Brighton Council

ATTACHMENTS

ORDINARY COUNCIL MEETING

16 JULY 2024

Brighton
going places

Brighton Council

MINUTES OF THE ORDINARY COUNCIL MEETING

OF THE BRIGHTON COUNCIL, HELD IN THE COUNCIL CHAMBERS,

COUNCIL OFFICES, 1 TIVOLI ROAD, OLD BEACH

AT 5.30P.M. ON TUESDAY, 18 JUNE 2024

PRESENT: Cr Gray; Cr Curran; Cr De La Torre; Cr Geard; Cr Irons; Cr McMaster; Cr Murtagh; Cr Owen and Cr Whelan

IN ATTENDANCE: Mr J Dryburgh (General Manager); Ms G Browne (Director Corporate Services); Mr C Pearce-Rasmussen (Director Asset Services); Mr D Allingham (Director Development Services) and Ms A Turvey (Manager, Community Development and Engagement)

1. Acknowledgement of Country

2. Apologies / Applications for leave of absence

All members were present.

3. Confirmation of Minutes

3.1 Ordinary Council Meeting

The Minutes of the previous Ordinary Council Meeting held on the 21st May 2024 are submitted for confirmation.

RECOMMENDATION:

That the Minutes of the previous Ordinary Council Meeting held on 21st May 2024, be confirmed.

DECISION:

Cr Curran moved, Cr Irons seconded that the Minutes of the previous Ordinary Council Meeting held on 21st May 2024, be confirmed.

CARRIED

VOTING RECORD

In favour	Against
Cr Curran	
Cr De La Torre	
Cr Geard	
Cr Gray	
Cr Irons	
Cr McMaster	
Cr Murtagh	
Cr Owen	
Cr Whelan	

3.2 Audit Panel Meeting

The Minutes of the Audit Panel Meeting held on the 15th March 2024 are submitted for confirmation.

RECOMMENDATION:

That the Minutes of the Audit Panel Meeting held on the 15th March 2024, be confirmed.

DECISION:

Cr Geard moved, Cr De La Torre seconded that the Minutes of the Audit Panel Meeting held on the 15th March 2024, be confirmed.

CARRIED

VOTING RECORD

In favour	Against
Cr Curran	
Cr De La Torre	
Cr Geard	
Cr Gray	
Cr Irons	
Cr McMaster	
Cr Murtagh	
Cr Owen	
Cr Whelan	

4. Declaration of Interest

In accordance with the requirements of Part 2 Regulation 8 of the L*ocal Government (Meeting Procedures) Regulations 2015*, the chairperson of a meeting is to request Councillors to indicate whether they have, or are likely to have, a pecuniary interest or conflict of interest in any item on the Agenda.

In accordance with Section 48(4) of the *Local Government Act 1993*, it is the responsibility of councillors to then notify the general manager, in writing, the details of any interest(s) that the councillor has declared within 7 days of the declaration.

Cr Owen declared an interest in item 13.5.

5. Public Question Time and Deputations

In accordance with the requirements of Part 2 Regulation 8 of the *Local Government (Meeting Procedures) Regulations 2015*, the agenda is to make provision for public question time.

There was no requirement for public question time.

6. Reports from Council

6.1 Mayor's Communications

The Mayor's communications are as follows:

22/5 Meeting with Homes Tasmania Board & CEO (GM in attendance)
23/5 Brighton Community Volunteering Awards
29/5 Meeting with Minister Duigan (GM in attendance)
3/6 Meeting with Andrew Jenner MP (GM in attendance)
4/6 Council Workshop
12/6 STRLUS Steering Committee Meeting
13/6 TasWaste (South) Special Local Government Forum
15/6 'The Walk' with Mr Peter Gutwein (along with Cr Owen, Cr Murtagh & Cr McMaster)
18/6 Council Meeting

RECOMMENDATION:

That the Mayor's communications be received.

DECISION:

Cr De La Torre moved, Cr Owen seconded that the Mayor's communications be received.

CARRIED

VOTING RECORD

In favour	Against
Cr Curran	
Cr De La Torre	
Cr Geard	
Cr Gray	
Cr Irons	
Cr McMaster	
Cr Murtagh	
Cr Owen	
Cr Whelan	

6.2 Reports from Council Representatives

- Cr Geard – Opening Broadmarsh Hall renovation of building for a Recovery Centre.
- Cr Geard – Attended Hobart Fire Management Committee on 18/6/24.
- Cr Geard – Review of fire management areas.
- Cr Irons – Attended Greater Hobart Homelessness Alliance meeting on 13/6/24.
- Cr Curran- Attended Drought Resilience Workshop in May.

RECOMMENDATION:

That the verbal reports from Council representatives be received.

DECISION:

Cr McMaster moved, Cr Irons seconded that the verbal reports from Council representatives be received.

CARRIED

VOTING RECORD

In favour	Against
Cr Curran	
Cr De La Torre	
Cr Geard	
Cr Gray	
Cr Irons	
Cr McMaster	
Cr Murtagh	
Cr Owen	
Cr Whelan	

7. Miscellaneous Correspondence

- Letter sent to Minister Street dated 30th May 2024 from the General Manager regarding a new gymnastics facility in Bridgewater.
- Letter sent to Minister Duigan dated 30th May 2024 from the General Manager regarding various topics.
- Proposed Housing Land Supply Consultation Package from the State Planning Office dated June 2024 regarding William Street, Brighton.
- Tasmanian Planning Commission Decision dated 9th April 2024 regarding RZ-2023-03 – 27 Scott Road, Bridgewater.
- Tasmanian Planning Commission Decision dated 10th May 2024 regarding RZ-2023-004 – Burrows Avenue Specific Area Plan.
- Tasmanian Planning Commission Decision dated 10th May 2024 regarding RZ-2022-05 – South Brighton Specific Area Plan.

8. Notification of Council Workshops

In accordance with the requirements of Section 8(2)(c) of the Local Government (Meeting Procedures) Regulations 2015.

One (1) Council workshop has been held since the previous Ordinary Council meeting.

A workshop was held on the 4th June 2024 at 4.30 pm to discuss Community Grant applications and the Greening Brighton Strategy.

Attendance: Cr Gray; Cr Curran; Cr De La Torre; Cr Irons; Cr McMaster and Cr Owen

Apologies: Cr Geard; Cr Murtagh & Cr Whelan

9. Notices of Motion

9.1 Condolence Motion - Mr Tony Foster AM OAM (1943-2024)

Mayor Leigh Gray has submitted the following motion:

> *That Brighton Council acknowledges the life and passing of Mr Tony Foster AM OAM (1943-2024). Tony made a significant contribution and had a major impact on the Brighton municipality as Mayor and Councillor over a period of 34 years.*
>
> *Mayor Leigh Gray handed over the Chair to Cr Curran in order to move his motion and read the statement of condolence at 5.46pm.*

Statement from Mayor L Gray:

Vale Mr Tony Foster AM OAM

On behalf of Brighton Council, it was with great sadness in May that I extended our sincere condolences to the family and friends of Mr Tony Foster who passed away on Monday 27 May 2024.

Tony served the Brighton Council as Mayor and Councillor for 34 years before his retirement in June 2021. He was Mayor for an incredible 28 of those years.

Tony worked tirelessly for the communities of the Brighton Municipality. The fact that Tony was Mayor for a continuous period of 28 years is testimony to the level of support he received from our community and his strong ability to represent the people of our area in a truly kind, fair and understanding manner.

Tony was a very accomplished leader, with the ability to ensure that decisions of Council were seen through to the end. His focus on achieving Council's goals and objectives, even in the face of challenges, was unwavering and determined.

Under Tony's leadership as Mayor, Brighton experienced exponential growth, many improved and expanded services to the community, innovations were championed and Council was managed in a highly efficient and cost effective manner.

Without question, Tony leaves a legacy of a long list of achievements that strengthened our local economy and made Brighton a better place to live and work. Under Tony's leadership, Brighton Council developed from a quiet rural municipality to the vibrant, diverse and rapidly growing Municipality that we see continue to prosper and progress today.

We say a very sad farewell to a person of action, vision and humanity but his memory and legacy will live on in our communities. We send heartfelt wishes of love and support to his wife Noeline and all of his beloved family members and friends.

DECISION:

Cr Gray moved, Cr Geard seconded that Brighton Council acknowledges the life and passing of Mr Tony Foster AM OAM (1943-2024). Tony made a significant contribution and had a major impact on the Brighton municipality as Mayor and Councillor over a period of 34 years

CARRIED

VOTING RECORD

In favour	Against
Cr Curran	
Cr De La Torre	
Cr Geard	
Cr Gray	
Cr Irons	
Cr McMaster	
Cr Murtagh	
Cr Owen	
Cr Whelan	

Mayor Leigh Gray returned to the Chair at 5.51pm.

10. Consideration of Supplementary Items to the Agenda

In accordance with the requirements of Part 2 Regulation 8(6) of the *Local Government (Meeting Procedures) Regulations 2015*, the Council, by absolute majority may approve the consideration of a matter not appearing on the agenda, where the General Manager has reported:

(a) the reason it was not possible to include the matter on the agenda, and
(b) that the matter is urgent, and
(c) that advice has been provided under Section 65 of the *Local Government Act 1993*.

The General Manager advised that there were no supplementary agenda items.

11. Reports from Committees

There were no Committee Meetings held in June 2024.

12. Council Acting as a Planning Authority

Under the provisions of the *Land Use Planning and Approvals Act 1993* and in accordance with Regulation 25 of the *Local Government (Meeting Procedures) Regulations 2015*, the Council will act as a planning authority in respect to those matters appearing under Item 12 on this agenda, inclusive of any supplementary items.

There were no Planning Authority items.

13. Officers Reports

13.1 Grants and Donations 2024/25

Attachment: 2024/25 Community Grants - Applicant Summary

Author: Manager Community Development & Engagement (A Turvey)

Background

The annual grants program guidelines were reviewed and adopted by Council in February 2024 and the following adjustments were made for the 2024/25 Brighton Council Community Development Grants Program:

- The Quick Response grants to once again be in line with the existing policy guidelines and exclude adults:
    - For individuals – this grant is for full-time students under the age of 18 years, who have been selected to represent Tasmania or Australia in a sport, the arts or another chosen field of expertise. The amounts are $100 if representing Tasmania and $200 if representing Australia.
- The Major Impact Grant is removed from the program due to these funds being allocated to the appointment of the Youth Engagement Officer for the 2024/25 and 2025/26 financial years.
- The 'Brighton Alive Grant' renamed to be simply 'Medium Community Development Grant' ($5,000-$15,000) to minimise confusion around who can apply (not just members of Brighton Alive Network) and to give a counter-balance to the 'Small Community Development Grant'.
- The Small and Medium Community Development Grants to be offered as just one round that opens at the beginning of March each year for approximately a four (4) week period. There was no obvious community demand for a second round, and it is anticipated that should Council be approached to consider funding a community initiative, this can be taken to Council for decision on its merits, outside of the official grant program period.

The Small and Medium Grant applications opened on 1 March and closed 5 April 2024. A total of 19 applications were received.

Across two Council workshops (7 May and 4 June 2024) Council discussed, assessed and awarded grant amounts based on these discussions.

Consultation

General Manager, Director Corporate Services, Director Asset Services, Community Development Officer, Youth Engagement Officer and Manager Community Development & Engagement.

Risk Implications

Nil

Financial Implications

A total budget of $75,000 has been allocated to Grants and Donations for 2024/25.

A total amount of $62,601 has been awarded to applicants, allowing some remaining funds for the Quick Response grants and any additional incidental grants or donations that Council may be asked to consider during the year.

Strategic Plan

Goal 1.1 Engage with and enable our community
Goal 1.4 Encourage a sense of pride, local identify and engaging activities
Goal 4.4 Ensure financial and risk sustainability

Social Implications

Nil.

Environmental or Climate Change Implications

Nil

Economic Implications

N/A

Other Issues

The Community Development team will work with the Speaking Made Easy, Brighton Group to define their idea for story boards/interpretation panels at the Pontville cenotaph and will report back to Council on what is required for this project.

Council will donate an existing defibrillator to Zoodoo and request that Zoodoo acknowledge this donation from Brighton Council with a sign or plaque.

Assessment

The small and medium grants have been awarded based on an assessment that they will have a positive impact on our local grassroots community groups in delivering improved outcomes for group members and our community as a whole, and takes into consideration many of these groups have limited funds from other sources available at their disposal.

Options

1. As per the recommendation.
2. That the grant allocation amounts be changed.

RECOMMENDATION:

That the grants and donations requests as allocated be adopted for the 2024/25 financial year.

DECISION:

Cr Owen moved, Cr De La Torre seconded that the grants and donations requests as allocated be adopted for the 2024/25 financial year.

CARRIED

VOTING RECORD

In favour	Against
Cr Curran	
Cr De La Torre	
Cr Geard	
Cr Gray	
Cr Irons	
Cr McMaster	
Cr Murtagh	
Cr Owen	
Cr Whelan	

13.2 LGBTIQA+ Community Consultation

Attachment:	LGBTIQA+ Community Consultation Proposal – La Trobe University, Australian Research Centre in Sex, Health and Society
Author:	Manager Community Development & Engagement (A Turvey)
Authorised:	General Manager (J Dryburgh)

Background

In 2023 Council was approached by community members, including individuals with lived experience of discrimination in our community, asking Council to take more of a leadership role in showing support for a more inclusive and diverse community. This included a request to fly a pride flag at Council's main buildings i.e. Civic Centre and Council Offices.

Subsequently, Mr Rodney Croome from Equality Tasmania was invited to brief Council in December 2023 on suggested approaches that Council could take in responding to these requests and possibly taking a broader approach to understanding the needs of our LGBTIQA+ community, their experiences of living in the Brighton area and promoting an inclusive community as a Council.

During this briefing it was highlighted that local government plays a key role in promoting inclusion because it is close to the community and provides key community services.

This is why a number of Tasmanian municipalities have taken action to ensure their community, services and workplaces are inclusive. Examples included:

- Kingborough Council: consulting with the community, developing an Action Plan, flying pride flags, conducting LGBTIQA+ inclusion workshops for staff.
- City of Hobart: consulting with the LGBTIQA+ community, developing an LGBTIQA+ commitment, flying pride flags, conducting workshops.
- City of Launceston: developing an LGBTIQA+ community consultation process and flag-flying policy.
- Derwent, Huon and Meander Valley Councils: flying pride flags.

It was agreed after this briefing that in order to ascertain the experience of specifically LGBTIQA+ people living in our community, Council conduct a consultation project with a view to potentially developing an LGBTIQA+ Action Plan based on these findings.

It was recommended that Council work with Dr Ruby Grant from La Trobe University who was involved in conducting the "Telling Us the Story" report, the largest-ever survey of LGBTIQA+ Tasmanians. It was commissioned by the State Government and conducted by the University of Tasmania in 2022.

Dr Ruby Grant prepared a proposal for Brighton Council and a grant application was made to DPAC for funding from the LGBTIQA+ Grant Program 2024 for funds of $13,184 (including GST) to conduct Option 1 of this proposal with Council providing the research officers time from internal staff (please see attached proposal from La Trobe University).

Council was unsuccessful in this grant process as there was an unprecedented number of applications competing for a total amount of $30K. The feedback from DPAC was that it was a very good proposal but as a first step, the grant review panel believed this was something that Council should take as a first step and self-fund.

In order to take this first step in understanding the experiences specifically of our LGBTIQA+ community in the Brighton Municipality, one solution is to use remaining funds from the 2023/24 budget for the Promotion of the Municipality.

Consultation

General Manager, Director Corporate Services, Dr Ruby Grant (La Trobe University), Mr Rodney Croome (Equality Tasmania), Community Development Officer, Youth Engagement Officer, Manager Community Development & Engagement and Department of Premier and Cabinet (LGBTIQA+ Grants Program).

Risk Implications

Nil.

Financial Implications

A total budget of **$13,184 (incl. GST)** based on internal project/research support being provided by Brighton Council. The funds to be allocated from the 2023/24 Promotion of Municipality budget.

Strategic Plan

Goal 1: Inspire a proud community that enjoys a comfortable life at every age.

1.1 Engage with and enable our community.

1.2 Build resilience and opportunity.

Goal 4: Ensure a progressive, efficient and caring Council.

4.3 Ensure strong relationships and engagements to shape the agenda and advocate for our community.

Social Implications

This project will be the beginning of a path towards Council providing a leadership role in assisting the LGBTIQA+ community in our area in feeling safe, being heard and represented in all areas of life in Brighton and in particular that the community feel seen and valued.

Environmental or Climate Change Implications

Nil.

Economic Implications

N/A

Other Issues

Nil.

Assessment

The community consultation will provide understanding and evidence for Council and broader community of the experiences that LGBTIQA+ people and their families living and working in our area have, the potential barriers to wellbeing and insights into how Brighton Council can best provide safe, welcoming and inclusive spaces, infrastructure and facilities. All of these insights will inform and frame the themes that could be addressed in a Brighton Council LGBTIQA+ Action Plan. This localised consultation project presents a unique opportunity for Brighton Council to engage its LGBTIQA+ residents to inform community strategies that are fit for purpose.

Options

1. As per the recommendation.
2. Other.

RECOMMENDATION:

That Council approve a budget of $13,184 to conduct the LGBTIQA+ community consultation research in 2024/25 in partnership with Dr Ruby Grant from La Trobe University. To be funded from the Promotion of the municipality budget.

DECISION:

Cr Irons moved, Cr De La Torre seconded that Council approve a budget of $13,184 to conduct the LGBTIQA+ community consultation research in 2024/25 in partnership with Dr Ruby Grant from La Trobe University. To be funded from the Promotion of the municipality budget.

CARRIED

VOTING RECORD

In favour	Against	Abstained
Cr Curran	Cr Murtagh	Cr McMaster
Cr De La Torre	Cr Owen	
Cr Geard	Cr Whelan	
Cr Gray		
Cr Irons		

13.3 Brighton Regional Sports Centre - upgrade to sporting facilities

Author: Project Engineer (L Ali-Lavroff)

Authorised: Director Asset Services (C Pearce-Rasmussen)

Background

The Brighton Football Club has successfully secured funding of approximately $145,000 (excl. GST) to upgrade the interchange boxes and goal netting at the Brighton Regional Sports Centre, aiming to make the infrastructure suitable for the Premier League. The cost of purchasing all necessary materials, excluding installation is estimated to be approximately $100,000 (excl. GST). Quotes for these materials have been provided to council by the club.

Therefore, the Brighton Football Club is seeking support from the Brighton Council to carry out civil works, including the construction of footings for the new interchange boxes and netting posts, as well as administrative assistance to ensure compliance with all relevant building codes. The Brighton Football Club will be responsible for designing and managing the project. The club are hoping to use any remaining funding for upgrades to the gatekeepers box at the Pontville Park entrance.

Consultation

Director Asset Services (C Pearce-Rasmussen) and President Brighton Football Club (D Clark).

Risk Implications

Nil.

Financial Implications

Not accounted for within the budget. Cost of concrete for slabs and footings is estimated to be approximately $23,000 (excl. GST).

Strategic Plan

S1.1 Engage with and enable our community

S1.2 Build resilience and opportunity

S1.3 Ensure attractive local areas that provide social, recreation and economic opportunities

S1.4 Encourage a sense of pride, local identity and engaging activities

S3.3 Community facilities are safe, accessible and meet contemporary needs

S3.4 Advocate and facilitate investment in our region

Social Implications

Not providing funding could result in disappointment for the Brighton Football Club and a missed opportunity to support low cost sporting options in the area. Additionally, the community would lose potential health benefits that come from improved sports facilities and increased participation in physical activities.

Environmental or Climate Change Implications

Nil.

Economic Implications

Nil.

Other Issues

Nil.

Assessment

Council staff have discussed Brighton Football Club's proposal with the club's President.

Providing in-kind support for this project would be beneficial from a community perspective as it would enhance local sports infrastructure, foster community engagement, and promote health and well-being through increased physical activity opportunities. Additionally, supporting the club aligns with the Council's commitment to encouraging local sports and recreational activities, which can boost community spirit and contribute to the overall quality of life in the area.

Options

1. As per recommendation.
2. Council approval an alternative amount of funding to that detailed in the recommendation.
3. Council decline the request for funding support.

RECOMMENDATION:

Council approve a $23,000 contribution to undertake the design and construction of footings for the new interchange boxes and netting posts at the Brighton Regional Sports Centre.

DECISION:

Cr Geard moved, Cr Irons seconded that item 13.3 is deferred subject to more information being provided.

CARRIED

VOTING RECORD

In favour	Against
Cr Curran	
Cr De La Torre	
Cr Geard	
Cr Gray	
Cr Irons	
Cr McMaster	
Cr Murtagh	
Cr Owen	
Cr Whelan	

13.4 Draft Greening Brighton Strategy

Attachment: Draft Greening Brighton Strategy 2024-2033

Author: Planning Officer (K Min)

Authorised: Director Development Services (D Allingham)

Purpose

This report aims to seek the endorsement of public consultation relating to the Draft Greening Brighton Strategy.

Background

Council engaged The Derwent Catchment Project (DCP) to undertake the review and update of the Greening Brighton Strategy 2016-2021.

The Greening Brighton Strategy 2016-2021 focused on increasing the number of trees in the urban areas of Bridgewater, Gagebrook, and Herdsman's Cove.

The Brighton municipality is experiencing rapid population growth accompanied by the growth in urban areas. Also, the frequency, extent, and duration of extreme heat events are projected to increase in the future and the severity of heatwave impact will be drastically intensified in the urban areas with potential impacts on people, environment, infrastructure, and economic activity.

In response to these challenges, DCG prepared a Draft Greening Brighton Strategy that covers all urban areas in the municipality. The updated strategy will deliver an integrated strategic approach to guide the planning, provision, protection, integration, and management of urban greening across the municipality for the next 10 years.

The updated strategy transition to more native species which are more climate resilient and require less maintenance. It also focuses on increasing biodiversity and density of plantings as opposed to individual street trees.

If endorsed by Council, a consultation process will be undertaken to gather feedback and input from the key stakeholders and the broader community.

Consultation

The following individuals and organisations were involved in the development of the draft Greening Brighton Strategy:

- The Derwent Catchment Project
- Brighton Council's Steering Committee members
- Councillor workshop (dated 4 June 2024)

Risk implications

The foreseeable risks and implications associated with the Draft Greening Brighton Strategy are as follows:

General risks

- Lack of support

  The risk of the community and relevant key stakeholders not being supportive of the key strategic approaches and actions identified in the Draft Strategy.

- Damage and vandalism

  The risk of planting and infrastructure works undertaken based on the Draft Strategy being damaged or vandalised.

Financial Implications

- Budgeting

  The Draft Greening Brighton Strategy includes an Action and Implementation Plan to guide Council's investment in urban greening. The sound implementation of the Strategy may require an increased budget to be allocated to the annual street tree budget. The draft Strategy can be utilised for grant applications to acquire more funding.

- Ongoing maintenance

  Council to be responsible for any ongoing maintenance costs.

Strategic Plan

The Draft Greening Brighton Strategy aligns with the following strategies:

- S1.1 Engage with and enable our community
- S1.2 Build resilience and opportunity
- S1.3 Ensure attractive local areas that provide social, recreational and economic opportunities
- S1.4 Encourage a sense of pride, local identity and engaging activities
- S2.1 Acknowledge and respond to the climate change and biodiversity emergency
- S2.2 Encourage respect and enjoyment of the natural environment
- S2.3 Demonstrate strong environmental stewardship and leadership
- S2.4 Ensure strategic planning and management of assets has a long-term sustainability and evidence-based approach
- S3.2 Infrastructure development and service delivery are guided by strategic planning to cater for the needs of a growing and changing population
- S4.1 Be big picture, long-term and evidence-based in our thinking
- S4.4 Ensure financial and risk sustainability

Social implications

- Positive impact on liveability

  Planting and works undertaken as a result of this initiative may encourage people to relax and walk around cool streets and green spaces, positively impacting their health and well-being.

- Positive impact on social cohesion

  Planting and works undertaken as a result of this initiative may facilitate social connection by supporting community participation in greening and contribute to fostering a sense of belonging and community.

Economic implications

- Positive impact on businesses and the economy

  Investment in quality urban greening can encourage and attract high value industries, entrepreneurs and skilled workers to the municipality through the creation of high quality, environmentally friendly living and working environments, adding value to local economies.

- Positive impact on property values and tax revenue

  Increased street trees and vegetation cover may help increase the value of neighbouring residential properties and contribute to creating additional land tax and rates.

- Reduced public health care expenditure

  Increased levels of urban greening can have a range of positive impacts on community health and wellbeing and may lower public health care expenditure.

Environmental or climate change implications

- Environmental benefits

  The implementation of the Draft Strategy can help to absorb stormwater runoff, improve air quality, increase biodiversity, provide shade for animals and people, and reduce heat retention to build community resilience to climate change.

Other Issues

Nil

Assessment

The Draft Greening Brighton Strategy 2024-2033 aligns with Council's Strategic Plan and will provide a range of ongoing, long-term benefits to the community. The strategy pivots towards a planting regime that is more resilient with less maintenance which will have improved benefits for biodiversity and community wellbeing. If Council endorse the Draft Strategy, consultation with the key stakeholders and the broader community will commence.

Options

1. As per the recommendation.
2. Suggest amendments to the Draft Greening Brighton Strategy; or
3. Do not endorse the Draft Greening Brighton Strategy for community consultation; or
4. Other

RECOMMENDATION:

That Council endorse the Draft Greening Brighton Strategy for public consultation.

DECISION:

Cr Owen moved, Cr Curran seconded that Council endorse the Draft Greening Brighton Strategy for public consultation.

CARRIED

VOTING RECORD

In favour	Against
Cr Curran	
Cr De La Torre	
Cr Geard	
Cr Gray	
Cr Irons	
Cr McMaster	
Cr Murtagh	
Cr Owen	
Cr Whelan	

Cr Owen left the meeting at 6.33pm due to a declared conflict of interest in item 13.5.

13.5 Old Beach Fire Brigade - Free Tip Entry

Attachment: Email from Councillor Owen

Author: Director Corporate Services (G Browne)

Background

An email has been received on behalf of the Old Beach Fire Brigade to request free entry to the Waste Transfer Station on Saturday 6th July 2024.

The Old Beach Fire Brigade will be conducting a working bee on this day to have a general tidy up around the station.

It is estimated that there will be a tandem trailer of general waste and a tandem trailer of green waste.

Consultation

Councillor Phil Owen, Ishita Singh (Facilities Management Officer)

Risk Implications

Nil

Financial Implications

Fees that would be applicable for the Waste Transfer Entry would be approximately $66.00, this being $33 for each tandem trailer.

Strategic Plan

Goal 1.3 – Ensure attractive local areas that provide social, recreational and economic opportunities.

Goal 1.4 – Encourage a sense of pride, local identity and engaging activities.

Social Implications

Nil

Environmental or Climate Change Implications

Nil

Economic Implications

Nil

Other Issues

Nil

Assessment

The Old Beach Volunteer Fire Brigade has operated within the Brighton Municipality for over fifty years. There is no monetary amount that can be put on the benefit that the community receives by having these volunteers available to fight fires. The Brigade operates autonomously out of their premises in Old Beach and there appears to be no recent record of them requiring free entry to the Waste Transfer station in the past.

Options

1. As per the recommendation.
2. Not approve the recommendation.

RECOMMENDATION:

That Council give free entry to the Old Beach Volunteer Fire Brigade for two tandem trailer loads of green and general waste.

This donation will be reported accordingly in Council's Annual Report in accordance with Section 77 of the *Local Government Act 1993.*

DECISION:

Cr Geard moved, Cr McMaster seconded that Council give free entry to the Old Beach Volunteer Fire Brigade for two tandem trailer loads of green and general waste.

This donation will be reported accordingly in Council's Annual Report in accordance with Section 77 of the Local Government Act 1993.

CARRIED

VOTING RECORD

In favour	Against
Cr Curran	
Cr De La Torre	
Cr Geard	
Cr Gray	
Cr Irons	
Cr McMaster	
Cr Murtagh	
Cr Whelan	

Cr Owen returned to the meeting at 6.36pm.

13.6 Budget 2024/25 Budget

Attachment: Draft Budget 2024-2025

Author: Director Corporate Services (G Browne)

Background

The Budget (Estimates) has been prepared in accordance with the *Local Government Act 1993*. The 2024-2025 Budget and Fees & Charges Register has been provided to all Councillors and a draft budget review workshop has been undertaken. The final budget has been completed in accordance with Councillor requests and is now ready to be adopted.

Consultation

Councillors, Senior Management, Senior Rates Officer, ratepayers and other stakeholders.

Risk Implications

Nil.

Financial Implications

As per the budget.

Strategic Plan

Goal 3 : Manage Infrastructure and growth effectively

Goal 4.4: Ensure Financial & Risk Sustainability

Social Implications

Considered within the budget.

Environmental or Climate Change Implications

Considered within the budget.

Economic Implications

Considered within the budget.

Other Issues

Nil.

Assessment

Council has been fortunate to receive substantial grant funding for various projects around the municipality over the past few years. This grant funding has meant that many projects have been brought forward that would not have come to fruition for several years, it also means that Council is required to maintain these new infrastructure assets, which results in an increase in operational costs.

Operational Costs especially in relation to materials and services that are used to provide ratepayers with the daily functions of waste collection, road works and streetscaping to name a few have been increasing dramatically since Covid times. These increases have previously been absorbed however it is no longer financially feasible for Council to keep absorbing these costs and to keep providing a higher level of service that ratepayers are expecting. Council has been extremely fortunate that in the past any increase has been minimal to the ratepayer however it is now not financially sustainable to do this in the future and unfortunately this increase will now need to be passed onto the ratepayers. The Brighton Council's 2024-2025 rate increase to residential occupied properties will be $91 per year.

The Rating Resolution is in line with the *Local Government Act 1993* and adopts the principles of Average Area Rating for residential rating.

Options

1. As per the recommendation.
2. Review the budget and make further changes prior to adoption in principle.

RECOMMENDATION:

1. That the 2024-2025 budget be adopted; and
2. Approve the 2024-2025 Rating Resolution as follows:

NOTICE OF RATES AND CHARGES

1. GENERAL RATE & MINIMUM

1.1 Pursuant to Section 90 of the *Local Government Act* 1993 (here referred to as the **"Act"**), Council hereby makes the following General Rate for all rateable land within the municipal area for the financial year commencing 1 July 2024 and ending 30 June 2025:

(a) Pursuant to Section 90(3)(c) of the Act, a General Rate of 26.0 cents in the dollar of the assessed annual value (here referred to as **"AAV"**) of the rateable land.

1.2 Pursuant to Section 107(1) of the Act, Council hereby varies the General Rate of 26.0 cents in the dollar (as previously made) as follows:

(a) For land within the municipality which is used or predominantly used for commercial purposes, the General Rate is varied by decreasing the amount of 26.0 cents in the dollar of AAV to 7.150881 cents in the dollar of AAV;

(b) For land within the municipality which is used or predominantly used for public purposes, the General Rate is varied by decreasing the amount of 26.0 cents in the dollar of AAV to 9.417983 cents in the dollar of AAV;

(c) For land within the municipality which is used or predominantly used for industrial purposes, the General Rate is varied by decreasing the amount of 26.0 cents in the dollar of AAV to 5.706162 cents in the dollar of AAV;

(d) For land within the municipality which is used or predominantly used for primary production purposes, the General Rate is varied by decreasing the amount of 26.0 cents in the dollar of AAV to 3.794115 cents in the dollar of AAV;

(e) For land within the municipality which is used or predominantly used for sporting or recreation purposes, the General Rate is varied by decreasing the amount of 26.0 cents in the dollar of AAV to 22.253977 cents in the dollar of AAV;

(f) For land within the municipality which is not used and is zoned as Agriculture within the Tasmanian Planning Scheme - Brighton, the General Rate is varied by decreasing the amount of 26.0 cents in the dollar of AAV to 9.395113 cents in the dollar of AAV;

(g) For land within the municipality which is not used and is zoned as Business within the Tasmanian Planning Scheme - Brighton, the General Rate is varied by decreasing the amount of 26.0 cents in the dollar of AAV to 13.851199 cents in the dollar of AAV;

(h) For land within the municipality which is not used and is zoned as Community Purpose within the Tasmanian Planning Scheme - Brighton, the General Rate is varied by decreasing the amount of 26.0 cents in the dollar of AAV to 19.92671 cents in the dollar of AAV;

(i) For land within the municipality which is not used and is zoned as Environmental Management within the Tasmanian Planning Scheme - Brighton, the General Rate is varied by decreasing the amount of 26.0 cents in the dollar of AAV to 19.92671 cents in the dollar of AAV;

(j) For land within the municipality which is not used and is zoned as General Industrial within the Tasmanian Planning Scheme - Brighton, the General Rate is varied by decreasing the amount of 26.0 cents in the dollar of AAV to 5.708664 cents in the dollar of AAV;

(k) For land within the municipality which is not used and is zoned as Light Industrial within the Tasmanian Planning Scheme - Brighton, the General Rate is varied by decreasing the amount of 26.0 cents in the dollar of AAV to 9.290777 cents in the dollar of AAV;

(l) For land within the municipality which is not used and is zoned as Open Space within the Tasmanian Planning Scheme - Brighton, the General Rate is varied by decreasing the amount of 26.0 cents in the dollar of AAV to 19.501699 cents in the dollar of AAV;

(m) For land within the municipality which is not used and is zoned as Rural Living within the Tasmanian Planning Scheme - Brighton, the General Rate is varied by decreasing the amount of 26.0 cents in the dollar of AAV to 9.395058 cents in the dollar of AAV;

(n) For land within the municipality which is not used and is zoned as Urban Mixed within the Tasmanian Planning Scheme - Brighton, the General Rate is varied by decreasing the amount of 26.0 cents in the dollar of AAV to 11.649448 cents in the dollar of AAV and

1.3 Pursuant to Sections 107(2A) and 107(2B) of the Act, Council hereby sets minimum amounts payable, in respect of the general rate as varied, as follows:

(a) For land within the municipality which is used or predominantly used for commercial purposes, the minimum amount payable in respect of the General Rate is an amount of $1161.00;

(b) For land within the municipality which is used or predominantly used for public purposes, the minimum amount payable in respect of the General Rate is an amount of $754.00;

(c) For land within the municipality which is used or predominantly used for industrial purposes, the minimum amount payable in respect of the General Rate is an amount of $1161.00;

(d) For land within the municipality which is used or predominantly used for primary production purposes, the minimum amount payable in respect of the General Rate is an amount of $1161.00;

(e) For land within the municipality which is not used and is zoned as Agriculture within the Tasmanian Planning Scheme – Brighton, the minimum amount payable in respect of the General Rate is an amount of $530.00;

(f) For land within the municipality which is not used and is zoned as Business within the Tasmanian Planning Scheme – Brighton, the minimum amount payable in respect of the General Rate is an amount of $530.00;

(g) For land within the municipality which is not used and is zoned as Community Purpose within the Tasmanian Planning Scheme - Brighton, the minimum amount payable in respect of the General Rate is an amount of $530.00;

(h) For land within the municipality which is not used and is zoned as General Industrial within the Tasmanian Planning Scheme - Brighton, the minimum amount payable in respect of the General Rate is an amount of $530.00;

(i) For land within the municipality which is not used and is zoned as Light Industrial within the Tasmanian Planning Scheme - Brighton, the minimum amount payable in respect of the General Rate is an amount of $530.00;

(j) For land within the municipality which is not used and is zoned as Residential within the Tasmanian Planning Scheme - Brighton, the minimum amount payable in respect of the General Rate is an amount of $530.00;

(k) For land within the municipality which is not used and is zoned as Rural Living within the Tasmanian Planning Scheme - Brighton, the minimum amount payable in respect of the General Rate is an amount of $530.00;

2. AVERAGED AREA RATE

2.1 Pursuant to Section 109A of the Act and Certificates issued to Council in accordance with Section 109H of the Act, Council hereby make the following averaged area rate (here referred to as **"AAR"**) for all rateable land within the municipal area for the following categories and localities for the financial year commencing 1 July 2024 and ending 30 June 2025:

(a) In the locality of Bridgewater, for rateable land that is used, or predominantly used, for residential purposes, the General Rate is varied by decreasing the amount of 26.0 cents in the dollar of AAV to 6.934268 cents in the dollar of AAV and then an AAR is made in the amount of $1046.00;

(b) In the locality of Brighton, for rateable land that is used, or predominantly used, for residential purposes, the General Rate is varied by decreasing the amount of 26.0 cents in the dollar of AAV to 5.783452 cents in the dollar of AAV and then an AAR is made in the amount of $1161.00;

(c) In the locality of Dromedary, for rateable land that is used, or predominantly used, for residential purposes, the General Rate is varied by decreasing the amount of 26.0 cents in the dollar of AAV to 5.509084 cents in the dollar of AAV and then an AAR is made in the amount of $1161.00;

(d) In the locality of Gagebrook, for rateable land that is used, or predominantly used, for residential purposes, the General Rate is varied by decreasing the amount of 26.0 cents in the dollar of AAV to 7.657748 cents in the dollar of AAV and then an AAR is made in the amount of $1046.00;

(e) In the locality of Herdsmans Cove, for rateable land that is used, or predominantly used, for residential purposes, the General Rate is varied by decreasing the amount of 26.0 cents in the dollar of AAV to 7.156964 cents in the dollar of AAV and then an AAR is made in the amount of $1046.00;

(f) In the locality of Honeywood for rateable land that is used, or predominantly used, for residential purposes, the General Rate is varied by decreasing the amount of 26.0 cents in the dollar of AAV to 4.997470 cents in the dollar of AAV and then an AAR is made in the amount of $1161.00;

(g) In the locality of Old Beach for rateable land that is used, or predominantly used, for residential purposes, the General Rate is varied by decreasing the amount of 26.0 cents in the dollar of AAV to 4.985227 cents in the dollar of AAV and then an AAR is made in the amount of $1161.00;

(h) In the locality of Pontville for rateable land that is used, or predominantly used, for residential purposes, the General Rate is varied by decreasing the amount of 26.0 cents in the dollar of AAV to 4.748147 cents in the dollar of AAV and then an AAR is made in the amount of $1161.00;

(i) In the locality of Tea Tree for rateable land that is used, or predominantly used, for residential purposes, the General Rate is varied by decreasing the amount of 26.0 cents in the dollar of AAV to 4.736605 cents in the dollar of AAV and then an AAR is made in the amount of $1161.00;

(j) In the locality of Bridgewater, for rateable land that may be classified as being both used, or predominantly used, for residential purposes **and** non-use land [i.e. vacant residential], the General Rate is varied by decreasing the amount of 26.0 cents in the dollar of AAV to 4.699813 cents in the dollar of AAV and then an AAR is made in the amount of $530.00;

(k) In the locality of Brighton, for rateable land that may be classified as being both used, or predominantly used, for residential purposes **and** non-use land [i.e. vacant residential], the General Rate is varied by decreasing the amount of 26.0 cents in the dollar of AAV to 4.188586 cents in the dollar of AAV and then an AAR is made in the amount of $530.00;

(l) In the locality of Dromedary, for rateable land that may be classified as being both used, or predominantly used, for residential purposes **and** non-use land [i.e. vacant residential], the General Rate is varied by decreasing the amount of 26.0 cents in the dollar of AAV to 6.254034 cents in the dollar of AAV and then an AAR is made in the amount of $530.00;

(m) In the locality of Gagebrook, for rateable land that may be classified as being both used, or predominantly used, for residential purposes **and** non-use land [i.e. vacant residential], the General Rate is varied by decreasing the amount of 26.0 cents in the dollar of AAV to 7.454400 cents in the dollar of AAV and then an AAR is made in the amount of $530.00;

(n) In the locality of Herdsmans Cove, for rateable land that may be classified as being both used, or predominantly used, for residential purposes **and** non-use land [i.e. vacant residential], the General Rate is varied by decreasing the amount of 26.0 cents in the dollar of AAV to 13.183555 cents in the dollar of AAV and then an AAR is made in the amount of $530.00;

(o) In the locality of Honeywood, for rateable land that may be classified as being both used, or predominantly used, for residential purposes **and** non-use land [i.e. vacant residential], the General Rate is varied by decreasing the amount of 26.0 cents in the dollar of AAV to 3.475259 cents in the dollar of AAV and then an AAR is made in the amount of $530.00;

(p) In the locality of Old Beach, for rateable land that may be classified as being both used, or predominantly used, for residential purposes **and** non-use land [i.e. vacant residential], the General Rate is varied by decreasing the amount of 26.0 cents in the dollar of AAV to 3.576459 cents in the dollar of AAV and then an AAR is made in the amount of $530.00;

(q) In the locality of Pontville, for rateable land that may be classified as being both used, or predominantly used, for residential purposes **and** non-use land [i.e. vacant residential], the General Rate is varied by decreasing the amount of 26.0 cents in the dollar of AAV to 5.419962 cents in the dollar of AAV and then an AAR is made in the amount of $530.00; and

(r) In the locality of Tea Tree, for rateable land that may be classified as being both used, or predominantly used, for residential purposes **and** non-use land [i.e. vacant residential], the General Rate is varied by decreasing the amount of 26.0 cents in the dollar of AAV to 3.288181 cents in the dollar of AAV and then an AAR is made in the amount of $530.00.

