Green) traffic loads cannot be accommodated, with the junction causing an adverse impact to Bowen Bridge through traffic, with excessive delays and queues forming, and operating performance at LOS F as detailed in table 7.3B.

Implementing traffic signals to control the right turn lane and the opposing traffic travelling to the Bowen Bridge, can provide a mitigation to achieve an adequate level of performance, but will instigate a delay to motorists traveling from Grass Tree Hill Road to the Bowen Bridge. A possible traffic signal layout is shown in diagram 8.0, which includes dual right turn lanes.

Modelling in table 9.6 indicates that traffic signals are predicted to provide a suitable level of traffic performance of LOS C for all three options.

Table 9.6 – Modelling comparison for Bowen Bridge right turn movement

Period	Option	Total vehicles	DOS	Max delay	LOS	Max Queue
Morning peak	Tivoli Green	2,170	0.675	23.4 secs	C	73.9 metres
	Option one	2,176	0.675	23.4 secs	C	73.9 metres
	Option two	2,213	0.675	23.7 secs	C	73.9 metres
	Option three	2,230	0.675	23.8 sec	C	73.9 metres
Evening peak	Tivoli Green	2,746	0.781	19.1 secs	B	57.5 metres
	Option one	2,784	0.781	20.1 secs	C	57.5 metres
	Option two	2,859	0.849	23.3 secs	C	57.5 metres
	Option three	3,129	0.801	22 secs	C	82 metres

## 10. Conclusion

Manual traffic survey data has determined that the highway between Compton Road and Grass Hill Road roundabout is busy, but motorists are receiving an appropriate level of service, including at junctions along this highway section.

Residential development within the Old Beach area has created significant commuter traffic peaks in both the morning and evening periods, and the highway is becoming an urban arterial road, and an extension of the greater Hobart urban arterial road network.

Once Tivoli Green development is completed, the increase in traffic along the highway is predicted to cause two sections of the highway to provide a poor level of service. The first section is at the junction of the Bowen Bridge with the highway. In the evening peak as motorists return to Old Beach, the length of the traffic queue is predicted to extend beyond the length of the dedicated right turn lane, and queuing in the through traffic lane is undesirable from a crash risk perspective. Traffic modelling demonstrates that providing traffic signals at this location will alleviate the queueing problem, with the signals having sufficient capacity to cater for future traffic growth.

The second location is at the southern junction of Otago Bay with the highway, the two-way traffic flow in the morning peak is predicted to make it challenging for motorists to turn right out of the junction, and further investigation is required to determine the feasibility of providing a dedicated turning facility, so motorists only need to select a gap in the northbound traffic flow.

For the purpose of this assessment, it is assumed that infrastructure improvements at the above two locations have occurred. On this assumption this assessment predicts the highway has the ability to absorb a moderate increase in traffic, which is achieved under option two, where an additional 580 residential lots could be generated from rezoning.

To achieve this moderate increase, additional infrastructure improvements would be necessary. Firstly, an additional exit lane out of Old Beach Road, and secondly improvements at the roundabout of Clive and Fouche Avenues. The roundabout capacity and performance could be improved, by providing isolated additional traffic lanes on the highway through the roundabout, or alternatively replacing the roundabout with traffic signals.

This assessment concludes that moderate infrastructure improvements should be considered at two locations, to facilitate safe and efficient traffic movements to accommodate the increase in traffic demand, generated by the Tivoli Green development. These improvements should occur over the next few years, to align with the incremental demand from Tivoli Green. On completion of these improvements, the highway is predicted to have sufficient capacity to accommodate further traffic growth, which could be generated from rezoning land in Old Beach to provide an additional 580 lots.

## 11. Appendix A – Traffic analysis of existing highway conditions

### 11.1 Compton Downs and East Derwent Highway junction

The morning peak hour occurred between 7:30am and 8:30am, where 644 vehicles were recorded traveling along the highway in a southbound direction towards the Bowen Bridge, with 287 vehicles travelling in the opposite direction. During the evening 589 vehicles were recorded travelling northbound, and 387 travelling southbound.

Compton Road generated a low number of vehicle movements, with 11 vehicles in the morning peak hour and 20 in the evening.

Compton Road intersects the highway at a standard T-Junction, with one traffic lane in each direction along the highway, and a short (50 metres long) dedicated right turn lane into Compton Road.

Table 11.1 – Traffic flows for Compton Road with East Derwent Highway

	Southbound East Derwent Highway	Northbound East Derwent Highway	Right from E/Derwent Hwy into Compton Rd	Left from E/Derwent Hwy into Compton Rd	Left from Compton Rd into E/Derwent Hwy	Right from Compton Rd into E/Derwent Hwy
7:30am to 7:45am	149	74	0	0	0	2
7:45am to 8:00am	180	75	0	0	0	1
8:00am to 8:15am	186	76	1	0	1	3
8:15am to 8:30am	129	62	0	0	1	2
8:30am to 8:45am	93	62	0	3	0	0
8:45am to 9:00am	82	59	0	0	0	1
<b>Peak hour totals</b>	<b>644</b>	<b>287</b>	<b>1</b>	<b>0</b>	<b>2</b>	<b>8</b>
<b>Total Morning Survey</b>	<b>819</b>	<b>408</b>	<b>1</b>	<b>3</b>	<b>2</b>	<b>9</b>
4:00pm to 4:15pm	79	116	0	3	0	1
4:15pm to 4:30pm	88	171	0	1	0	3
4:30pm to 4:45pm	99	155	2	4	0	3
4:45pm to 5:00pm	121	147	0	1	2	0
<b>Total Afternoon Survey</b>	<b>387</b>	<b>589</b>	<b>2</b>	<b>9</b>	<b>2</b>	<b>7</b>

The traffic modelling of the junction indicates the traffic performance for the morning and evening peak hour periods is similar, with highway users receiving a high level of performance with free-flowing conditions and vehicles turning off the highway not impeding the highway traffic flow.

Compton Road motorist must give way to traffic travelling along the highway, with motorists turning right needing to select a gap in both directions of traffic, which can be challenging in peak periods. In both peak periods the level of service is currently operating at level of service LOS C, with acceptable average delays of less than 17 seconds, and no notable traffic queues due to the low number of vehicles leaving the area.

Table 11.1A – Intersection and highway performance

Period	Intersection		SB	NB	Level of service for highway users			
	Total vehicles	DOS			Left off Hwy		Right off Hwy	
					Delay	LOS	Delay	LOS
Morning	943	0.294	A	A	5.6 secs	A	6.9 secs	A
Evening	996	0.327	A	A	5.6 sec	A	8.9 secs	A

Table 11.1B – Compton Road traffic performance

Period	Left out		Right Out		Maximum queue length
	Ave delay	LOS	Ave delay	LOS	
Morning	6.5 secs	A	15.5 secs	C	0.6 metres
Evening	8.1 secs	A	16.8 secs	C	0.6 metres

## 11.2 Old Beach Road and East Derwent Highway junction

At the junction of Old Beach Road and the highway there is one traffic lane in each direction, with a dedicated right turn lane (55 metres long) into Old Beach Road.

The traffic flows at the junction are detailed in the table below, with Old Beach Road generating 171 vehicle movements in the morning peak hour, and 146 vehicle movements in the evening peak. During the morning peak 96 percent of the vehicles leaving Old Beach Road turned left toward the Bowen Bridge. While in the evening 91 percent of vehicles entering Old Beach Road turned right from Bowen Bridge.