3. WASTE MANAGEMENT SERVICE CHARGE

Pursuant to Section 94(1) of the Act, Council hereby make the following service charges for waste management for the financial year commencing 1 July 2024 and ending 30 June 2025

(a) $282.00 for each premises, tenement, flat, unit, apartment, single stratum section or portion of land set aside for separate occupation to which a regular garbage and recycling removal service is supplied by the Council.

(b) $82.00 for each premises, tenement, flat, unit, apartment, single stratum section or portion of land set aside for separate occupation to which a FOGO removal service is supplied by the Council.

(c) In addition to (a) & (b) $75.00 per bin for each premises, tenement, flat, unit, apartment, single stratum section or portion of land set aside for separate occupation to which a regular garbage and recycling and FOGO driver assist service is supplied by the Council.

(d) In addition to (a), (b) & (c) State Government Waste Levy of $20.00 for each premises, tenement, flat, unit, apartment, single stratum section or portion of land set aside for separate occupation to which a regular garbage and recycling removal service is supplied by the Council.

4. FIRE SERVICE RATE

Pursuant to Sections 93 & 93A of the Act, and notice received by Council in accordance with Section 81B of the *Fire Service Act 1979,* the following fire service rates apply for the financial year commencing 1 July 2024 and ending 30 June 2025:

(a) A Separate Urban Fire Rate of 1.128728 cents in the dollar of AAV in respect of all lands in the proclaimed district with a minimum amount of $49.00; and

(b) A Separate Brighton Rural Fire Rate of 0.305351 cents in the dollar of AAV in respect of all lands in the proclaimed district with a minimum amount of $49.00; and

(c) A Separate Rural Fire Rate of 0.283411 cents in the dollar of AAV in respect of all lands in the proclaimed district with a minimum amount of $49.00.

5. PAYMENT OF RATES & CHARGES BY INSTALMENTS

Rates and Charges must be paid by four (4) instalments – the first to be paid on or before 7 August 2024, and then by 31 October 2024, 31 January 2025 and 30 April 2025 respectively.

6. INTEREST

Pursuant to Section 128(1) (b) of the Act interest will apply to any amount of rates and charges which remain unpaid after the date on which it is to be paid. The rate for 2024/2025 is 10.14% per annum calculated on a daily basis.

Cr Murtagh left the meeting at 6.37pm.

Cr Murtagh returned to the meeting at 6.40pm.

DECISION:

Cr Curran moved, Cr McMaster seconded that

1. the 2024-2025 budget be adopted; and

2. approve the 2024-2025 Rating Resolution as listed above.

CARRIED

VOTING RECORD

In favour	Against
Cr Curran	
Cr De La Torre	
Cr Geard	
Cr Gray	
Cr Irons	
Cr McMaster	
Cr Murtagh	
Cr Owen	
Cr Whelan	

13.7 Draft 2024/25 Annual Plan

Attachment: Draft 2024/25 Annual Plan

Author: General Manager (J Dryburgh)

Background

The Annual Plan 2024/25 has been prepared in accordance with Section 71 of the *Local Government Act 1993* and Council's 2024/25 budget.

The Annual Plan is presented in draft format. Once adopted by Council, it will be prepared and published in accordance with Council's style guide and be made available online.

Consultation

Senior Management Team and relevant Council officers.

Risk Implications

None.

Financial Implications

The draft Annual Plan directly reflects the 2024/25 budget, which is already approved in principle.

Strategic Plan

The draft Annual Plan is in accordance with Council's Strategic Plan, in line with the following strategies:

S4.4: Ensure financial and risk sustainability

S4.2: Be well governed, providing quality service and accountability to our community

Social Implications

The Annual Plan clearly shows the key commitments for the financial year. A mid-year progress report will be presented to Council early in 2025.

The Annual Plan contains a range of social and community-focused commitments.

Environmental or Climate Change Implications

The Annual Plan includes a range of environmental and climate change commitments.

Economic Implications

The Annual Plan commitments support economic growth and development in the region.

Other Issues

Nil.

Options

1. As per the recommendation.

2. Other.

RECOMMENDATION:

That the Annual Plan 2024/25 be adopted in accordance with Section 71 of the *Local Government Act 1993* and that a copy be forwarded to the Director of Local Government and the Director of Public Health.

DECISION:

Cr De La Torre moved, Cr Geard seconded that the Annual Plan 2024/25 be adopted in accordance with Section 71 of the Local Government Act 1993 and that a copy be forwarded to the Director of Local Government and the Director of Public Health.

CARRIED

VOTING RECORD

In favour	Against
Cr Curran	
Cr De La Torre	
Cr Geard	
Cr Gray	
Cr Irons	
Cr McMaster	
Cr Murtagh	
Cr Owen	
Cr Whelan	

14. Questions on Notice

There were no Questions on Notice for the June 2024 meeting.

Meeting closed: 6.43pm

Confirmed: _____

(Mayor)

Date: 16 July 2024

Brighton Council

MINUTES OF THE PLANNING AUTHORITY MEETING

OF THE BRIGHTON COUNCIL HELD

IN THE COUNCIL CHAMBERS, COUNCIL OFFICES, OLD BEACH

AT 5.30 P.M. ON TUESDAY, 2 JULY 2024

1. Acknowledgement of Country

2. Attendance

Cr P Owen (Chairperson); Cr B Curran; Cr A De La Torre; Cr P Geard; Cr G Irons and Cr M Whelan.

IN ATTENDANCE: Cr J McMaster; Mr D Allingham (Director Development Services); Ms G Browne (Director, Corporate Services); Mr C Pearce-Rasmussen (Director, Asset Services); Mrs Jo Blackwell (Senior Planner)

3. Apologies

Cr De La Torre moved, Cr Irons seconded that Cr Gray and Cr Murtagh be granted leave of absence for this meeting.

CARRIED

VOTING RECORD

In favour	Against
Cr Curran	
Cr De La Torre	
Cr Geard	
Cr Irons	
Cr Owen	
Cr Whelan	

4. Public Question Time and Deputations

There was no requirement for Public Question Time.

5. Declaration of Interest

In accordance with the requirements of Part 2 Regulation 8 of the L*ocal Government (Meeting Procedures) Regulations 2015*, the chairperson of a meeting is to request Councillors to indicate whether they have, or are likely to have, a pecuniary interest or conflict of interest in any item on the Agenda.

In accordance with Section 48(4) of the *Local Government Act 1993*, it is the responsibility of councillors to then notify the general manager, in writing, the details of any interest(s) that the councillor has declared within 7 days of the declaration.

There were no declarations of interest.

6. Council Acting as Planning Authority

In accordance with the provisions of Part 2 Regulations 25 of the *Local Government (Meeting Procedures) Regulations 2015*, the intention of the Council to act as planning authority pursuant to the *Land Use Planning and Approvals Act 1993* is to be noted. In accordance with Regulation 25, the Council will act as a planning authority in respect to those matters appearing under Item 6 on this agenda, inclusive of any supplementary items.

6.1 Development Application DA 2024/0061 - Multiple Dwellings x 53 (51 new, 2 existing) at 24B & 38 Jetty Road, Old Beach

Author: Jo Blackwell (Senior Planner)

Authorised: David Allingham (Director Development Services)

Applicant:	SJM Property Developments
Subject Site:	24b and 38 Jetty Road, Old Beach
Proposal:	Multiple Dwellings x 53 (51 new, 2 existing)
Planning Scheme:	Tasmanian Planning Scheme - Brighton
Zoning:	General Residential
Codes:	Parking and Sustainable Transport Code Road and Railways Assets Code
Local Provisions:	N/A
Use Class:	Residential
Discretions:	• 8.4.2 A3/P3 Building Envelope • C2.6.5 A1/P1 Pedestrian access • C3.5.1 A1.1 – A1.5/P1 Traffic Generation at a Vehicle crossing, level crossing or new junction
Representations:	14 representations were received. The representors raised the following issues: • Density • Privacy • Overshadowing • Local character • Landscaping

	• Visual impact • Traffic • Vehicle Access • Waste Collection • Boundary fencing • Property Values • Type of Tenancy • Public Infrastructure/Facilities • Process and applicable legislation • Construction concerns
Attachments	(1) (a) Applicant's Response (Planning) to Representations (b) Hubble Response (Traffic) to Representations (2) (a) – (g) – Application documents (3) TasWater SPAN (4) Titles (5) TasNetworks Fact Sheet
Recommendation:	Approval with conditions

1. STATUTORY REQUIREMENTS

The purpose of this report is to enable the Planning Authority to determine application DA 2024/61.

The relevant legislation is the *Land Use Planning and Approvals Act 1993* (LUPAA). The provisions of LUPAA require a planning authority to take all reasonable steps to ensure compliance with the planning scheme.

Council's assessment of this proposal should also consider the issues raised in any representations received, the outcomes of the State Policies and the objectives of Schedule 1 of the Land Use Planning and Approvals Act, 1993 (LUPAA).

This report details the reasons for the officer recommendation. The Planning Authority must consider this report but is not bound to adopt the recommendation. Broadly, the Planning Authority can either:

(1) adopt the recommendation, or

(2) vary the recommendation by adding, modifying, or removing recommended reasons and conditions or replacing an approval with a refusal (or vice versa).

Any alternative decision requires a full statement of reasons to comply with the *Judicial Review Act* 2000 and the *Local Government (Meeting Procedures) Regulations 2015*.

2. SITE ASSESSMENT

The proposal encompasses two titles located at 24b Jetty Road (C/T 159864/1) and 38 Jetty Road, Old Beach (C/T 159864/3). The site area has a combined land area of 1.8382ha, or approximately 1.73ha excluding access strips.

Each of the lots are developed by existing dwellings, which are proposed to be retained.

The site is bounded by Jetty Road to the west, the East Derwent Highway (EDH) to the east, and residential development in Coghlan Court and Henty Close to the south. To the north a large residential lot adjoins the site boundary (refer Figure 1).

Figure 1: Site Map (source: Listmap)

The gradient of the land falls towards Jetty Road. The site is steepest nearest the EDH before levelling out in the centre of the site with an average gradient of approximately 10 - 14%.

The site is zoned General Residential as shown in Figure 2 with the EDH to the east zoned utilities. The site can be serviced through an upgrade to existing water and sewer infrastructure.

Figure 2: Zoning Map (source: Listmap)

The site is subject to a number of easements, including a right of way between the access through 38 Jetty Road ending at the 24 Jetty Road. It is council's understanding that despite efforts to reach agreement to extinguish this easement, this has not been achieved. The Right of Way and existing access strip from 24B Jetty Road has the effect of setting aside a 5.00m (min) wide strip of land at the rear of the properties backing on to 26 – 36 Jetty Road.

A Drainage Easement is also located through the site, as shown on Figure 3:

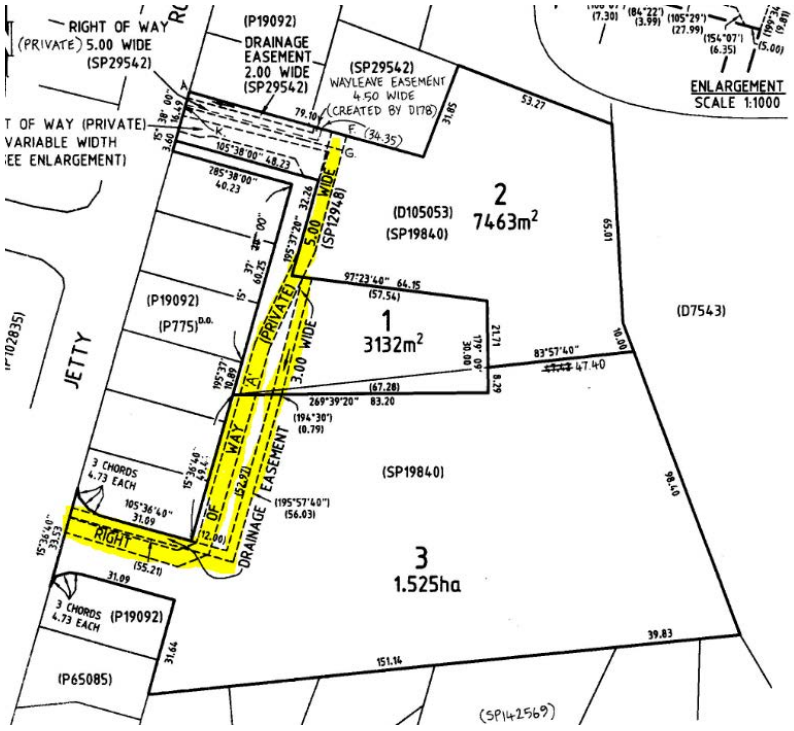


Figure 3: Existing Easements (source SP 159864

3. PROPOSAL

The proposal is for the construction of 51 additional units, and the retention of the two existing dwellings on the site.

The property has frontage to Jetty Road via a 15m wide by approx. 40m long access strip between 36 and 40 Jetty Rd. 24B Jetty Road also has a separate 3.6m wide access strip to the north adjacent 26 Jetty Road.

The development does not propose to use the narrower 3.6m wide access strip to the north.

There is a mix of one and two storey dwellings proposed, comprising 14 two bedroom units; 32 three bedroom units and seven four bedroom units.

The proposal includes 124 car parking spaces (including 18 visitor parking spaces) which includes 2 car parking spaces for each dwelling, to be contained within either a single enclosed garage, double enclosed garage, or uncovered parking spaces. Parking for 5 motorcycles is provided.

The application is supported by proposal plans including site plans, landscaping plan and elevations, Traffic Impact Assessment, Traffic Noise Assessment, Stormwater Management Report, and Civil design drawings.

4. PLANNING SCHEME ASSESSMENT

Compliance with Applicable Standards:

5.6.1 A use or development must comply with each applicable standard in the State Planning Provisions and the Local Provisions Schedules.

5.6.2 A standard is an applicable standard if:

(a) the proposed use or development will be on a site within:

(i) a zone;

(ii) an area to which a specific area plan relates; or

(iii) an area to which a site-specific qualification applies; or

(b) the proposed use or development is a use or development to which a relevant applies; and

(c) the standard deals with a matter that could affect, or could be affected by, the proposed use or development.

5.6.3 Compliance for the purposes of subclause 5.6.1 of this planning scheme consists of complying with the Acceptable Solution or satisfying the Performance Criterion for that standard.

5.6.4 The planning authority may consider the relevant objective in an applicable standard to determine whether a use or development satisfies the Performance Criterion for that standard.

Determining applications (clause 6.10.1):

6.10.1 In determining an application for any permit for use or development the planning authority must, in addition to the matters required by section 51(2) of the Act, take into consideration:

(a) all applicable standards and requirements in this planning scheme; and

(b) any representations received pursuant to and in conformity with section 57(5) of the Act,

but in the case of the exercise of discretion, only insofar as each such matter is relevant to the particular discretion being exercised.

Use Class

The Use Class is categorised as Residential under the Scheme. In the General Residential Zone the Residential use class is Permitted and is therefore consistent with the zone purpose.

Compliance with Performance Criteria

The proposal meets the Scheme's relevant Acceptable Solutions with the exception of the following:

Clause 8.4.2 A3/P3 Building Envelope

Objective:	
The siting and scale of dwellings: (a) provides reasonably consistent separation between dwellings and their frontage within a street; (b) provides consistency in the apparent scale, bulk, massing and proportion of dwellings; (c) provides separation between dwellings on adjoining properties to allow reasonable opportunity for daylight and sunlight to enter habitable rooms and private open space; and (d) provides reasonable access to sunlight for existing solar energy installations.	
Acceptable Solution	Performance Criteria
A3 A dwelling, excluding outbuildings with a building height of not more than 2.4m and protrusions that extend not more than 0.9m horizontally beyond the building envelope, must:	P3 The siting and scale of a dwelling must: (a) not cause an unreasonable loss of amenity to adjoining properties, having regard

(a) be contained within a building envelope (refer to Figures 8.1, 8.2 and 8.3) determined by: (i) a distance equal to the frontage setback or, for an internal lot, a distance of 4.5m from the rear boundary of a property with an adjoining frontage; and (ii) projecting a line at an angle of 45 degrees from the horizontal at a height of 3m above existing ground level at the side and rear boundaries to a building height of not more than 8.5m above existing ground level; and (b) only have a setback of less than 1.5m from a side or rear boundary if the dwelling: (i) does not extend beyond an existing building built on or within 0.2m of the boundary of the adjoining property; or (ii) does not exceed a total length of 9m or one third the length of the side boundary (whichever is the lesser).	(i) reduction in sunlight to a habitable room (other than a bedroom) of a dwelling on an adjoining property; (ii) overshadowing the private open space of a dwelling on an adjoining property; (iii) overshadowing of an adjoining vacant property; and (iv) visual impacts caused by the apparent scale, bulk or proportions of the dwelling when viewed from an adjoining property; (b) provide separation between dwellings on adjoining properties that is consistent with that existing on established properties in the area; and (c) not cause an unreasonable reduction in sunlight to an existing solar energy installation on: (i) an adjoining property; or (ii) another dwelling on the same site.

The proposal exceeds the building envelope for dwellings 21, 23 and 24, located in the centre of the site, whilst the protrusions for eaves along the southern boundary (being units 40 – 46) and northern boundary (unit 21) are excluded under 8.4.2 A3. The acceptable solution is not met, and assessment against the performance criteria is relied upon.

Figures 4 and 5 shows the Building Envelope Diagrams which form part of the proposal plans (sheet PD23405-09 Revision 05). The diagrams show the areas located outside of the building envelope.

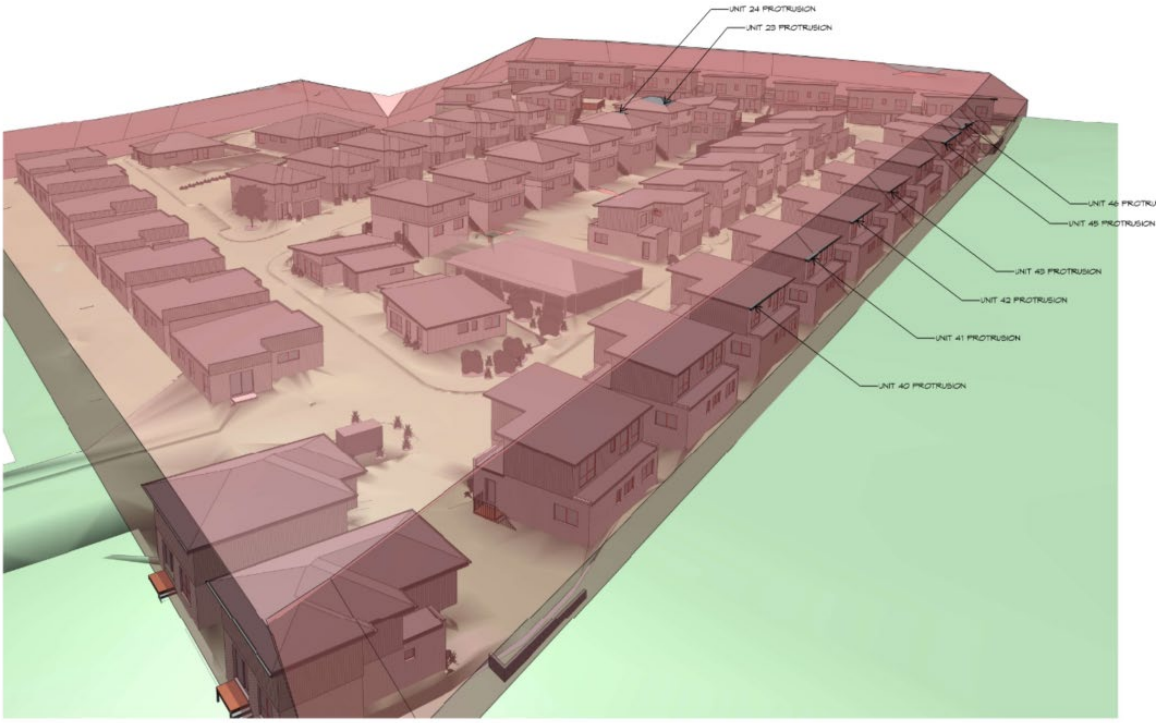


Figure 4: Building Envelope Diagram 1 showing envelope protrusion for units 23 and 24, and eaves excluded by 8.4.3 A3 from southern boundary (source: Application documents)

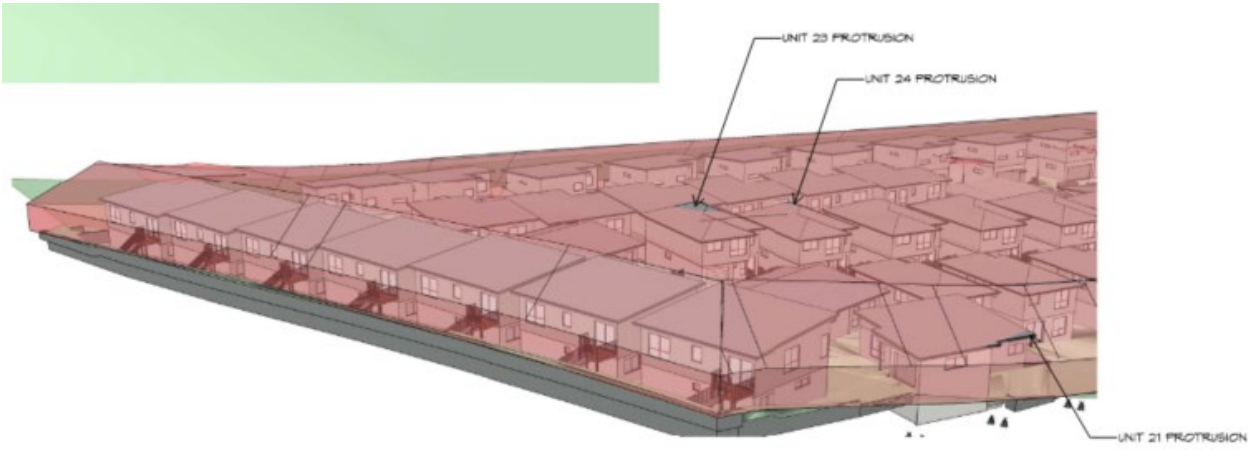


Figure 5: Building Envelope Diagram 2 showing Unit 21, 23 and 24 Protrusions from northern boundary (Source: Application documents)

The applicant has confirmed that it will reduce the height of units 21, 23 and 24, to ensure that all dwellings comply with the Acceptable Solution for building envelope required by 8.4.2. A3, and has requested that a condition be included in any permit requiring amended plans to be submitted to Council for approval, prior to commencement of any works or issue of any approvals required pursuant to the *Building Act 2016*.

Accordingly the acceptable solution can be met through condition.

Clause C2.6.5 A1/P1 Pedestrian access

Objective:

That pedestrian access within parking areas is provided in a safe and convenient manner.	
Acceptable Solution	Performance Criteria
A1.1 Uses that require 10 or more car parking spaces must: (a) have a 1m wide footpath that is separated from the access ways or parking aisles, excluding where crossing access ways or parking aisles, by: (i) a horizontal distance of 2.5m between the edge of the footpath and the access way or parking aisle; or (ii) protective devices such as bollards, guard rails or planters between the footpath and the access way or parking aisle; and (b) be signed and line marked at points where pedestrians cross access ways or parking aisles. A1.2 In parking areas containing accessible car parking spaces for use by persons with a disability, a footpath having a width not less than 1.5m and a gradient not steeper than 1 in 14 is required from those spaces to the main entry point to the building.	P1 Safe and convenient pedestrian access must be provided within parking areas, having regard to: (a) the characteristics of the site; (b) the nature of the use; (c) the number of parking spaces; (d) the frequency of vehicle movements; (e) the needs of persons with a disability; (f) the location and number of footpath crossings; (g) vehicle and pedestrian traffic safety; (h) the location of any access ways or parking aisles; and (i) any protective devices proposed for pedestrian safety

The proposal provides for a minimum 1m wide concrete footpath within the site, which connects the units to the visitor car parking spaces and the public footpath. It is proposed that pathways will be separated from driveways by kerbing where possible, and where pathways cross the internal road, crossings will be delineated with road markings. However, the footpath does not provide 2.5m separation or protective devices required by the acceptable solution. Therefore assessment against the performance criteria is relied upon.

The applicant has submitted a Traffic Impact Assessment (TIA) which addresses the performance criteria. It is proposed to enhance pedestrian safety by installing a 10km/h shared zone speed limit sign at the beginning of the development and to install barrier kerb within the development site. The shared zone will require drivers

to give way to pedestrians within the site and allow them to use move around the site in a safe and convenient manner (refer p21 of the TIA).

The TIA was referred to Council's Senior Officer – Development Engineering. That officer considers the assessment in the TIA as being reasonable and as satisfactorily addressing the performance criteria.

Accordingly, the PC can be satisfied.

Clause C3.5.1 A1.1 – A1.5/P1 Traffic Generation at a Vehicle crossing, level crossing or new junction

Objective:	
To minimise any adverse effects on the safety and efficiency of the road or rail network from vehicular traffic generated from the site at an existing or new vehicle crossing or level crossing or new junction	
Acceptable Solution	**Performance Criteria**
A1.1 For a category 1 road or a limited access road, vehicular traffic to and from the site will not require: (a) a new junction; (b) a new vehicle crossing; or (c) a new level crossing. A1.2 For a road, excluding a category 1 road or a limited access road, written consent for a new junction, vehicle crossing, or level crossing to serve the use and development has been issued by the road authority. A1.3 For the rail network, written consent for a new private level crossing to serve the use and development has been issued by the rail authority. A1.4 Vehicular traffic to and from the site, using an existing vehicle crossing or private level crossing, will not increase by more than: (a) the amounts in Table C3.1; or	P1 Vehicular traffic to and from the site must minimise any adverse effects on the safety of a junction, vehicle crossing or level crossing or safety or efficiency of the road or rail network, having regard to: (a) any increase in traffic caused by the use; (b) the nature of the traffic generated by the use; (c) the nature of the road; (d) the speed limit and traffic flow of the road; (e) any alternative access to a road; (f) the need for the use; (g) any traffic impact assessment; and (h) any advice received from the rail or road authority.

(b) allowed by a licence issued under Part IVA of the Roads and Jetties Act 1935 in respect to a limited access road. A1.5 Vehicular traffic must be able to enter and leave a major road in a forward direction.	

The proposal provides for an increase of 324 vehicle movements per day using the existing vehicle access with 33 vehicle movements per day likely to occur during morning and evening peak periods. The expected vehicle movements exceed 20% or 40 vehicle movements per day, as prescribed by Table C3.1. The proposal complies with A1.1-A1.3 and A1.5.

As the proposal cannot satisfy A1.4 of the acceptable solution, assessment against the performance criteria is relied upon.

The proposal was supported by a Traffic Impact Assessment which considered the performance criteria in relation to this standard.

The TIA found that Jetty Road is lightly trafficked, and has sufficient capacity to absorb the increase in traffic without causing an adverse effect on traffic numbers, traffic flow or residential amenity.

The TIA was referred to Council's Senior Officer – Development Engineering. That officer considers the assessment in the TIA as being reasonable and as satisfactorily addressing the performance criteria.

Accordingly, the PC is satisfied.

5. Referrals

Senior Officer – Development Engineering

The proposal was referred to Council's Senior Officer – Development Engineering for assessment. Those officers' comments are included in this report where applicable.

TasWater

TasWater have reviewed the proposal and have issued a Submission to Planning Authority Notice reference number TWDA 2024-00375-BTN dated 15th May 2024, which is to form part of any permit issued.

Department of State Growth

The proposal was referred to the Department of State Growth as statutory authority and separately as an adjoining land owner. DSG have advised:

> *"Thank you for the referral of the proposal for 51 new dwellings at 24b and 38 Jetty Road, Old Beach.*

The department notes the findings of the Traffic Impact Assessment suggests that most vehicles will use the Fouche Avenue to utilise the nearby roundabout to turn right toward the Bowen Bridge and that no upgrades are required/proposed to the Jetty Road intersections to accommodate the development.

We also note that the Noise assessment considers that minimum acoustic properties of facades are proposed to reduce noise impacts on those properties within the road attenuation area. The department requests that these are mandated as part of any permit issued".

TasNetworks

The proposal was referred to TasNetworks, who have advised that based on the information provided, the development is not likely to adversely affect TasNetworks' operations. However, it is advised that if the existing power poles and service lines are to remain, that safety clearances are adhered to and further advice can be sought from TasNetworks. A fact sheet has been provided to be included with TasNetworks' advice.

Tasmanian Gas Pipeline

The proposal was referred to TasGas, who have advised that they have no objection to the proposal.

6. Representations

Fourteen (14) representations were received during the statutory public exhibition period between 28th May 2024 and 13th June 2024, as extended to include the King's Birthday public holiday. The representations are summarised in Table 1.

TABLE 1: SUMMARY OF REPRESENTATIONS	
Issue Raised	**Officer's Response**
Disagrees with Traffic Impact Assessment	The Traffic Impact Assessment has been prepared by a suitably qualified person in accordance with the requirements set out in the Austroads Guide to Traffic Management Part 12: Traffic Impacts of Developments
Traffic flow issues arise from growing developments across the municipality and Bridgewater Bridge	Additional traffic is currently using the East Derwent Highway as a result of the works on the Bridgewater Bridge. This traffic is anticipated to return to using the Bridgewater Bridge/ Brooker Highway route post completion of the bridge. General growth along the road network as a result of development in the municipality and surrounds has been considered within the TIA and within the Department of State Growth corridor study. Traffic generation as a result of the proposed development is minimal in the context of overall development and is not expected to cause any adverse impact along the immediate road network.
Issues with access from Jetty Road to East Derwent Highway (EDH)	The proposed development is anticipated to have the largest impact on the road network during the AM and PM peak hour. Based on traffic modelling results presented within the TIA, while there will be additional delays experienced at the access from jetty Road to East Derwent Highway during the peak hours, the delays are minimal and considered to be within acceptable limits with the road network anticipated to continue to operate at an acceptable overall Level Of Service (LOS) post development.
Speeding along Jetty Road	The proposed development is not expected to result in an increase in vehicle speeds along Jetty Road.
Increase in traffic	While there will be additional traffic generated by the proposed development, the additional traffic is

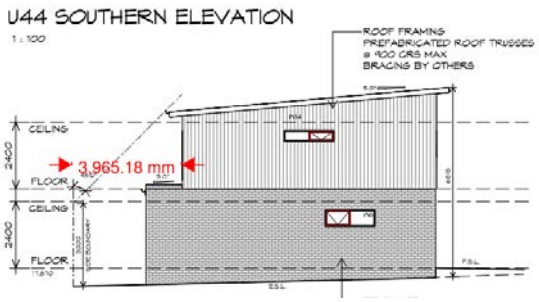
	not expected to impact the safety, amenity or operation of the surrounding road network.
There is often 3 large school buses in Jetty Road travelling in the same direction further slowing traffic and reducing visibility. Vehicles are unable to pass the buses as there are multiple buses at the same stop with little to no visibility causing delays and a safety hazard for school children.	The TIA assesses the design and capacity of Jetty Road, noting that Jetty Road is constructed to urban standards. Jetty Road is assessed as being a low-speed environment (signed posted 50km/h) with light traffic flows. The TIA states that the road is wide enough between kerb faces to accommodate two-way traffic movements and on-street parking.
Parking on Jetty Road due to overflow vehicles from site	The TIA assesses the design and capacity of Jetty Road, noting that Jetty Road is constructed to urban standards. Jetty Road is assessed as being a low-speed environment (signed posted 50km/h) with light traffic flows. The TIA states that the road is wide enough between kerb faces to accommodate two-way traffic movements and on-street parking.
Insufficient visitor parking spaces provided	The proposal complies with the number of dedicated visitor parking spaces required to meet the acceptable solution in the Planning Scheme.
Visitor Parking is not suitably located to convenient service dwellings	Visitor parking is located within approximately 200m of the furthest dwelling. Given the site constraints, visitor parking has been provided at safe locations. Pedestrian paths have been provided connecting visitor parking spaces with the dwellings
Car parking is not designed having regard to the proximity to the respective dwelling	All residential parking spaces are provided adjacent to the dwelling they are servicing. Given the site constraints, visitor parking has been provided at safe locations.
Reasonable pedestrian access from the visitor parking to respective units is not provided	Footpaths have been provided between parking spaces and residential dwellings. A shared zone is also applicable within the proposed development which provides a low speed environment and priority to pedestrians.

Why is an outdated RTA Guide to Traffic Generating Developments (RTA Guide) updated 2013 used for a proposed development in out Hobart, where public transport services are not near the same level as existing in NSW.	The RTA Guide is a nationally, well accepted document that provides advice on trip generation rates. While the rates were determined in 2013, they were determined based on extensive surveys undertaken across NSW. The volumes have also been reviewed periodically by both RMS and external bodies with the most recent review being undertaken by Austroads in 2021. The reviews have found that traffic generation rates have remained stable, affirming their continued validity. The traffic generation rates used in the TIA reflect those identified in rural NSW, where public transport usage is limited, and reliance on cars is similar to the patterns observed in Hobart.
The report mentions a study conducted by Hubble Traffic in December 2022. This study is outdated as traffic on EDH has increased significantly since the construction of the Bridgewater Bridge (expected completion mid 2025) and beyond as driving habits change.	While traffic volumes on the East Derwent Highway have increased as a result of the works on the Bridgewater Bridge, this increase is expected to be temporary. The additional traffic is anticipated to return to using the Bridgewater Bridge/ Brooker Highway route post completion of the bridge
There has been no reference to the issue of public transport. There is a lack of reasonable and reliable public transport in this area, compounded by Metro's temporary service adjustments.	Given the location of the site the TIA has assumed a low use of public transport. Increased demand for Public Transport in the area may satisfy the warrant for Metro to provide more frequent and regular service.
The assumption on p4 of the Traffic Report. The two sample times overlap, so there is no transparency over the full period of peak hour. Further the peak hour study shown ends at 5.30pm. In the current circumstances many local residents arrive home after 5.30pm, many of which use their cars due to unreliable public transport.	The TIA identifies the AM peak hour to occur between 7:30am and 8:30am and the PM peak hour to occur between 4:00pm and 5:00pm. This aligns with traffic data collected along the surrounding road network both as part of the TIA as well as for other purposes. The TIA has assessed traffic generation during both the AM and PM peak hour

Point 6.1 (page 9) states that "90% of generated trips leave the site during the morning peak, with the opposite occurring the evening peak". This is manipulating the assumption for this area stating 10% daily of trips occur during peak hour and appears to contradict its own report. Refer table 4.08 (page 4).	The TIA identifies that during the AM peak hour, 90% of the vehicles generated during the peak hour are leaving the site [10% are returning] while during the PM peak hour, 90% of the vehicles generated during the peak hour are returning [10% are leaving]. This aligns with travel patterns identified for residential developments.
Proposal affects property values	Property values are not relevant to the planning assessment.
Purpose of housing (ie social housing, privately owned and/or rentals)	Tenancy is not relevant to the planning assessment.
Moral obligation on developer to confirm who the units will be occupied by	See above.
No increase in facilities to support residential growth.	Brighton Council continually engages in strategic projects to provide necessary facilities, which is a separate matter to the statutory assessment of this proposal.
No provision for public open space in the development	The provision of Public Open Space relates to proposals for subdivision. As the application relates to multiple dwellings development, rather than subdivision, the Planning Authority is not able to require public open spaces.
Number of Dwellings for the area	The site (comprising 24B and 38 Jetty Road) is zoned General Residential under the Planning Scheme which provides for higher residential densities for multiple dwellings (325m2 per dwelling). The site area (less internal accesses) is calculated as 1.73ha, which, when divided by 53 equates to 326m2 per dwelling. The proposed density satisfies the acceptable solution.

Density is not appropriate for a low density suburb such as Old Beach, 20 to 30 homes appropriate	The site is zoned General Residential, rather than Low Density Residential, which provides for development at higher residential densities.
Site is overcrowded	The proposed density satisfies the acceptable solution.
No need for 51 additional buildings when Old Beach rezoning for Precinct A and B is being undertaken	As indicated by the existing General Residential zoning of the land, the site has previously been approved by the Tasmanian Planning Commission (TPC) for residential use. Any future rezoning of Old Beach Precinct A will consider the supply of existing residential land and future demand.
Concerns over one entrance/exit for the property (in case of fire and other disasters)	Whilst multiple points of access and egress can provide redundancy, the proposal is no different to many road networks servicing a greater number of dwellings that have a single point of entry/exit.
There will be 106 bins on the street for collection, which usually occurs in peak hour. Unlikely that trucks can enter the site for reasons of safety, road width and turning, so further traffic and pedestrian hazard will be created with the bins being left and at time turned over on the footpath and surrounding road in Jetty Road	The development has been designed for waste collection to occur within the site. No bins from the development will need to be placed on Jetty Road. A medium rigid vehicle is able to manoeuvre safely and efficiently within the site to enable collection.
General queries as to where waste location is to occur	Each unit has its own bin storage area with the application demonstrating sufficient space on the internal road network for bins to be placed on collection day. Units 20 and 21 an 52 and 53 do have shared bin storage areas.
Noise and light pollution	Residential noise and light pollution do not form part of the planning assessment. The Environmental Management and Pollution Control Act 1994 regulates residential noise, and sets out what action may constitute a nuisance, such as noisy equipment, machinery and vehicles.

	Residents are able to contact Council's Senior Environmental Health officer if a nuisance arises.
Boundary Fencing	The Boundary Fences Act 1908 covers the erection and repair of boundary fences. The cost of boundary fencing is generally shared by adjoining owners. Boundary fences up to 2.1m in height are generally exempt from Planning.
No-one at Brighton Council will answer questions completely	Council officers have spent a significant amount of time answering all queries directed to them in relation to this development.
Notification was only received 11/6/24, with closing date of 13/6/2024	All correspondence to adjoining land owners was mailed via Australia Post on 28/5/2024. A further letter was sent out on 30/5/2024 which extended the date for representations to 13/6/24 to allow for the additional day where the Council offices were closed for the Kings Birthday public holiday (section 57(5AA)) of the *Land Use Planning and Approvals Act 1993*.)
Under what Act are the grounds for objection. If council refuses objections from ratepayers, are we able to apply to the Land and Environment Court?	The *Land Use Planning and Approvals Act* 1993 authorises the application of the Planning Scheme. Pursuant to section 61 of the Land Use Planning and Approvals Act 1993 representors have a period of 14 days after the date on which notice was served on the relevant person to appeal to the Tasmanian Civil and Administrative Tribunal - Resource and Planning Stream.
Support for future DA on my site	All development applications are assessed against the provisions of the planning scheme in force at the time.
Development is efficient by maximizing every square metre of land	The proposal addresses the provisions of the General Residential zone and relevant Codes.
Is the site going to be security gated	Whether to install gates is a decision for the owner of the site or any future body corporate. Any frontage fencing (including gates) must accord with the exemptions or standards provided by the planning scheme.

Privacy – 2 storey dwellings located along southern boundary of site Having living areas on 2nd storey allow occupants to look into gardens and living areas	The General Residential development standards require a 3m setback from the side boundary of the site, and a 4m setback from the rear boundary. The proposed development meets the required setbacks for side boundaries (applicable to the subject site), as shown in the image below: 
Type F2 units overshadow. If dwellings were similar to B1/B2 adjacent to Jetty Road side, this would be a great compromise.	The Applicant has submitted a request to Council for a condition to be included on any permit that the units currently outside the building envelope be amended to show compliance with the acceptable solution.
Loss of sunlight/overshadowing to private open space	The Applicant has submitted a request to Council for a condition to be included on any permit that the units currently outside the building envelope be amended to show compliance with the acceptable solution.
Can the site be serviced for sewerage and water infrastructure	Yes. The application was referred to TasWater who have issued a Submission to Planning Authority Notice (SPAN). A condition on the SPAN is that the developer pay a special infrastructure contribution charge for upgrading of the downstream sewerage pump station to accommodate increased flows from the development.
Construction issues including proposed timeframe for works, parking during construction, will there be temporary amenities, who to contact during works; Is there a plan for dust control.	These issues are usually addressed during building stage. However, it is intended to include a condition for a Construction Management Plan to be submitted to Council's Director Development Services which outlines how the site is to be managed during construction
Are there any power/water outages planned	If there are planned power and water outages, residents will be notified through the relevant authorities.
Hours for construction, including weekends	Council's standard conditions include a condition relating to construction hours, which are in

	accordance with the requirements of the *Environmental Management and Pollution Control Act 1993.*
Vehicle access from adjoining residential lot crosses title for development site	The existing driveway for the adjacent property at 36 Jetty Road currently crosses a portion of 38 Jetty Road without any existing Right of Way. The boundary appears to have been arranged to allow a future road intersection and the wider splay is not necessary for the proposed development. Whilst essentially a civil matter between property owners the proposed development does not appear to alter or need to alter the existing access arrangements at no. 36. The planning authority does not have any head of power to include conditions requiring the matter to be addressed as part of this application. However, it is intended that advice be included on any permit granted, requesting the applicant to address the matter.
Proposal is out of character with the surrounding properties, which mainly comprise single dwelling lots.	There are no Local Area Objectives applicable to the General Residential Zone. The standards for residential development are set out in the Tasmanian Planning Scheme – Brighton which comprises the State Planning Provisions for each zone. The standards for general residential development are statewide standards and are set at a strategic level determined by regional policies and strategies.
Impact on the streetscape has not been considered.	There are no relevant planning scheme standards relating to impact on streetscape.
The aesthetics of the neighbourhood has been compromised over the years through Council approval regulations allowing such high intensity developments. This seems to be driven by economic and political considerations from Council	The proposal meets the zone purpose and satisfies the density standards for multiple dwellings.

No provision of landscaping to soften the expanse of concrete	A landscaping plan has been provided in support of the application.
Removal of trees within the development/road attenuation area	Landscaping and vegetation management within a private garden, public garden or park, or within state-reserved land or a council reserve is exempted from planning approval pursuant to clause 4.4.2 of the Planning Scheme, unless protected by legislation, a permit condition, an agreement made under 71 of the Act or a covenant, or the vegetation is not specifically listed and described as part of a Local Heritage Place or a significant tree in the Brighton Local Provisions Schedule. The vegetation on the site is not subject to any of the above.
Visual Impact	The Applicant has submitted a request to Council for a condition to be included on any permit that the units currently outside the building envelope be amended to show compliance with the acceptable solution.

A summary of the representations was provided to the Applicant for comment. The applicant has provided responses to the summary of representations prepared by its consultants. These are included in Attachments 1(a) and 1(b).

It is not considered necessary to amend the proposal based on the representations received.

7. Conclusion

The proposal for **Multiple Dwellings x53 (51 new, 2 existing)** at **24b and 38 Jetty Road, Old Beach** in Tasmania, satisfies the relevant provisions of the Tasmanian Planning Scheme - Brighton, and as such is recommended for approval.

RECOMMENDATION:

That pursuant to the *Tasmanian Planning Scheme - Brighton*, Council approve application DA 2024/0061 for **Multiple Dwellings x53 (51 new, 2 existing)** at **24b and 38 Jetty Road, Old Beach** in Tasmania, for the reasons outlined in the officer's report and a permit containing the following conditions be issued:

General

(1) The use or development must be carried out substantially in accordance with the application for planning approval, the endorsed drawings and with the conditions

of this permit and must not be altered or extended without the further written approval of Council.

(2) This permit shall not take effect and must not be acted on until 15 days after the date of receipt of this letter or the date of the last letter to any representor, whichever is later, in accordance with section 53 of the *Land Use Planning and Approvals Act* 1993.

Amended Plans

(3) Prior to the issue of any approval under the *Building Act* 2016, amended plans must be submitted to and approved by the Director Development Services. The revised plans must show:

(a) the height of dwellings 21, 23 and 24 lowered to comply with the building envelope prescribed by 8.4.2 A3 of the Tasmanian Planning Scheme – Brighton.

Advice: *The applicant has advised that plans for units 21, 23, and 24 care able to altered to accord with the acceptable solution.*

(b) All ground floor windows within 2.5m of the shared driveway must be:

a) set back at least 1m from the edge of the driveway

b) have fixed obscure glazing.

All work required by this condition must be undertaken in accordance with the approved revised plans.

Advice: *This condition requires further information to be submitted and approved pursuant to s60(2) of the Land Use Planning and Approvals Act 1993.*

Consolidation of Titles

(4) Prior to commencement of works or any issue of approval under the *Building Act* 2016, Certificates of Title Volume 159864 Folios 1 and 3 must be consolidated unless otherwise agreed to by Council's Director Development Services.

Advice: *This condition requires further information to be submitted and approved pursuant to s60(2) of the Land Use Planning and Approvals Act 1993.*

Easements

(5) Easements must be created over all drains, pipelines, wayleaves and services in accordance with the requirements of the Council's Municipal Engineer. The cost of locating and creating the easements shall be at the subdivider's full cost.

Final plan

(6) A final approved plan of survey and schedule of easements as necessary, together with two (2) copies, must be submitted to Council for sealing for each stage. The final approved plan of survey must be substantially th6e same as the endorsed plan of subdivision and must be prepared in accordance with the requirements of the Recorder of Titles.

(7) Prior to Council sealing the final plan of survey for each stage, security for an amount clearly in excess of the value of all outstanding works and maintenance required by this permit must be lodged with the Brighton Council. The security must be in accordance with section 86(3) of the Local Government (Building & Miscellaneous Provisions) Council 1993. The amount of the security shall be determined by the Council's Municipal Engineer in accordance with Council Policy 6.3 following approval of any engineering design drawings and shall not to be less than $5,000.

(8) All conditions of this permit, including either the completion of all works and maintenance or payment of security in accordance with this permit, must be satisfied before the Council seals the final plan of survey for each stage. It is the subdivider's responsibility to notify Council in writing that the conditions of the permit have been satisfied.

(9) The subdivider must pay any Titles Office lodgment fees direct to the Recorder of Titles.

Services

(10) The Subdivider must pay the cost of any alterations and/or reinstatement to existing services, Council infrastructure or private property incurred as a result of the proposed subdivision works. Any work required is to be specified or undertaken by the authority concerned.

(11) Property service connections are to be consolidated to the satisfaction of the relevant authority and to the satisfaction of Council's Municipal Engineer.

Noise Attenuation

(12) The recommendations of the Traffic Noise Assessment for 38 Jetty Road prepared by Noise Vibration Consulting, dated 8 April 2024 must be implemented including:

a) A façade construction that will achieve an airborne sound isolation rating of R_w 27 for dwellings located along the eastern boundary of site, being dwellings 47 to 53 inclusive.

Private Open Space

(13) Prior to a Certificate of Occupancy being issued for any dwelling, the developer must demonstrate that for any dwelling, the private open space has been designed and constructed in accordance with the approved plans.

Advice: *This condition requires further information to be submitted and approved by Council's Director Development Services pursuant to s s60(2) of the Land Use Planning and Approvals Act 1993.*

Landscaping

(14) Prior to the issue of any approval under the *Building Act* 2016, an amended landscaping plan must be submitted and approved by Council's Director Development Services. The revised plans must show:

a) A survey of all existing vegetation to be retained and/or removed.

b) The areas to be landscaped,

c) Details of surface finishes of paths and driveways.

d) Details of fencing.

e) A planting schedule of all proposed trees, shrubs and ground covers including botanical names, common names, pot sizes, sizes at maturity and quantities of each plant.

f) Landscaping and planting within all open areas of the site, including the equivalent of one tree per dwelling, which can grow to a minimum height of 3m and a minimum spread of 2m at maturity.

All work required by this condition must be undertaken in accordance with the approved revised plans.

Advice: *This condition requires further information to be submitted and approved by Council's Director Development Services pursuant to s s60(2) of the Land Use Planning and Approvals Act 1993.*

(15) Planting must bear a suitable relationship to the proposed height of the buildings and must not use species listed as noxious weeds within Tasmania, displaying invasive characteristics or unsuitable for fire prone areas. If considered satisfactory, the landscape plan will be endorsed and will form part of this permit.

(16) All trees and landscaping must be planted and installed in accordance with the approved Landscaping Plan. Prior to the use commencing, evidence showing compliance with this condition must be submitted and approved aby Council's Director Development Services.

Advice: *This condition requires further information to be submitted and approved by Council's Director Development Services pursuant to s s60(2) of the Land Use Planning and Approvals Act 1993*

(17) Replacement trees and landscaping in accordance with the approved Landscaping Plan must be planted if any is lost. All landscaping must continue to be maintained to the satisfaction of Council.

Fencing

(18) Any front fence must have a height above natural ground level of not more than:

(a) 1.2m, if the fence is solid; or

(b) 1.8m, if the fence has openings above a height of 1.2m which provide a uniform transparency of not less than 30%.

Amenity

(19) All external metal building surfaces must be clad in non-reflective pre-coated metal sheeting or painted to the satisfaction of the Director Development Services.

TasWater

(20) The use and/or development must comply with the requirements of TasWater, as detailed in the form Submission to Planning Authority Notice, Reference No TWDA 2024/00375-BTN dated 14th May 2024, as attached to this permit.

Services

(21) The developer must pay the cost of any alterations and/or reinstatement to existing services, Council infrastructure or private property incurred as a result of the proposed subdivision or development. Any work required is to be specified or undertaken by the authority concerned.

(22) Services located under the proposed driveway are to be relocated or provided with trafficable covers to the requirements of the relevant authority and to the satisfaction of Council's Municipal Engineer.

Advice: *The existing stormwater main under the proposed parking bays/driveway is to be exposed and backfilled with FCR. Should the pipe not have minimum cover it will need to be relocated, lowered or protected to the satisfaction of Council's Municipal Engineer. The existing stormwater manhole is the be adjusted and provided with a Class D trafficable lid and surround to match the new driveway levels.*

(23) All private services and structures are to be located at least 1.0 metre clear of public stormwater infrastructure and designed to ensure no loads are imposed on Council's pipes.

(24) Private services must not be installed within Council's drainage easements without prior approval from Council's Municipal Engineer.

(25) Prior to the commencement of the works a CCTV inspection survey is to be conducted, at the developer's expense, of the public stormwater within the site to ascertain the condition of the pipe. Any damage or defects are to be noted in a dilapidation report to be provided to Council's Asset Services Department prior to construction.

(26) At the completion of the works a CCTV inspection survey is to be conducted, at the developer's expense, of the affected stormwater pipes to ascertain the condition of the pipe to determine if any damage may have occurred during construction. Any damage to the stormwater pipe or manholes not identified in the pre-construction dilapidation report is to be repaired to the satisfaction of Council at the developers cost.

Parking and Access

(27) The existing vehicular access vehicle access to to 38 Jetty Road must be upgraded and reconstructed in accordance with the following;

(a) Reinforced concrete in accordance with Council's Standard Drawings and Specification;
(b) Australian Standard AS 2890 - Parking facilities, Parts 1-6;
(c) Allow for 2 way traffic;
(d) Allow regular use vehicles (including medium rigid vehicle) to enter and exit the site without crossing the centreline of the public road to the extent that there is any interaction with the opposing direction of travel; and

(e) to the satisfaction of Council's Municipal Engineer.

(28) At least one hundred and twenty-four (124) car parking spaces, including at least two (2) parking spaces per dwelling and eighteen (18) dedicated visitor car parking spaces, must be provided on site at all times for the use of the development.

(29) At least five (5) motorcycle parking spaces must be provided on the land at all times for the use of the development.

(30) Pedestrian paths must be provided to parking areas in accordance with the endorsed plans and:

(a) have a 1m wide footpath that is separated from the access ways or parking aisles, excluding where crossing access ways or parking aisles;

(b) be signed and line marked at points where pedestrians cross access ways or parking aisles;

(c) a 10km/h shared zone speed limit sign is to be provided at the entrance to the development.

(31) Unless the *Right Of Way 'A' (Private) 5.00 Wide* as shown on Sealed Plan 159864 is expunged the proposed visitor space (VIS-18) obstructing the Right Of Way is to be removed or marked as no parking and a crossover provided to maintain vehicular access to the Right Of Way.

(32) All parking, access ways, manoeuvring and circulation spaces must be provided in accordance with the endorsed drawings, Australian Standard AS 2890 - Parking facilities, Parts 1-6, or as otherwise required by this permit, and include all of the following;

(a) be constructed with a durable all weather pavement;

(b) be drained to the public stormwater system;

(c) be surfaced by concrete or approved equivalent material to restrict abrasion from traffic and minimise entry of water to the pavement.

(d) have a gradient in accordance with Australian Standard AS 2890 - Parking facilities, Parts 1-6;

(e) provide for vehicles to enter and exit the site in a forward direction;

(f) have an internal access width not less than 5.5m;

(g) have a vertical clearance of not less than 2.1m above the parking surface level;

(h) be delineated by line marking or other clear physical means.

(33) Prior to the commencement of works or the issue of any approval under the *Building Act 2016*, the developer must submit to Council a parking plan including:

(a) pavement details,

(b) design surface levels and gradients,

(c) drainage,

(d) turning and travel paths (where required to demonstrate compliance with AS2890),

(e) dimensions (including clearances),

(f) line marking,

(g) lighting (where provided),

(h) pedestrian paths (including any signage, line marking, protective devices such as bollards, guard rails or planters),

(i) signage

(j) waste (garbage & recycling) bin collection locations for each dwelling

The parking plan is to be certified by an engineer and shall form part of the permit once accepted.

Advice: *This condition requires further information to be submitted and approved by Council's Municipal Engineer pursuant to s s60(2) of the Land Use Planning and Approvals Act 1993.*

(34) The completed parking and associated turning areas and access must be certified by a practicing civil engineer to the effect that they have been constructed in accordance with the endorsed drawings and specifications approved by Council before the proposed hospital is occupied.

(35) All areas set-aside for parking and associated turning, and access must be completed before the use commences and must continue to be maintained to the satisfaction of the Council's Municipal Engineer.

Access to Public Road

Advice*: No works on or affecting any Council road reservation is to be commenced until the Brighton Council has issued a WORKS IN ROAD RESERVATION PERMIT. Application for the issue of the necessary works permit is to be made to the Brighton Council's Asset Services Department prior to the proposed date of commencement of any works.*

Stormwater

(36) Unless approved otherwise by Council's Municipal Engineer the stormwater system for the proposed development must be substantially in accordance with the *STORMWATER MANAGEMENT REPORT, PROPOSED MULTI-RESIDENTIAL DEVELOPMENT, 24B & 38 JETTY ROAD, OLD BEACH REF: SR-2024-02-05-02 revision D2* dated 03/05/2024, prepared by Acacia Engineering.

(37) Stormwater from the proposed development must drain to the public stormwater system to the satisfaction of Council's Municipal Engineer and in accordance with the *Building Act 2016*.

(38) The stormwater drainage system for the proposed development must be designed to comply with all of the following:

(a) be able to accommodate a storm with a 5% AEP, when the land serviced by the system is fully developed;

(b) stormwater runoff will be no greater than pre-existing runoff or any increase can be accommodated within existing or upgraded public stormwater infrastructure.

Advice: *The existing public stormwater system downstream of the proposed development has limited capacity. The development will need to limit peak flows for up to and including the 5% AEP event to pre existing or upgrade the downstream network.*

(c) Stormwater from the proposed development must be treated prior to entering the public stormwater system to:

(d) achieve that the quality targets in accordance with the State Stormwater Strategy 2010.

(39) The development must incorporate overland flow paths through the site to accommodate a 1% AEP (plus climate change) rainfall event.

(40) The stormwater system within the development must continue to be maintained to ensure the quality targets, in accordance with the State Stormwater Strategy 2010, and flow rates discharging to the public stormwater system are maintained as per the approved design and water is conveyed so as not to create any nuisance to adjacent or downstream properties.

(41) The driveway must be drained to minimise surface runoff over adjoining land (including road reservation) in accordance with the requirements of the Municipal Engineer and the Building Act 2016.

(42) Prior to the lodgement of building or plumbing applications the developer must submit a revised (for construction) Stormwater Management Report to Council's Municipal Engineer. The Stormwater Management Report must be prepared and certified by a suitably qualified person, in accordance with section 2.6.2 of *DEP &LGAT (2021). Tasmanian Stormwater Policy Guidance and Standards for Development. Derwent Estuary Program and Local Government Association of Tasmania (Hobart, Australia)* and include calculations, design, construction and maintenance details of stormwater treatment, detention, and conveyance. The report must clearly demonstrate that the requirements of this permit are met and that adjacent and downstream properties will not be adversely impacted by the stormwater system. Once approved the Stormwater Management Report will form part of this permit.

Advice: *General Manager's consent is required for connection to the public stormwater system in accordance with the Urban Drainage Act. Providing the planning permit conditions are met General Managers Consent will be granted.*

Advice: *This condition requires further information to be submitted and approved by Council's Director Development Services pursuant to s s60(2) of the Land Use Planning and Approvals Act 1993*

Erosion and Sediment Control

(43) Prior to commencement of works or issue of any approvals under the *Building Act 2016*, an Erosion and Sediment Control Plan (here referred to as a 'ESCP') prepared in accordance with the guidelines *Erosion and Sediment Control, The fundamentals for development in Tasmania*, by the Derwent Estuary Programme

and Tamar Estuary and Esk Rivers Program, must be approved by Council's Director Development Services. The ESCP shall form part of this permit when approved.

Advice: *This condition requires further information to be submitted and approved by Council's Municipal Engineer pursuant to s s60(2) of the Land Use Planning and Approvals Act 1993*

(44) Temporary run-off, erosion and sediment controls must be installed in accordance with the approved ESCP and must be maintained at full operational capacity to the satisfaction of Council's Director Development Services until the land is effectively rehabilitated and stabilised after completion of the development.

Construction Amenity

(45) Prior to the commencement of works or issue of any approvals under the Building Act 2016, a Construction Management Plan must be submitted to and approved by the Director Development Services. The Construction Management Plan must include, but is not limited to:

(a) air and dust management,

(b) noise control,

(c) traffic control,

(d) waste management, and

(e) stormwater and sediment control (refer conditions 36 and 37).

Advice: *This condition requires further information to be submitted and approved by Council's Municipal Engineer pursuant to s60(2) of the Land Use Planning and Approvals Act 1993*

(46) The developer must make good any damage to the road frontage of the development site including road, kerb and channel, footpath, and nature strip to the satisfaction of Council's Municipal Engineer.

(47) The road frontage of the development site including road, kerb and channel, footpath, and nature strip, should be:

(a) Surveyed prior to construction, photographed, documented and any damage or defects be noted in a dilapidation report to be provided to Council's Asset Services Department prior to construction.

(b) Be protected from damage, heavy equipment impact, surface scratching or scraping and be cleaned on completion.

In the event a dilapidation report is not provided to Council prior to commencement, any damage on completion, existing or otherwise, may be deemed a result of construction activity and require replacement or repair to the satisfaction of Council's Municipal Engineer.

Advice: *This condition requires further information to be submitted and approved by Council's Municipal Engineer pursuant to s s60(2) of the Land Use Planning and Approvals Act 1993*

(48) Works associated with the development must only be carried out between the following hours unless otherwise approved by the Council's General Manager

- Monday to Friday 7:00 am to 6:00 pm
- Saturday 8:00 am to 6:00 pm
- Sunday and State-wide public holidays 10:00 am to 6:00 pm

(49) All works associated with the development of the land shall be carried out in such a manner so as not to unreasonably cause injury to, or prejudice or affect the amenity, function, and safety of any adjoining or adjacent land, and of any person therein or in the vicinity thereof, by reason of:

(a) Emission of noise, artificial light, vibration, odour, fumes, smoke, vapour, steam, ash, dust, waste water, waste products, grit or otherwise.

(b) The transportation of materials, goods and commodities to and from the land.

(c) Obstruction of any public footway or highway.

(d) Appearance of any building, works or materials.

(50) Any accumulation of vegetation, building debris or other unwanted material must be disposed of by removal from the site in an approved manner. No burning of such materials on site will be permitted unless approved in writing by the Council's General Manager.

(51) Public roadways or footpaths must not be used for the storage of any construction materials or wastes, for the loading/unloading of any vehicle or equipment; or for the carrying out of any work, process or tasks associated with the project during the construction period.

THE FOLLOWING ADVICE APPLIES TO THIS PERMIT:

A. If any condition in this permit requires that further documents are to be submitted and approved, you will need to submit the relevant documentation to development@brighton.tas.gov.au for assessment pursuant to s60 of the *Land Use Planning and Approvals* Act 1993.

Where building approval is also required, it is recommended that documentation is submitted well before submitting documentation for building approval to avoid unexpected delays.

B. Based on the information provided, the development is not likely to adversely affect TasNetworks' operations, however, it is advised that if the existing power poles and service lines are to remain, that safety clearances are adhered to and further advice can be sought from TasNetworks by calling 1300 137 008, before works are to commence on site. See attached fact sheet for further information.

The standard arrangements will apply for connection to the electricity network. For further information, please refer to TasNetworks' website - New electricity connections - TasNetworks.

C. This permit does not imply that any other approval required under any other legislation or by-law has been granted.

D. A separate permit is required for any signs unless otherwise exempt under Council's planning scheme.

E. This planning approval shall lapse at the expiration of two (2) years from the date of the commencement of planning approval if the development for which the approval was given has not been substantially commenced. Where a planning approval for a development has lapsed, an application for renewal of a planning approval for that development shall be treated as a new application.

DECISION:

Cr Irons moved, Cr Geard seconded that the recommendation be endorsed.

CARRIED

VOTING RECORD

In favour	Against
Cr Curran	
Cr De La Torre	
Cr Geard	
Cr Irons	
Cr Owen	
Cr Whelan	

Meeting closed: 6.02 pm

Confirmed: _____

(Chair)

Date: 16 July 2024

Brighton Council

MINUTES OF THE COMMUNITY DEVELOPMENT COMMITTEE

MEETING OF THE BRIGHTON COUNCIL HELD

IN THE COUNCIL CHAMBERS, COUNCIL OFFICES, OLD BEACH

AT 5.15 P.M. ON TUESDAY, 2 JULY 2024

1. Acknowledgement of Country

2. Attendance

Cr A De La Torre (Chairperson); Cr B Curran; Cr P Geard; Cr G Irons; Cr J McMaster; Cr P Owen and Cr M Whelan.

IN ATTENDANCE: Mr D Allingham (Director Development Services); Ms G Browne (Director, Corporate Services); Mr C Pearce-Rasmussen (Director, Asset Services); Ms A Turvey (Manager Community Development & Engagement), Mr J Flack (Youth Engagement Officer).

3. Apologies

Cr Owen moved, Cr Geard seconded that Cr Gray and Cr Murtagh be granted leave of absence for this meeting.

CARRIED

VOTING RECORD

In favour	Against
Cr Curran	
Cr De La Torre	
Cr Geard	
Cr McMaster	
Cr Irons	
Cr Owen	
Cr Whelan	

4. Public Question Time

There was no requirement for Public Question Time.

5. Declaration of Interest

In accordance with the requirements of Part 2 Regulation 8 of the L*ocal Government (Meeting Procedures) Regulations 2015*, the chairperson of a meeting is to request Councillors to indicate whether they have, or are likely to have, a pecuniary interest or conflict of interest in any item on the Agenda.

In accordance with Section 48(4) of the *Local Government Act 1993*, it is the responsibility of councillors to then notify the general manager, in writing, the details of any interest(s) that the councillor has declared within 7 days of the declaration.

There were no declarations of interest.

6. Business

6.1 Youth Engagement Officer - Progress Report (April-June 2024)

Author: Youth Engagement Officer (John Flack)

Authorised: Manager, Community Development & Engagement (A Turvey)

Background

The Community Development team has committed to providing a quarterly update on the work being undertaken by Council's Youth Engagement Officer. This is the second progress report provided for Council's information.

Relationship Building Activities (April – June 2024)

- Facilitating fortnightly BYAG meetings.
- Attended a Child & Youth Safety Framework information session held in Bridgewater for community groups with Independent Regulator in attendance.
- Liaising with Brighton Football Club on opportunities for the club to support football in our local schools in Bridgewater, Gagebrook and Herdsmans Cove.
- BGH Breakers meeting to discuss grant application and understand the approach to bringing sports to our local communities.
- Meeting with PCYC to understand shift in priorities and their current strategy development. Used this opportunity to feedback ideas from BYAG on what they would like to see PCYC offer for young people, which included more visible sports activities in community.
- Working with Bridgewater Police to discuss and begin establishing a collaborative community safety group. This would include representatives from schools, Tas Police, Brighton Council, PCYC and Brighton Alive with end goal to work on a Youth Safety Strategy.
- Bond Place and Civic Centre high visibility activity (Youth Engagement Officer drumming as a way of making connections).
- Brighton Alive/Youth Network facilitation.

- Co-ordinating the Youth Week event and official opening of the pump track at Bridgewater Foreshore Parkland.
- Attended the Youth Network of Tasmania (YNOT) forum in Launceston on youth homelessness with BYAG.
- Meeting of Youth Action Priorities (YAP) Southern Tasmanian – gathering of youth services to network and learn about what is happening for youth in our region.
- Visited the Clarence Plains Youth Centre to familiarise with what's happening in other municipalities, meet other youth workers and share experiences/learnings.
- Participated in The Smith Family careers session at Brighton Primary School to speak about being a social worker and youth worker.
- Attended a Gagebrook Primary School Association meeting – this group has reformed.
- Attended the Alcohol, Tobacco and Other Drugs Council Tasmania (ATDC) networking breakfast.
- Accompany students from Herdsmans Cove Primary School on a weekly basis to the Jordan River Community Shed to do wood working activities.
- Have had two (2) meetings with the Jordan River Learning Federation - Senior School youth workers Ray and Abbie to discuss the work they are doing with disengaged and disconnected students and look at where Council can provide support for this one year pilot.
- Have received two (2) referrals (from Child Safety and Tas Police) to assist with families who have children who are not currently attending school.
- Attended Under One Rainbow's Cris Fitzpatrick celebration at Cris Fitzpatrick Park, where BYAG supported some activities for Under One Rainbow.
- Submitted a Tas Network's Community Grant application on behalf of BYAG, to run school holiday activities for young people in the community.
- Social work supervision for the UTAS master's in social work student currently undertaking a placement with the Community Development team.

Key Observations:

- Finding a spot to bump into youth has been difficult. However, have been making some progress with weekly drumming sessions outside the Civic Centre and Bond Place. Small signs of making connection with disengaged young people on bikes in the area e.g. thumbs up from kids.
- Brighton Alive Youth Action Network had a very productive discussion in June around the effectiveness of the meetings and an agreement was made to give the meetings a core goal related to supporting the establishment of the Bridgewater Youth Hub. This forum is also seen as a space where people who work with youth can find support from others in the community and make relevant connections.
- The young people who attended the two day Asset Based Community Development (ABCD) workshop are truly putting what they learnt into practice. The young people are involved in helping to bring to fruition two initiatives that were brought to life at the workshops. This included a 'bump in' place for young people in the Gagebrook/Herdsmans Cove area and a 'Hobby Expo' to showcase many different activities or interests available to young people in our area. They

are following up and developing leadership skills by investing time in the projects and including everyone in the decision-making process.

- It will be highly beneficial for services to start working together more to create a Youth Safety Strategy for the Brighton LGA. This would mean Council, Youth Justice, Education and those who support our young people in the area to share information to create safety plans and initiatives.

Options

1. As per the recommendation.

2. Other

RECOMMENDATION:

That Council receives and notes the information in the Youth Engagement Officer's Progress Report (April-June 2024).

DECISION:

Cr McMaster moved, Cr Curran seconded that Council receives and notes the information in the Youth Engagement Officer's Progress Report (April-June 2024).

CARRIED

VOTING RECORD

In favour	Against
Cr Curran	
Cr De La Torre	
Cr Geard	
Cr McMaster	
Cr Irons	
Cr Owen	
Cr Whelan	

6.2 Update on the Bridgewater Youth Hub – Partnership between Tasmanian Aboriginal Legal Service (TALS) & Brighton Council

Author: Manager, Community Development & Engagement (A Turvey)

Authorised: General Manager (J Dryburgh)

Background

In 2023 Council, agreed to progress the Bridgewater Youth Community Hub in partnership with the Tasmanian Aboriginal Legal Service (TALS). A Memorandum of Understanding (MOU) for the project was endorsed by Council and signed in December 2023 between Brighton Council, TALS and Australian Red Cross.

Since this time, the Australian Red Cross (ARC) has made a funding decision at the national level to withdraw from all of its place-based projects, and this includes ARC's place based work in our Brighton local government area. As of the end of July 2024, ARC will no longer employ a place based worker in the Brighton Council communities.

This decision by ARC did mean some delays in progressing the project, but in recent weeks Council officers and TALS were able to make some decisions around how they would like to move forward with the project and the following report provides Council with an update.

Progress Report – Bridgewater Youth Hub

- The MOU will be amended to remove ARC from the agreement and an updated version of the MOU will be brought to Council in July 2024.
- TALS will fund a Project Officer who will have expertise in place based work and drive the community engagement process for the youth hub in collaboration with Brighton Council, BYAG and the Brighton Alive Youth Action Network.
- A draft Community Engagement Plan is being developed and will be provided to Council in July 2024 for Council's information and input. It has already been identified that Winter Fest in August 2024 will provide an ideal opportunity to introduce the idea of a youth hub to the broader community and young people, giving the project team a prime opportunity to begin gathering and collaborating on ideas for the youth hub.
- The Community Engagement Plan will incorporate a communications plan for this first stage of the project that outlines key messaging, how communications will be managed and the mediums utilised for all stakeholders.
- Based on an site analysis conducted by Development Services, a primary site for the location of the Youth Hub was identified out of several options within the Bridgewater area at 55 Eddington Street, Bridgewater, on the corner of Green Point Road and Eddington Street. This site is currently owned by the DECYP.