Table 11.2A – Traffic flows for Old Beach Road with East Derwent Highway

Time	Northbound on East Derwent Hwy	Southbound on East Derwent Hwy	East Derwent Hwy Left into Old Beach Rd	East Derwent Hwy Right into Old Beach Rd	Left from Old Beach Rd into East Derwent Hwy	Right from Old Beach Rd into East Derwent Hwy
7:30am to 7:45am	133	73	0	5	27	1
7:45am to 8:00am	181	76	1	9	40	3
8:00am to 8:15am	195	76	1	7	43	1
8:15am to 8:30am	134	67	0	5	28	0
8:30am to 8:45am	91	69	2	10	15	0
8:45am to 9:00am	78	54	1	9	8	1
Peak hour	643	292	2	26	138	5
<b>Total Morning Survey</b>	<b>812</b>	<b>415</b>	<b>5</b>	<b>45</b>	<b>161</b>	<b>6</b>
4:00pm to 4:15pm	130	77	14	5	8	0
4:15pm to 4:30pm	179	92	27	1	6	1
4:30pm to 4:45pm	151	102	17	1	9	0
4:45pm to 5:00pm	147	111	27	4	12	0
5:00pm to 5:15pm	129	71	21	3	12	5
5:15pm to 5:30pm	132	99	37	2	13	1
Peakhour	606	376	92	9	39	6
<b>Total Afternoon Survey</b>	<b>868</b>	<b>552</b>	<b>143</b>	<b>16</b>	<b>60</b>	<b>7</b>

The traffic modelling of the junction indicates the traffic performance for the morning and evening peak hour periods is similar, highway users received a high level of performance with free-flowing conditions, with traffic turning off the highway not impeding the highway traffic flow.

Old Beach Road motorist must give way to traffic travelling along the highway, with the dominant movement in the morning being a left turn, where motorists turning left received a high level of service at LOS A, and five motorists turning right out receiving an acceptable level of service at LOS C, with the average delay for the right turner being 18.4 seconds.

During the evening peak there was a significant right turn movement into Old Beach Road, the right turning vehicles received a high level of service LOS A, as the southbound highway traffic flow was reasonably low providing suitable turning gaps. The maximum queue length of the right turning vehicles is predicted to be 8.1 metres, which creates no adverse impact as the right turn lane is 55 metres long.

Once again, vehicles turning right out of Old Beach Road incur a slight delay of 19 seconds, due to the need to pick a gap in both traffic flows along the highway.

Although Old Beach Road generated a moderate number of vehicle movements, there were no traffic capacity issues, and all motorists received an acceptable level of traffic performance.

Table 11.2B – Intersection and highway performance

Period	Intersection		Level of service for highway users					
	Total vehicles	DOS	SB	NB	Left off Hwy		Right off Hwy	
					Delay	LOS	Delay	LOS
Morning	1,106	0.352	A	A	5.6 secs	A	9.2 secs	A
Evening	1,128	0.338	A	A	6.9 secs	A	7.7 secs	A

Table 11.2C – Old Beach Road traffic performance

Period	Left out		Right Out		Maximum queue length
	Ave delay	LOS	Ave delay	LOS	
Morning	9 secs	A	18.4 secs	C	5.1 metres
Evening	6.9 secs	A	19.6 secs	C	1.5 metres

### 11.3 East Derwent Highway roundabout with Fouche and Clives Avenues

Either side of the highway there are substantial residential developments, extending from both Fouche and Clives Avenues, with a roundabout provided to manage traffic flows, which interrupts the free-flowing highway conditions.

The roundabout has one traffic lane on each approach, and an inner core traffic island diameter of 25 metres, with side roads intersecting at approximately ninety degrees, which provides a reasonably efficient roundabout.

The roundabout is located south of both Compton and Old Beach Road, in between these nodes there is two side roads that service the Old Beach water side residential catchment.

Table 11.3A – Traffic flows for roundabout at Clives and Fouche Avenues

Time	Southbound on East Derwent Hwy	Northbound on East Derwent Hwy	East Derwent Hwy Right into Clives Ave	East Derwent Hwy Left into Clives Ave	East Derwent Hwy Right into Fouche Ave	East Derwent Hwy Left into Fouche Ave	Clives Ave Right into East Derwent Hwy	Clives Ave Left into East Derwent Hwy	Clives Ave straight into Fouche Ave	Fouche Ave Right into East Derwent Hwy	Fouche Ave Left into East Derwent Hwy	Fouche Ave straight into Clives Ave
7:30am to 7:45am	144	42	1	2	1	3	9	33	0	37	2	2
7:45am to 8:00am	210	49	2	3	0	6	5	32	1	51	1	0
8:00am to 8:15am	279	60	4	2	1	0	2	51	1	60	4	0
8:15am to 8:30am	176	50	5	2	0	1	3	22	2	39	3	0
8:30am to 8:45am	109	60	3	1	7	5	3	17	1	17	6	0
8:45am to 9:00am	82	50	11	2	1	9	3	10	1	13	2	1
peak hour	809	201	12	9	2	10	19	138	4	187	10	2
Total Morning Survey	1000	311	26	12	10	24	25	165	6	217	18	3
4:00pm to 4:15pm	77	186	17	3	2	21	6	9	0	2	2	1
4:15pm to 4:30pm	73	202	21	5	5	19	7	8	3	6	3	2
4:30pm to 4:45pm	88	160	17	10	8	17	6	8	0	3	4	0
4:45pm to 5:00pm	86	172	18	6	10	27	6	10	1	11	4	3
5:00pm to 5:15pm	72	140	23	3	8	26	6	0	1	9	5	2
5:15pm to 5:30pm	80	180	31	15	12	30	4	9	2	9	2	1
Peak hour	326	652	89	34	38	100	22	27	4	32	15	6
Total Afternoon Survey	476	1040	127	42	45	140	35	44	7	40	20	9

Traffic modelling indicates that during the morning, the roundabout caters for 1,403 vehicle movements, operating at a Degree of Saturation of 0.67. Overall, motorists are receiving an acceptable level of traffic performance ranging between LOS A and B.

With highway motorists requiring to give way to side traffic, they incur a slight traffic delay, with the average delay being 6.8 seconds for southbound through motorists travelling towards the Bowen Bridge. Because of the traffic demand, the maximum queue length for this southbound approach is estimated at 51 metres or 6.8 vehicles.

The roundabout is achieving its desirable outcome of sharing delays to all approaches, and there is sufficient traffic flow on all legs to provide efficient roundabout outcomes.

In the evening peak hour, the roundabout is also providing all motorists will an acceptable level of traffic performance ranging between LOS A and B. The roundabout is operating with no significant delays or excessive traffic queues.

Table 11.3B – Summary of roundabout traffic modelling

Period	Total vehicles	DOS	Average delay	LOS	Maximum queue length
Morning	1403	0.675	6.9 secs	A	51.5 metres
Evening	1345	0.571	5.3 secs	A	39 metres

### 11.4 East Derwent Highway and Bowen Bridge interchange

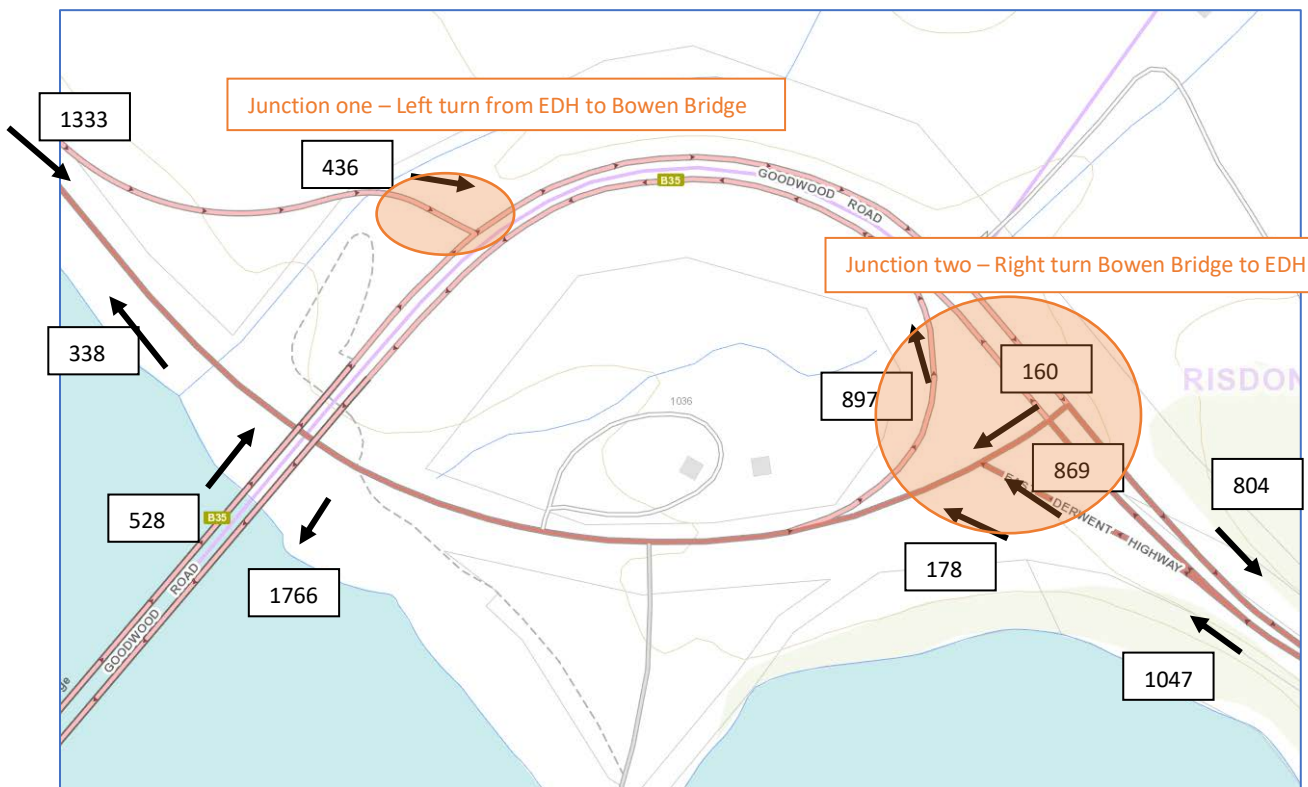
The interchange is quite large, with two separate junctions to be analysed, the left turn from the highway onto Bowen Bridge (junction one), and the right turn from Bowen Bridge to the highway (junction two).

Southbound traffic on the highway proceeding across the river, are provided with a high-level traffic arrangement, where vehicles loop underneath the bridge, and then onto the Bowen Bridge through an added lane, with no need to give way to any other traffic flow.

Southbound traffic proceeding to Geilston Bay, need to exit left from the highway, then turn left onto the Bowen Bridge through a give way junction.

Vehicles travelling from the Bowen Bridge to the highway towards Old Beach, are required to undertake a right turn and give way to traffic travelling onto the Bowen Bridge.

Diagram 11.4A - Morning peak hour flows at East Derwent Highway and Bowen Bridge interchange

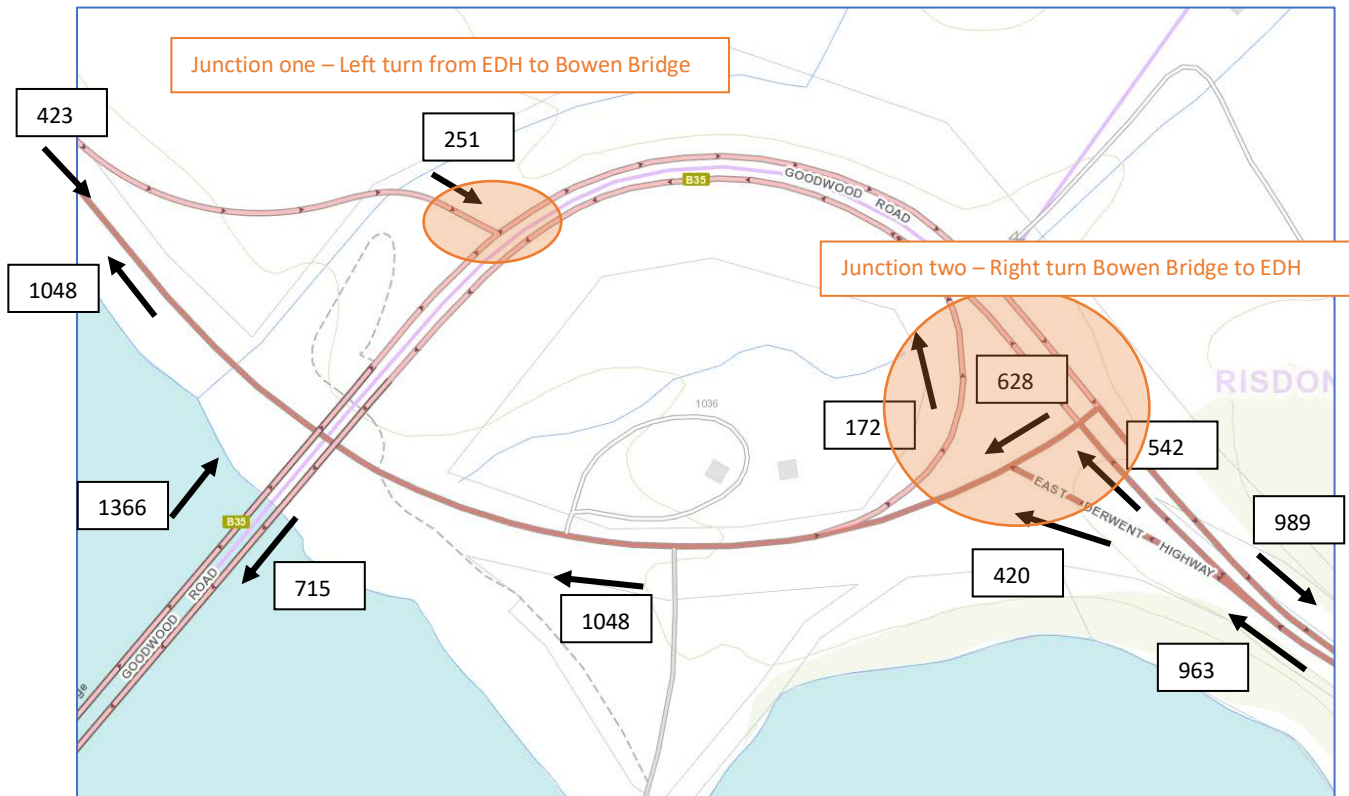


In the morning peak, 68 percent of the southbound highway traffic proceeds across the Bowen Bridge, while the other 32 percent travels towards Geilston Bay. In the opposite direction (northbound), there is 338 vehicles heading towards Old Beach.