- This preferred site was flagged with Minister Jaensch when he was Minister for Education and he has requested in his role as Minister for Aboriginal Affairs and Minister for Children and Youth, that TALS and Brighton Council write to him formally advising that this site is the preferred site for the Bridgewater Youth Hub so that we can begin negotiations to obtain this land from DECYP. This letter has been drafted and will be sent to Minister Jaensch week commencing 1 July 2024, as a joint letter from the CEO of TALS and the General Manager of Brighton Council.
- An initial meeting with the Principal of Jordan River Learning Federation – Senior School has recently occurred to inform the school of the desire to use this site for the Youth Hub and we were pleased to receive in principle support from the school for this location.
- Throughout the community engagement process, over the next six months, Council will provide a member of the Asset Services team to work with the community engagement team and a building design firm, to take the co-creation ideas from the community engagement work and develop a concept design for the physical infrastructure. This scoping and concept design work will put Council in an ideal position to apply for large infrastructure grants to construct this purpose built youth hub facility in Bridgewater.

Options

1. As per the recommendation.
2. Other.

RECOMMENDATION:

That Council receives and notes the information contained within this update on the Bridgewater Youth Hub project (a partnership between TALS and Brighton Council).

DECISION:

Cr Geard moved, Cr McMaster seconded that Council receives and notes the information contained within this update on the Bridgewater Youth Hub project (a partnership between TALS and Brighton Council).

CARRIED

VOTING RECORD

In favour	Against
Cr Curran	
Cr De La Torre	
Cr Geard	
Cr McMaster	
Cr Irons	
Cr Owen	
Cr Whelan	

6.3 Overview of Community Creators Pilot Program

Attachment: Community Creators Pilot Program Presentation

Author: Manager, Community Development & Engagement (A Turvey)

Authorised: General Manager (J Dryburgh)

Overview

Community Creators is a schools based program developed by Kylie Murphy, Council's Community Development Officer and Joselle Griffin, Place Based Community Development Worker with Australian Red Cross.

It is designed to work with students in primary and secondary schools to build an understanding of:

- What is community?
- How you can be an active community member?
- What is a community leader?
- How you can use your voice as a young person to advocate for change and work with others to shape what your community is like.

To many of us who have lived, volunteered and worked in communities all our lives this might seem obvious but for many young people a sense of community is not automatically know to them.

Jordan River Learning Federation – Senior School agreed to the conduct of a pilot program of the Community Creators program with a group of students from across the school and supported in the school by Paul Mabb, Aboriginal Education Support Officer.

After the first term and what was originally to be just a six week program, JRLF-SS invited Kylie and Joselle back to continue the program this term, to allow the students to work on the actions they wanted to take to help make change in their community.

Based on evident capacity building, young people taking on a mentoring and leadership role with the potential to run the program and an increase in confidence amongst participants (and the ability for Community Creators to engage some of the disengaged students), the school has welcomed the program with enthusiasm in Term 2 2024.

The goal in 2024 is to submit an expression of interest to the Tasmanian Community Fund (TCF) for their Connected and Educated Children funding stream, which would allow Council to roll this program out to the primary schools in our area who would like to participate. There has already been confirmed interest from East Derwent Primary School, who have agreed to run a primary school pilot program this year.

If successful, the TCF funding would allow the program to be embedded into our local schools and be conducted in a sustainable manner over a 5-7 year period.

The pilot program has been invaluable in providing learnings and opportunities for enhancements and changes to how Community Creators is facilitated within a senior school.

An additional benefit has been those in Community Creators discovering their voice and desire to volunteer and joining the BYAG.

Options

1. As per the recommendation.
2. Other.

Cr Irons left the meeting at 5.26pm.

RECOMMENDATION:

That Council receives and notes the information contained within this overview of the Community Creators Pilot Program.

DECISION:

Cr Curran moved, Cr Whelan seconded that Council receives and notes the information contained within this overview of the Community Creators Pilot Program.

CARRIED

VOTING RECORD

In favour	Against
Cr Curran	
Cr De La Torre	
Cr Geard	
Cr McMaster	
Cr Owen	
Cr Whelan	

Meeting closed: 5.27pm

Cr Irons returned to the meeting at 5.28pm

Confirmed: _____

(Mayor)

Date: 16 July 2024

TASMANIAN PLANNING COMMISSION

Our ref: DOC/24/81282
Officer: Karen Fyfe
Phone: 03 6165 6808
Email: tpc@planning.tas.gov.au

11 July 2024

Mr James Dryburgh
General Manager
Brighton Council

Attention: Ms Jo Blackwell

By email: admin@brighton.tas.gov.au
Jo.Blackwell@brighton.tas.gov.au

Dear Mr Dryburgh

Tasmanian Planning Scheme - Brighton
Amendment RZ 2023-002
203 and 205 Old Beach Road, Old Beach

The Commission's decision to modify and approve the above amendment and the instrument under the *Land Use Planning and Approvals Act 1993* is enclosed.

The Commission will make the necessary amendments to the planning scheme and the planning scheme maps to give effect to the amendment.

The planning authority is also required to give notice of the Commission's decision on the draft amendment as set out in the *Land Use Planning and Approvals Regulations 2014*.

If you require further information, please contact Karen Fyfe, Planning Assistant, on 03 6165 6808.

Yours sincerely

Karen Fyfe
Planning Assistant

Attachments:

- Brighton - draft amendment RZ 2023-002 - Decision and reasons, 26 June 2024
- Brighton - draft amendment RZ 2023-002 - Approved effective, 17 July 2024

TASMANIAN PLANNING COMMISSION

DECISION

Planning scheme	Tasmanian Planning Scheme - Brighton
Amendment	RZ 2023-002 - 203 and 205 Old Beach Road, Old Beach
Planning authority	Brighton Council
Applicant	JMG Engineers & Planners for Great Divide Developments Pty Ltd
Date of decision	26 June 2024

Decision

The draft amendment is modified under section 40N(1)(b) of the *Land Use Planning and Approvals Act 1993* as set out in Annexure A and is approved under section 40Q.

Dan Ford
Delegate (Chair)

Rohan Probert
Delegate

Ross Lovell
Delegate

REASONS FOR DECISION

Background

Amendment

The draft amendment relates to 203 and 205 Old Beach Road, Old Beach and proposes to:

- rezone the site from Future Urban to General Residential, Low Density Residential, Environmental Management and Open Space;
- amend the application of the Priority Vegetation Area overlay; and
- apply the Flood-Prone Hazard Area overlay to parts of the site.

Site information

The site consists of 203 Old Beach Road (folio of the Register 123119/1) and 205 Old Beach Road (folio of the Register 135401/7), Old Beach.

The site is located south of Gagebrook and to the west of Old Beach Road. 203 Old Beach Road has frontage and direct access to Old Beach Road. Access to 205 Old Beach Road is via a right of way across 203 Old Beach Road.

203 Old Beach Road is 6.676ha and 205 Old Beach Road is 5.885ha. Both lots have been developed for residential use and contain a number of outbuildings.

205 Old Beach Road is dissected by a TasWater Bulk Transfer Water Main, which lays within a 10m-wide Pipeline Easement. The existing dwellings are serviced by reticulated water mains. No reticulated sewer services are provided.

The surrounding land is zoned Future Urban, Open Space and Rural Living to the north, General Residential to the south, Open Space to the west and Rural to the east across Old Beach Road.

It is important to recognise the setting of the site within the local and broader urban context, as this has some influence on the way future development might integrate.

The broader urban setting is one dominated by post-war suburban style subdivision and development. This style contrasts with traditional pre-war layouts that are based on a grid system of roads, and produces more chaotic, car-based and less connected neighbourhoods that favour a narrow range of household types. This is also typical of most suburban development around greater Hobart, and indeed major towns and cities around the country. In breaking with this approach, the planning authority introduced the Tivoli Green Specific Area Plan (Tivoli Green SAP), whose boundary abuts the site which is the subject of the proposed amendment.

In general terms, it can be said that the Tivoli Green SAP introduces a neo-traditional approach to urban design, featuring a modified grid layout for the movement system and complementary design standards for a variety of housing. Such a grid system enhances connectivity within neighbourhoods and to adjacent places, provides legibility to make wayfinding easier and enhances traffic distribution and safety for all types of road users. Moreover, as Figure BRI-S9.1 in The Tivoli Green SAP demonstrates, the grid structure provides for generally rectilinear shaped lots, which in turn allows optimum design opportunities, without creating wasted or inconvenient spaces associated with the rear of irregular shaped lots usually found at the termination of cul-de-sacs.

The site is subject to the Bushfire-Prone Areas overlay and the Natural Assets Code (Waterway and Coastal Protection Area and the Priority Vegetation Area overlays).

The site is dissected by Bobs Creek and Gage Brook, which converge and form into a natural wetland area towards the northwest of the site.

An application for a 4-lot subdivision (SA 2022-044) of the two titles was approved by the Brighton planning authority on 16 May 2023. The subdivision excised the two existing dwellings and associated outbuildings within Lots 3 and 4, leaving Lots 1 and 2 to provide for future subdivision. The lots approved by the subdivision are yet to be created.

The supporting report prepared by JMG Engineers & Planners noted that the draft amendment will enable the site to be made available for residential and supporting uses consistent with the proposed residential zones.

The supporting documentation associated with the SA 2022-044 application was accompanied by an indicative future subdivision plan on Lots 1 and 2 of the approved SA 2022-044 permit. Lots 1 and 2 broadly represent the area proposed to be rezoned to General Residential in this draft amendment. While several similar versions of indicative layouts where referenced, they generally provided for 86 additional residential lots ranging from 450m^2 to 970m^2 accessed from Lottie Mews. It is noted, however, that the plan considered by the planning authority as supporting information to the draft amendment application provided for a road commencing at Arbie Lane and extending through Lot 2 on the previously approved subdivision plan to connect with the balance lot, Lot 3. It is also noted that later indicative layouts replaced that connecting road with a cul de sac.

This application is limited to a draft planning scheme amendment and the indicative layout plan does not form part of the proposal.

Issues raised in representations

The representors raised the following issues:

- concerns regarding the sewerage and stormwater services proposed for the site;
- lack of documentation quantifying the potential impact of reticulated stormwater discharge under the *State Policy on Water Quality Management 1997* (Water Quality Policy);
- insufficient provision of additional public open space;
- errors within the traffic data identified in the traffic impact statement and concern regarding the impact of additional traffic upon Riviera Drive;
- developer contributions for infrastructure completed by Tivoli Green Pty Ltd;
- the bushfire hazard management plan provided was prepared for the subdivision application SA 2022-044 and does not address the rezone application; and
- the flood hazard report provided was prepared for the subdivision application SA 2022-044 and does not address the rezone application.

Planning authority's response to the representations

The planning authority considered the representations and recommended that no modifications were required to the draft amendment in response to the representations.

Date and place of hearing

The hearing was held at the Commission's office on Level 3, 144 Macquarie Street, Hobart on 16 April 2024.

Appearances at the hearing

Planning authority:	Jo Blackwell, Senior Planner Leigh Wighton, Development Engineer
Applicant:	Mat Clark, MC Planners for Great Divide Developments Pty Ltd Sam El Haddad, Civil Engineer
Representors:	Clint Johnstone, Tivoli Green Pty Ltd Amelia Johnstone, Tivoli Green Pty Ltd Anna Wilson, Tivoli Green Pty Ltd

Consideration of the draft amendment

1. Under section 40M of the *Land Use Planning and Approvals Act 1993* (the Act), the Commission is required to consider the draft amendment to the Local Provisions Schedule (LPS) and the representations, statements and recommendations contained in the planning authority's section 40K report and any information obtained at a hearing.
2. A hearing was convened to assist the Commission consider the issues in the representations.
3. The Commission must also consider whether the draft amendment meets the LPS criteria as set out under section 34(2) of the Act:

    (a) contains all the provisions that the SPPs specify must be contained in an LPS; and

    (b) is in accordance with section 32; and

    (c) furthers the objectives set out in Schedule 1; and

    (d) is consistent with each State policy; and

    (da) satisfies the relevant criteria in relation to the TPPs; and

    (e) as far as practicable, is consistent with the regional land use strategy, if any, for the regional area in which is situated the land to which the relevant planning instrument relates; and

    (f) has regard to the strategic plan, prepared under section 66 of the *Local Government Act 1993*, that applies in relation to the land to which the relevant planning instrument relates; and

    (g) as far as practicable, is consistent with and co-ordinated with any LPSs that apply to municipal areas that are adjacent to the municipal area to which the relevant planning instrument relates; and

    (h) has regard to the safety requirements set out in the standards prescribed under the *Gas Safety Act 2019*.

4. Where relevant, these matters are discussed below.

Application of the General Residential Zone

5. The draft amendment includes rezoning 5.505ha of the site from Future Urban to General Residential.
6. In their supporting report, the applicant noted that the General Residential Zone would be in keeping with the wider zoning pattern and character of the area, including the existing settlement pattern, use, layout and development of Old Beach.

7. The Zone Application Guidelines for the General Residential Zone within Guideline No. 1 - Local Provisions Schedule (LPS): Zone and Code Application (the Guidelines) state as follows:

> GRZ 1 The General Residential Zone should be applied to the main urban residential areas within 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.
>
> GRZ 2 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) within the General Residential Zone in an interim planning scheme;
>
> (b) within 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.
>
> *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.*
>
> GRZ 3 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.

8. In their supporting report, the applicant submitted that the application of the General Residential Zone within the draft amendment aligned with GRZ 1, GRZ 2 and GRZ 3 of the Guidelines for the following reasons:

- The site is not identified for higher density ('Inner Residential') and noting the location of the site and surrounding land uses, it is considered 'General Residential' is an appropriate zone;
- The site is capable of being connected to a reticulated water supply service and a reticulated sewerage system through existing mains in the immediate area;
- The site is currently zoned 'Future Urban' which permits residential uses;
- The proposed zoning is consistent with the regional strategy;
- It is proposed to apply 'General Residential' to land that is outside of highly constrained areas. Land that is constrained is proposed to be zoned 'Low Density Residential';and

- Future use and development will be adequately controlled by the applicable zone and code provisions under the planning scheme.

9. Mat Clark noted at the hearing that consideration had been given to applying a Specific Area Plan (SAP) over the proposed General Residential Zone to guide future development. However, the applicant also submitted that a SAP was not required in this instance for the following reasons:

    - the area of the site available to be zoned General Residential was limited by flooding constraints and considered to be relatively small;
    - servicing was considered to be relatively straightforward;
    - access to the proposed General Residential land was preferred to be via Lottie Mews and was not required, or desirable from Old Beach Road; and
    - development options were considered to be relatively limited.

10. In its supporting report, the planning authority submitted that the draft amendment was consistent with GRZ 1 and GRZ 2 of the Guidelines as:

    (a) it is intended that future division of land will create lots connected to a reticulated water supply and serviced by a reticulated sewerage system;

    (b) the land is identified within the Southern Tasmania Regional Land Use Strategy as being within the Urban Growth Boundary. As previously noted, the land is currently zoned Future Urban. There is an expectation that future subdivision will connect with the Tivoli Green precinct.

11. Mr Clark submitted that in the context of the broader residential area, the site did not warrant specific urban design solutions applied to it via a SAP and that future development ought to be controlled via the standard General Residential Zone provisions.

12. At the hearing, Mr Johnstone submitted on behalf of Tivoli Green Pty Ltd that he raised no objection to the General Residential Zone component of the draft amendment.

Commission consideration

13. The Commission notes that good neighbourhood development through appropriate consideration of the urban design treatment of future subdivision is something that the planning authority has clearly placed great weight on. This is evidenced by the inclusion of the Tivoli Green SAP in the planning scheme. In relation to the site's future urban design treatment and its relationship to the adjacent neighbourhood, the applicant noted in the hearing that the proposed development would, in effect, be as good a grid arrangement as it could be, having regard to the limited number of connection points.

14. With the exception that the Guidelines establish the expectation that the conversion from the Future Urban Zone to the General Residential Zone would be supported by detailed structure/precinct plans to guide future development, the Commission accepts the submissions of the planning authority and applicant that the area of the site proposed to be zoned General Residential is generally consistent with the Guidelines.

15. The potential need for a structure plan is discussed in further detail below. However, it is accepted that the land proposed to be revised to the General Residential Zone is unconstrained, can be serviced, is not identified for higher densities and is suitable for future residential development.

16. The General Residential Zone provides some guidance as to what may be anticipated in good subdivision design. These tools, which may be applied by the planning authority to ensure good outcomes, start with the Objectives for clause 8.6.2:

> That the arrangement of new roads within a subdivision provides for:
>
> (a) safe, convenient and efficient connections to assist accessibility and mobility of the community;
>
> (b) the adequate accommodation of vehicular, pedestrian, cycling and public transport traffic; and
>
> (c) the efficient ultimate subdivision of the entirety of the land and of surrounding land.

17. The objectives are followed by relevant Performance Criteria:

> P1
>
> The arrangement and construction of roads within a subdivision must provide an appropriate level of access, connectivity, safety and convenience for vehicles, pedestrians and cyclists, having regard to:
>
> …
>
> (c) the need for connecting roads and pedestrian and cycling paths, to common boundaries with adjoining land, to facilitate future subdivision potential;
>
> (d) maximising connectivity with the surrounding road, pedestrian, cycling and public transport networks;
>
> …
>
> (g) the efficient and safe movement of pedestrians, cyclists and public transport;
>
> …
>
> (j) the future subdivision potential of any balance lots on adjoining or adjacent land.

18. The Commission is persuaded that these planning controls will provide tools for the planning authority to ensure future subdivision applications have adequate road connectivity between each part of the site and contribute to the quality of neighbourhood design required in the adjacent area covered by the Tivoli Green SAP.

19. The Commission supports the application of the General Residential Zone as shown on the certified amendment.

Application of the Low Density Residential Zone

20. The draft amendment includes rezoning 6.712ha of the site from Future Urban to Low Density Residential.

21. In their supporting report, the applicant noted that the Low Density Residential Zone would allow for the two existing dwellings whilst recognising environmental constraints upon the surrounding land, including waterways and wetlands.

22. The zone application Guidelines for the Low Density Residential Zone state as follows:

> LDRZ 1 The Low Density Residential Zone should be applied to residential areas where one of the following conditions exist:
>
> (a) residential areas with large lots that cannot be developed to higher densities due to any of the following constraints:
>
> (b) lack of availability or capacity of reticulated infrastructure services, unless the constraint is intended to be resolved prior to development of the land; and

(c) environmental constraints that limit development (e.g. land hazards, topography or slope); or

(d) small, residential settlements without the full range of infrastructure services, or constrained by the capacity of existing or planned infrastructure services; or

(e) 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.

LDRZ 2 The Low Density Residential Zone may be applied to areas within 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.

LDRZ 3 The Low Density Residential Zone should not be applied for the purpose of protecting areas of important natural or landscape values.

LDRZ 4 The Low Density Residential Zone should not be applied to land that is targeted for greenfield development unless constraints (e.g. limitations on infrastructure, or environmental considerations) have been identified that impede the area being developed to higher densities.

23. The applicant's supporting report submitted that the draft amendment aligns with LDRZ 1, LDRZ 2 and LDRZ 3 of the Guidelines for the following reasons:

- The draft Low Density Residential Zone area is not identified for higher density (Inner Residential) and cannot be developed at high density due to the flooding hazard risk;
- The draft Low Density Residential Zone area, while able to be connected to reticulated services, is intended to remain on on-site wastewater as is currently the case;
- Considering the location of the site and surrounding land uses, it is considered 'Low Density Residential' is an appropriate zone; however areas of the site are impacted by environmental constraints including wetlands and waterways;
- The site is currently zoned 'Future Urban' which permits residential uses. Lot sizes are above those stated within the Ministerial Guideline; and
- The draft Low Density Residential Zone area does not contain areas of important natural or landscape values.

24. The applicant noted that although application of the Rural Living A Zone was also considered, that zone was not considered appropriate given the wider range of permitted uses and the lack of any strategic direction to extend the zone in this area.

25. In its supporting report, the planning authority submitted that the land to be rezoned Low Density Residential was identified as having environmental constraints relating to flooding and priority vegetation.

26. The planning authority submitted that because of this, the draft amendment satisfied LDRZ 1(a) and LDRZ 4, given the existing constraints on the site relating to natural values and waterway and coastal protection overlays.

27. At the hearing, the Commission noted the applicant's rationale to apply the General Residential Zone to areas of the site that weren't highly constrained and queried whether unconstrained areas within the draft Low Density Residential Zone ought to be zoned General Residential.

28. The planning authority submitted that that proposition had not been considered, and that they did not object to consideration being given to a wider application of the General Residential Zone over the subject site.

29. Mr Clark submitted that there is no compulsion to change the zoning of the areas of the site that were not subject to potential flooding as the current owners of each property intended to continue using the land as they currently were. He submitted that while applying the Rural Living Zone to the two existing houses and their surrounds to reflect this use had been considered, that zone was thought to be overly restrictive and the Low Density Residential Zone better reflected the capacity of the land.

Commission consideration

30. The Commission notes that some areas within the area proposed to be revised to the Low Density Residential Zone were identified as being constrained by potential flooding on the mapping produced by Flussig Engineers. Conversely, other areas proposed for Low Density Residential zoning are relatively unconstrained.

31. The Commission acknowledges that the current owners of the land may not wish to alter the way they currently use their respective properties. However, the Commission notes that should the land be rezoned as proposed, there is no compulsion to alter the established use.

32. The Commission notes that the site is currently zoned Future Urban under the Tasmanian Planning Scheme - Brighton, and that the Zone Purpose Statements for that zone include ensuring that development does not compromise the potential for future urban use and development of the land. The Commission also notes that the Guidelines state that:

> 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.

33. The Commission notes that the site is within the Greater Hobart Urban Growth Boundary and within a Greenfield Development Precinct shown on Map 10 - Residential Strategy for Greater Hobart - Residential Development Areas within the Southern Tasmania Regional Land Use Strategy 2010-2035 (regional strategy). The Commission also notes that SRD 2.5 of the regional strategy states:

> SRD 2.5 Implement a Residential Land Release Program that follows a land release hierarchy planning processes as follows:
>
> 1. Strategy (greenfield targets within urban growth boundary);
> 2. Conceptual Sequencing Plan;
> 3. Precinct Structure Plans (for each Greenfield Development Precinct);
> 4. Subdivision Permit; and
> 5. Use and Development Permit.

34. The Commission finds that there are areas within the draft Low Density Residential Zone that are constrained and other areas that could potentially be more appropriately zoned General Residential. Establishing the various constraints and land capability requires further analysis and would inform the development of a Precinct Structure Plan. In the absence of a Precinct Structure Plan, the Commission does not support

application of the Low Density Residential Zone as proposed under the draft amendment. In the absence of further strategic analysis, the Commission finds that the application of the Low Density Residential Zone is unlikely to reflect the capability of the land to be developed at the density envisaged for land within the regional strategy's urban growth boundary.

35. The Commission notes that should a Precinct Structure Plan be developed for the site in the future, road and movement connectivity to adjoining land is likely to prove a key determinant of the suitability of the plan and indeed, the potential nature and density of future development.

Application of the Environmental Management Zone

36. The applicant's supporting report submitted that the Environmental Management Zone had been applied to the areas of the site with a Hazard Rating of H4-H6 in the flood hazard report prepared by Flüssig Engineers (flood report). The applicant submitted that the use of the Environmental Management Zone was considered an alternative to relying on the flood-prone hazard areas hazard code (laid over the General Residential and Low Density Residential Zones) to regulate areas susceptible to flooding.

37. The applicant submitted that the draft amendment aligned with EMZ 1 of the Guidelines as the application of the Environmental Management Zone was limited to private land, identified as being at high risk of flooding, and suitable for limited use and development.

38. In their supporting report, the applicant submitted that Zone Application Guideline EMZ 3 was partly applicable to the site as some of the area proposed for Environmental Management Zoning would be used for a sewer pump station.

39. The planning authority submitted that the draft Environmental Management Zone includes riparian and flood affected areas identified in the applicant's flood report, and that the Environmental Management Zone was intended to limit use and development due to the risk associated with the identification of the land as a high-risk flood area.

40. At the hearing, Ms Blackwell indicated that the planning authority had not carried out any natural values assessment of the draft Environmental Management Zone but considered that part of the site to include riparian areas and wetlands.

41. Also at the hearing, Ms Wilson submitted on behalf of Tivoli Green Pty Ltd that the land proposed to be zoned Environmental Management potentially contained saltmarsh/wetland, which was a threatened community, in the vicinity of Gage Brook.

42. In relation to whether the draft Environmental Management Zone contained significant ecological, scientific, cultural or scenic values as referred to in Zone Application Guideline EMZ 1, Mr Clark confirmed at the hearing that the Enviro-dynamics Natural Values Assessment did not include any part of the site north of the area proposed to be revised to the General Residential Zone and that the applicant relied upon the existing Priority Vegetation Overlay as an indication of the biodiversity on that part of the site.

43. At the hearing and noting the absence of a natural values assessment of the northern part of the site, the Commission explored with the parties whether the area proposed to be revised to the Environmental Management Zone would be more appropriately zoned Open Space. Mr Clark submitted that while it was understood that the Open Space Zone could be applied to private land, it may create an expectation that the Council intended to acquire that land in the future when that may not be their intention. At the hearing, Ms Blackwell acknowledged that the Council could consider a larger area of Open Space Zone in the vicinity of Gage Brook, and that such consideration would be likely to benefit from a strategic planning assessment of the area.

Commission consideration

44. Zone Application Guideline EMZ 1 of the Guidelines states:

> EMZ 1 The Environmental Management Zone should be applied to land with significant ecological, scientific, cultural or scenic values, such as:
>
> (a) land reserved under the *Nature Conservation Act 2002*;
>
> (b) land within the Tasmanian Wilderness World Heritage Area;
>
> (c) riparian, littoral or coastal reserves;
>
> (d) Ramsar sites;
>
> (e) any other public land where the primary purpose is for the protection and conservation of such values; or
>
> (f) any private land containing significant values identified for protection or conservation and where the intention is to limit use and development.

45. While the Commission notes the submissions of the parties, in the absence of any natural values assessment of the area proposed to be revised to the Environmental Management Zone by a suitably qualified person, the Commission is not persuaded that the application of the zone is consistent with Guideline EMZ 1. As such, the Commission does not support application of the Environmental Management Zone proposed in the draft amendment.

46. The Commission further notes that the identification of natural values, constraints and intended future uses for this area could inform the development of a future Precinct Structure Plan.

Application of the Open Space Zone

47. The applicant's supporting report submitted that the draft amendment aligns with Zone Application Guidelines OSZ 1, OSZ 2, OSZ 3 and OSZ 3 of the Guidelines for the following reasons:

- The proposed open space zoning supports delivery of open space, in accordance with Brighton Council's Public Open Space Policy AP13 and recognises the natural environment of the waterway;
- The land is not seaward of the high water mark;
- While currently private land, areas zoned 'Open Space' will be transferred to Council as part of the SA2022-044 subdivision permit and will contribute to its open space network; and
- The area of the site proposed to be zoned 'Open Space' does not contain significant natural values nor is it intended for formal recreational facilities.

48. At the hearing, Ms Blackwell submitted on behalf of the planning authority that the small parcels of land identified for rezoning to the Open Space Zone are riparian areas, adjacent to Gage Brook.

49. At the hearing, the planning authority noted that a condition of the approved subdivision permit SA2022-44 required the land proposed to be zoned Open Space to be transferred to Council pursuant to section 117 of the *Local Government (Building and Miscellaneous Provisions) Act 1993* for Public Open Space.

50. Also at the hearing, Mr Johnstone and Ms Wilson indicated support for a larger area of the Open Space Zone around Gage Brook to complement and integrate with the public

open space created as part of the adjoining Tivoli Green development. Ms Wilson also submitted at the hearing that in the longer term, establishing open space links to the northeast (towards the intersection of Gage Brook and Old Beach Road) and potentially the southeast (in the vicinity of Bobs Creek) created the potential for a local open space network, and that a network of open space links was likely to enhance usage and desirability.

51. Despite the area proposed to be rezoned to Open Space reflecting the public open space contribution required through SA2022-44, Ms Blackwell acknowledged at the hearing that a larger area of Open Space Zone in the vicinity of Gage Brook may be appropriate. She further submitted that such consideration would likely benefit from a strategic planning assessment of the area.

Commission consideration

52. The Commission notes that a potentially larger area of land zoned Open Space may be warranted, but establishing the extent should follow a natural values assessment of the northern part of the site and be reflected in a future Precinct Structure Plan. Even so, the Commission is persuaded that the three areas of land proposed to be rezoned to Open Space as shown on the certified amendment on the northern side of Gage Brook reflect the SA2022-44 permit and are less likely to contain significant natural values. The Commission is satisfied that the application of the Open Space Zone is consistent with OSZ 1 and OSZ 3 of the Guidelines and supports the application of the Open Space Zone as shown on the certified amendment.

Natural Values - priority vegetation

53. The draft amendment proposes to amend the C7.0 Natural Assets Code's priority vegetation overlay by removing the overlay from the southern part of the site proposed to be rezoned General Residential (as shown on the certified amendment submitted to the Commission on 9 April 2024).

54. The applicant's supporting report provided a natural values assessment prepared by Enviro-dynamics dated 12 September 2022, which submitted that the southern part of the site proposed to be rezoned General Residential comprised agricultural land and that there were no threatened vegetation communities, threatened species or threatened species habitat present.

55. The natural values assessment noted that as the vegetation on the southern part of the site did not meet the definition of 'priority vegetation' in the planning scheme, none of the Natural Assets Code's provisions were relevant to the subject area.

56. Further, the natural values assessment concluded that any development on the southern section of the site would not impact any significant natural values.

57. The applicant's supporting report submitted that removal of the priority vegetation overlay from the area of the site to be rezoned General Residential would support future development for urban uses.

Natural Values - waterway and coastal protection

58. The C7.0 Natural Assets Code's waterway and coastal protection overlay applies to the site. The draft amendment proposes no changes to this overlay.

59. The natural values assessment prepared by Enviro-dynamics dated 12 September 2022 references the subdivision standards which are not relevant to this draft amendment, they would however be applicable to any future subdivision facilitated by the approval of the draft amendment.

60. The natural values assessment notes that the riparian zone of Bobs Creek and downstream of the site are largely covered by exotic species.

Commission consideration

61. The Commission notes that, at the hearing, the applicant advised that the Enviro-dynamics natural values assessment did not assess any part of the site north of the area proposed to be revised to the General Residential Zone.

62. The Commission notes the evidence provided in the natural values assessment prepared by Enviro-dynamics and supports the amendment to the Natural Assets Code by the removal of the priority vegetation overlay from the area proposed to be revised to the General Residential Zone.

Flood-prone areas

63. The draft amendment proposes to insert the flood-prone hazard area overlay over parts of the site. The flood-prone hazard area overlay is not used extensively in the planning scheme but does apply to areas surrounding sections of the Jordan River.

64. The draft amendment was supported by a flood report prepared by Flussig Engineers (dated 16 March 2023/FE_22144). The applicant submitted that the extent of the proposed additions to the flood-prone hazard area overlay would be in accordance with mapping within the flood report and would allow development within the zones proposed under the draft amendment subject to appropriate flood-risk assessment.

65. Section 1.1 of the flood report noted that the report relates to a proposed subdivision of land at 203-205 Old Beach Road, Old Beach.

66. The flood report concluded that:

> The Flood Hazard Report for 203-205 Old Beach Road, Old Beach development site has reviewed the potential development flood scenario.
>
> The following conclusions were derived in this report:
>
> 1. Peak flows for the 1% AEP at 2100 were undertaken against C12.7.1 of the TPS Flood Prone Areas Hazard code.
> 2. Peak discharge sees at the cross sectional result line is 5.50 m3/s.
> 3. Velocity at the cross-sectional result line is 1.02 m/s.
> 4. The hazard rating within lot 203 is predominantly H1 – H2, with small areas of higher ratings in the vicinity of Bobs Creek and Gage Brook to the north. Hazard ratings within lot 205 range from H1 to H5, particularly in the north-west corner of the lot.

67. The flood report recommended that the following engineering design be adopted for future development and use of the site to ensure consistency with the Tasmanian Planning Scheme Inundation Code:

> 1. Any future structures, located in the inundation area, are to be designed to resist flood forces including debris for the given flood conditions.
> 2. Future use of the subdivision, to be limited to areas deemed safe under the Australian Rainfall Runoff (ARR) Disaster manual categories.
> 3. Recommendations for future buildings will vary based on their specific layout and must be assessed separately.
> 4. Consideration should be given for an easement to allow unimpeded overland flow from the southern lot boundary of lot 205 towards Gage Brook.

5. Building lots that are impacted by hazard ratings H3 or greater should be minimized or designed to allow safe areas for building envelopes under the Australian Flood Resilience and Design Handbook.

6. Final subdivision concept is to be reassessed against this model by incorporating the post development scenario in a 3D terrain model to ensure compliance with the TPS 2021.

68. The flood report concluded that the subdivision of 203 and 205 Old Beach Road, Old Beach would meet the current Acceptable Solutions and Performance Criteria of the Tasmanian Planning Scheme's C12.0 Flood-Prone Areas Hazard Code if carried out in accordance with the report's requirements.

69. The Commission noted that section 4 of the flood hazard report stated:

> Lot 203 is less affected by hazard ratings greater than H3 with the majority of the affected areas, particularly on the eastern side of the lot, affected predominantly by H1. Therefore, the risk to people and buildings from any future development of lot 203 may be acceptable. The current subdivision layout is mostly outside the affected flood areas.

70. In light of that assessment, the Commission queried whether there was potential for the area on the eastern side of 203 Old Beach Road in the vicinity of Bobs Creek to be developed for residential use and be considered for General Residential zoning.

71. Mr Wighton noted that the flood hazard report indicated that part of 203 Old Beach Road was assessed as being a relatively low hazard area and flooding flow depths were relatively low. Mr Wighton submitted that subject to broad reshaping of the land and adjustment of levels to manage flood inundation, there was potential for land in that part of the site to be suitable for future residential use and development at densities consistent with the General Residential Zone.

72. Ms Wilson submitted that the extent of the flooding associated with Bobs Creek in the eastern area of 203 Old Beach Road was caused by more than just the creek 'spilling out' – rather, that the extent of flooding in that part of the site was affected by flood water being impeded by the existing culvert under Old Beach Road and then spilling over the road and onto the subject land. She submitted that if the culvert was changed as part of any upgrade of Old Beach Road, the extent of potential flooding to that part of the site was also likely to change. She submitted that, in any case, construction of any housing in that part of the site ought to be upon some degree of fill.

73. Despite the certified amendment including an area to be added to the C12.0 Flood-Prone Areas Hazard Code's overlay mapping, at the hearing Mr Wighton advised that the Council's preferred approach was to rely on a non-statutory flood-prone areas map. Mr Wighton submitted that a non-statutory map could be readily updated as and when required and would be used to inform the Council's application of the C12.0 Flood-Prone Areas Hazard Code.

74. Mr Wighton advised that Council had recently resolved to make the flood-prone area mapping for the entire Brighton municipality publicly available via the Council's website. Mr Wighton submitted that in accordance with that decision, the planning authority now proposed that the insertion of the draft flood-prone hazard area overlay be rejected.

75. On 22 April 2024, the Commission directed the planning authority to confirm Brighton Council's decision in relation to the publication of flood mapping outside of the planning scheme and to provide information detailing how members of the community would be made aware of the existence and location of flood mapping.

76. The planning authority submission dated 6 May 2024 provided minutes from a Council decision dated 20 September which confirmed:

> … that Council endorse and agree to make public the completed Stormwater System Management Plan, Catchment Management Plans and associated stormwater modelling to allow staff to commence engagement with the community in relation to their outputs. In doing so the Council, note that these are dynamic documents and will be updated as development and changing conditions require.

77. In their letter dated 6 May 2024, the planning authority submitted that while Council's decision did not specifically determine not to include flood mapping in the planning scheme maps, it was clear that the Council was of the view that providing a format that was dynamic and able to be continually updated to account for changing conditions was appropriate.

78. The planning authority also advised that the community were made aware of the flood mapping on the Council's website and that a notation was also included in question 13(a)(ii) of the section 337 certificate provided by the Council to prospective purchasers that a title is subject to C12.0 Flood-Prone Hazards Code.

79. The Commission also directed the planning authority to respond to the requirements of the State Planning Provisions (SPPs) clause LP1.7.10 Flood-Prone Areas Hazard Code, which requires:

> (a) If a planning authority has flood-prone areas in its municipal area, the LPS must contain an overlay showing the areas for the application of the Flood-Prone Areas Hazard Code.

80. In their letter dated 6 May 2024, the planning authority submitted that any mapping that formed part of the Brighton Interim Planning Scheme 2015 was transitioned through to the planning scheme as part of the Brighton Local Provisions Schedule coming into effect in April 2021.

81. The planning authority also submitted that:

> A number of Council's have introduced the Flood Prone Areas Hazard Code into their respective planning scheme maps. Anecdotally, this has caused problems with development applications, where ongoing development has altered the overland flow or provided solutions to mitigate the effects of the mapping. This has caused unnecessary delay and cost where applicants have been required to prepare flood modelling reports. By creating a process whereby the flood mapping sits outside of the planning scheme maps, applicants remain able to identify the mapping and make allowances for any flooding, while at the same time allowing [Council] a fluid management method to record ongoing adjustments.
>
> The current application is a prime example of how the flood mapping shown in the Flussig report has already been superseded due to the stormwater management undertaken in the Tivoli Green SAP area, in particular through Lottie Mews and Arbie Lane.
>
> The process proposed is similar to that implemented by Glenorchy City Council. It is considered that by having the flood mapping sit outside of the planning scheme overlays, benefits arise from applicants not being required to address the Code in circumstances where the risk has already been mitigated. Council retain the ability under clauses C12.2.3 and C12.2.4 of the Scheme to request further information where the land is identified on Council mapping as being subject to risk of flood or has the potential to cause increased risk from flood.