At this interchange, there is a significant traffic flow of 869 vehicles travelling onto the Bowen Bridge from Geilston Bay, with the two westbound lanes on the Bowen Bridge carrying 1,766 vehicles towards the Brooker Highway.



Diagram 11.4B - Evening peak hour flows at East Derwent Highway and Bowen Bridge interchange



In the evening peak, vehicles travelling to Old Beach from the Bowen Bridge, must undertake a right turn on the highway and loop underneath the bridge. A moderate number of vehicles undertook this turn and were delayed by Geilston Bay traffic proceeding onto the Bowen Bridge, causing queues. The right turn lane for this manoeuvre is 100 metres long and occurs on a sweeping curve, with site observations finding that the queue occasionally extends beyond the length of the right turn lane, spilling into the through traffic lane.

Traffic performance at junction one

Traffic modelling of junction one, indicates that all motorists receive the highest level of performance at LOS A, for both the morning and evening peak. Although the interchange is busy, there is sufficient gaps to facilitate efficient traffic flow, mainly due to two traffic lanes operating on the Bowen Bridge.

Table 11.4A – Traffic modelling for junction one

Period	Intersection			Left turn onto Bowen Bridge				
	Vehicles	DOS	LOS	Vehicles	DOS	Ave delay	LOS	Max queue
Morning	1,103	0.155	A	499	0.401	7 secs	A	16.3m
Evening	1,617	0.350	A	251	0.321	9.6 secs	A	10.3m

Traffic performance at junction two

At the second junction, there are two give way controls, the right turn from the Bowen Bridge onto the highway (from Brooker Highway to Old Beach), and the left turn from the highway (from Geilston Bay to Old Beach). The other movements are free flowing, and because they are unimpeded, they operate at LOS A.

The traffic modelling analysed the two give way controls, and during the morning and evening peaks the right turn movement operates at an appropriate level of service of LOS C. During the morning peak the average delay is 15.5 seconds, with the maximum queue being 11.2 metres.

During the evening peak the delay extends to 17.8 seconds, with a maximum queue length of 77.8 metres, this right turn is operating at a high degree of saturation at 0.825, which indicates limited spare capacity.

Overall, the interchange is busy, but motorists are receiving an appropriate level of performance

Table 11.4B – Traffic modelling for junction two

Period	Right turn from Bowen Bridge to EDH					Left turn from EDH to EDH				
	Veh	DOS	Delay	LOS	Queue	Veh	DOS	Delay	LOS	Queue
Morning	160	0.327	15.5sec	C	11.2m	178	0.128	6.2sec	A	4.0m
Evening	628	0.825	17.8sec	C	77.4m	420	0.519	11.2sec	B	24.2m

11.5 Distribution of trips arriving or leaving the residential catchments

Each developed property generates traffic movements, and the RTA Guide specifies on average each rural dwelling could generate 0.7 trips in the peak hour periods. In the morning period the collected traffic survey data indicates, 88 percent of these trips are leaving the property, with 12 percent arriving.

In the evening peak the collected survey data indicates 71 percent of the trips are arriving to the properties, with 29 percent of the trips leaving.

Table 11.5 – Trip distribution of side roads (in or out)

Road	Morning peak hour			Evening peak hour		
	In	Out	Total	In	Out	Total
Compton Rd	2	10	12	11	9	20
Old Beach Rd	28	143	171	101	45	146
Fouche Ave	16	199	215	129	53	182
Clives Ave	23	161	184	142	53	195
<b>Total</b>	<b>69</b>	<b>513</b>	<b>582</b>	<b>383</b>	<b>160</b>	<b>543</b>
<b>Percentage</b>	<b>12%</b>	<b>88%</b>		<b>71%</b>	<b>29%</b>	

### 11.6 Trip distribution – generating southbound or northbound vehicle movements

From the survey data it was established that during the morning peak period, 93 percent of all vehicles leaving the side roads travelled in a southerly direction towards the Bowen Bridge.

While in the evening peak period, 76 percent of vehicles arrived from the Bowen Bridge direction.

Table 11.6 – Trip distribution of side streets (southbound or northbound)

Road	Morning peak			Evening peak		
	Bridgewater	Bowen Bridge	Total	Bridgewater	Bowen Bridge	Total
Compton Rd	2	8	10	2	9	11
Old Beach Rd	5	138	143	9	92	101
Fouche Ave	10	187	197	38	100	142
Clives Ave	19	138	157	34	89	129
<b>Total</b>	<b>36</b>	<b>471</b>	<b>507</b>	<b>83</b>	<b>290</b>	<b>383</b>
<b>Percentage</b>	<b>7%</b>	<b>93%</b>		<b>24%</b>	<b>76%</b>	

M. Whelan  
PO Box 270  
BRIGHTON TAS 7030  
wwtas@bigpond.net.au

1/5/23

General Manager  
Brighton Council  
Tivoli Road  
GAGEBROOK TAS 7030

Dear Madam,

**DEVELOPMENT APPLICATION – FIREWOOD PROCESSING – 252 ELDERLSIE ROAD,  
BRIGHTON – WWTAS PTY LTD**

I refer to the above matter.

Attached are the following documents relating to a new development application at 252 Elderslie Road, Brighton:-

- Council application form and covering letter
- Photos of processor
- Processor specifications
- Site plan
- Location plan
- Copy of the Certificate of Title and Folio Plan

The application is for the processing and distribution of firewood. Timber will be delivered to the site by log truck in a maximum of 6 metres lengths and then processed using a Cord King CS2740 (Model 80) processor.

The Cord King CS2740 has the following specifications:-

- 134 HP Deutz turbo diesel engine - T4F (smaller than the current excavator)
- 60" Carbide tooth circular saw with 27" cutting capacity
- 58-ton splitter
- 12 - way Hydraulic adjustable quick change box wedge
- Extra 16-way hydraulic adjustable box wedge
- 20' infeed conveyor
- 4-leg Hydraulic folding live deck
- Dual Drive live deck
- Extra Large Heated Operators Cab
- Trap doors for last piece assist (easy end-of-log cutting)
- Hydraulic log stop (adjustable 6"-24" length)
- Auto Split (One Button split)
- Auto Clamping
- End Cut Bypass door
- Hydraulic oil coolers: 2 X 48,000 BTU/Hr
- 16K lbs tandem axles with Electric brakes and running lights
- Pintle Hitch
- 30' Dual chain, stand-alone offloading conveyor
- Grizzly Debris Separator

The Cord King CS2740 has the following performance:-

- Production Rate: 29m<sup>3</sup>/hr
- Cycle Time (cut & split): every 3.5 seconds
- Max Log Diameter: 27"
- Max Log Length: 40' (butt on the deck)
- Estimated Fuel Consumption: 10 l/hr
- Weight: 7.25t

Contracts with supplies will provide approximately 1-2 log truck loads (30 tonnes) of logs per day. The average will however be less than 7 loads per week. Timber will be processed on-site and then generally delivered in bulk 2 tonnes loads. We have purchased a HINO 300 series vehicle (small truck) for deliveries. A second truck will be purchased when the timber begins to dry out and sales have increased. The trucks are 5.2 metres long and can be driven with a "C" class licence. The development will process at full capacity a total of 210 tonnes per week. That would equate to a maximum of 105 (2 tonne) loads a week. This equates to about 18 loads (by a vehicle under 5.5 metres) per day or the equivalent of 2 loads per hour.