82. Ms Wilson noted that flood prone areas identified along Gage Brook within the flood report's mapping were not shown within Annexure 3 of the certified draft amendment.

Commission consideration

83. Clause LP1.7.10 Flood-Prone Areas Hazard Code of the Tasmanian Planning Scheme requires:

> (a) If a planning authority has flood-prone areas in its municipal area, the LPS must contain an overlay showing the areas for the application of the Flood-Prone Areas Hazard Code.

84. While the Commission notes the planning authority's rationale for not wanting to include the Flood-Prone Areas Hazard Code overlay in the planning scheme, the Commission is not persuaded that that rationale is sufficient to circumvent the requirements of Clause LP1.7.10. In circumstances where a planning authority has robust flood-prone mapping for a particular catchment, that mapping should be included in the planning scheme. The Commission notes that the mapping shown on the certified amendment is incomplete, that it only applies to two titles representing a small percentage of the catchment and, to some extent, that it is now superseded and no longer reflects on-ground conditions. For these reasons and noting the potential for the mapping to distort or misrepresent the extent of perceived flood-prone areas within the catchment, the Commission rejects the certified Flood-Prone Areas Hazard Code overlay mapping.

85. The Commission notes that any revised whole of catchment area modelling would inform a future Precinct Structure Plan and could be implemented via a suitable planning scheme amendment in the future. In the interim, the Flood-Prone Areas Hazard Code will continue to apply to known flood-prone areas through the application of section C12.2.4 of the Code.

Regional land use strategy

86. The relevant regional land use strategy is the Southern Tasmania Regional Land Use Strategy 2010-2035 (regional strategy).

Settlement and residential development

87. The applicant's supporting report submitted that the Residential Strategy for Greater Hobart-Residential Development Areas shown on Map 10 of the regional strategy identifies Old Beach as being within the Greater Hobart Urban Growth Boundary and that the subject site forms part of a larger Greenfield Development Precinct.

88. The applicant submitted that the proposal aligns with the strategic directions of the regional strategy, including that:

> The proposed amendment would enable denser urban development to be delivered within an existing settlement, which will provide good access to community services and education and health facilities within the existing urban area, on land that is accessible and well designed and located.

89. The applicant submitted that the relevant policies relating to residential growth in the regional strategy are:

> SRD 2.1 Ensure residential growth for Greater Hobart occurs through 50% infill development and 50% greenfield development.
>
> SRD 2.2 Manage greenfield growth through an Urban Growth Boundary, which sets a 20-year supply limit with associated growth limits on dormitory suburbs.
>
> SRD 2.3 Provide greenfield land for residential purposes across the following Greenfield Development Precincts: Bridgewater North, Brighton South, Gagebrook/Old Beach.

SRD 2.6	Distribute residential infill growth across the existing urban areas for the 25-year planning period as follows: Brighton LGA 15% (1,987 dwellings). It is noted that this is in addition to greenfield development.
SRD 2. 7	Ensure that the residential zone in planning schemes does not encompass more than a 10-year supply of residential land.
SRD 2.8	Encourage a greater mix of residential dwelling types across the area with a particular focus on dwelling types that will provide for demographic change including an ageing population.
SRD 2.9	Investigate the redevelopment to higher densities potential of rural residential areas close to the main urban extent of Greater Hobart.

90. The applicant considered that the proposal supported these regional policies by allowing greenfield residential development within the urban growth boundary close to the main urban extent of Greater Hobart.

91. The planning authority's report supporting the draft amendment (supporting report) supported the applicant's assessment and considered that the draft amendment furthered the objectives of the regional strategy.

92. At the hearing, the Commission discussed the requirement of the regional strategy for Precinct Structure Plans to support subdivisions.

93. At the hearing, Ms Blackwell submitted that the planning authority's strategic planning priorities had not included the subject site and that there was no short-term intention to complete a structure plan for the subject area.

94. At the hearing, Mr Clark submitted that consideration had been given to applying a SAP over the proposed General Residential Zone to guide future development. He submitted, however, that he did not pursue this form of amendment for the following reasons:

- the area of the site available to be zoned General Residential was limited by flooding constraints and considered to be relatively small;
- servicing was considered to be relatively straightforward;
- access to the proposed General Residential land was preferred to be via Lottie Mews and not include Old Beach Road; and
- development options were considered by the applicant to be relatively limited.

95. As such, the applicant submitted that the introduction of a SAP offered little or no value in this instance, and that less weight ought to be applied to those provisions of the regional strategy requiring a structure plan.

Commission consideration

96. The site is within the regional strategy's Greater Hobart Urban Growth Boundary and within a Greenfield Development Precinct shown on Map 10 - Residential Strategy for Greater Hobart - Residential Development Areas.

97. Section 19.6 of the regional strategy deals with the Greater Hobart Residential Strategy and includes the following:

> To ensure an orderly release of land within the Urban Growth Boundary a land release program built around Precinct Structures Plans will be required.
>
> Precinct Structure Plans will be required to be completed and relevant aspects incorporated into planning schemes through the Specific Area Plan

mechanism, and the rezoning process (under the *Land Use Planning and Approvals Act 1993*) will then be triggered. Once rezoned individual Planning Authorities may then consider subdivision application[s]. Site Development Plans will be required to support subdivision applications and will principally need to show that the proposed subdivision is in accordance with the Specific Area Plan.

98. Regional policy 2.3 of the regional strategy states:

> SRD 2.3 Provide greenfield land for residential purposes across the following Greenfield Development Precincts:
>
> - Bridgewater North
> - Brighton South
> - Droughty Point Corridor
> - Gagebrook/Old Beach…

99. Regional policy SRD 2.5 of the regional strategy states:

> SRD 2.5 Implement a Residential Land Release Program that follows a land release hierarchy planning processes (sic) as follows:
>
> 1. Strategy (greenfield targets within urban growth boundary);
> 2. Conceptual Sequencing Plan;
> 3. Precinct Structure Plans (for each Greenfield Development Precinct);
> 4. Subdivision Permit; and
> 5. Use and Development Permit.

100. The Commission notes that the regional strategy has designated the site to be within a Greenfield Development Precinct, and that regional policy SRD 2.5 requires a Precinct Structure Plan to be completed for each Greenfield Development Precinct, with relevant components then incorporated into the prevailing planning scheme via a SAP.

101. The Commission finds that the proposed application of the General Residential Zone and the Open Space Zone is, as far as is practicable, consistent with the regional strategy's settlement and residential development policies. This is the most substantial component of the amendment. However, the Commission considers that the balance of the site would benefit from broader strategic assessment informing a future Precinct Structure Plan addressing matters including:

- whether areas of the draft Low Density Residential Zone may be more appropriately rezoned General Residential;
- whether areas of the draft Environmental Management Zone may be more appropriately rezoned Open Space; and
- whether additional controls are required to be implemented through the Specific Area Plan mechanism.

102. The Commission also considers that a Precinct Structure Plan would consider how the subject site would integrate with the Future Urban Zone and Rural Living Zone land to the north and how open space, pedestrian and transport networks would integrate with the wider area in terms of access, connectivity and servicing. The Commission notes that a successful Precinct Structure Plan would also include the ability to optimise connections within the site as well as to adjoining areas in order to achieve the quality neighbourhood design objectives that the planning authority has for the area.

103. In the absence of a Precinct Structure Plan, the Commission does not support application of the Low Density Residential Zone or Environmental Management Zone as proposed under the draft amendment.

104. The Commission rejects the application of the Low Density Residential Zone and Environmental Management Zone from the draft amendment.

Managing risks and hazards

105. The applicant's supporting report submitted that while the site was susceptible to flooding from Gage Brook and Bobs Creek, the area of the site proposed to be rezoned General Residential was largely outside the susceptible area. The draft amendment would include additional areas of the site within the flood-prone hazard areas overlay, with the associated code regulating future use and development subject to those provisions.

Commission consideration

106. The Commission notes that the regional strategy includes the following regional policies that relate to managing risks and hazards:

MRH 2	Minimise the risk of loss of life and property from flooding;
MRH 2.1	Provide for the mitigation of flooding risk at the earliest possible stage of the land use planning process (rezoning or if no rezoning required; subdivision) by avoiding locating sensitive uses in flood prone areas.

107. The Commission considers that the land within the proposed General Residential Zone is predominantly outside of the areas considered susceptible to flooding. In the case of the land affected by the overland flow path extending from the southern boundary of the site towards Gage Brook, the Commission notes that, despite the certified flood-prone overlay mapping not forming part of the approval, the areas known to be vulnerable to flooding will still be subject to the Flood-Prone Areas Code and would provide adequate regulation of future use and development.

108. The Commission finds that the draft amendment is, as far as is practicable, consistent with the regional strategy's managing risks and hazards policies.

Land use and transport integration

109. In his representation made on behalf of Tivoli Green Pty Ltd, Mr Johnstone submitted that the documentation provided in support of the application contained a number of inaccuracies and inconsistencies, including in relation to the applicant's Traffic Impact Assessment. He submitted that these included inaccuracies regarding the number of established residences and approved lots, the traffic capacity of the Riviera Drive/East Derwent Highway intersection and the use of Lottie Mews and Riviera Drive as collector roads.

110. In its supporting report, the planning authority stated as follows:

> The applicant has provided a traffic impact statement (TIS) (refer Attachment C) considering impact on the road network which may arise from future development of the site. In summary the TIS identifies that access to the East Derwent Highway will be constrained based on development of the approved lots in the Tivoli Green and any future lots should this amendment be approved.
>
> Council's senior technical officer considers that the TIS does not sufficiently consider the impact of the proposal on the road network.
>
> Recently, a comprehensive Traffic Impact Assessment (Old Beach TIA) has been prepared as part of a broader Old Beach Rezoning project, which has identified limitations in the East Derwent Highway. The proposed rezoning

> under consideration results in a moderate increase in traffic on the East Derwent Highway above the already approved Tivoli Green development. The 2 main upgrades identified in the Old Beach TIA to accommodate Tivoli Green (and moderate additional development) are located outside the municipality at the Bowen Bridge and Otago Bay. A 3rd upgrade at the Clives Avenue/East Derwent Highway Roundabout is also likely to be required near completion of the existing Tivoli Green subdivision.
>
> These upgrades, particularly the Bowen Bridge and Otago Bay are required irrespective of the rezoning under consideration. The Department of State Growth is currently undertaking a corridor study of the East Derwent Highway partially in response to concerns raised by Council over the future performance of the East Derwent Highway.
>
> More specifically related to the proposed land to be rezoned, construction of an intersection between Riviera Drive and Old Beach Road is in the final design stages, and will most likely be finalised within the next 6-12 months, which assist by diverting some traffic from Riveria Drive onto Old Beach Road.

111. At the hearing, Mr Johnstone raised concerns that the opportunity for connectivity had been lost in the proposed development. Mr Johnston cited the 9m wide road reserve through Tivoli Green as an example of good connectivity and noted that this had not been applied to this development.

112. The Commission queried whether there were any future planning controls for the northern connection point of the site. Ms Blackwell advised that the planning authority had considered a pedestrian footway through the northern part of the site using the boundary of the creek but had not looked at options for a connection from Old Beach Road to the northern side of the site.

113. The extension of Lottie Mews and the potential for a road heading east/west from the East Derwent Highway through to Old Beach Road were also discussed as options for connectivity.

Commission consideration

114. The Commission notes the submissions of the representor and the planning authority.

115. The Commission also notes that regional policy LUTI 1.1 states as follows:

> LUTI 1.1 Give preference to urban expansion that is in physical proximity to existing transport corridors and the higher order Activity Centres rather than Urban Satellites or dormitory suburbs.

116. The Commission considers that the proposed General Residential zoned land is located within Greater Hobart's Urban Growth Boundary and in close proximity to the existing East Derwent Highway transport corridor.

117. The Commission finds that the draft amendment is, as far as is practicable, consistent with the regional strategy's land use and transport integration policies.

Strategic Plan

118. The planning authority's supporting report submitted that the draft amendment is consistent with the Brighton Council Strategic Plan 2023-2033 as follows:

> 1.3 Ensure attractive local areas that provide social, recreational and economic opportunities.
>
> 2.2 Encourage respect and enjoyment of the natural environment.
>
> 2.3 Demonstrate strong environmental stewardship and leadership.

3.2 Infrastructure development and service delivery are guided by strategic planning to cater for the needs of a growing and changing population.

3.4 Advocate and facilitate investment in our region.

4.1 Be big picture, long term and evidence-based in our thinking.

Commission consideration

119. The Commission agrees with the planning authority that the draft amendment has regard to the strategic plan.

Brighton Structure Plan 2018

120. The applicant's supporting report submitted that the Brighton Structure Plan (structure plan) contains three strategies for housing:
    - Strategy 1: Maintain an urban growth boundary
    - Strategy 2: Plan for housing growth within the urban growth boundary
    - Strategy 3: Increase housing diversity
121. The applicant submitted that the structure plan identifies a requirement for 1169 additional dwellings and 582 additional greenfield lots within the northern region of the structure plan area (including Brighton/Pontville) by 2033, and that Old Beach is identified as an area for conventional density housing.
122. The applicant submitted that the draft amendment is consistent with the structure plan vision and associated strategies.
123. Similarly, the planning authority submitted that the draft amendment is consistent with the structure plan's three housing strategies.

Commission consideration

124. The Commission agrees that the draft amendment aligns with the structure plan as it assists with the delivery of housing opportunities in the Brighton community by facilitating additional greenfield lots and land supply within the urban growth boundary.
125. The Commission considers that the draft amendment is consistent with the structure plan.

State Policies and Resource Management and Planning System Objectives

State Coastal Policy 1996

126. In section 4.2.1 of their supporting report, the applicant submitted that the site is not located within 1km of the high-water mark and is not subject to the *State Coastal Policy 1996* (Coastal Policy).
127. The planning authority submitted:

> The State Coastal Policy 1996 applies to land within 1km of the high-water mark. The site is within 1km of the high water mark but is separated from coastal waters by the East Derwent Highway, and General Residential and Open Space zoned land on adjoining land. The proposed amendment will not impact the Coastal Zone.

Commission consideration

128. The Commission notes that the 'Coastal Zone', as defined in the Coastal Policy, includes all land to a distance of 1km inland from the high-water mark. The site is

located within 1km of the high-water mark along the River Derwent as shown on the LISTmap Coastline layer which depicts the mean high-water mark. As such, the Coastal Policy applies.

129. As the subject site is separated from the river by the East Derwent Highway and further inland than existing residential areas, the Commission considers that the draft amendment is consistent with the Urban and Residential Development policies of the Coastal Policy.

130. At the hearing, the Commission discussed policy 1.1.9 of the Coastal Policy which requires, amongst other things, identification and protection of important coastal wetlands.

131. The applicant acknowledged that the Natural Values Assessment carried out by Enviro-Dynamics (dated 12 September 2022) did not include any assessment of the site to the north of the proposed General Residential Zone.

132. Submissions were made by Ms Wilson and Ms Blackwell that land within 205 Old Beach Road contained saltmarsh/wetlands.

133. The Commission notes the absence of any suitably qualified person assessment of the natural values of the area of the subject site north of the proposed General Residential Zone. It also notes the relevance of such advice to the application of the Low Density Residential, Environmental Management and Open Space Zones set out in the Guidelines.

134. As discussed above, the Commission finds that all the land north of the General Residential Zone should remain in the Future Urban Zone until further strategic planning, including assessment of natural values, is undertaken, which in turn can inform a future Precinct Structure Plan for the area.

135. The Commission finds that the draft amendment is consistent with the Coastal Policy.

State Policy on the Protection of Agricultural Land 2009

136. The applicant's supporting report submitted, in section 4.2.3, that as the site is zoned Future Urban, it is not considered agricultural land for the purposes of the *State Policy on the Protection of Agricultural Land 2009* (PAL Policy).

137. The planning authority's supporting report submitted:

> Resource Development (if for agricultural use, except for controlled environment agriculture) is a permitted use pursuant to the Use Table contained in clause 30.2 of the Scheme. Listmap identifies the land capability as Class 4, defining the land as "Land well suited to grazing but which is limited to occasional cropping or a very restricted range of crops."
>
> The layer "Land Potentially Suitable for Agricultural Zone" available on Listmap, does not identify the land as being required to be set aside for agricultural purposes.

Commission consideration

138. The Commission finds that the draft amendment is consistent with the PAL Policy.

State Policy on Water Quality Management 1997

139. The applicant and planning authority considered the draft amendment to be consistent with the *State Policy for Water Quality Management 1997* (Water Quality Policy).

140. The applicant's supporting report submitted that the area of the site proposed to be zoned General Residential is likely to be capable of being fully connected to reticulated services. The applicant submitted that the existing provisions within the planning

scheme would ensure that issues relating to water quality are adequately dealt with on-site with minimal off site impacts for any future use and development on the land.

141. The applicant submitted that the proposed Open Space, Environmental Management and Low Density Residential Zones protected the values and functions of the waterways corridor, protecting water quality, ecological health, habitat values and water conveyance and supporting the waterway corridor's natural amenity.

142. The applicant and planning authority considered the draft amendment to be consistent with the Water Quality Policy.

Commission consideration

143. The Commission finds that the draft amendment is consistent with the Water Quality Policy.

Schedule 1 Objectives of the Act

144. The applicant and planning authority both considered that the draft amendment furthered the Objectives of Schedule 1 of the Act.

145. In their supporting report, the applicant submitted that the draft amendment would allow urban use and development that utilises the land efficiently, that is capable of being fully connected to reticulated services and roads and promotes economic growth and the delivery of urban uses and housing on suitable sites.

National Environmental Protection Measures (NEPMs)

146. *National Environmental Protection Measure* (NEPMs) are automatically adopted as State Policies under section 12A of the *State Policies and Projects Act 1993* and are administered by the Environment Protection Agency.

Commission consideration

147. The Commission finds that the draft amendment is not inconsistent with the requirements for NEPMs and that it generally furthers the Objectives of Schedule 1 of the Act.

148. The Commission supports the application of the General Residential Zone and the Open Space Zone.

149. In relation to Objective 1(b), relating to the fair, orderly and sustainable use of air, land and water, the application of the Low Density Residential Zone, the Environmental Management Zone and the Flood-Prone Area Overlay is rejected.

Modifications required to draft amendment

150. Under section 40M of the Act the Commission must consider whether modifications to a draft amendment of an LPS ought to be made.

151. The draft amendment requires modification to delete the rezone of the site from Future Urban to Low Density Residential and Environmental Management and to delete the Flood-Prone Areas Hazard Code overlay.

152. Rezoning of the adjoining road to the centreline, consistent with the Commission’s established mapping practice, is required to avoid leaving a portion of the road on Old Beach adjacent to the General Residential Zone in the Future Urban Zone.

Decision on draft amendment

153. Subject to the modifications described above and shown in Annexure A, the Commission is satisfied that the draft amendment meets the LPS criteria and gives its approval.

Attachments

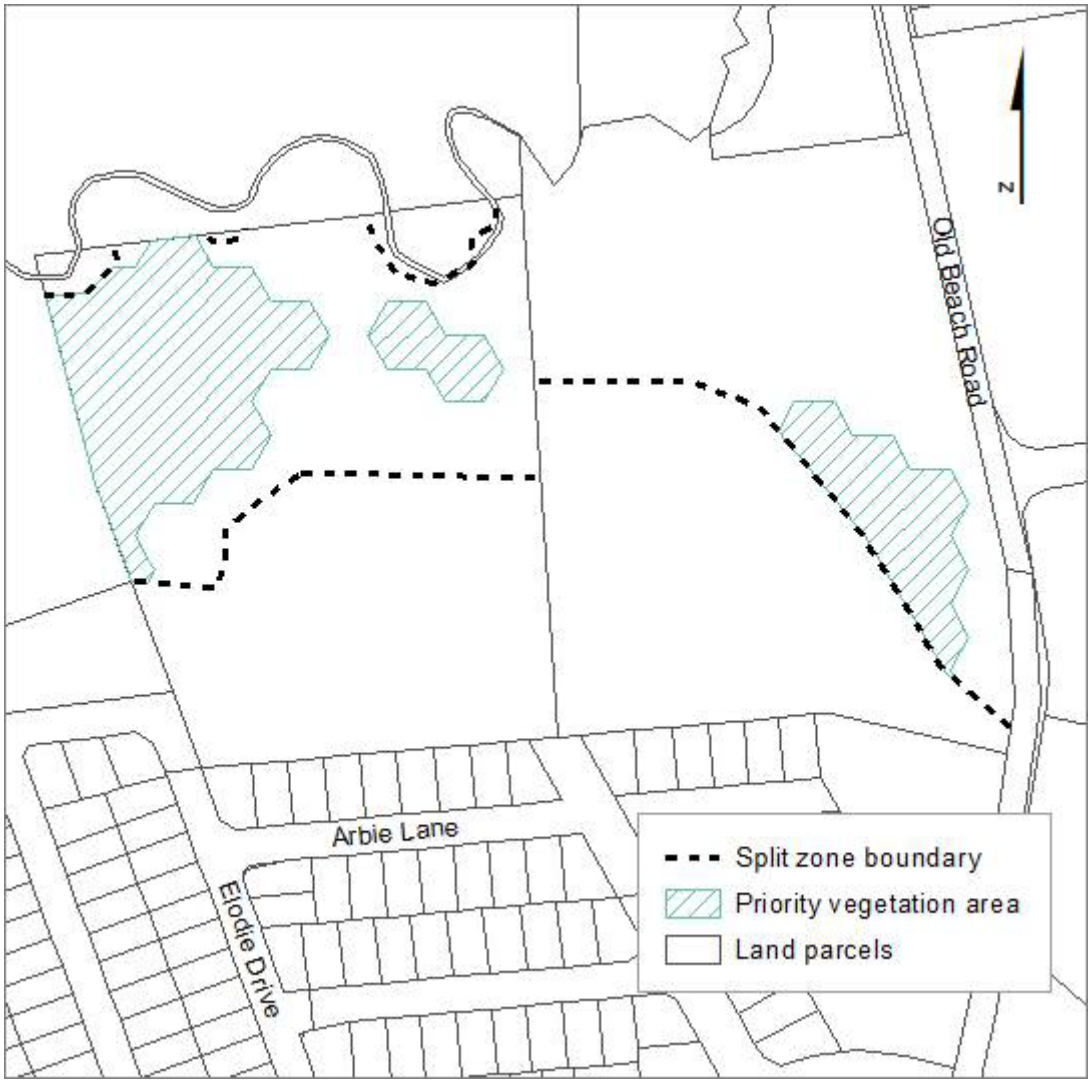
Annexure A - Modified amendment RZ 2023-002

Annexure A

Modified amendment RZ 2023-002 - Tasmanian Planning Scheme - Brighton

1. Rezone part of 203 Old Beach Road, Old Beach (folio of the Register 123119/1) and 205 Old Beach Road, Old Beach (folio of the Register 135401/7) from Future Urban to General Residential and Open Space as shown below:

2. Amend the priority vegetation area overlay on 203 and 205 Old Beach Road, Old Beach as shown below.



TASMANIAN PLANNING COMMISSION

Approved

Effective date: 17 July 2024

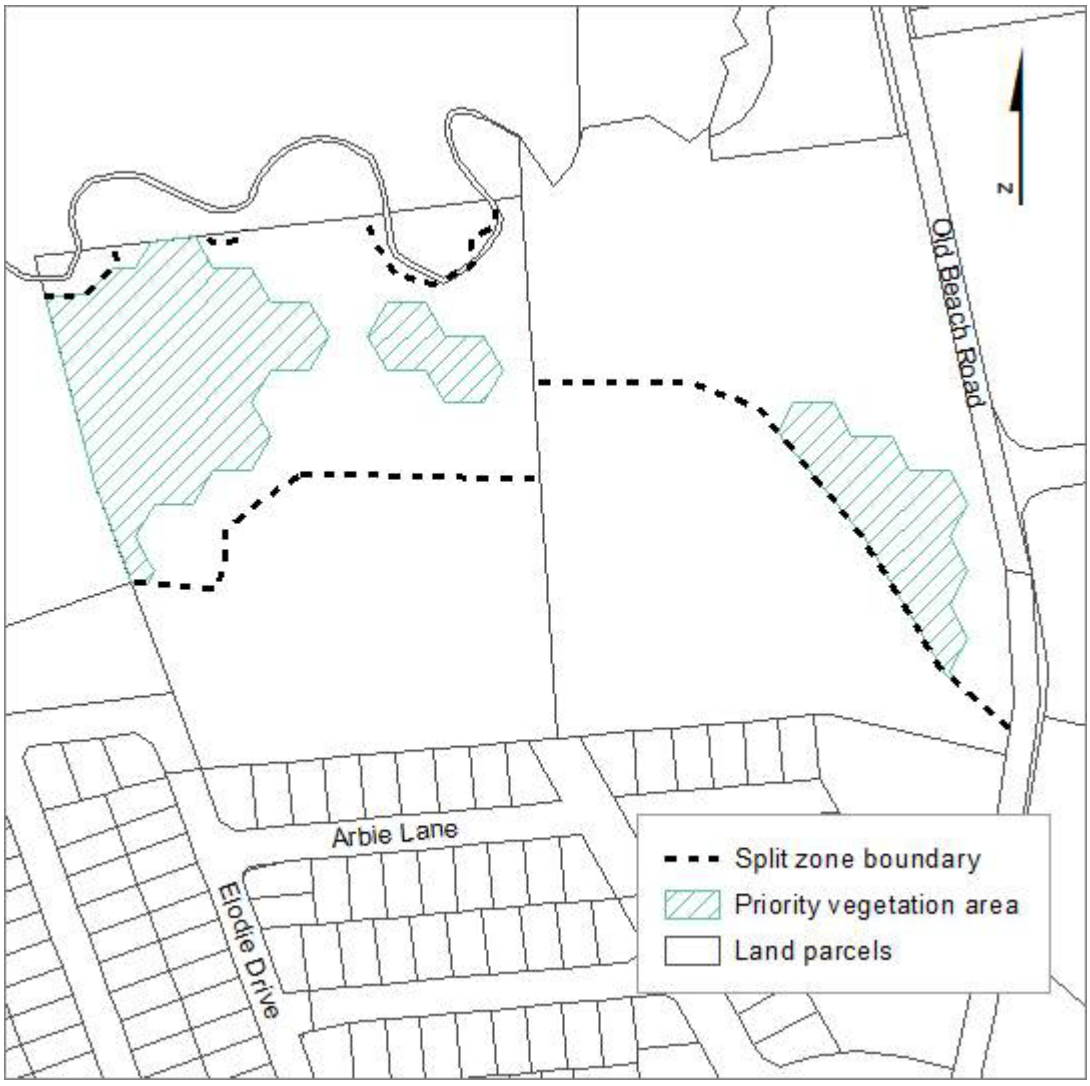
TASMANIAN PLANNING COMMISSION

Tasmanian Planning Scheme - Brighton

Draft amendment RZ 2023-002

1. Rezone part of 203 Old Beach Road, Old Beach (folio of the Register 123119/1) and 205 Old Beach Road, Old Beach (folio of the Register 135401/7) from Future Urban to General Residential and Open Space as shown below:

2. Amend the priority vegetation area overlay on 203 and 205 Old Beach Road, Old Beach as shown below.



Southcentral Workforce Network Regional Jobs Hub | Project Status Report

Date: June 2024

Summary of Project Progress:

From the the 4th of December 2023 to the 25th of June 2024, the project has engaged with 343 jobseekers (1947 overall), has assisted 126 local people into employment (515 overall), has assisted in the delivery of 20 training courses (127 overall) in which 215 people have participated (1259 overall). Thirty six referrals have been made to other Hubs in the Network (Glenorchy 11, Sorell 7, North West 6, Huon 5, East Coast 1 and Launceston 6).

As we write this report, SWN are delivering our second Hospitality Ready program to 8 participants from our region. The program is funded through Training and Work Pathways Program (TWPP) and 74 applications were received for the 8 available spaces in the course. SWN have again applied for funding through TWPP to deliver another two intakes in 2024 and 2025. The program has attracted interest from business owners in remote areas of the Subregion, with requests received to run programs in the Derwent Valley and Central Highlands. Promotion of these have commenced which will see a more condensed version of our program delivered to community members in these regions and will provide opportunities of employment for the upcoming tourism season.

In Partnership with the Southern Midlands Council (SMC), SWN will be delivering a “Guarding for Life“ program which will provide 40 community members with a pool lifeguard accreditation over the next two years. SMC sourced the funding through Active Tasmania and through support from Rural Youth and Royal Lifeguarding Australia, the first program will be delivered on the 7th 8th and 9th of September 2024. Each program will cater for 12 participants who will also take part in a Communication and Conflict Resolution Workshop. Each program will be marketed to Rural Youth members in the Derwent Valley, Southern Midlands, Central Highlands and Northern Midlands LGA’s providing young people in the region the opportunity to gain employment and play a role in providing an important service to their community.

In partnership with the Derwent Catchment Project, we are close to finalising our Connection to Country program which will support Aboriginal community members in our region in gaining skills which may lead to employment opportunities and also connect them to their culture and the land in which they live. This program will be funded through Jobs Tasmania’s Partnership Fund and will provide participants with accredited skill set training, work placement, cultural awareness and site visits.

During February SWN held a networking event at Lark Distillery in Pontville for businesses in the Southern Midlands and Brighton Council LGA’s. Over 100 guests were in attendance and included representatives from each State political party, Local Government representatives, staff from each council, business owners and stakeholders. Updates were provided to guests by the Mayor of Brighton Council Leigh Gray and Southern Midlands Council Deputy Mayor Karen Dudgeon. A similar event with an agricultural feel will be held in the Central Highlands on the 13th of September at Ratho Farm.

SWN have also supported 64 students to gain White Card accreditation through our partnership with Master Builders Tasmania (MBT). This is the Fourth year we have partnered with MBT to deliver this support to students in our region. We have also supported the community by providing inhouse Coffee Making and Beverage Service training along with accredited First Aid, White Card, Responsible Service of Alcohol, Forklift and Food Safety Supervisor training. The SWN team have delivered 14 Outreach sessions to community members in their LGA and have also held information sessions for job seekers interested in securing employment with both Hungry Jacks and Metro. In partnership with The Australian Academy of Media, we continue to deliver our Certificate IV in Mental Health to 15 participants which will conclude in October 2024.

The project is still in scope

The project is still within budget

The project is still on time

Objectives:

Number	Objective Name	Progress
3.1	To Increase the level of employment for residents of the region	126 local jobseekers assisted into meaningful employment since the 4th of December 2023 to the 25th of June 2024.
3.2	To Increase the labour force participation rate for residents of the region	151 employment opportunities have been identified in the subregion since the 4th of December 2023 and promoted to jobseekers during face to face career consults, through SWN social media platforms, the SWN website, via text and email. SWN training courses (21 since December the 4th 2023) have also been promoted to Jobseekers and Subregion business in the same manner. New Staff member Damon Willis has include QR codes on all advertising to provide the public with an overview of SWN services.
3.3	Increase the level of engagement in formal education and accredited as well as non-accredited training for residents of the region	Assisted in the delivery of: • x 1 Food Safety Supervision course to 9 participants from local businesses delivered by Work & Training.

		• x 1 Responsible Service of Alcohol – 15 participants, training delivered by TasTAFE. • Responsible Conduct of Gaming course to 15 participants and delivered by TasTAFE. • Industry Keno Writer course delivered to 8 participants delivered by Network Gaming. • Communication & Conflict Resolution Course to 8 participants delivered by TasTAFE. • Dealing with Stress in the Workplace to 8 participants delivered by All About Tranquil. • Certificate IV in Mental Health to 15 participants delivered by the Australian Academy of media. Ongoing for12 months. • x 3 White Card courses to 56 participants delivered by Scala and TasTAFE. • x 5 Construction Safe programs to 64 participants delivered by Master Builder Tasmania. • First Aid with CPR to 15 participants delivered by Work & Training. • Forklift delivered to 11 Participants delivered by Learning Partners and OnRoad OffRoad • Coffee Making and Beer Pouring to 6 participants delivered by SWN staff.
3.4	To support the residents of the region to be on a pathway to 3.1, 3.2 or 3.3	See 3.2 SWN staff referred jobseekers to Jobs Tasmania programs and services. These included the Job Ready Fund and the Career Connector program both administered by Jobs Tasmania partner Searson Buck. SWN also work closely with Area Connect to provide transport solutions to community members who face barriers accessing transport to their place of employment or training.
3.5	To actively participate and provide input into the Jobs Tasmania convened Regional Jobs Network Community of Practice	SWN Advisory Board Chair Andrew Benson and staff took part in all online Community of Practice session held by Jobs Tasmania during 2024.
3.6	To actively participate and provide input into the Jobs Tasmania Evaluation Project	Participated in all scheduled Evaluation Consults with the BSL as part of their final evaluation reporting process.

3.7	To assist business across the SCS to connect with employment services, training systems and achieve growth within their sector	SWN has marketed all training opportunities to subregion business via social media, our website and email. Workforce Australia and Disability Employment Service providers are made aware of all employment and training opportunities uncovered / scheduled by SWN and have the option of presenting job ready candidates which after an SWN screening process, can then be forwarded on to employers who can take advantage of incentives which may be aligned to the individual jobseeker. Incentives of up to $10k are aligned to some Employment Service Provider candidates. Since December 4th 2023 jobseekers aligned to an Employment Service Providers have taken part in our Hospitality Ready, White Card, Forklift, First Aid SWN coffee training programs.
3.8	To provide efficient and effective governance of the SWN Jobs Hub	SWN is provided a strong level of governance through its alignment to Brighton Council and the SWN Jobs Hub Advisory Board who have met on 2 occasions since the 4th of December 2023. Brighton Councils Director Governance & Regulatory Services Janine Banks is also an SWN Board Member. About Us | Southcentral Workforce Network (swntas.org)

Outputs: *Summary of how the project is working towards achieving the Outputs. Maximum of 200 words.*

All jobseeker who register with SWN, receive face to face support which is specific to the individual and varies in its content. Our aim is to ensure jobseekers receive the support they require to secure meaningful, long-term employment in the position they feel suits them best. SWN have engaged with over 740 businesses in the region to not only uncover employment opportunities but to provide support to employers who have difficulty attracting the employee who best meets their requirements. This engagement also provides us with the information we need to deliver training which best meets the needs of jobseekers and employers in our region. Our Hospitality Ready program came from consultation with industry and delivers skill sets and valuable experience to participants and breaks down barriers which have limited their opportunities of gaining employment in the sector Hospitality Ready (swntas.org). Our upcoming Guarding for Life program is a product of input from the Southern Midlands Councils concerns around the rising numbers of drowning deaths in regional Australia and the inability of community pools in Southern Tasmania to remain open due to a lack of trained staff.

Number	Output	Progress
5.1	Updated Strategic Plan (high level – 15 month)	• Completed • Approved by Advisory Committee • Approved by Jobs Tasmania
5.2	Updated Implementation Plan (15 month)	• Completed • Approved by Advisory Committee • Approved by Jobs Tasmania
5.3	Identify and establish a Jobs Hub site	**Completed**. 371 Brighton Road Pontville. Fitted out and officially opened by Minister Jaensch on the 9th of February 2022.
5.4	Maintain a functional Jobs Hub Advisory Board	**Ongoing**. Two additional Advisory Board members appointed in 2024. Lauren Sheppard – CEO Moo Brew, Craig Knight – COO Tasmanian Botanics. Elliott Booth appointed as Deputy Chair of Advisory Board to align with future succession planning.
5.5	Retain and develop a successful Jobs Hub Team (staffing)	**Ongoing**. SWN assisted former staff member Darcy Woolley to secure a building apprenticeship with the HIA in March. His position has not been replaced as yet. This will take place in September 2024 when a new deed for 3 years is issued to us by Jobs Tasmania. Currently potential new staff members can only be offered a three-month contract. Dearne Stone, Amy Holbrook and Damon Willis are all working through their Certificate IV in Mental Health and are all wonderful assets to the project.