The site is the unused section of the flat quarry floor and will utilise approximately 2200m<sup>2</sup> of area plus a shared access. It is level site, which is cleared of vegetation and has a solid rock foundation. The site is completely separated from the remaining limited quarry operations which utilised only a small part of the remaining 1.7ha. There is adequate access, turning and parking at the quarry site.

The current quarry has been in operation for more than 60 years and can produce up to 4999m<sup>3</sup> per annum. This equates to approximately 625 truck loads (vehicles over 5.5 metres long) a year that have operated at the site. The existing quarry uses a Hyundai R210 C-7 Excavator which produces 150hp. That same machine will be utilised for the unloading of log trucks. The processor has a smaller engine than this machine.

The processor is moveable and will be towed in front of the stacked timber. The timber would be processed and heaped on a hard stand area or loaded by conveyor. Currently the hard stand is formed in gravel, but it will later be sealed with bitumen. The timber is sustainably resourced and processed green.

The processor uses a 60" circular saw to cut the timber to length and the logs are delivered in 6 metre lengths, so there is no need to use chainsaws for the cutting of timber to firewood length.

The proposed hours of processor operation are less than the hours permitted for the existing quarry:-

- Monday to Friday 8am to 5pm
- Saturday 9am - 4pm

The development is exempt from the bushfire code as it is not a subdivision, vulnerable or hazardous use.

Please do not hesitate to contact me if you have any further queries.

Regards



Michael Whelan

WWTAS Pty Ltd

0409416353

SEARCH OF TORRENS TITLE

VOLUME 31166	FOLIO 1
EDITION 5	DATE OF ISSUE 06-Sep-2016

SEARCH DATE : 18-Apr-2023

SEARCH TIME : 07.25 AM

DESCRIPTION OF LAND

Parish of MELVILLE, Land District of MONMOUTH  
 Lot 1 on Diagram 31166  
 Being the land described in Conveyance No. 63/0633  
 Derivation : Part of 500 Acres Gtd. to J. Ferguson  
 Prior CT 4360/56

SCHEDULE 1

M589127 TRANSFER to W W TAS PTY LTD Registered 06-Sep-2016  
 at noon

SCHEDULE 2

Reservations and conditions in the Crown Grant if any  
 TOGETHER WITH a right of carriageway over the strip of land  
 marked "Right of Way 7.32 metres wide" on D 31166

UNREGISTERED DEALINGS AND NOTATIONS

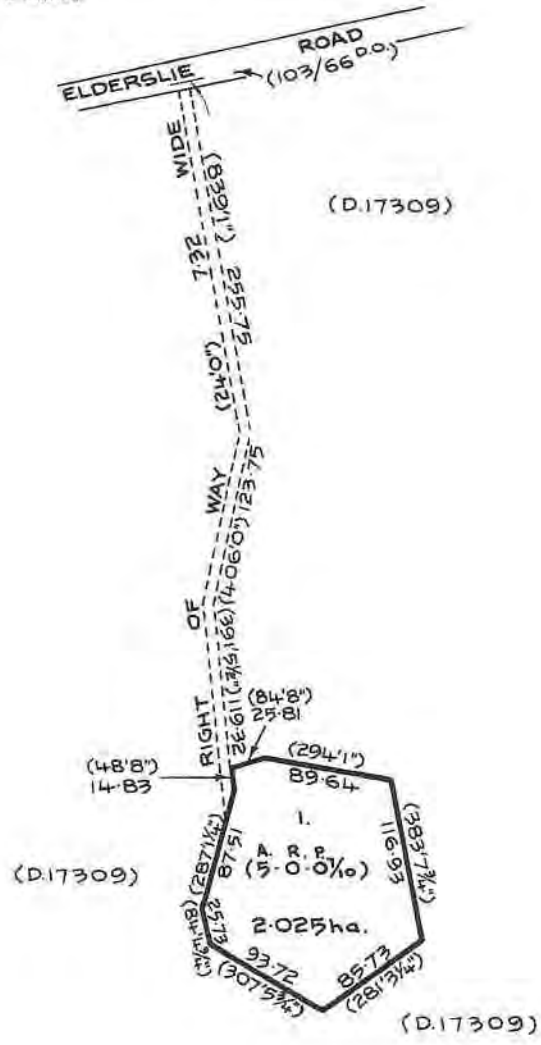
No unregistered dealings or other notations

APPROVED: 29 APR 1987 <i>Brendan Lee</i> ACTING RECORDER OF TITLES	CONVERSION PLAN CONVERTED FROM 96/56.D.O.	REGISTERED NUMBER <b>D.31166</b>
FILE NUMBER Y.7512.	GRANTEE PART OF 500.0.0 JOSHUA FERGUSON.	DRAWN B. HILL. 15.4.87

SKETCH BY WAY OF ILLUSTRATION ONLY

CITY/TOWN OF  
LAND DISTRICT OF MONMOUTH.  
PARISH OF MELVILLE.  
LENGTHS ARE IN METRES. NOT TO SCALE.  
LENGTHS IN BRACKETS IN METRES/FEET & INCHES.

TASMAP MUNICIPAL CODE NO. 12	LAST TASMAP UPJ NO. 2002	LAST SURVEY PLAN NO.
ALL EXISTING SURVEY NUMBERS TO BE CROSS REFERENCED ON THIS PLAN		

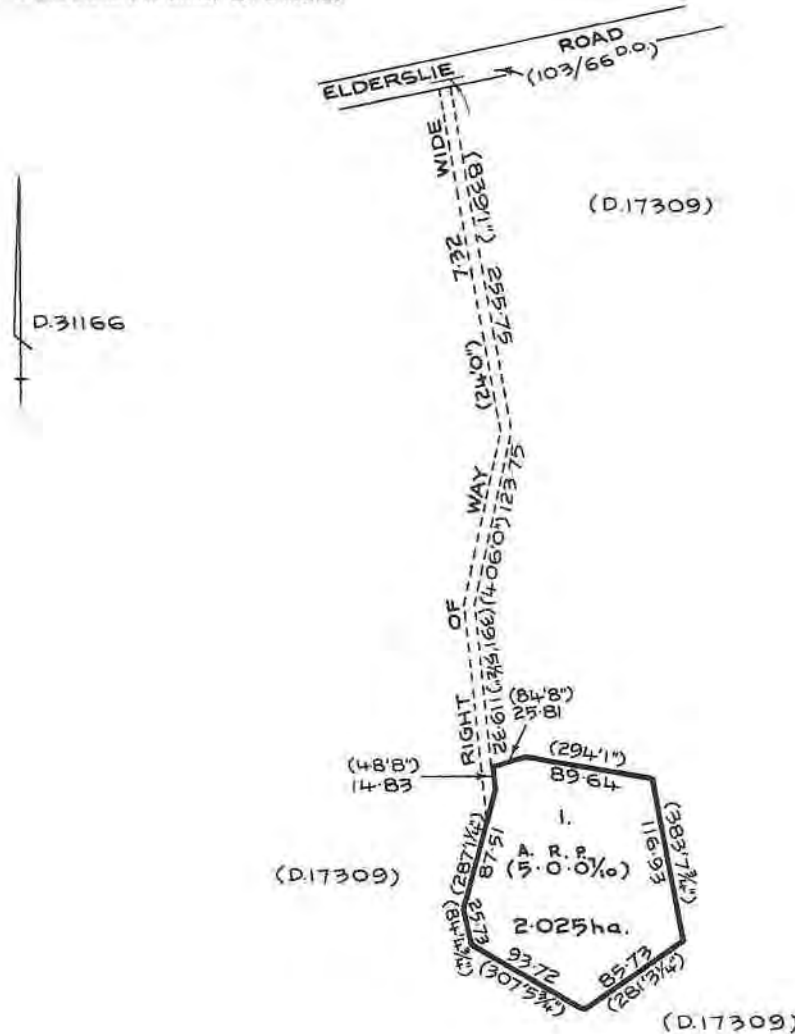


APPROVED 29 APR 1987 <i>Banding Lee</i> ACTING RECORDER OF TITLES	CONVERSION PLAN CONVERTED FROM 95/56 D.O.	REGISTERED NUMBER <b>D.31166</b>
FILE NUMBER Y.7512.	GRANTEE PART OF 500-0-0 JOSHUA FERGUSON.	DRAWN B. HILL 15-4-87

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CITY/TOWN OF  
LAND DISTRICT OF MONMOUTH.  
PARISH OF MELVILLE.  
LENGTHS ARE IN METRES, NOT TO SCALE.  
LENGTHS IN BRACKETS IN LINKS/FEET & INCHES.

TASMAP MUNICIPAL CODE NO. 12	LAST TASMAP UPI NO. 2002	LAST SURVEY PLAN NO.
ALL EXISTING SURVEY NUMBERS TO BE CROSS REFERENCED BY THIS PLAN		







252

40 m



Ruler ✕

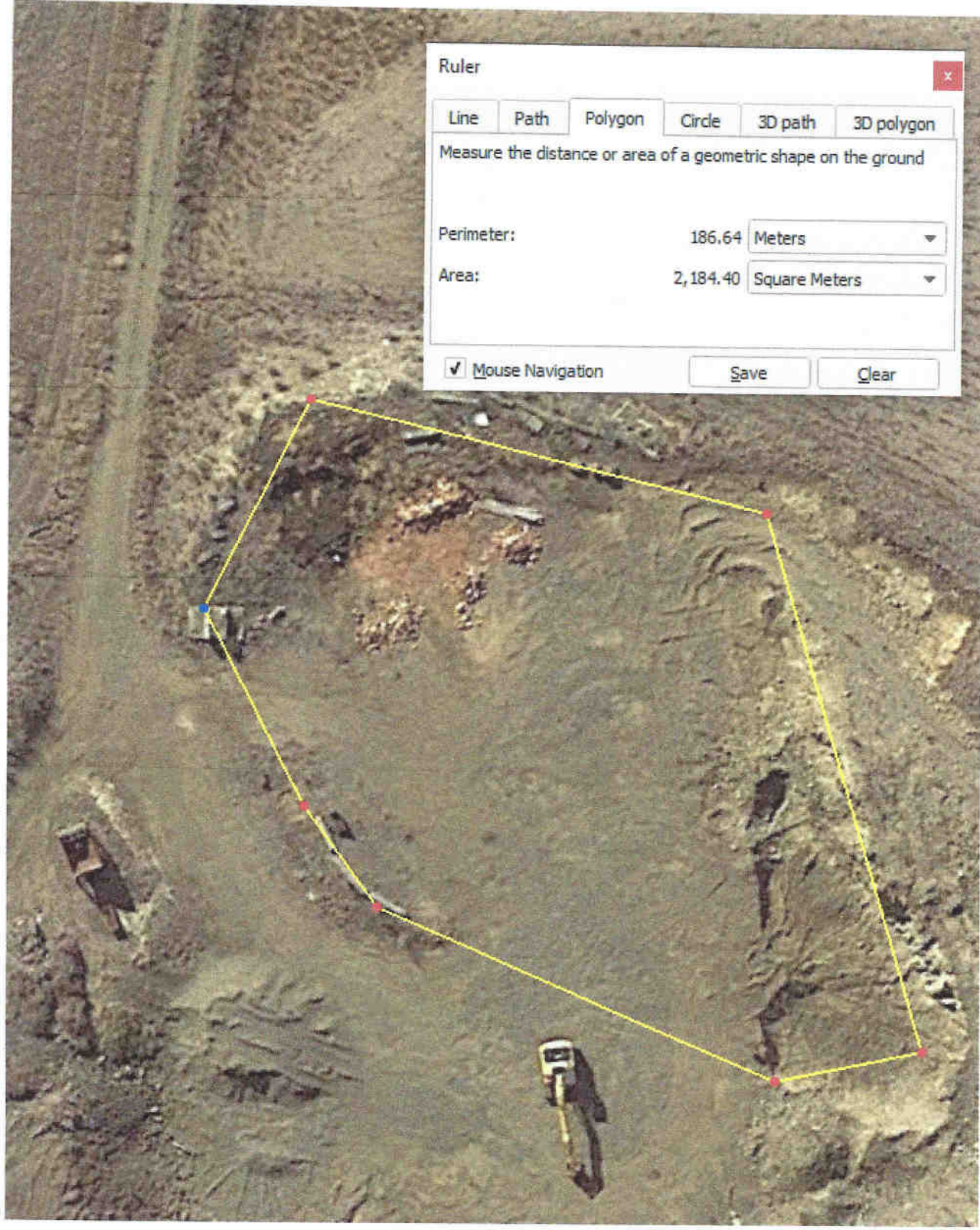
Line Path **Polygon** Circle 3D path 3D polygon