Number	Output	Progress
5.6	Promotion of Hub	**Ongoing**. Popularity of project and our presence on social media has placed SWN at the top of the results listed when our details are typed into the Google search engine. This has been achieved without a monetary outlay and reflects the popularity of the project. We continue to promote our project through social media and continue to create videos highlighting employment success stories which are featured on our website. Our SWN Facebook page currently has over 2,000 followers. Our posts are shared by community members, community groups, individual business and local government and industry stakeholders. SWN's LinkedIn following continues to grow and allows us to promote our services among our networks. SWN staff continue to deliver outreach sessions throughout the Subregion which also promotes our service to jobseekers and businesses across the four South Central Subregion (SCS) municipalities. Participants and business also regularly refer us to friends and family members. Staff host group sessions with Employment Service Provider participants both on and off site and we are regularly invited to speak with school students about career options which allows us to expose them to the services available through our Hub. We currently support New Norfolk High School by providing career advice and pre-employment support each Friday to year 9,10,11 and 12 students. We are also given regular opportunities to update attendees at regional council meetings where both councillors and the public are briefed on SWN services. When possible, SWN staff attend networking events in our region where we can promote our services to business, jobseekers and stakeholders alike. Our regional networking events also provide us with the opportunity to promote our services to business and the three levels of government.
5.7	Progress Reports	Six monthly progress reports, this document (June 2024)

Number	Output	Progress
5.8	Customer Relationship Management (CRM) system Introduction	**Completed**. Funded through our SWN budget (Fast Track 360). Commenced use on CRM the 7th of March 2022. The system allows SWN to keep track of and provide data requested by Jobs Tasmania. The tool allows SWN staff to identify registered candidates with skill sets required by businesses in our region and connect them to the employers. Messages and information can be sent directly to jobseekers and employers from the CRM and also assists staff to follow correct recruitment processes ensuring all tasks are completed. Reporting capabilities are utilised which are then used to produce reporting documents and distributed to relevant stakeholders. During March SWN facilitated CRM workshops with the Southern Employment and Training where we assisted staff members to navigate their CRM and utilise its capabilities to achieve the outcomes required by their projects.
5.9	Promote Area Connect transport service to community members	**Ongoing .** SWN promotes the Area Connect service to our community members and businesses through social media, face to face contact, our online newsletter and via our website. Jobseekers are made aware of the service and its availability when they register with our project. Regular contact with the Operations Manager, Brett Williams and Southern Regional coordinator Ryan Hawkins has been maintained with issues dealt with swiftly. The relationship continues to grow with both organisations having a healthy respect for the services each provides to the community and the outcomes achieved together through regular and respectful communication. SWN hosted Area Connect's February 2024 regional meeting.
5.10	Conduct group pre-employment sessions / workshops for jobseekers and students where required	**Ongoing**. 343 new jobseekers have registered with the Jobs Hub since December the 4th 2023. All take part in one-on-one / face to face career consults with SWN staff who provide assistance where needed to help the individual become job ready. Career awareness and interview technique group sessions have been delivered to students from New Norfolk High School. We have also delivered 7 group sessions to participants aligned to Workforce Australia and Disability Employment Service providers in an attempt to align them to a job / training opportunity or identify a future career.

Number	Output	Progress
5.11	Consult with industry to uncover employment opportunities for jobseekers and identify skill requirements for possible training programs	**Ongoing**. Since the commencement of 2024, 151 employment opportunities have been identified in the subregion and promoted to residents. In consultation with industry, 20 training programs have been delivered to meet the requirements of individual sectors. 215 participants have taken part in these training programs. In the past six months SWN has assisted a number of larger employers in the region such as SRT Logistics, Tasmanian Botanics, Callington Mill Distillery, Wanden Valley Farms, Westerway Berry Farm, Ratho Farm, Lake St Clair Wilderness Lodge and Kinetic who regularly utilise our services.
5.12	Identify grant funding opportunities and partner with stakeholders to develop training programs to upskill community members in alignment with Industry requirements	**Ongoing.** SWN have again applied for TWPP to fund our Hospitality Ready program during October and November 2024 and again in June and July 2025. This program allows us to partner with 5 training providers, nine local employers, a not-for-profit organisation, Area Connect, local suppliers and Workforce Australia Providers to deliver the course successfully. In partnership with the Southern Midlands Council, we have recently secured funding through Active Tasmania to deliver a lifeguarding training program "Guarding for Life" which will up skill 40 community members during 2024 and 2025 in the Southern Midlands, Central Highlands, Derwent Valley and Northern Midlands Local Government Areas. This will give community pools in these regions access to trained staff, allow them to remain open and continue to provide a valuable service to their community. Rural Youth, Royal Lifesaving Tasmania, TasTAFE and area connect have also agreed to support the program.
5.13	Work with school career advisors and connect industry with students to create awareness of career pathways post year twelve	**Ongoing**. In partnership with the Master Builders Association, SWN have coordinated and partly funded the delivery of 5 Construction Safe programs to 64 students from Oatlands, Jordan River Learning Federation, Campania, Bothwell and New Norfolk High Schools. SWN have delivered group and one on one support sessions to students from the New Norfolk High School (NNHS) on a weekly basis during April, May and June. SWN also spend time with disengaged students from NNHS and have assisted one of these students to secure employment with a local employer on a part time basis which has also allowed his to again take up his studies with the school.

Number	Output	Progress
5.14	Provide individual face to face pre-employment support to jobseekers, provide them with training options to upskill and connect them with employment opportunities which align to their individual skill sets	**Ongoing**. Since December 4th 2023, 343 jobseekers have received face to face assistance from SWN staff, 247 resumes have been forwarded to local employers and 215 community members have taken part in training programs initiated by SWN.
5.15	Establishment of a business network which provides participants access to information and services which assists them to achieve stability and growth.	**Ongoing**. SWN held a business networking event at Lark Distillery at Pontville during February which saw over 100 guests attend. A similar event will be held at Ratho Farm in September which will allow guests not network with State and Local government representatives and service providers. SWN have also been asked by Brighton Council to support a business group in their LGA. This will include businesses in the Brighton Industrial Hub which continues to grow.
5.16	Provide online medical screenings to participants of SWN training programs and provide a comprehensive report to SWN businesses prior to work placement or employment	**Ongoing.** SWN continues provide business with the option of accessing an online medical check (Quescreen) through Workforce Health Assessors. Demand for this service continues to grow and provides businesses with information regarding the health of candidates and pre existing injuries which may restrict them from performing well in specific roles. SWN also provide this service to all participants who take part in SWN training programs.
5.17	Provide ergonomic screening support to SCS businesses and provide training to management to mitigate risk in the workplace	**Ongoing.** SWN have conducted staff training and have commenced ergonomic checks with businesses within our region.
5.18	Attend all Community of Policy & Practice meetings and support the initiative by providing clear and valuable feedback at all gatherings, workshops and evaluation sessions held by the Brotherhood of St Laurence.	**Ongoing.** Attended all CoPP online meetings and evaluation sessions held by in the front half of 2024. Advisory Board Chair Andrew Benson has also attended these meetings.
5.19	Develop SWN assets register	**Completed.** Completed August 2023
5.20	Document all SWN policies and procedures	**Ongoing.** Commenced in January 2024 and review annually.
5.21	Refer jobseekers to Jobs Tasmania programs and services such as The Job Ready Fund, Career Connector program and the Rapid Response Skills Initiative.	**Ongoing.** Community members who meet the criteria for specific programs are referred to Jobs Tasmania funded programs. This also includes jobseekers who can access the Area Connect service and businesses who may wish to nominate for the Employer of Choice program. All links are currently being added to our website which will then be accessible by the public.

Project Schedule: *Summary of how the project is meeting its schedule and discussion of any issues. Maximum of 200 words.*

Explanation Below

Number	Milestone Description	Scheduled Start	Scheduled Finish	Status
7.1	Delivery of 2024 Construction Safe Program	March 2024	May 2024	**Completed.** 64 students from Oatlands, Campania, New Norfolk, Jordan River and Bothwell High Schools took part in the one day. All gaining their White Card accreditation.
7.2	Delivery of Boots On Program	August 2023	July 2024	**Completed**. Funding not continued by Keystone. Program ended.
7.3	Delivery of Certificate IV Mental Health	October 2023	October 2024	**Ongoing**. SWN provided support to the Australian Academy of Media's successful grant application, coordinated the programs recruitment process and are hosting all face to face session at our SWN site.
7.4	Recruitment of additional Career Advisor	October 2023	October 2023	**Completed**. Damon Willis commenced during October. His probationary period ended 23rd January 2024.
7.5	Develop SWN Assets Register	July 2023	August 2024	**Ongoing.** Established August 2023
7.6	Document all SWN policies and procedures	July 2023	June 2024	**Ongoing.** Commenced January 2024 and review annually.
7.7	Review SWN Strategic Plan	July 2023	September 2023	**Completed**. Strategic plan reviewed, updated, approved by Advisory Board and forwarded on to Jobs Tasmania.
7.8	Glenora District High School Pre-employment / Skills Program	August 2023	July 2024	**Ongoing.** SWN continues to deliver career awareness sessions, one on one workshops and training sessions to year 9, 10, 11 and 12 students as requested by Glenora High Schools Career Advisor. Regular communication with staff has been the key to connecting and assisting students from the area.
7.9	Establish Walk & Talk Program	July 2023	July 2024	**Ongoing.** Insurance coverage currently being sourced.
7.10	Develop and deliver events as per Job shows and events deed	July 2023	September 2024	**Ongoing.** Held Business networking event at Lark Distillery Pontville, on the 26th of February 2024 in which over 100 local business and political representatives were in attendance. Similar event will be held at Ratho

				Farm Bothwell on the 13th of September for businesses in the Central Highlands region.

Assumptions and Constraints: *Commentary on assumptions and constraints and whether current. Add new or amended to table.*

Click here to enter text.

Assumptions (New or amended)	Constraints (New or amended)

Risk Register: *Complete updated risk register if appropriate.*

Click here to enter text.

Id	Description of Risk	Impact or consequence	Likelihood/ Seriousness	Grade	Change	Mitigation Actions (Preventative or Contingency)	Who's Responsible for Mitigation Action
	<Description of risk>						

Project Plan:

We recognise that a project plan is a live document and therefore amendments and updates during the life of the project may be required. If there have been significant changes identified in this Status Report then a revised and updated project plan may be appropriate.

Attachments:

Registration/application forms, processes etc

ATTACHMENT
AGENDA ITEM 13.2

SOUTHERN COUNCILS CLIMATE COLLABORATION

CLIMATE CHANGE ADAPTATION PLAN 2024

BRIGHTON COUNCIL CLIMATE CHANGE RISK ASSESSMENT

Brighton Council

Southern Tasmanian Councils Authority

Regional Climate Change Initiative

SUMMARY

This climate change adaptation plan aims to improve the capability of Brighton Council to manage the risks associated with climate change. Climate change adaptation is defined as *action taken to prepare for actual or expected changes in the climate in order to minimise harm and to cope with consequences*. Climate change is affecting council's service delivery and the infrastructure that the community depends upon by exacerbating the threats that existing extreme weather events pose.

Important drivers of adaptation planning are:

- recognition of the importance of identifying and managing emerging risks to council infrastructure and functions;
- meeting expectations of Council's insurers;
- managing financial risks; and
- managing legal liability in relation to development decisions and asset performance.

This adaptation plan addresses climate related risks to each council business area and overarching corporate considerations. The vulnerability of Council infrastructure and community assets in relation to heavy rainfall, flooding, heat, bushfire and sea level rise to developing climate hazards has been assessed utilising the on-ground expertise and knowledge of council staff. Future modelled climate data specific to the Brighton municipal area was used to frame each risk statement.

Key climate change vulnerabilities identified were:

- Increasing damage to roads, culverts, stormwater infrastructure and bridges from larger flood events.
- Increasing call on council resources for recovering from intense storm events.
- Increasing impacts on low lying coastal and estuarine infrastructure and recreational assets.
- Gaps in modelled data for flooding, in relation to guidance of planning decisions for flood prone areas.
- Legal implications of development decisions made in areas subject to inundation by sea level rise, storm surge and flooding.
- Capacity to efficiently deliver bushfire and flooding disaster support to the community.
- Inadequacy of some roads in areas highly vulnerable to bushfire – ingress, egress and ability to pass.
- Increasing impact on local vegetation communities and landscape/streetscape plantings due to heat and drought.

An adaptation action was identified to address each of the identified risks together with responsibility, suggested timeframe and likely stakeholders. Examples of adaptation actions to address some of the highest rated risks are:

- *Installation of new pull-off areas to enable traffic management and access for fire engines in known high bushfire risk areas.*
- *Plan for infrastructure upgrades to cope with flood events in a prioritised manner based upon asset risk analysis and numbers of people likely to be effected.*
- *Maintaining fuel loads at an acceptable level on council properties and have a documented program to do this. Implement an education and awareness program to address purposeful fire lighting.*

Particular corporate actions are suggested and cover:

- *Management of legal liability in relation to development decisions and asset management which includes:*
  - *keeping up to date on general climate change science and information, particularly in relation to potential risks from natural hazards;*
  - *developing clear and certain criteria for decision making to increase public confidence that decisions are made on the basis of the best available scientific evidence.*
- *Incorporation of climate change action into existing documents and processes such as the Risk Register, Annual Plan, Strategic Plan and Financial Plan.*
- *Emergency response plans should be reviewed, developed and implemented considering hazard changes under climate change projections. Up to date emergency response procedures can minimise consequences when extreme events occur.*

The adaptation plan suggests a mechanism to implement regional adaptation actions where issues in common are identified across councils through both a regional adaptation strategy and ongoing involvement with the Regional Climate Change Initiative which is a forum for progressing actions collaboratively.

This climate change adaptation plan was developed under the Southern Councils Climate Collaboration Project (2021–24).

Authors: Graham Green and Katrina Graham

March 2024

CONTENTS

1.0 INTRODUCTION

This climate change adaptation plan (CCAP) aims to improve the capability of Brighton Council to manage the risks associated with climate change. It is designed to:

- increase the capacity of council to protect and fortify assets/services;
- respond to increased and intensifying natural hazards;
- reduce exposure to potential liability in decision making; and
- minimise financial risks.

Climate change adaptation is defined as action taken to prepare for actual or expected changes in the climate:

- in order to minimise harm; and
- to cope with the consequences.

Extreme weather events, once deemed a rare occurrence, are evolving into a 'new normal' and need to be managed. The majority of Australians (80%) have experienced some form of extreme weather disaster since 2019.[1]

The term "climate whiplash" has recently been coined to describe the state of our weather as communities are flung between storms and flooding rains to heatwaves and bushfires and back again, a recent example being the carnage wrought across Victoria on 13th February 2024. Closer to home, extreme events in the Tasmanian spring and summer of 2023-24 are redefining the parameters of extreme events in this state, from out-of-season bushfires at Freycinet and Dolphin Sands and the unprecedented deluge in St Helens in February where recently upgraded stormwater systems still failed to cope with the rainfall volume.

Southern Tasmanian storm, May 2018, estimated cost – $135 million

Black summer bushfires 2019–20 – $103 billion in losses, $4.4 billion in response

Recorded extreme weather events have increased worldwide by 90% over the past 20 years. Between 2019-2022, 11 natural catastrophes were declared in Australia and $13 billion in insurance claims were paid.[2]

The cost of natural disasters in Australia is expected to rise from an average $38 billion currently to closer to $94 billion per year by 2060.[3]

Climate change is affecting how council delivers its critical services and maintains infrastructure that the community depends upon by exacerbating the threats that existing extreme weather events pose. Climate change risk statements and ratings, developed according to a standard risk management approach, form the basis of this plan.

Formulation of risk statements was based upon climate change modelling specific to the Brighton municipal area and involved input from council staff representing all business areas.

1 Climate Council (2023), Climate Trauma: The growing toll of climate change on the mental health of Australians. www.climatecouncil.org.au/resources
2 Insurance Council of Australia
3 Update to the economic costs of natural disasters in Australia – Australian Business Roundtable for Disaster Resilience & Safer Communities – Deloitte Access Economics

Climate change adaptation is relevant across all council business areas

Figure 1 depicts the core functions and services of Tasmanian councils – these are common to all councils. The boxes with red borders indicate the roles and responsibilities of councils for which they have statutory responsibility. To ensure good climate governance and mitigate their potential exposure to liability councils need to ensure that climate considerations, at a minimum, have been integrated into strategic and operational systems and processes represented in the purple boxes.

Figure 1: Core functions and services of Tasmanian councils

Corporate

Corporate governance – risk acknowledgement

- Public risk register
- Strategic Plan
- Insurance implications and expectations
- Legal liability

Development approval and control – risk mitigation

- Building approvals
- Development approvals
- Local and regional land use plans

Asset management – manage risks to asset and service delivery

- Stormwater
- Roads
- Built assets
- Parks and reserves

Financial management – resources to prepare, prevent, respond, recover

Emergency management

Environmental health

Workplace health and safety

Community

Community development – facilitate building resilience in the local community

Natural resource management – managing threats to local biodiversity

The climate change adaptation plan includes an 'implementation plan', the first step of which is the identification of adaptation actions, responsibility, and timeframes. For some risks and actions, stakeholders are identified for situations where it provides greater efficiencies for councils to work collaboratively to manage climate change hazards.

'Investment' in adaptation actions can be based upon factors such as risk priority and a cost benefit analysis which weighs up factors such as the value of the asset, the importance of the asset to the community and the average annual cost of protecting and maintaining the asset.

Experience has demonstrated that adaptation investments exponentially decrease economic losses from climate impacts and bigger investments leads to lower losses. However, there will always be costs from residual climate change impacts that adaptation cannot alleviate.[4] The World Resources Institute finds that every dollar invested in adaptation yields net economic benefits ranging from $2 to $10.[5]

This adaptation plan was developed under the Southern Councils Climate Collaboration Project (2021-24) and builds upon work undertaken under the Regional Climate Change Adaptation Project (RCCAP 2010-14).

Image: Graham Green

4 European Environment Agency 2023: assessing the costs and benefits of climate change adaptation.
5 World Resources Institute 2023: Adapt Now: A global call for leadership on climate resilience.

1.1 PROJECT BACKGROUND

The STCA's climate program, The Regional Climate Change Initiative (RCCI) has, since 2010, developed a range of climate resources to support, and increase the capacity of council's climate change management including:

- **Mitigation** (reducing emissions and energy use)

  Corporate:
  - 'How to undertake a corporate council inventory guide'.
  - Council Carbon Calculator and supporting fact sheets.

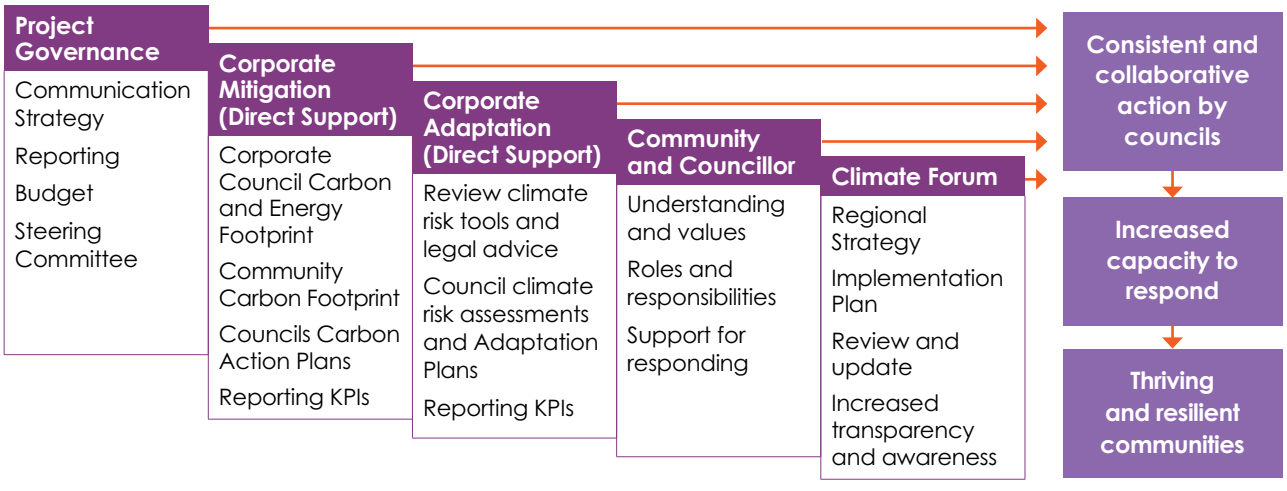
  Community:
  - Community (municipal) energy and greenhouse emissions profiles.
- **Adaptation** (responding to climate impacts and change)
  - Legal advice on councils' exposure to liability for climate change action.
  - Principles and objectives for local government climate change action.
  - Climate (municipal) profiles, based on UTAS Climate Futures program.
  - Corporate Adaptation Planning Modules (climate risk assessment and adaptation options tool).
  - Regional Strategy – adapting to a changing coastline in Tasmania.

The Project intends to develop a collaborative and consistent framework for all Tasmanian Councils in addressing climate action. It aims to:

- Provide a clear set of principles to guide Councils in responding to climate change adaptation and mitigation.
- Strengthen the resilience of Councils to climate impacts locally and regionally, and contribute to managing the transition to low carbon economies.
- Review existing strategies and plans and identify necessary updates.
- Provide strategic direction for key council functions including: land use planning, infrastructure/assets management, natural resource management, recreational and cultural values.
- Build awareness of potential liability for decisions and actions associated with climate change impacts, risks and hazards.
- Direct awareness to what councils' key stakeholders are doing to adapt to climate change to encourage collaborative responses and resource sharing.

Figure 2: Core functions and services of Tasmanian councils

The Southern Councils Climate Collaboration 2022 – 2024 is the latest initiative of the RCCI and the project under which this adaptation plan was developed, is summarised as follows:



1.2 PROJECT CONTEXT

In Australia, "Local governments are on the frontline in dealing with the impacts of climate change. They have an essential role to play in ensuring that local circumstances are adequately considered in the overall adaptation response, and local communities are directly involved in adaptation efforts. Local governments are well positioned to inform State and Commonwealth governments about on-the-ground needs of local and regional communities, communicate directly with those communities, and respond to local challenges."[6]

Specifically local governments are responsible for:

- Delivery of adaptation responses that align to State and Australian Government legislation.
- Provision of information about relevant climate change risks and contribution of appropriate resources to prepare, prevent, respond and recover from detrimental climatic impacts.
- Informing other levels of government about the on-the-ground needs of local and regional communities.
- Managing risks and impacts to Council's public assets and to local government service delivery.[7]

Scope is also afforded to Tasmanian Councils to address climate change under the *Local Government Act* (Tas) 1993, which describes the role of Councils to provide for the health, safety and welfare of the community; as well as represent and promote the interests of the community; and provide for the peace, order and good government of its municipal area.[8] Additionally the Local Government (Content of Plans and Strategies) Order 2014 s.8. (2) (2) (b) (vii) requires councils to have in place an Asset Management Policy that includes the planning for climate change adaptation and mitigation.[9]

In managing and preparing for the impacts of climate change, Local Government is well positioned to work with communities due to its:

- core function to directly support and assist local communities;
- local knowledge and experience;
- understanding of community needs and vulnerabilities;
- key role in responding to emergencies;
- role in infrastructure design, construction and maintenance;
- role in review and update of planning schemes (in relation to identified local impacts and threats); and
- ability to effectively disseminate information and provide support to the community.

Local experience, in combination with relevant scientific data and technical expertise, provides the basis for undertaking a well-informed 'risk management' approach to climate change. Effective adaptation requires a portfolio of actions, ranging from fortifying infrastructure to advocacy and collaboration. There is also an appreciation that managing climate change risks has benefits, regardless of the magnitude of climate change that occurs. It is a 'no regrets' approach that can bolster infrastructure, reduce risk and liability, improve community well-being, and protect biodiversity.

6 National Climate Resilience and Adaptation Strategy 2021 to 2025 (dcceew.gov.au)

7 Role and Responsibilities for Climate Change Adaptation in Australia, Council of Australian Governments Select Council on Climate Change 2012

8 *Local Government Act* (Tas) 1993.Section 20 Function and Powers.

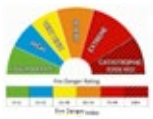
9 https://www.legislation.tas.gov.au/view/whole/html/inforce/current/sr-2014-035

1.3 CLIMATE CHANGE SUMMARY DATA FOR BRIGHTON COUNCIL

The development of this climate change adaptation plan was based upon council-specific, climate projection data provided by Climate Futures for Tasmania. Modelled future climate is continually becoming a more exact science as real world data is fed back into models helping validate outcomes and improve forecasts. The modelling equips us well to forecast future scenarios in relation to council's assets and functions. However, climate change is likely to deliver surprises and potentially unforeseen outcomes through intensifying and intersecting climate driven hazards.

The information below is a summary of Climate Futures data[10] relevant to the Brighton municipal area.

The Forest Fire Danger Index (developed by CSIRO scientist, A. G. McArthur) **combines a measure of vegetation dryness with air temperature, wind speed and humidity**. If you add the daily FDI values over a year for a location, you get what is called the annual accumulated FDI.



Current climate and recent trends

- Brighton Council has a temperate, maritime climate. Long-term average temperatures have risen in the decades since the 1950s, at a rate of up to 0.1 °C per decade, however this rate is now accelerating.
- The average annual rainfall across the municipality is currently around 550 mm. There has been a decline in average annual rainfall since the 'baseline period' (1961-1990).
- Tasmania's southern region is influenced by large-scale climate drivers. For example, the extended dry spell of 1995-2009 coincided with an 'El Nino' pattern; the dry spell of 2018-20 coincided with an Indian Ocean Dipole event; and extended wetter spells, such as between 2020-2022, often coincide with dominance of a 'La Nina' climate driver. It is expected that climate change will exacerbate the impact of these broader scale patterns, and particularly from east-

Table 1: Brighton future climate projection data– from Climate Futures Tasmania (average sub region data) 2019 RCP 8.5 (business as usual) scenario

	Baseline 1961-1990	Current	Mid-century 2040-2060	End of century 2080-2100
Average daily maximum temperature (°C)	16.5	17	18.2	19.5
Average annual hot days (above 30°C)	5	7	10	14
Mean Minimum Asphalt Critical Viscosity	97300	140900	179400	297500
Average annual cumulative Forest Fire Danger Index	1701	1733	1992	2268
Average annual rainfall (mm)	569	556	550	572
Average annual evaporation (mm)	988	996	1087	1217
Extreme rainfall – 24hr AEP 1%	174 mm	178 mm	189 mm	201 mm
Sea level – 1% AEP	1.77	1.92	2	2.6

10 Climate Change Information for Decision Making (2019): T. Remenyi, N. Earl, P. Love, D. Rollins, R. Harris; Climate Futures Programme, Discipline of Geography & Spatial Sciences, University of Tasmania.

coast lows which are expected to intensify with potential to deliver damaging flood events to eastern Tasmania.

1.3.1 Extreme events

The changes in climate that are most likely to impact upon council infrastructure, roads, the local community and the environment are an increase in intensity of extreme events and intersecting hazards. Intersecting hazards include the combined impact of, for example:

- heavy rain and gale force winds associated with storms which may cause road cuts due to both fallen trees and flash flooding;
- heatwave conditions associated with bushfire and smoke pollution;
- a confluence of low pressure, high tide, and in some cases high river levels, have the potential to result in unprecedented coastal inundation, and
- compounding events that exhaust the economic and human resources of councils to manage and respond.
- Increased evaporation and longer dry periods coupled with more extreme temperatures is likely to enhance the occurrence and intensity of bushfires, with more starts due to lightning strikes. Future fire danger. A guide to the increasing bushfire risk under climate change is: twice the danger, twice the area, twice as often.
- Heavier rainfall events than witnessed historically, particularly from east-coast lows, are expected to occur. High daily runoff events are likely to increase, including those that may lead to erosion, landslips or flooding.
- Inundation in vulnerable coastal areas will increase due to sea level rise. The current 100-year coastal inundation event is likely to occur almost every year by 2100.

Aside from the incremental rise of sea level, extreme coastal inundation events with the potential for infrastructure damage and erosion will occur when there is a confluence of low pressure, high tide and localised flooding if heavy rainfall occurs at the same time.

More Information

Detailed information from the Climate Futures Programme on the modelled future climate for Tasmanian sub-regions may be found here: **www.wineaustralia.com/climate-atlas**

Figure 3. Threat multiplier – intersecting hazards

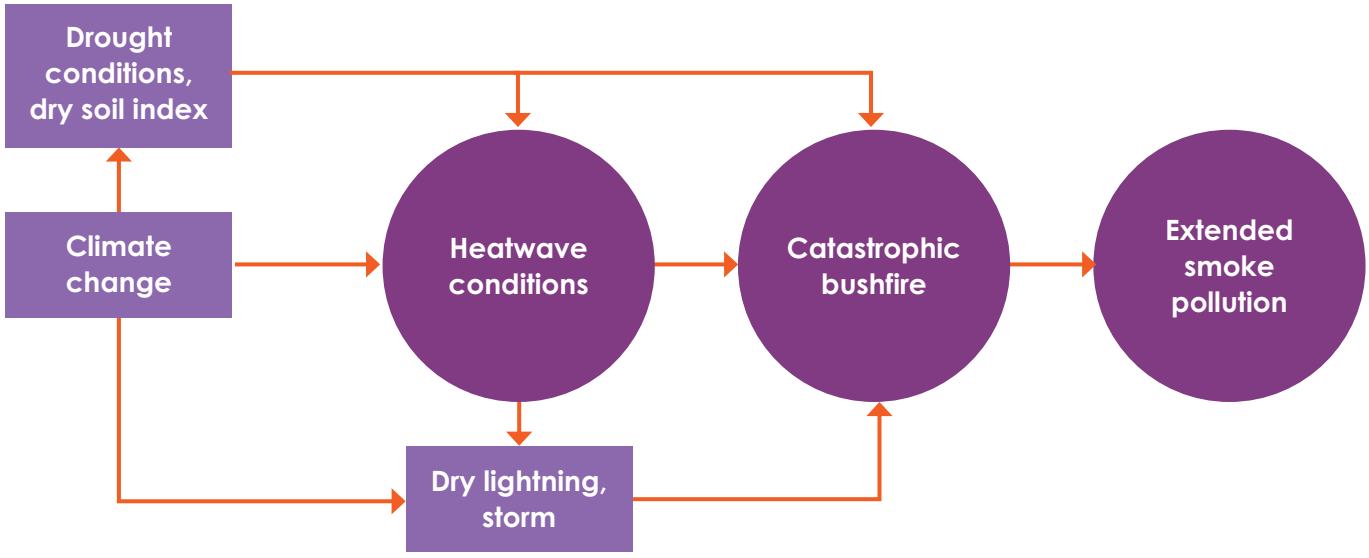


Image adapted from: Tasmanian Disaster Risk Assessment (TASDRA) 2022

2.0 OVERARCHING CORPORATE CONSIDERATIONS

Corporate climate change adaptation considerations fall across all Council strategic, operational and service areas. Engagement with these requires the development of understanding and governance by senior management who have overall responsibility for the setting and delivery of strategic and budgetary parameters. They are also increasingly expected to demonstrate leadership in the response to climate change.

Insurer Expectations

Local government insurer Municipal Association of Victoria (MAV) is increasingly expecting council's to demonstrate responses to climate hazards, exposure and resultant risk. Lack of engagement and action could at a minimum result in insurance premiums rising and at worst litigation for negligence in failure to address risks appropriately. Councils with a solid framework in climate change adaptation procedures will minimise risk to council business and the community who relies on decision making that is well considered, based in up to date facts, and appropriate.

Legal Liability

The threat of climate change is now clearly established through legislation and national and state policy and international agreements. It is likely that a court will construe that the risks and impacts of climate change are now foreseeable.

With increasing vulnerability to climate change impacts councils need to provide solutions to adapt to and manage, identified risks associated with climate change. A key consideration of councils in the face of climate change is potential liability that they are exposed to in discharging their various statutory roles, powers and functions in times where exposure to natural hazards is increasing.

MAV Insurance,[11] has provided advice that councils have a duty of care in the context of climate change adaptation which may arise in the context of:

- Development approvals – where the risk of harm was foreseeable;
- The provision of protective standards in planning schemes e.g. regarding bushfire protection;
- Failure to maintain or build infrastructure e.g. stormwater systems; and
- The provision, or lack thereof, of information which is considered by a court to be negligent.

Baker and McKenzie, in a report to the Australian Local Government Association[12] outlined actions that councils may follow to reduce liability. These include:

- keeping up to date on general climate change science and information, particularly in relation to potential risks from natural hazards;
- developing clear and certain criteria for decision making to increase public confidence that decisions are made on the basis of the best available scientific evidence;
- exercising reasonable care when making planning decisions, taking care to ensure relevant facts are known and understood, and reasons for decisions are clear, accurate and documented;
- increasing public consultation, as this may improve transparency around decision-making processes and limit administrative review; and
- facilitating the provision of up to date information to property owners on potential risks to property.

Useful information and case studies about legal risk and climate change adaptation can be accessed at: https://coastadapt.com.au/sites/default/files/information-manual/IM06_Legal_Risk.pdf

11 MAV Insurance Fact Sheet: Liability Risk & Climate Change Adaptation
12 Local Councils Risk of Liability in the Face of Climate Change Resolving Uncertainties; a report for the Australian Local Government Association, Baker and McKenzie, 22 July 2011.

Emergency Management

As the closest level of government to the community, together with having a responsibility for the wellbeing of their community, councils have an important role in emergency management. Although councils are not a provider of emergency services, council are required to have in place Emergency Management Plans that cover functions including:

- provision of recovery centres and relief services during emergencies or disasters;
- provision of resources and information to emergency service teams such as Tasmania Fire Service and the SES;
- informing the community of the current situation, developments and ongoing prognosis during emergency events; and
- local emergency planning and development of mitigation options using risk analysis, prioritisation and treatment approaches.

As outlined earlier, extreme events and associated emergencies are likely to increase as a result of climate change, potentially resulting in resources for emergency management being required more frequently than in the past. Emergency management planning may be coordinated through a special council committee who have the role of preparing and reviewing a municipal emergency management plan. It is pertinent for this committee to be aware of, and discuss, possible scenarios for intensifying natural hazards and the implications for council's ability to respond appropriately.

Specific identified risks and actions in relation to council's emergency management role are presented in Sections 3 and 4.

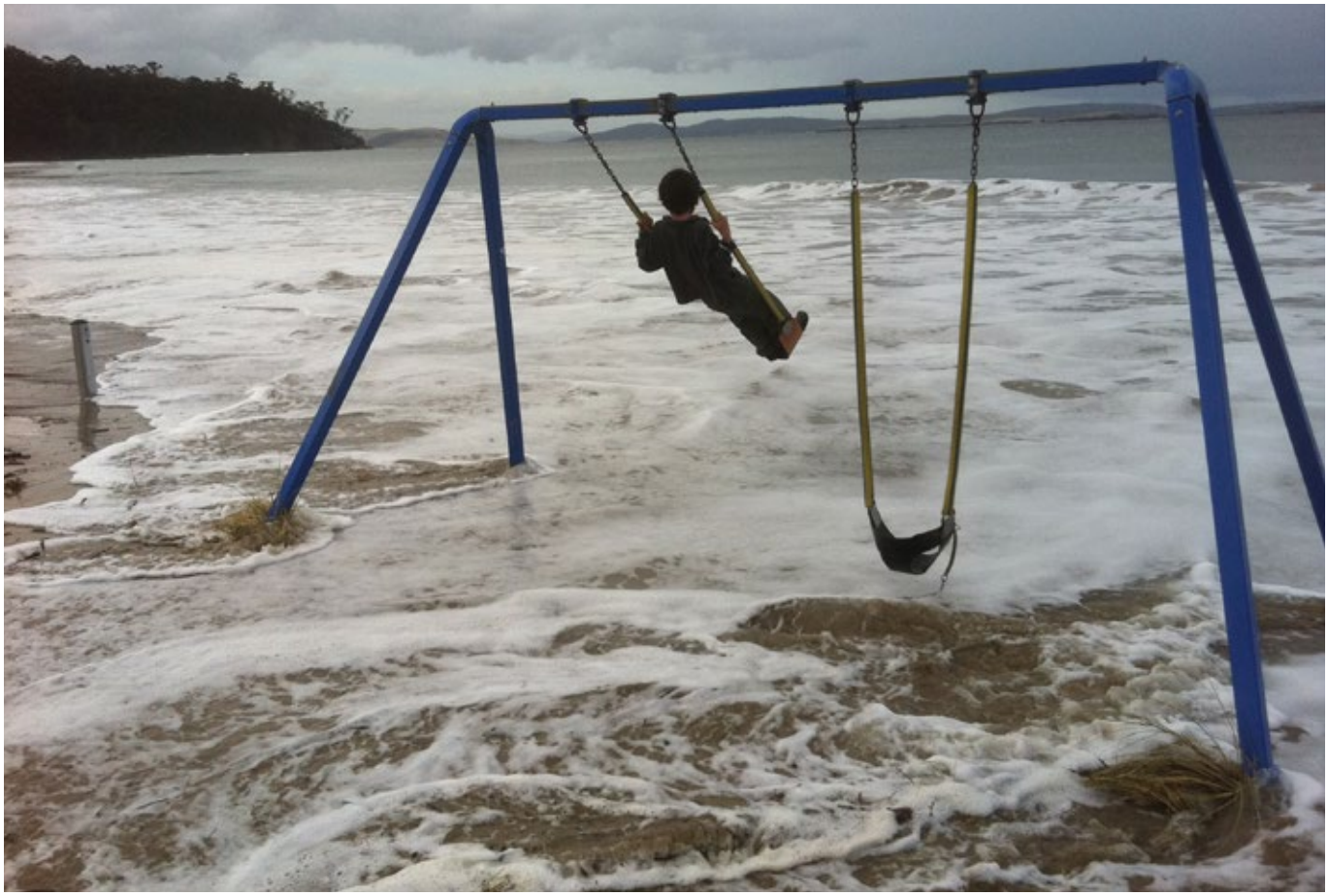


Image: Katrina Graham

3.0 CLIMATE CHANGE IDENTIFIED RISKS AND ACTIONS

Risk is the outcome of the confluence of hazard, vulnerability and exposure. Hazards only become risks if there is exposure, and that there is vulnerability to their impacts.

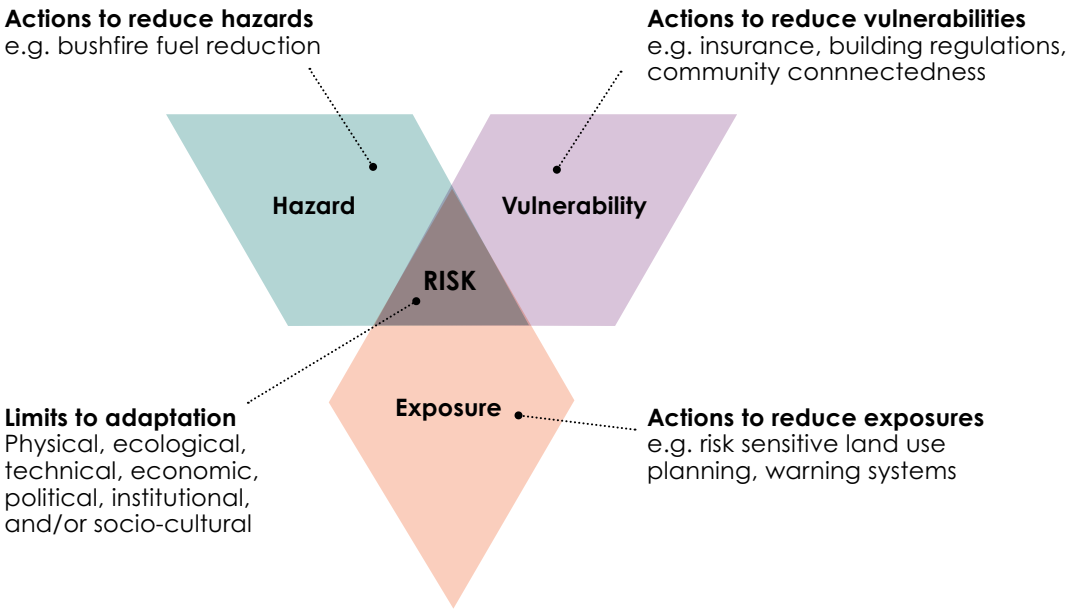


Image adapted from: Tasmanian Disaster Risk Assessment (TASDRA) 2022

Adaptation is about actively reducing exposure or building coping mechanisms for when hazards occur. Adaptation options that are feasible and effective today are likely to become constrained and less effective with increasing global warming. In other words, there are limits to adaptation, in some case moving away from the hazard may be the only option.

'Risk statements' are the key way that Councils define hazards and their implications for council. Climate change requires the development of specific risk statements to cover emerging climate hazards. Components of a meaningful risk statement are:

1. Climate change impact/hazard;
2. Consequence; and
3. Implication for council.

Example risk statement:

Increase in the frequency and intensity of extreme storms will result in heavier rainfall and unprecedented flooding (identify specific locations) leading to infrastructure damage or failure.

The risk management approach used in this adaptation plan was undertaken in accordance with the Risk Management Standard ISO 31 000.

3.1 RISKS AND ACTIONS ASSOCIATED WITH EXTREME EVENTS

3.1.1 Rainfall and Flooding

Heavier rainfall events, particularly from east-coast lows, are expected to create challenging hazards for council:

VULNERABILITIES

Rainfall and Flooding

Increasing extreme rainfall events has the following implications:

- **Exposure of infrastructure vulnerabilities – more frequent damage to assets.**
- **Implications for planning decisions made in areas that are vulnerable to flooding, likely to unprecedented levels.**
- **Absence of up to date modelling or hydrological studies to guide planning decision making.**
- **Exposure of shortcomings in the stormwater system – management of localised flooding associated with council infrastructure.**
- **Testing of emergency services capacity, e.g. managing road closures and recovery centres.**
- **More resources required for dealing with the aftermath of more intense rainfall events.**

Identified risks, ratings and draft actions for rainfall and flooding are presented in Table 2.

Table 2: Identified risk statements, ratings and management for rainfall and flooding

Risk ID	Risk Statement	Primary business area impacted	Primary risk category	Secondary risk category	Risk rating in light of increasing climate change threats (primary risk category)			Existing Controls	Adaptation Action	Target risk level	Responsibility	Timeframe
					Likelihood	Consequence	Risk rating					
RAINFALL AND FLOODING												
1	Increase in heavier rainfall events and unprecedented flooding resulting in infrastructure damage or failure (e.g. road surfaces and bridges).	Asset Services	Financial	Service delivery	**Almost certain**	**Moderate**	**High**	Infrastructure improvements and upgrades	Plan for infrastructure upgrades to cope with flood events in a prioritised manner based upon asset risk analysis and numbers of people likely to be effected.	**Medium**	Asset Services	Ongoing
2	Heavier rainfall and unprecedented flooding events meaning that new developments near waterways could be in harms way, requiring review of information for planning decisions to avoid future litigation risk (e.g. Jordan River flood mapping).	Development & Environmental Services	Financial	Public safety	**Almost certain**	**Minor**	**Medium**		Secure resources to undertake detailed flood modelling where there are data gaps to better define exposure sites and vulnerabilities.	**Low**	Development & Environmental Services	
3	Increase in the frequency and magnitude of flood events leading to road inundation, risk to road users (e.g. Tottenham, Ford Road), and implications for emergency response.	Asset Services	Public safety		**Almost certain**	**Minor**	**Medium**	Deploy signage on affected roads	Greater vigilance and promptness in deploying signage at the start of flood events.	**Low**	Emergency Management Committee	Immediate

Table 2: Identified risk statements, ratings and management for rainfall and flooding (continued)

Risk ID	Risk Statement	Primary business area impacted	Primary risk category	Secondary risk category	Risk rating in light of increasing climate change threats (primary risk category)			Existing Controls	Adaptation Action	Target risk level	Responsibility	Timeframe
					Likelihood	Consequence	Risk rating					
RAINFALL AND FLOODING												
4	Heavier rainfall events leading to greater likelihood that stormwater infrastructure will fail resulting in localised flooding.	Asset Services	Service delivery	Financial	**Almost certain**	**Moderate**	**High**	Council's Stormwater Management Plan lists vulnerable locations	Stormwater Management Plan is the guiding document. Prioritise infrastructure upgrades in hot spot areas that are prone to flooding.	**Medium**	Asset Services	Immediate
5	Increasingly heavy rainfall events exacerbating the risk of tunnel erosion affecting council infrastructure, particularly roads – e.g. Honeywood Drive.	Asset Services	Financial	Service delivery	**Likely**	**Minor**	**Medium**	None	Monitor known high risk areas and ensure a geotech report is required for development applications in vulnerable areas.	**Medium**	Asset Services	
6	Increasing rainfall intensity in storms will result in more resources requitred to attend to clean up and for debris removal.	Asset Services	Service delivery	Financial	**Almost certain**	**Minor**	**Medium**	Map trees in asset register and allocate adequate funds to tree management programs	More funds allocated to tree management programs following hazardous tree analysis and assessment.	**Medium**	Asset Services	Immediate

3.1.2 Increasing Temperature

The modelled temperature rise for Brighton from the baseline period to end of century is 3°C with an expected tripling of hot days (above 30°C) (Table 1).

There are synergies between increasing temperature, decreasing moisture in the landscape, and increasing likelihood of fire-starts. Increasing temperature, particularly resultant temperature extremes and heatwaves, is part of a range of climate-forced factors that often in combination produce an impact. Temperature related risks for Brighton Council are listed in Table 3.

Image: Graham Green

Table 3: Risk statements, ratings and management for temperature change

Risk ID	Risk Statement	Primary business area impacted	Primary risk category	Secondary risk category	Risk rating in light of increasing climate change threats (primary risk category)			Existing Controls	Adaptation Action	Target risk level	Responsibility	Timeframe	Key External Stakeholder
					Likelihood	Consequence	Risk rating						
TEMPERATURE ↑													
7	Changes to mean temperature and increasing 'heat days' and heatwaves will result in diminishing water resources during extended dry spells and hotter weather resulting in implications for water storages and local fire fighting capacity.	Emergency Management	Public safety	Service delivery	**Likely**	**Moderate**	**High**	Awarness of existing dams and water sources	Ensure there is water capacity/ storage in areas of high bushfire risk –- commencing with an audit of what is currently available in the municipality e.g. fast fill stations. Upgrade the emergency management plan accordingly. Advocacy to Taswater and Tas Fire Service to be involved.	**Medium**	Emergency Management Committee	Short term	Tas Fire Service
8	Changes to mean temperature and increasing 'heat days' and heatwaves will result in local biodiversity loss and favour introduced weed species having implications for council's NRM resources and priorities.	NRM	Environ-mental	Financial	**Almost certain**	**Minor**	**Medium**	Tree planting programs, biodiversity protection support initiatives and weed management program	Continue to resource, or seek grant funding for, biodiversity protection and restoration programs. Manage the impact of weeds on land that we control. Increase weed mapping and planning of control measures.	**Medium**	NRM	On a needs basis	State Govt

Table 3: Risk statements, ratings and management for temperature change (continued)

Risk ID	Risk Statement	Primary business area impacted	Primary risk category	Secondary risk category	Risk rating in light of increasing climate change threats (primary risk category)			Existing Controls	Adaptation Action	Target risk level	Responsibility	Timeframe	Key External Stakeholder
					Likelihood	Consequence	Risk rating						
9	Changes to mean temperature and increasing 'heat days' and heatwaves will result in impacts to landscaping and street plantings with implications for species selection, weeding and watering.	Asset Services	Environ-mental		**Likely**	**Minor**	**Medium**	Greening Strategy – Heat and dry resistant species are already being selected	Select only species that are tolerant to heat and dry spells and ensure plantings are made at appropriate times with a follow-up watering program.	**Low**	Asset Services	On a needs basis	
10	Declining mean annual rainfall, longer dry spells and more severe droughts will result in impacts on street trees on our road reserves (loss of limbs), ingress of roots into moist areas (such as around pipes and foundations) resulting in increased workload and costs.	Asset Services	Financial	Public safety	**Almost certain**	**Moderate**	**High**	None	Replace trees at risk of creating issues with those that will withstand emerging conditions of heat and dry. Consider planting street trees into tree cells. Update street tree policy accordingly.	**Medium**	Asset Services	Ongoing	
11	Changes to mean temperature and increasing 'heat days' and heatwaves will result in greater instances of material degradation, particularly road surfaces (but also facades and structures) having consequences for budgets.	Asset Services	Financial	Service delivery	**Likely**	**Moderate**	**High**	None	Advocate for, and adopt, road surface materials that can withstand greater exposure to heat.	**Medium**	Asset Services	Immediate	Contractors

3.1.3 Bushfire

Twice the danger, twice the area, twice as often is a mantra that is now being used to summarise the increasing bushfire risk.

Rising average temperatures and more frequent extreme temperatures have the potential to contribute to a variety of impacts including: rapid drying of the landscape (flash droughts); longer bushfire seasons; enhanced wildfire intensity; and heatwave related illness and mortality (particularly in vulnerable demographics such as the elderly). Impacts may also be incurred on council's infrastructure and property, and on natural resources.

VULNERABILITIES

Bushfire

Changes to bushfire likelihood and behaviour may result in:

- **Emergency services response capacity challenges.**
- **An increase in repair or replacement costs of council and community infrastructure.**
- **Planning considerations in relation to development in locations with extreme bushfire hazard and exposure.**
- **Difficulty in accessing sufficient water resources when fire is associated with drought.**
- **Significant community disruption leading to a range of public health and safety issues, and delays to core council services.**
- **Exposure of shortcomings in the communications network i.e. mobile phone black-spots and/or damage to communications infrastructure.**
- **Pressure to upgrade roads in vulnerable areas to enable safe evacuation and access for emergency services.**
- **Pressure on natural resources not well adapted to fire.**

Identified risks, ratings and actions for bushfire are presented in Table 4.

Table 4: Identified risk statements, ratings and management for bushfire hazard

Risk ID	Risk Statement	Primary business area impacted	Primary risk category	Secondary risk category	Risk rating in light of increasing climate change threats (primary risk category)			Existing Controls	Adaptation Action	Target risk level	Responsibility	Timeframe	Key External Stakeholder
					Likelihood	Consequence	Risk rating						
BUSHFIRE – twice the danger, twice the area, twice as often													
12	Increasing frequency and intensity of bushfires will result in more areas of the local government area that become unsuitable/ dangerous for residential development having implications for hazard abatement and compliance.	Development & Environmental Services	Community and lifestyle	Financial	**Almost certain**	**Minor**	**Medium**	Increasing requirements for residents to comply with bushfire safety measures on their property	Compliance follow-up together with hazard abatement notices. Develop a planning position on fire bunkers in areas highly vulnerable to bushfire.	**Medium**	Development & Environmental Services	Immediate	Tas Fire Service
13	Increasing frequency and intensity of bushfires will result in increasing likelihood of damage to infrastructure and assets such as community halls that provide public services, having consequences for budgets and 'insurability'.	Asset Services	Financial	Community and lifestyle	**Likely**	**Insignificant**	**Low**	None	Ensure flammable vegetation is removed from the proximity of infrastructure and that mechanisms to minimise implications of ember attack are implemented (e.g. gutter guard). Roadside vegetation management.	**Low**	Asset Services	Immediate	Tas Fire Service

Table 4: Identified risk statements, ratings and management for bushfire hazard (continued)

Risk ID	Risk Statement	Primary business area impacted	Primary risk category	Secondary risk category	Risk rating in light of increasing climate change threats (primary risk category)			Existing Controls	Adaptation Action	Target risk level	Responsibility	Timeframe	Key External Stakeholder
					Likelihood	Consequence	Risk rating						
14	Increasing frequency and intensity of bushfires exacerbating the potential for evacuation and access issues on roads to vulnerable localities, e.g. Dromedary.	Emergency Management	Public safety		**Almost certain**	**Major**	**Extreme**		Installation of new pull-off areas to enable traffic management and access for fire engines in known high bushfire risk areas	**High**	Asset Services	Immediate	Tas Fire Service
15	Increasing high fire risk conditions resulting in a higher probability of fire starts on council land that impact the property of others – resulting in litigation.	Asset Services	Financial	Financial	**Possible**	**Major**	**High**		Keep fuel loads to a reasonable level on council properties – have a documented program to do this. Education and awareness program to address purposeful fire lighting.	**High**	Asset Services	On a needs basis	SES

3.1.4 Sea Level Rise and Storm Surge

There are several useful resources available to council when considering the implications of sea level rise and storm surge, including:

- Regional Strategy – Adapting to a Changing Coastline in Tasmania
- CoastAdapt;
- Sea level rise planning allowances for Tasmania;
- Coastal vulnerability mapping; and
- Tasmanian Coastal Adaptation Pathways Project.

Regional Strategy – Adapting to a Changing Coastline in Tasmania

This 'Strategy' developed by the Regional Climate Change Initiative (RCCI) in 2022, will help Councils to employ a risk management approach to existing or potential hazards on the coastline that threaten harm to public and natural assets, infrastructure, people or property. Risk assessments lead to the identification of several options for responding to hazards, and with stakeholder and community involvement, can be used to develop local coastal hazard plans. These plans outline what actions will be implemented, e.g. re-vegetating dunes or engineering solutions such as sea walls. Retreat or relocation, and 'no action' are sometimes viewed as the most appropriate responses.

The Strategy's coastal 'Principles' cover coastal values, public safety and private property through to the role of council and their coastal management role. The principles are not prescriptive, enabling flexibility for councils to develop responses that suit their local coastal issues and resources.

The Strategy may be downloaded at: https://www.stca.tas.gov.au/rcci/our-projects/our-changing-coastline/

CoastAdapt (coastadapt.com.au)

The CoastAdapt web site has a comprehensive range of useful information and planning tools, for example: data and graphics on inundation and coastal erosion; estuaries and sea level rise; local scale risk assessment guidelines; legal risk; and adaptation options for planning, engineering, environment and community.

Sea level rise planning allowances (SLRPAs) for Tasmania

SLRPAs were implemented by the Tasmanian Government in 2012 to promote consistent decision making concerning future land use and development and to reduce the level of uncertainty around the management of future sea level rise. Based upon emissions scenario RCP 8.5, the sea level planning allowance for Brighton is 0.23 m for 2050 and 0.85 m by 2100.

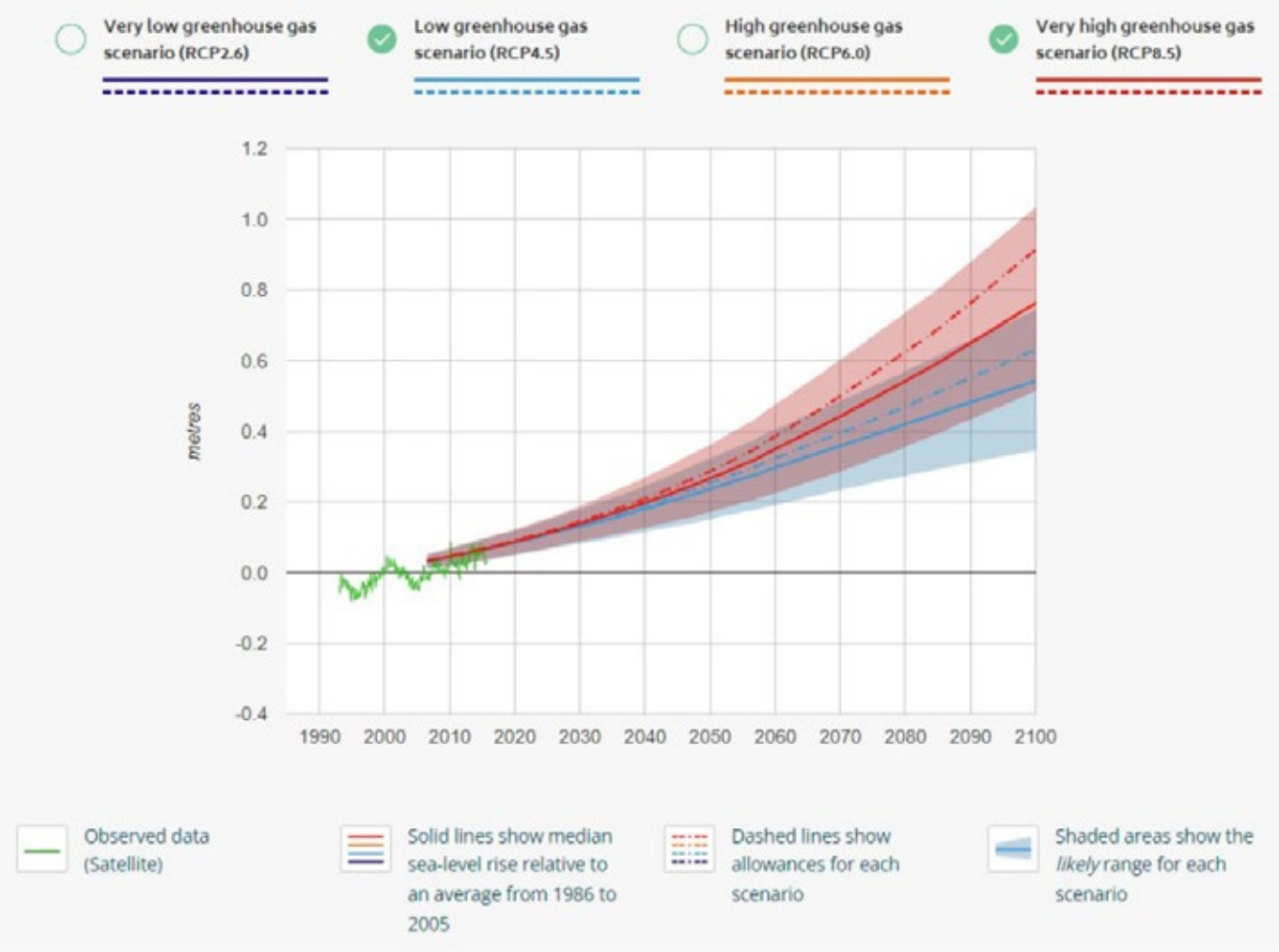
The Tasmanian Government has developed a 'Coastal Hazards Package' in response to the risks posed by coastal erosion and inundation. The Package provides guidance for the management of coastal hazards in terms of land use planning and development resources and can be accessed at: www.dpac.tas.gov.au/divisions/osem/coastal_hazards_in_tasmania

Coastal vulnerability mapping

Coastal hazard layers are available through LISTmap

- Coastal Erosion Hazard Bands 2016
- Coastal Inundation Hazard Bands 2016

Figure 4. Projected sea level rise for Brighton – image from CoastAdapt



Sea level rise outlook for Brighton Council under various emissions scenarios – from CoastAdapt

Tasmanian Coastal Adaptation Pathways Project (TCAP)

The TCAP project aimed to assist Tasmanian communities and decision makers (including councils) to adapt to climate change impacts. Reports have been prepared for several sites in the Southern Region: Kingston Beach, Lauderdale/Roches Beach, and Nutgrove/Long Beach. The Communities and Coastal Hazards Project built upon TCAP with further work undertaken in Kingborough and Glamorgan Spring Bay.

Identified and rated risk statements in relation to the sea level rise hazard in Brighton are presented in the Table 5. As identified in the staff workshop, sea level rise along Brighton's coastline is likely to lead to environmental and financial implications in the short term, and ultimately consequences for infrastructure and service delivery.

Table 5: Identified risk statements, ratings and management for sea level rise and storm surge

Risk ID	Risk Statement	Primary business area impacted	Primary risk category	Secondary risk category	Risk rating in light of increasing climate change threats (primary risk category)			Existing Controls	Adaptation Action	Target risk level	Responsibility	Timeframe	Key External Stakeholder
					Likelihood	Consequence	Risk rating						
SEA LEVEL RISE													
16	Changes in sea level and the frequency of coastal erosion and inundation events will require regular review of planning procedures and controls to ensure development isn't in harms way and that Council is not vulnerable to future litigation stemming from current decision making.	Development & Environmental Services	Financial	Community and lifestyle	**Likely**	**Minor**	**Medium**	Coastal Erosion Hazard Code – coastal erosion hazard area overlay. Sea level rise benchmarks	Keep abreast of legal advice regarding planning decision making in areas of potential risk. Ensure public are made aware of the risks of coastal development, particularly if within the hazard bands of the overlay.	**Low**	Development & Environmental Services		State Govt
17	Changes in sea level and the frequency of coastal erosion and inundation events will result in increased frequency of tidal inundation leading to coastal erosion and requirement for environmental rehabilitation work.	NRM	Environ-mental	Financial	**Likely**	**Moderate**	**High**	Coastal buffering environmental plantings and works	Identify a source of resources for coastal environmental rehabilitation and environmental protection work.	**Medium**	Asset Services		State Govt

Table 4: Identified risk statements, ratings and management for sea level rise and storm surge (continued)

Risk ID	Risk Statement	Primary business area impacted	Primary risk category	Secondary risk category	Risk rating in light of increasing climate change threats (primary risk category)			Existing Controls	Adaptation Action	Target risk level	Responsibility	Timeframe	Key External Stakeholder
					Likelihood	Consequence	Risk rating						
SEA LEVEL RISE													
18	Changes in sea level and the frequency of coastal erosion and inundation events will result in more frequent and higher storm surges leading to damage to coastal assets (such as roads, car parks, playgrounds, buildings and pump stations) and higher maintenance costs.	Asset Services	Financial	Community and lifestyle	**Likely**	**Moderate**	**High**	Buffering and protection works	Impacted assets will ultimately need to be relocated if they can no longer be protected. This needs to be weighed up versus increasing costs to repair damage to coastal assets such as roads and pump stations.	**High**	Asset Services		State Govt
18a	Changes in sea level and the frequency of coastal erosion and inundation events will result in more frequent and higher storm surges leading to damage to coastal assets (such as roads, car parks, playgrounds, buildings and pump stations) and higher maintenance costs.	Asset Services	Service Delivery		**Likely**	**Moderate**	**High**	Acceptance that some infrastructure may ultimately become unprotectable therefore redundant if not relocatable	For assets that can't be relocated or protected – instill in the community through PR an awareness that service delivery in some instances may not be able to be maintained.	**High**	Asset Services		

4.0 STRATEGIC ACTIONS AND SUMMARY ACTIONS FOR COUNCIL BUSINESS AREAS

4.1 STRATEGIC ACTION PRIORITIES – INCORPORATION INTO OTHER DOCUMENTS AND PROCESSES

Strategic priorities are broad level climate change adaptation actions that increase council's climate governance and cross numerous Council service areas. Having these in place enables and facilitates the inclusion of climate consideration across council's corporate strategic and operational functions increasing council's climate resilience and mitigating exposure to potential liability. Success of such actions is dependent on management support. Implementation of strategic actions will provide Council with a solid framework in climate change adaptation and will build an internal culture that supports the implementation of the specific adaptation options listed earlier. Strategic priority examples are provided in Table 6:

Image: Glenorchy City Council Staff

Table 6: Broad level climate change adaptation actions that may be implemented across Council (Strategic Priorities)

Strategic Priority Description	Reasoning
Integrate climate change risk management into existing Council wide risk assessment framework.	Climate change risks should be incorporated into Council's existing risk management processes. From a process point of view this will ensure that climate change risks continue to be properly addressed.
Assign a climate change officer to oversee implementation of this Plan.	A representative from Council is recommended to be assigned to oversee the implementation of actions outlined in the Plan.
Consideration of climate change risks and impacts during the development of other Council strategies, policies and plans.	The climate change impacts and risk process outlined throughout this adaptation action plan should be considered in the development of future plans, policies and strategies to ensure that these issues are incorporated throughout all of Council's service areas. This will also ensure there are mechanisms for actions to be implemented.
Integration of this adaptation action plan and greenhouse gas mitigation measures to prioritise projects that have dual benefits.	Ensure that future emissions are considered in the decision making process of prioritising adaptation actions. Often dual benefits can be achieved for climate change mitigation and adaptation.
Report on climate change adaptation progress into any future publicly available documents or reports.	Reporting on climate change adaptation progress will assist in engaging the community and informing other Councils on Council's progress.
Consider developing climate change related KPIs.	Climate change related Key Performance Indicators (KPIs) which would be reported on through Council's annual report will incentivise continuous improvement.
Ensure that the projected impacts of climate change are properly considered in Council's emergency management planning.	Emergency response plans should be investigated, developed and implemented considering the best available climate change projections. Up to date emergency response procedures can minimise consequences when extreme events occur.
Where required, support the implementation of Regional Councils Climate Change Adaptation Strategies.	Administered through the STCA, the Regional Councils Climate Change Adaptation Strategy aims to drive adaptation in local government for the region and deliver on a number of common actions that are relevant to its member councils. The success of this strategy is dependent on a high level of buy in from each of the Councils across Southern Tasmania.

4.2 ASSET SERVICES

Council's Asset Services team is responsible for overseeing the construction, maintenance and replacement of property and infrastructure assets, including roads, drains and culverts, bridges, stormwater infrastructure, council owned buildings and recreational infrastructure such as walking tracks. For councils, effective asset management is about understanding the required level of service and delivering it in the most cost effective manner. Managing this objective is core business for local government and is key to ensuring council sustainability. The projected impacts of climate change threaten conventional asset management both in terms of financial modelling, as well as the level of service that is acceptable or even achievable.

Projected increases in the intensity and frequency of extreme events directly impact on council's asset base with significant and unpredictable financial and service delivery implications. Council's stormwater system for example is designed for historical climate and with projected climate change, will possibly become under-capacity in places.

Council will therefore need to consider the additional cost of managing stormwater at the current acceptable level of service and either fund that cost or accept that a greater frequency of inundation events is likely. This may result in public inconvenience, safety issues, and potentially legal liability for damage to property from poorly performing council infrastructure.

Further to the projected increases in extreme events, incremental changes to the climate such as increasing average temperatures or reduced average rainfall will also have implications for council's capacity to deliver its infrastructure based services. Such changes may result in accelerated structural fatigue in council's infrastructure. Design standards based upon past climate data and patterns may need to be reconsidered for new or replacement infrastructure to account for incremental climate change projections.

Identified Asset Services actions are listed in Table 7.

Table 7: Asset Services Identified Adaptation Actions

Risk ID	Risk statement	Primary risk category	Risk rating	Adaptation Action	Timeframe
14	Increasing frequency and intensity of bushfires exacerbating the potential for evacuation and access issues on roads to vulnerable localities, e.g. Dromedary.	Public safety	Extreme	Installation of new pull-off areas to enable traffic management and access for fire engines in known high bushfire risk areas	Immediate
1	Increase in heavier rainfall events and unprecedented flooding resulting in infrastructure damage or failure (e.g. road surfaces and bridges).	Financial	High	Plan for infrastructure upgrades to cope with flood events in a prioritised manner based upon asset risk analysis and numbers of people likely to be affected.	Ongoing
4	Heavier rainfall events leading to greater likelihood that stormwater infrastructure will fail resulting in localised flooding.	Service delivery	High	Stormwater Management Plan is the guiding document. Prioritise infrastructure upgrades in hot spot areas that are prone to flooding.	Immediate
10	Declining mean annual rainfall, longer dry spells and more severe droughts will result in impacts on street trees on our road reserves (loss of limbs), ingress of roots into moist areas (such as around pipes and foundations) resulting in increased workload and costs.	Financial	High	Replace trees at risk of creating issues with those that will withstand emerging conditions of heat and dry. Consider planting street trees into tree cells. Update street tree policy accordingly.	Ongoing

Table 7: Asset Services Identified Adaptation Actions (continued)

Risk ID	Risk statement	Primary risk category	Risk rating	Adaptation Action	Timeframe
11	Changes to mean temperature and increasing 'heat days' and heatwaves will result in greater instances of material degradation, particularly road surfaces (but also facades and structures) having consequences for budgets.	Financial	High	Advocate for, and adopt, road surface materials that can withstand greater exposure to heat	Immediate
15	Increasing high fire risk conditions resulting in a higher probability of fire starts on council land that impact the property of others – resulting in litigation.	Financial	High	Keep fuel loads to a reasonable level on council properties – have a documented program to do this. Education and awareness program to address purposeful fire lighting.	On a needs basis
17	Changes in sea level and the frequency of coastal erosion and inundation events will result in increased frequency of tidal inundation leading to coastal erosion and requirement for environmental rehabilitation work.	Environ-mental	High	Identify a source of resources for coastal environmental rehabilitation and environmental protection work.	
18	Changes in sea level and the frequency of coastal erosion and inundation events will result in more frequent and higher storm surges leading to damage to coastal assets (such as roads, car parks, playgrounds, buildings and pump stations) and higher maintenance costs.	Financial	High	Impacted assets will ultimately need to be relocated if they can no longer be protected. This needs to be weighed up versus increasing costs to repair damage to coastal assets such as roads and pump stations.	
18a	Changes in sea level and the frequency of coastal erosion and inundation events will result in more frequent and higher storm surges leading to damage to coastal assets (such as roads, car parks, playgrounds, buildings and pump stations) and higher maintenance costs.	Service delivery	High	For assets that can't be relocated or protected – instill in the community through PR an awareness that service delivery in some instances may not be able to be maintained.	
5	Increasingly heavy rainfall events exacerbating the risk of tunnel erosion affecting council infrastructure, particularly roads – e.g. Honeywood Drive.	Financial	Medium	Monitor known high risk areas and ensure a geotech report is required for development applications in vulnerable areas.	On a needs basis
6	Increasing rainfall intensity in storms will result in more resources requitred to attend to clean up and for debris removal.	Service delivery	Medium	More funds allocated to tree management programs following hazardous tree analysis and assessment.	Immediate
9	Changes to mean temperature and increasing 'heat days' and heatwaves will result in impacts to landscaping and street plantings with implications for species selection, weeding and watering.	Environ-mental	Medium	Select only species that are tolerant to heat and dry spells and ensure plantings are made at appropriate times with a follow-up watering program.	On a needs basis
13	Increasing frequency and intensity of bushfires will result in increasing likelihood of damage to infrastructure and assets such as community halls that provide public services, having consequences for budgets and 'insurability'.	Financial	Low	Ensure flammable vegetation is removed from the proximity of infrastructure and that mechanisms to minimise implications of ember attack are implemented (e.g. gutter guard). Roadside vegetation management.	Immediate

4.3 CORPORATE AND COMMUNITY

Brighton Council has an important role in community and economic development, particularly through encouraging investment and job growth, and enhancing liveability and environmental attributes which may influence individual's decisions to live in the municipal area.

Maintaining assets that are fundamental to council operation and community services is an important role of councils. Increasing climate hazards have the potential to cause more frequent impacts on and damage to council buildings. Insurance premiums are likely to rise, as are repair and replacement costs if damage is sustained. Weighing up the value of the asset, the importance of the asset to the community, and the average annual cost of protecting and maintaining the asset are important considerations in determining where to allocate limited resources.

Councils also have an important role in creating healthy vibrant communities, in fact most of council's roles and functions have a bearing on the wellbeing of residents. Climate change, and its resultant range of hazards, is now a well-documented influencer of mental health and is beginning to regularly disrupt the fabric of communities. The majority of Australians (80%) have experienced some form of extreme weather disaster since 2019.[13]

If the community is not prepared for the impacts of climate change then Council may be required to invest increasing resources in community support to assist residents through tough times, including clean-up effort, and support due to disruption to local businesses. For rural councils, programs that Councils may consider referring local businesses and individuals to in challenging times are: Drought Ready Tasmania (www.droughtready.tas.gov.au) and Rural Alive and Well (www.rawtas.com.au).

There is a potential role for council in disseminating specific information to the community in relation to climate change to assist in preparing for changes that could be challenging.

There is also a toll on council staff in assisting the community through extreme events, particularly when their frequency is escalating. Council may be required to invest extra resources in the way staff are managed to avoid burnout, anxiety and fatigue.

13 Climate Council (2023), Climate Trauma: The growing toll of climate change on the mental health of Australians. www.climatecouncil.org.au/resources

4.4 DEVELOPMENT SERVICES

Climate change risks have implications for council's role in planning and development approval, particularly in relation to possible litigation if risk to property from climate change related disasters are not adequately identified or communicated.

In relation to changes in flood and bushfire risk from a warming climate, planning scheme overlays should be updated if and where possible to incorporate modelled data to appropriately guide development. If there remain grey-areas, or uncertainty about potential impact from natural hazards, then additional information to guide decision making should be sought.

With increasing bushfire likelihood it may be useful to have the State Planning Provisions modified to require planning schemes to be informed by modelled fire data that could include: vegetation flammability; slope; ignition potential; and suppression capability.

The Bushfire-Prone Areas Code overlay covers the majority of the municipal area. It prompts thinking around appropriateness of developments in terms of location, access and water supply. For each development a detailed bushfire attack level (BAL) assessment is required as part of the planning assessment process. This assessment informs detail around positioning of buildings, buffer areas, construction technique, and appropriate building materials to minimise bushfire impact and flammability.

Identified Development Services actions are listed in Table 8.

Table 8: Development Services Identified Adaptation Actions

Risk ID	Risk statement	Primary risk category	Risk rating	Adaptation Action	Timeframe
2	Heavier rainfall and unprecedented flooding events meaning that new developments near waterways could be in harms way, requiring review of information for planning decisions to avoid future litigation risk (e.g. Jordan River flood mapping).	Financial	**Medium**	Secure resources to undertake detailed flood modelling where there are data gaps to better define exposure sites and vulnerabilities.	On a needs basis
12	Increasing frequency and intensity of bushfires will result in more areas of the local government area that become unsuitable/ dangerous for residential development having implications for hazard abatement and compliance.	Community and lifestyle	**Medium**	Compliance follow-up together with hazard abatement notices. Develop a planning position on fire bunkers in areas highly vulnerable to bushfire.	Immediate
16	Changes in sea level and the frequency of coastal erosion and inundation events will require regular review of planning procedures and controls to ensure development isn't in harms way and that Council is not vulnerable to future litigation stemming from current decision making.	Financial	**Medium**	Keep abreast of legal advice regarding planning decision making in areas of potential risk. Ensure public are made aware of the risks of coastal development, particularly if within the hazard bands of the overlay.	

4.5 ENVIRONMENTAL HEALTH

Councils have a statutory role for the provision of environmental health services across their communities. In addition to these formal roles other functions may include: aged care, child health, special needs care, supported accommodation and counselling and support services. Climate change has many implications for community health. Gradual shifts over time in temperature, humidity and rainfall patterns can create ideal conditions for disease vectors, such as mosquitos, in areas where there was no previous exposure.

Direct impact of extreme events such as bushfire and heatwaves can result in emergency services and community support services being stretched beyond their capacity. There is now an established link between extreme heatwaves and an increase in mortality in vulnerable sectors of the community.