Measure the distance or area of a geometric shape on the ground

Perimeter: 186.64 Meters ▼

Area: 2,184.40 Square Meters ▼

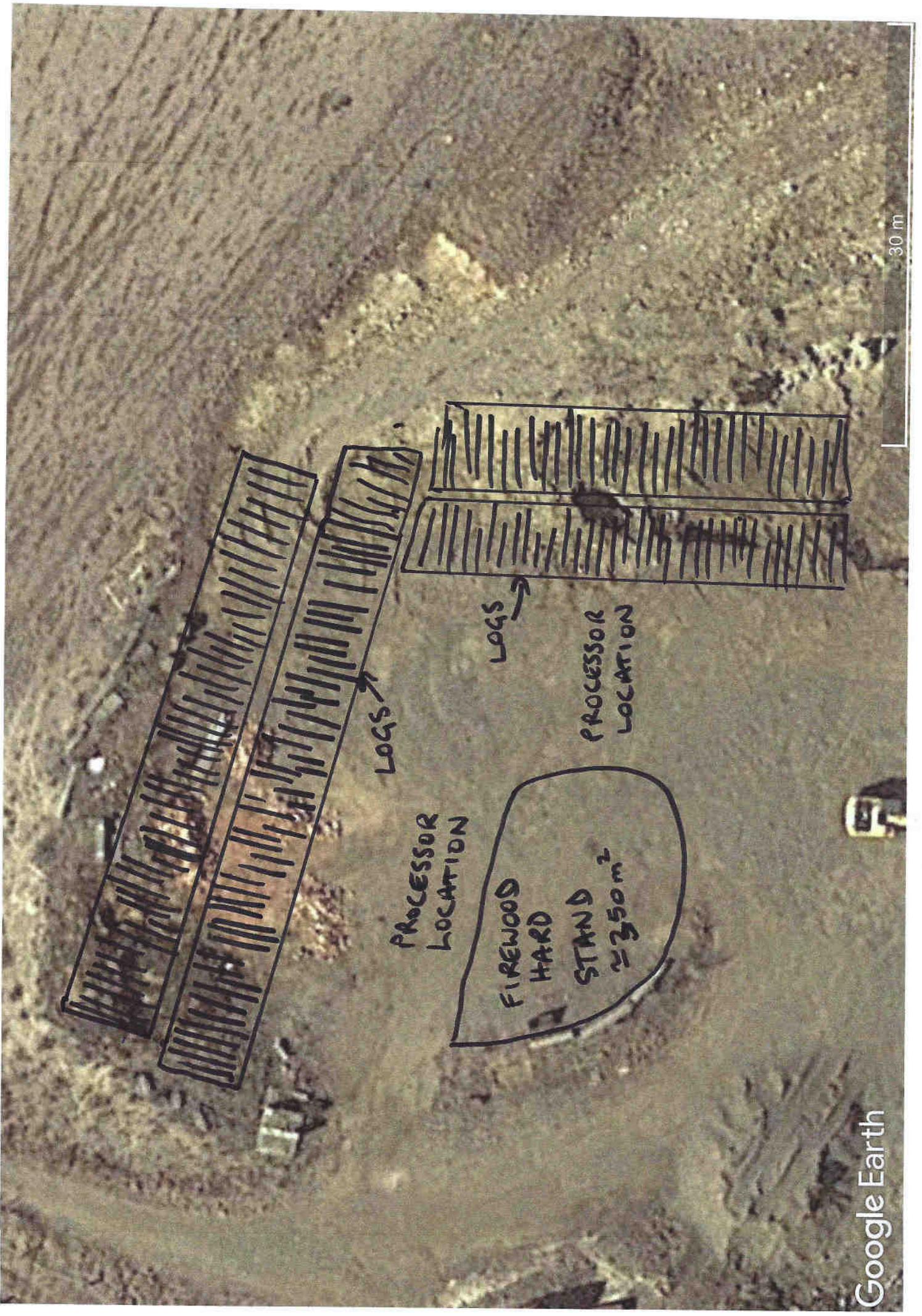
Mouse Navigation Save Clear





70 m

252



30 m

LOGS

LOGS

PROCESSOR  
LOCATION

PROCESSOR  
LOCATION

FIREWOOD  
HARD  
STAND  
≈ 350 m<sup>2</sup>

W W Tas Pty Ltd

Proposed Firewood Processing

1181 Elderslie Road  
BROADMARSH TAS 7030

Environmental Management Plan

## Contents

Background.....	3
Proposed Operation.....	3
Environmental Issues.....	4
Noise mitigation.....	5
Stormwater.....	5
Fuel storage and Machine Maintenance.....	5
Traffic.....	6
Dust management.....	6
Storage of hazardous chemicals.....	6
On site safety measures.....	6
Fire.....	6
Summary.....	6
Figure 1: Site Layout.....	3
Figure 2: Cord King showing circular saw and splitting bar.....	4
Figure 3: Nearest Residences.....	5

## Background

WW Tas Pty Ltd are proposing to operate a firewood facility at 252 Elderslie Road, Brighton, Tasmania. The proposed site is in an old quarry. Brighton Council (Council) requested the preparation of an environmental management plan (EMP) for the operation, to support the Development Application (DA) for this proposal.

## Proposed Operation

The site layout is shown in Figure 1. It is proposed that approximately 3,000 tonnes of logs will be brought onto site per annum. After processing and drying, this will produce approximately 2,750 tonnes of firewood for sale.

Logs (maximum 6 metres in length) will be processed into firewood using a Cord King machine (Figure 1). The Cord King cuts the logs to length using a large circular saw, and then splits them using a ram to push the wood through a splitting bar arrangement (Figure 2). This operation means there is no need for chainsaws to be generally used on site. However, chainsaws may on occasion need to be used to unblock the wedge or at times to cut any major anomalies out of the timber.

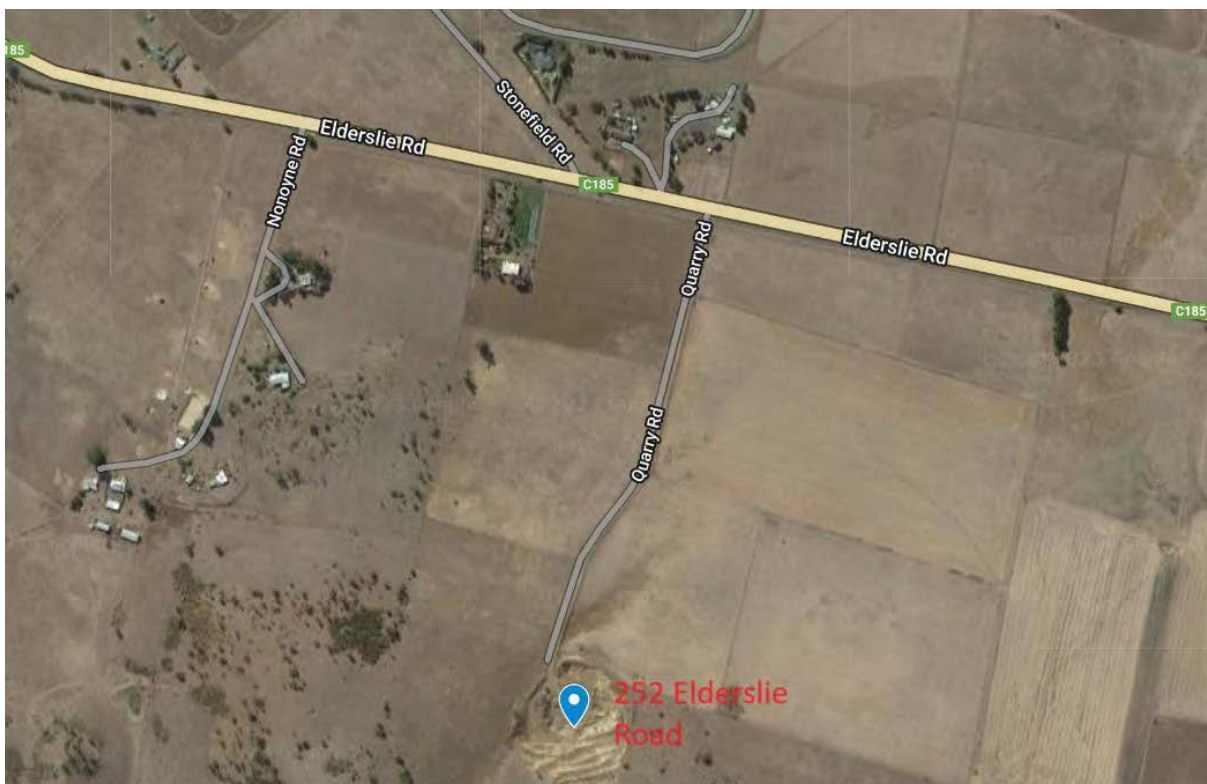


Figure 1: Site Layout





**Figure 2: Cord King showing circular saw and splitting bar**

The machine produces approx. 3m<sup>3</sup> each of sawdust and timber sticks/shavings a day. The sawdust will be collected in larger 3m<sup>3</sup> or 6m<sup>3</sup> bins direct from the saw to prevent spillage and then placed in smaller 1m<sup>3</sup> bins for storage before delivery to local horse stables in Brighton.

The sticks/shavings are collected off a grizzly debris sorter in 1m<sup>3</sup> bins before direct delivery to the public for mulch or "fire sticks". A small amount of waste which is collected around (generally under) the machine (approx. 1m<sup>3</sup> a week) will be sold as mulch (gum bark).

No wood waste will be burnt on-site.

The proposed hours of operation are Monday to Friday 8am to 5pm and Saturday 9am-4pm with no operations on public holidays.

Logs are stacked in two rows to create a noise barrier between the operation and nearby residences (Figure 3). Sufficient logs will be stored on site awaiting processing so that at least one row of logs always remains as a barrier.

## Environmental Issues

The identified environmental issues with their controls are provided below,

## Noise mitigation

The nearest residences to the proposed operation are over 450 metres away (Figure 3). Noise levels were measured using a phone app called Decibel X. This app allows measurements in Frequency Weighting A, B and C. Measurements were conducted in the presence of Brighton Council officers. The first measurements were made at noise monitoring site 1, on the Elderslie Road side of the log stack (Figure 3). The excavator was operating, then the log splitter was operating as well. The d(B)A readings did not exceed 80. The noise from the saw was audible and had the typical pitch generated by circular saws. A second set of readings were collected at the gate adjacent to Elderslie Road (Figure 3) with both the excavator and log splitter operating. Those readings were variable because of road traffic noise, but it appeared that noise levels from the quarry didn't exceed 70 d(B)A. The readings for both d(B)B and d(B)C were similar to the d(B)A ones. The saw was barely audible at the gate, but still had the same noise signature as the noise recorded adjacent to the log pile.

Traffic noise generally masked the noise from the quarry. This suggests that noise will not be an environmental nuisance to neighbours if operations are kept to the proposed hours (see above).



**Figure 3: Nearest Residences**

## Stormwater

The site slopes back into the old quarry face and rainwater soaks into the quarry floor. This means very little, if any, stormwater flows offsite.

## Fuel storage and Machine Maintenance

Machines will be refuelled from utility vehicle mounted storage tanks. Fuel will not be stored on site. Machines will be serviced on site (oil changes). Filters and waste oil will be disposed of at a recycling centre.

## Traffic

As described above, it is proposed to process approximately 3,000 tonnes of logs a year, to produce approximately 2,750 tonnes of firewood. Traffic movements are estimated as two trucks per week bringing in 60 tonnes of logs and approximately five truckloads of firewood leaving the site each working day.

Considering how busy Elderslie Road is, especially truck movements during the period that noise measurements were undertaken, this increase in truck movements is not expected to cause any significant increase in movements. The entrance to the site also has a good line of sight in each direction. It is therefore considered that traffic movements associated with the proposed activity will not adversely affect other road users.

## Dust management

The base of the quarry is compacted and does not produce significant amounts of dust. Any dust will be controlled using an on-site 2000l water tank with hose-reel. Additionally, any generated dust would impact on employees before it could cause environmental nuisance to others.

## Storage of hazardous chemicals

There will be no hazardous liquids on site other than diesel (see above)

## On site safety measures,

WW Tas have appropriate documentation and processes to comply with the *Work Health and Safety Regulations 2022* and the *Work Health and Safety (Transitional) Regulations 2022*. This includes signage and inductions. Visitors to the site are accompanied by an employee at all times.

## Fire

Fire represents a risk to machinery, unprocessed logs and firewood. The area is surrounded by pasture, but there is a risk of arson. There is also a small risk associated with machinery catching fire during operation, and vegetation at the edge of the quarry catching fire. To manage this risk, WW Tas:

- Are installing cameras that send photos remotely;
- Signage to this effect will be visible on site;
- The site is locked when not being used to prevent vehicle access.
- No fires will be lit on site;
- Fire extinguishers will be sited at each major machine;
- A small fuel reduction burn may be undertaken to remove grass at the edge of the quarry; and
- There will be an on-site 2000l water tank with hose-reel.

## Summary

WW Tas will undertake the following measures to ensure the proposed operation does not cause environmental nuisance to neighbours, or impact on the surrounding environment.

- The proposed hours are Monday to Friday 8am to 5pm and Saturday 9am-4pm with no operations on public holidays;

- Chainsaws will not be used on site, other than in rare occasions;
- No fuel will be stored on site other than in utility vehicle mounted tanks;
- Waste oil and filters will be disposed off-site at a recycling centre;
- Dust will be managed using a water cart; and
- Fire management will include on-site fire extinguishers, a water cart, a small fuel reduction and surveillance cameras.

SEARCH OF TORRENS TITLE

VOLUME 31166	FOLIO 1
EDITION 5	DATE OF ISSUE 06-Sep-2016

SEARCH DATE : 02-Nov-2023

SEARCH TIME : 09.14 AM

DESCRIPTION OF LAND

Parish of MELVILLE, Land District of MONMOUTH  
 Lot 1 on Diagram 31166  
 Being the land described in Conveyance No. 63/0633  
 Derivation : Part of 500 Acres Gtd. to J. Ferguson  
 Prior CT 4360/56

SCHEDULE 1

M589127 TRANSFER to W W TAS PTY LTD Registered 06-Sep-2016  
 at noon

SCHEDULE 2

Reservations and conditions in the Crown Grant if any  
 TOGETHER WITH a right of carriageway over the strip of land  
 marked "Right of Way 7.32 metres wide" on D 31166

UNREGISTERED DEALINGS AND NOTATIONS

No unregistered dealings or other notations

APPROVED 29 APR 1987 <i>Boundary Line</i> ACTING RECORDER OF TITLES	<b>CONVERSION PLAN</b> CONVERTED FROM 96/56.D.O.	REGISTERED NUMBER <b>D.31166</b>
FILE NUMBER Y.7512.	GRANTEE PART OF 500-0-0 JOSHUA FERGUSON.	DRAWN B. HILL. 15-4-87

SKETCH BY WAY OF ILLUSTRATION ONLY

CITY/TOWN OF  
LAND DISTRICT OF MONMOUTH.  
PARISH OF MELVILLE.  
LENGTHS ARE IN METRES. NOT TO SCALE.  
LENGTHS IN BRACKETS IN LINKS/FEET & INCHES

TASMAP MUNICIPAL CODE NO. 12	LAST TASMAP UPI NO. 2002	LAST SURVEY PLAN NO.
ALL EXISTING SURVEY NUMBERS TO BE CROSS REFERENCED BY THIS PLAN		