Severe seasonal conditions such as drought lead to tough environmental and economic situations which can result in more widespread mental health challenges. Councils have an important community role in promoting and maintaining links to relevant support services in times of hardship.

4.6 NATURAL RESOURCE MANAGEMENT

Council's role in natural resource management (NRM) is focused on management of local reserves, protecting local biodiversity and managing threats such as weeds.

The natural environment is under pressure from climate change. The climate change we are now experiencing is occurring relatively rapidly. In natural vegetation communities this change is likely to favour some species and disadvantage others. A possible outcome is loss of vulnerable species and changes in structure, function and composition of vegetation communities. Additionally, exacerbated threat to vegetation communities may occur through proliferation of weeds which may be favoured by changing temperature and rainfall conditions. Direct physical impacts on natural systems may also be exacerbated under climate change, for example, rivers and streams are likely to experience flood flows at levels not seen before, creating vulnerability to erosion in riparian areas.

There may be a need to refocus NRM activities in the future away from addressing issues in isolation to a strategic approach that is well informed about landscape-scale ecological processes. This approach will enable limited resources to be deployed wisely and in ways that address several issues, for example, revegetation in conjunction with landscape connectivity priorities.

Table 9: Natural Resource Management Identified Adaptation Actions

Risk ID	Risk statement	Primary risk category	Risk rating	Adaptation Action	Timeframe
8	Changes to mean temperature and increasing 'heat days' and heatwaves will result in local biodiversity loss and favour introduced weed species having implications for council's NRM resources and priorities.	Environ-mental	**Medium**	Continue to resource, or seek grant funding for, biodiversity protection and restoration programs. Manage the impact of weeds on land that we control. Increase weed mapping and planning of control measures.	On a needs basis

4.7 EMERGENCY MANAGEMENT

Increasing frequency and magnitude of extreme events associated with climate change may result in resources for emergency management being stretched at times. Significant effort should be invested to ensure that relevant staff are well briefed to respond and that Emergency Management Plan and procedures are reviewed regularly so council's roles in emergency response run seamlessly.

Refer also to Section 2.3 – Council's corporate responsibilities in Emergency Management.

Emergency management risks, additional to standard emergency management responsibilities, are listed in Table 10.

Table 10: Emergency Management Identified Adaptation Actions

Risk ID	Risk statement	Primary risk category	Risk rating	Adaptation Action	Timeframe
7	Changes to mean temperature and increasing 'heat days' and heatwaves will result in diminishing water resources during extended dry spells and hotter weather resulting in implications for water storages and local fire fighting capacity.	Public safety	High	Ensure there is water capacity/ storage in areas of high bushfire risk – commencing with an audit of what is currently available in the municipality e.g. fast fill stations. Upgrade the emergency management plan accordingly. Advocacy to Taswater and Tas Fire Service to be involved.	Short term
3	Increase in the frequency and magnitude of flood events leading to road inundation, risk to road users (e.g. Tottenham, Ford Road), and implications for emergency response.	Public safety	Medium	Greater vigilance and promptness in deploying signage at the start of flood events.	Immediate

5.0 ADAPTATION PLAN IMPLEMENTATION AND REVIEW

The implementation of this Plan requires a co-ordinated approach, both across council business, in partnership with other councils, and with external stakeholders. Key components of implementation include:

- a process for adaptation plan endorsement by council;
- a logical way for incorporation of key local risks and adaptation actions into council documents and processes such as risk registers, strategic plans, annual plans or asset management plans; and
- an appropriate mechanism to implement sub-regional and regional adaptation actions either through advocacy or collaboration.

It is important that management play a role in Plan implementation by assuming responsibility for implementing adaptation actions. Implementation of adaptation actions may provide Council with a buffer to the challenges posed by climate change.

5.1 FINANCIAL AND RESOURCE REQUIREMENTS

Financial and resource availability are critical factors for enabling implementation of adaptation actions. The adaptation options identified in this Plan will come at varying degrees of cost and resource requirement. It is likely that Council will initially support implementation of those adaptation actions which are cost effective and align with current resource capacity and availability. As mentioned earlier in this document every dollar invested in adaptation typically yields net economic benefits ranging from $2 to $10,[14] hence implementation of prioritised actions may be viewed as a 'no regrets' approach.

Prioritising 'investment' in adaptation actions can be based upon factors such as:

- risk priority; and
- cost benefit analysis - weighing up the value of the asset, the importance of the asset to the community, and the average annual cost of protecting and maintaining the asset.

In some cases it may not be financially feasible to protect or fortify an asset, hence consideration of relocation of an asset may be the only option.

It is important to recognise that not all climate change action within Council will require its own funding, but will become embedded in the operational business of Council through appropriate governance arrangements, planning and policy. Notwithstanding this, some of the more complex adaptation options, such as road relocation or coastal fortification will require substantial financial support and resources. For these actions, pursuing grant funding and establishing partnerships for collaborative or common actions can be effective in reducing the overall cost of action for Council, enabling the full cost of action to be offset.

14 World Resources Institute 2023: Adapt Now: A global call for leadership on climate resilience.

5.2 STAKEHOLDER INVOLVEMENT AND COLLABORATION

Climate change is likely to impact either directly or indirectly on all aspects of council function. Further to this, impacts are likely to be felt throughout the community affecting other organisations that council has involvement with. A collaborative adaptation response between all stakeholders is therefore essential for council to maintain its service level in a changing climate. It is important that:

- linkages between organisations and commonalities of hazards and risks are identified;
- there is a clear understanding of roles and responsibilities in relation to management of identified climate change risks;
- there is awareness of what stakeholders are doing to manage climate change;
- recognition of opportunities to develop or strengthen existing collaborations and share resources; and
- duplication of efforts is avoided wherever possible.

Image: Graham Green

5.3 REGIONAL STRATEGY

The former Regional Councils Climate Change Adaptation Strategy (2013-17) for southern Tasmania, provided a policy platform and the parameters for cohesive and effective regional and sub-regional action(s) and, importantly, to strengthen the role of councils in adapting to climate change. Its underlying principles were:

- Climate change is a global issue requiring local solutions.
- Climate change action is a shared responsibility between local, state and Commonwealth governments, communities and the private sector.
- Local governments have an important role in leadership and educating communities at both the municipal and regional level on climate change and adaptation.
- Councils must prepare for and manage the impacts of climate change on its assets and services.
- Early climate change adaptation action is more cost effective than late action.
- Collaboration and cooperation on climate change adaptation actions by local government provides more effective use of resources.

Implementation of the Strategy is ongoing through a regional working group (the Regional Climate Change Initiative) who develop and implement an action plan to progress shared risks and actions between councils through a 'regional register'. Regional actions relate to the following themes:

- education and awareness raising;
- advocacy to State/Australian Government/stakeholders;
- collaboration on regional strategy;
- collaboration on climate action;
- cost sharing on research, study and technical advice; and
- reviewing design standards.

Regional actions are prioritised by the RCCI in relation to considerations such as: level of urgency, resourcing requirements, staff availability, funding opportunities, strategic directions and policy settings.

Completion of the Southern Councils Climate Collaboration provides an opportunity to re-appraise the risks and actions in common across the southern councils that are best addressed collectively through the regional approach.

For example the following corporate actions in relation to legal liability could be most effectively pursued through collective advocacy to the State Government:

1. Amendment to *Local Government Act* (Tas) 1993, by the State Government, to insert an equivalent section to s733 *Local Government Act* (NSW) that exempts local governments from civil liability for the impacts of climate change where statutory powers, planning scheme provisions and assessment of development applications are done in good faith and in accordance with manual/s prepared by the State Government.

2. Formulation of State-wide codes to deal with climate change impacts to achieve a uniform set of provisions across the State that: contain specific development controls; removes discretionary decision making from technical assessments; does not require risk analysis; and identifies prescribed levels for sea level rise in developed coastal regions throughout the State.

5.4 EVALUATION AND REVIEW

Monitoring and evaluation of climate change adaptation is necessary to ensure a flexible response and effective allocation of resources. Despite increasing accuracy of modelling based upon the input of real-world data as time goes by, climate change is likely to deliver surprises and potentially unforeseen outcomes. This is because we are entering uncharted waters and it is often difficult to predict how infrastructure and the environment will respond to unprecedented, intensifying and intersecting climate driven hazards.

Monitoring and evaluation is important to evaluate the progress of adaptation actions; integrate new knowledge about climate change projections and potential impacts; keep abreast of legal implications and planning considerations; evaluate and incorporate new technology that can assist with defining hazards, exposure and risk.

Establishment of executive leadership and an appropriate staff team to conduct risk re-assessment involving staff from all operational areas is important. Staff who have local knowledge and influence over potential impacts, including ability to implement actions and allocate resources, must be involved in these assessments.

A component of the Southern Council's Climate Collaboration 2022-23 was a review of the risk tool and legal advice. The tool is a resource that enables comprehensive in-house review of the risk management process. Climate change adaptation tools that provide a guide to the whole process of adaptation planning are available at:

www.stca.tas.gov.au/rcci/our-projects/regional-council-climate-adaptation-project/

Image: Glenorchy City Council Staff

5.5 RELATED RESOURCES

Tasmanian Disaster Resilience Strategy 2020-2025
www.dpac.tas.gov.au/divisions/osem/tasmanian_disaster_resilience_strategy_2020-2025

Tasmanian Climate Change Action Plan 2023-25
https://recfit.tas.gov.au/climate/climate_change_action_plan

Of particular relevance to local government in the Action Plan:

- an undertaking to update the fine-scale climate projections for Tasmania;
- development of a state-wide Climate Change Risk Assessment;
- development of a consistent state-wide approach to managing the impacts of coastal hazards under a changing climate.

Detailed information from the Climate Futures Programme on the modelled future climate for Tasmanian sub-regions may be found here: **www.wineaustralia.com/climate-atlas**

REGIONAL
CLIMATE CHANGE
INITIATIVE

The Climate Change Adaptation Plan 2023 has been prepared under the auspices of the Southern Tasmanian Councils Authority, Regional Climate Change Initiative by the 12 Councils of southern Tasmania: Brighton, Clarence City, Central Highlands, Derwent Valley, Glamorgan Spring Bay, Glenorchy City, City of Hobart, Huon Valley, Kingborough, Sorell, Southern Midlands and Tasman.

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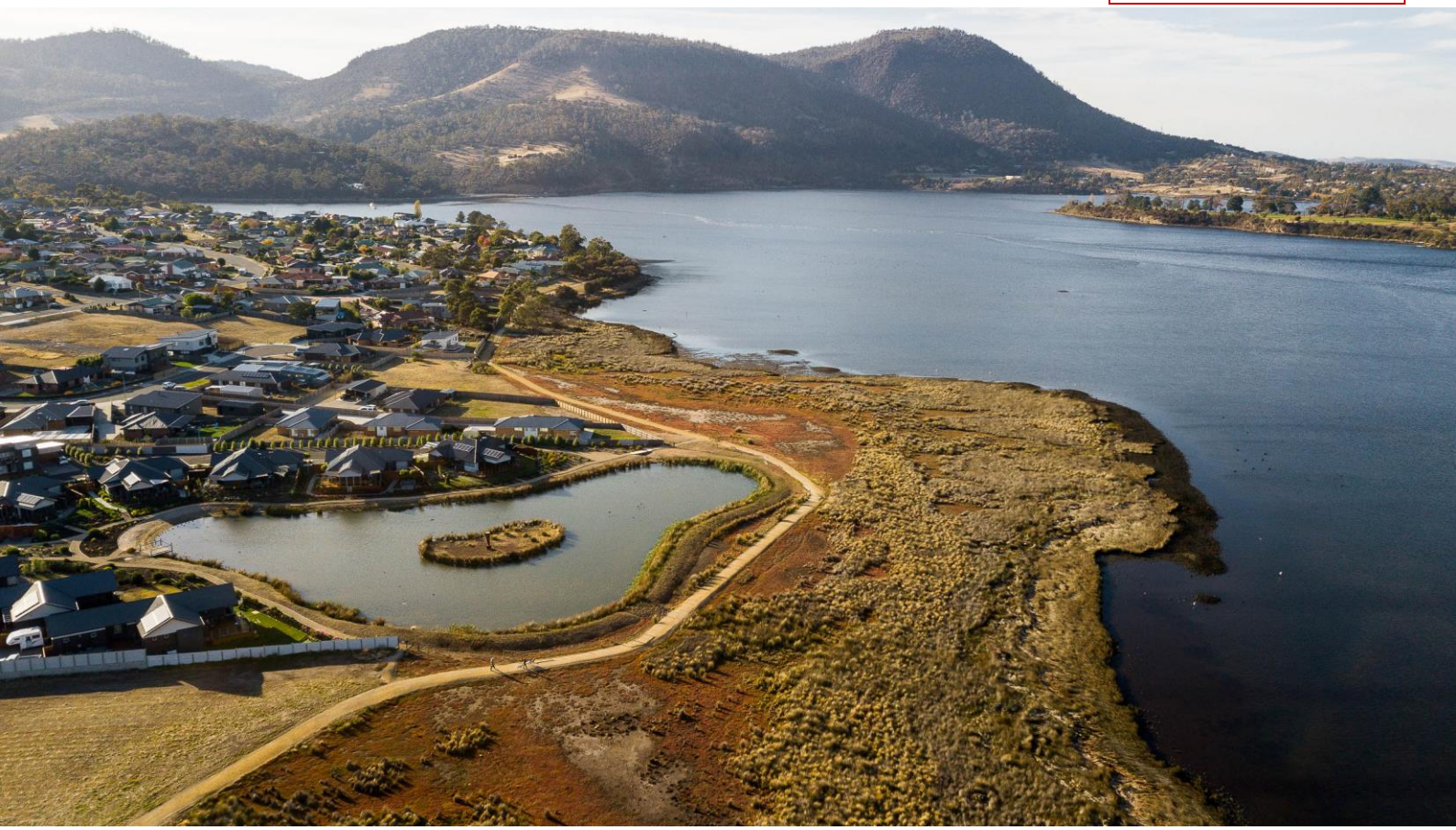

Derwent River Foreshore Coastal Hazards Project - FINAL

Prepared for Brighton Council

04 | 03 | 2024

SGS Economics & Planning

Certified B Corporation

SGS Economics and Planning Pty Ltd
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OFFICES IN CANBERRA, HOBART, MELBOURNE, AND SYDNEY ON THE COUNTRY OF THE NGAMBRI/NGUNNAWAL/NGARIGO, MUWININA, WURUNDJERI, AND GADIGAL PEOPLES.

Front cover image Old Beach by Sam Shelly photographers 2019.

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Acronyms

AEP	Annual Exceedance Probability
CBA	Cost Benefit Analysis
DEM	Digital elevation model
IPCC	International Panel on Climate Change
LGA	Local Government Authority
LiDAR	Light detection and ranging
LISTmap	Land Information System Tasmania map
mAHD	Australian Height Datum mean
MHT	Mean high tide
MNHLUP	Mitigating Natural Hazards through Land Use Planning
RCP	Representative concentration pathways
SLR	Sea level rise
SLRPA	Sea Level Rise Planning Allowance
SSP	Shared Socio-economic Pathway
TCAP	Tasmanian Costal Adaptation Pathways
TSPA	Threatened Species Protection Act

Glossary

Term	Definition
Annual exceedance probability (AEP)	The probability that a flood of a given (or larger) magnitude will occur within a period of one year.
Coastal erosion	Coastal erosion, sometimes referred to as shoreline retreat, occurs when a net loss of sediment or bedrock from the shoreline results in landward movement of the high-tide mark.
Coastal inundation	The temporary or permanent flooding of land by the sea due to storm surge, tides or sea-level rise.
Ecosystem services	Ecological processes or functions having monetary or non-monetary value to individuals or society at large. These are frequently classified as (1) supporting services such as productivity or biodiversity maintenance, (2) provisioning services such as food or fibre, (3) regulating services such as climate regulation or carbon sequestration and (4) cultural services such as tourism or spiritual and aesthetic appreciation.
Freeboard	The height difference between the 100-year flood level and the floor level of a building.
Radiative forcing	Radiative forcing is what happens when the amount of energy that enters the Earth's atmosphere is different to the amount of energy that leaves it.
Representative concentration pathways (RCP)	RCPs portray possible future greenhouse gas and aerosol emissions scenarios. The four RCPs range from very high (RCP8.5) through to very low (RCP2.6) future concentrations. The numerical values of the RCPs (2.6, 4.5, 6.0 and 8.5) refer to the concentrations in 2100.[1]
Scenario RCP8.5	Scenario RCP8.5 is the highest baseline future greenhouse gas and aerosol emissions scenario. It is generally referred to as the basis for the 'worst case' climate change scenarios based on current policies and practices.
Shared Socio-economic Pathway (SSP)	SSPs expand on RCPs to allow for a standardised comparison of society's choices and their resulting levels of climate

[1] CoastAdapt, (n.d), 'What are the RCPs?', accessed at: https://coastadapt.com.au/infographics/what-are-rcps

Term	Definition
	change. Unlike RCPs, SSPs include socioeconomic narratives and trends to indicate a range of plausible futures. The SSPs are based on five narratives: 1.a world of sustainability-focused growth and equality (SSP1) 2. a “middle of the road” world where trends broadly follow their historical patterns (SSP2) 3. a fragmented world of “resurgent nationalism” (SSP3) 4. a world of ever-increasing inequality (SSP4); and 5. a world of rapid and unconstrained growth in economic output and energy use (SSP5).
Scenario SSP5-8.5	Scenario SSP5-8.5 is the highest baseline future greenhouse gas and aerosol emissions scenario and correlates to Scenario RCP8.5.

Source: IPCC, 2022

Executive summary

Climate change is expected to exacerbate coastal hazards in the Derwent River Foreshore, increasing the frequency and severity of storm events, flooding and erosion. Brighton Council identified three sites of most concern:

1. Sunrise Avenue (Site A),
2. Riverside Drive (Site B), and
3. Old Beach (Site C).

The aim of this project is to understand and plan for coastal hazards at these three sites along the Derwent River foreshore and in doing so, build the capacity of Brighton Council and the community to make key decisions. To build this capacity, this project is expected to provide information about the risks and adaptation options and improve community understanding about risk reduction. The project broadly reflects the Tasmanian Coastal Adaptation Pathways (TCAP) process to provide an assessment of existing and projected coastal hazards, an assessment of risk and values, indicate adaptation pathways and conduct a Cost Benefit Analysis (CBA) of the pathways.

The Brighton Council Derwent River Foreshore Coastal Hazards Project has been funded, in part, by the Australian Government's, *Preparing Australian Communities – Local Stream Program*. This project responds to the issues of coastal inundation along the Derwent River Foreshore where it is reported that residential backyards regularly flood, rare saltmarsh communities experience habitat restriction, and government assets and infrastructure are impacted.

Coastal hazard management and land use planning

The Tasmanian Government initiated the *Mitigating Natural Hazards through Land Use Planning* (MNHLUP) project in 2011 to help mitigate risks from natural hazards. Through the MNHLUP, the State Government adopted a hazard treatment approach, where stakeholders collectively define the hazard, consider available evidence and identify options for mapping areas that might be exposed to hazards. Then further define the boundaries of hazard bands, and develop planning, building, and emergency management outcomes that apply within each hazard band.

In 2012, the Tasmanian Government implemented Sea Level Rise Planning Allowances (SLRPAs) across the state so that sea level rise (SLR) could be considered in planning decisions, and to reduce uncertainty around sea level rise management in coastal areas. In 2016, the State Government commissioned coastal hazard modelling. In response to this modelling, the Tasmanian Government identified and implemented hazard bands for erosion and inundation. The bands are based on hazard planning matrices[2], which describe hazard exposure, control intent (whether planning or building

[2] Tasmanian Government Department of Premier and Cabinet 2016, *Coastal Hazards in Tasmania – Summary Report of Coastal Hazards Technical Report*, https://www.dpac.tas.gov.au/__data/assets/pdf_file/0027/63855/Coastal_Hazards_report_Version_7_20161201_-_Summary_report.pdf

controls are necessary) and strategic planning considerations for each hazard band. The *C10.0 Coastal Erosion Hazard Code* and *C11.0 Coastal Inundation Hazard Code* of the Brighton Planning Scheme outline the purpose and application of the coastal hazard bands, as well as use and development standards.

This report utilises the SES 2016 coastal hazard modelling. At the time of this project, an update of coincidental flood modelling for the Derwent River was being undertaken. A request for this flooding information was made but the modelling had not concluded in time to be included in this project. To counter this, the SES 2016 coastal hazard modelling was verified using Climatics modelling which mostly aligns with the current coastal hazard mapping available.

Values at risk from erosion and inundation

The three study sites encompass public and private infrastructure, Aboriginal heritage items as well as natural assets. Understanding these values is critical to determine the nature and magnitude of risks, and to inform appropriate adaptation pathways in line with protecting what the community values.

Coastal erosion

Across the three sites, modelling indicates that there are no properties currently at risk of coastal erosion. By 2050, 22 residential properties may be at medium risk of land erosion. These properties have a combined building value of $6.6 million, with most (18) of these properties being in Site B – Riverside Drive. By 2100, 51 residential properties across the three sites may be at risk of erosion with a combined capital value of $23.2 million (low risk hazard band). 30 of these properties are within Site C – Old Beach.

TABLE 1: SUMMARY OF RESIDENTIAL PROPERTIES POTENTIALLY AT RISK – COASTAL EROSION[3]

	High Risk Hazard Band		Medium Risk Hazard Band		Low Risk Hazard Band	
	Capital Value ($)	Count	Capital Value ($)	Count	Capital Value ($)	Count
Site A	0	0	0	0	0	0
Site B	0	0	6,607,500	18	7,290,000	21
Site C	0	0	2,180,000	4	15,907,500	30
Total	**0**	**0**	**8,787,500**	**22**	**23,197,500**	**51**

Source: SGS Economics and Planning, 2023

[3] Value is the adjusted capital value of a property after deducting land value, which includes improvements to the property over time. SGS has only considered the impact of coastal hazards on properties and has excluded where only land parcels or additional infrastructure (i.e. greenhouses/sheds) are at risk.

Additional assets at risk across the three sites are:

- Site A: The erosion risk mainly affects the foreshore area. Seven additional residential plots of land (not buildings) are at risk of erosion.
- Site B: coastal erosion is likely to be relatively mild. No residential properties are currently at risk. The boat ramp and some public lands zoned for utilities and open space, are at risk of present-day and future coastal erosion. A small level of risk of erosion has been indicated for the railway track and playground area.
- Site C: By 2050, projected erosion could lead to a recession of up to 110 meters inland. A boat ramp, a minor section of a vehicle track, and segments of a hiking trail are likely to be affected. Open space, especially the foreshore adjacent to the hiking trail, is also expected to be at risk.
- Across all three sites, 18 identified Aboriginal Heritage items are at risk of erosion. 12 of these are in Site C, while the remaining six are in Site B.

Inundation

The modelling indicates that there is no immediate threat of inundation to properties across the three sites. However, the risk of inundation intensifies significantly, as areas become susceptible to a 1% storm event by 2050, and/or face the prospect of a 0.8m sea level rise by 2100. A total of 22 residential properties, valued at approximately $9.3 million, will be susceptible to these hazards. Notably, residential homes situated in the south of Site C are particularly susceptible to inundation. As the risk progresses, categorised within the low-risk hazard band, the number of properties at risk is anticipated to quadruple in impact. This escalation will result in $38.2 million worth of properties, or a total of 89 homes at risk of inundation caused by storm events in 2100.

TABLE 2: SUMMARY OF RESIDENTIAL PROPERTIES POTENTIALLY AT RISK – INUNDATION[4]

	High Risk Hazard Band		Medium Risk Hazard Band		Low Risk Hazard Band	
	Capital Value ($)	Count	Capital Value ($)	Count	Capital Value ($)	Count
Site A	0	0	0	0	0	0
Site B	0	0	900,000	3	2,540,000	8
Site C	0	0	8,400,000	19	35,680,800	81
Total	**0**	**0**	**9,300,000**	**22**	**38,220,800**	**89**

Source: SGS Economics and Planning, 2023

[4] Value is the adjusted capital value of a property after deducting land value, which considers for improvements to the property over time. SGS has only considered the impact of coastal hazards on properties and have excluded where only land parcels or additional infrastructure (greenhouses/sheds) are at risk.

Across all the sites, other assets at risk of inundation are:

- Site A: Modelling indicates present risk to other assets is minimal. By 2050, a proportion of the marshland could become inundated. This risk would be limited to the area below the railway track. By 2100, inundation risk will increase and affect some areas beyond the railway track boundary, primarily open space and railway tracks with limited existing uses.
- Site B: At present, the anticipated inundation risk to public infrastructure is minimal. The level of risk is anticipated to rise in the medium term. Assets at risk in the medium term include the disused boat ramp, playground, open space and roads (1% AEP in 2050). In the long term (1% AEP in 2100), there is an increased risk to additional roads and sections of the hiking track.
- Site C: In the area south of Site C, the risk of inundation is significantly higher and could substantially impact the community in the medium to long term. Open space and parts of the hiking trail are at risk in the present day. As the risk increases, more of these areas could become inundated, along with other assets, including several roads and the boat ramp.
- Across all three sites, 25 identified Aboriginal Heritage items are at risk of inundation. 21 of these are in Site C, while the remaining four are in Site B.

This assessment will inform stakeholder engagement across the three sites to determine acceptable risk, the value the community places on those assets at risk and how the community may choose to respond (informing the development of adaptation pathways).

Stormwater

There are no stormwater hazards present in Site A

The majority of Site B is vulnerable to stormwater drainage hazards. Several hundred houses and other buildings are at a very low risk from stormwater. The area of stormwater hazard overlaps with areas assessed with natural values ranging from lowest to high priority along the coastline. Notably there is a small pocket of open space that is of moderate-to-high priority. There are six Aboriginal Heritage items that are at very low risk of stormwater damage.

A significant area of land in Site C is vulnerable to stormwater hazards. For Site C, several hundred houses and buildings are at very low risk of stormwater. About 11 Aboriginal Heritage items are at a very low risk from Stormwater hazards. The area of stormwater hazard overlaps with areas assessed with natural values ranging from lowest to moderate priority along the coastline. There are 11 Aboriginal Heritage items that are at very low risk of stormwater damage.

Adaptation pathways

Adaptation pathways consist of complementary options that can be implemented simultaneously and consecutively over time to manage coastal risk and protect values. Adaptation pathways may vary from ‘protect at all cost’ to ‘planned retreat’ and anything in between.

Three pathways were assessed:

- Business as usual or ‘do nothing’
- Pathway 1 - minimal intervention
- Pathway 2 – protect the coast

Each of these pathways has associated costs, implications highlighting the trade-offs associated with choosing a certain pathway.

Cost Benefit Analysis

A Cost Benefit analysis compared the costs and benefits associated with each pathway to inform decision making about what may be the best overall outcome for the community. The results of which are shown in the table below. A number of values, such as Aboriginal culture and foreshore recreation and amenity, could not be expressed in dollar values. As a result, the key performance indicators (NPV and BCR) which only include the monetised values, cannot be solely relied on when assessing the options.

TABLE 3: COST-BENEFIT ANALYSIS RESULTS FOR EACH ADAPTATION PATHWAY, ALL SITES

Incremental costs ($ millions)	Pathway 1			Pathway 2		
	Site A	Site B	Site C	Site A	Site B	Site C
Adaptation costs	1.68	0.97	1.15	11.00	4.16	5.17
Incremental benefits ($ millions)						
Avoided cost of risk	0.16	0.57	0.58	0.31	3.18	1.50
Land value uplift	0	0	0	0	0	3.40
Improved community wellbeing	+	0.02	0.02	++	0.03	0.04
Retention of natural values	+++		+++	-		-
Retention of Aboriginal cultural heritage	-	+	+	-	++	++
Retention of foreshore recreation and amenity	++	++	+	+	++	+
Reduced emergency services expenditure	+	+	+	+	++	++
Subtotal	**0.16**	**0.59**	**0.48**	**0.31**	**3.21**	**4.94**
Net present value (NPV) ($ millions)	**-1.52**	**-0.38**	**-0.32**	**-10.69**	**-0.95**	**-0.23**
Benefit-Cost ratio (BCR)	**0.09**	**0.61**	**0.60**	**0.03**	**0.77**	**0.96**

Source: SGS Economics and Planning, 2023
Figures are in millions

The CBA results indicate that Pathway 2 - protect the coast, would return the most benefits per dollar spent at Sites B and C (i.e. for every dollar spent in Site C, $0.96 of quantified benefits would result). While Pathway 2 would be more expensive, the associated intensive interventions would protect more properties and also be beneficial for some of the qualitative values, such as Aboriginal culture and recreational value of the foreshore. At Site A however, there are no private properties that fall within the coastal inundation or erosion hazard bands, and thus the larger expenditure in pathway 2 would not return as much of a benefit as it would for Sites B and C. At Site A, pathway proves to be the superior investment decision.

The CBA results only include the monetised costs and benefits and should be considered in tandem with the additional impacts of each pathway that could not be costed (i.e. preservation of Aboriginal heritage items, community wellbeing and social cohesion). Traditionally, an investment decision would be made based on these results alone, however the pathway of choice should not be solely based on economic appraisal, but also the preferences of the community given other, non-monetised benefits.

Next steps

For each site, a preferred pathway has been identified through this report. The following are recommended:

- Engage with the community to seek feedback on the preferred pathway
- Once confirmed, initiate the process for concept designs, engineering considerations and implementation. The community should continue to be engaged throughout.
- Engage with TasRail to understand their considerations for the rail line sections at risk, and options to accommodate culverts for wetland migration (Site A).

1. Introduction

1.1 Purpose of this report

Climate change is expected to exacerbate coastal hazards within the Derwent River Foreshore. This includes increases in the frequency and severity of storm events, rainfall flooding and sea level rise. Using the LIST-map coastal hazard layer, Brighton Council has identified three sites where exposure and vulnerability to coastal hazards is most acute: Sunrise Avenue (Site A), Riverside Drive (Site B), and Old Beach (Site C).

The aim of this project is to understand and plan for coastal hazards at these three sites along the Derwent River foreshore and in doing so, build the capacity of Brighton Council and the community to make key decisions. To build this capacity, this project is expected to provide information about the risks and adaptation options and improve community understanding about risk reduction. The project broadly reflects the Tasmanian Costal Adaptation Pathways (TCAP) process to provide an assessment of existing and projected coastal hazards, an assessment of risk and values, indicate adaptation pathways and conduct a Cost Benefit Analysis (CBA) of the pathways.

The Brighton Council Derwent River Foreshore Coastal Hazards Project has been funded, in part, by the Australian Government's, *Preparing Australian Local Communities Program*. This project responds to the issues of coastal inundation along the Derwent River Foreshore where residential backyards regularly flood, rare saltmarsh communities experience habitat restriction, and government assets and infrastructure are impacted.

To build Brighton Council's capacity to respond and adapt to existing and projected coastal hazards, this report provides:

- Hazard mapping and assessments of each of the three sites to generate consistent and clear maps of coastal hazards at present and projected changes to 2050, 2075 and 2100[5].
- Assessment of Values at Risk, and the cost of doing nothing to manage the risk. This considers the private, public, and natural land, assets, infrastructure, and services that are, or will be, at risk in the three sites if nothing is done to manage the risk[6].

This report represents Stage 1 of the project, the findings of which will feed into Stage 2 (community engagement) and Stage 3 (adaptation planning) to provide a better understanding of the issues and possible responses.

[5] Spatial layers have been produced by SGS that map out the study areas based on pdf illustrations. As such, it should be noted that there may be a small margin of difference.

[6] The impact on Crown/State owned land has been considered as this may be managed by Brighton Council.

1.2 Project approach

This project has three stages. Stage 1 – Coast hazards and risk assessment. The outcomes of this stage, were to identify risks and assets at risk to inform Stage 2 - community and stakeholder engagement. The engagement subsequently informed Stage 3 - the development of adaptation pathways. The cost benefit analysis assessed the costs and benefits of different options of how Council, the community and infrastructure and property owners may choose to respond and adapt to identified risks. Figure 1 gives an overview of project method.

Within Stage 1, the hazard mapping and risk assessment has utilised LIST, LiDAR data and related GIS layers to indicate sea level rise impacts and erosion impacts across the three sites. Despite updated modelling by the IPCC, the LISTmap projections have been deemed sufficient. The current coastal hazard mapping has been verified using Climatics modelling which mostly aligns with the current coastal hazard mapping available.

The asset risk assessment considers the public assets, infrastructure, essential services and other values that are or will be at risk if nothing is done. This assessment utilised Council's rates database, asset and infrastructure database, data on natural and recreation assets and values. SGS estimated the value of infrastructure from *Rawlinson (2022): Australian Construction Handbook* and escalated figures to represent 2023 costs and additional expenses associated with regional locations.

FIGURE 1 PROJECT METHOD

1.3 Study areas

Brighton Council has identified the following three key sites where assets and residential properties are most affected using LIST-map coastal hazard layers.

Site A: Sunrise Avenue

Site A includes the foreshore/marshlands area around Sunrise Avenue north of Bridgewater Bridge. The area is low-lying in nature with numerous foreshore properties. Brighton Council maintains the road of Sunrise Avenue. The Derwent Valley Railway line runs along the foreshore area.

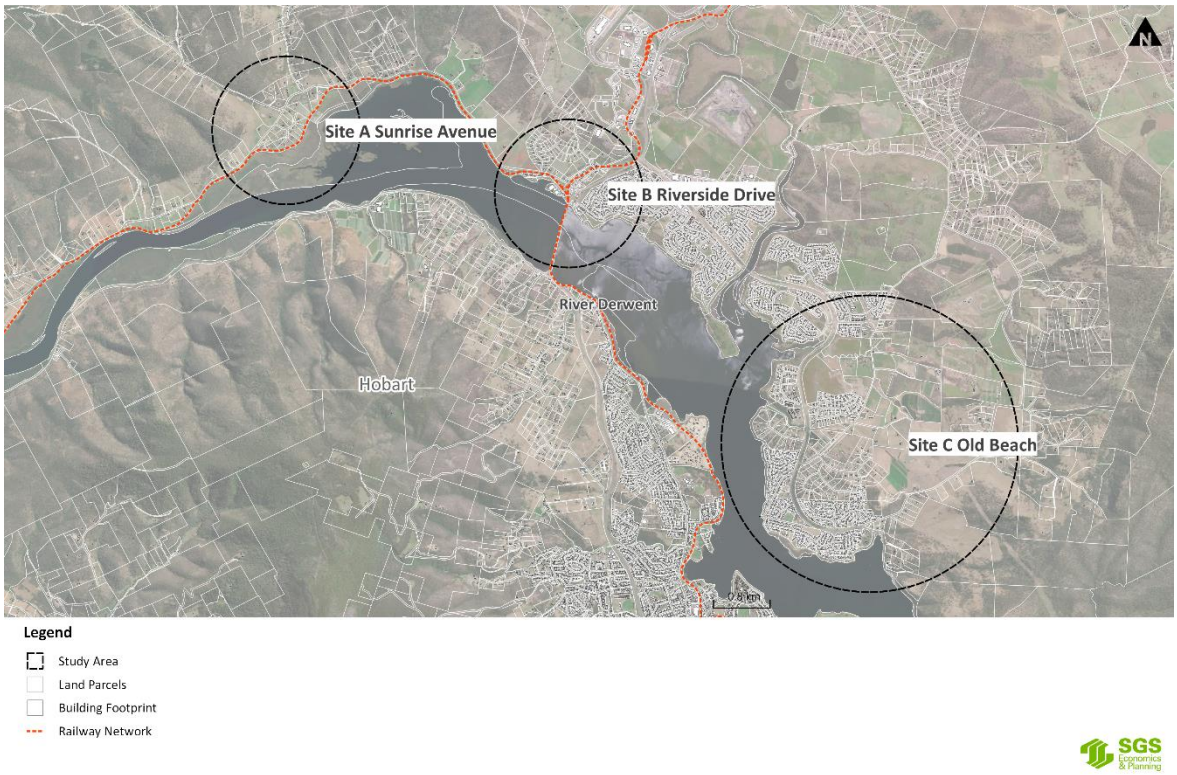
Site B: Riverside Drive

Site B includes the foreshore area around Riverside Drive, a road maintained by Brighton Council. The site is subject to frequent inundation of the road area and some foreshore properties. The site is located immediately adjacent to Bridgewater Bridge. An upgrade of the Bridge is underway. This Project ***does not*** include an assessment of the land and infrastructure associated with the upgrade of the Bridgewater Bridge – climate change impact assessments are a separate piece of work being carried out by Brighton Council (see Appendix A – Bridgewater Bridge for a summary of works and potential impacts).

Site C: Old Beach

Site C includes the foreshore area between the north end of Morrisby Road, Old Beach and the southern boundary of the Brighton municipality (see Figure 2). It also includes the Jetty and the end of Jetty Road and East Derwent Highway, which is a primary route of entry/exit to the municipality. The site is subject to frequent inundation of the walking paths, the foreshore (Crown Land), and some private properties. Brighton Council maintains the walking track and has a licence to conduct maintenance works in an approximately one metre area surrounding the walking track.

FIGURE 2: STUDY SITES



Source: SGS Economics and Planning, 2023

2. Coastal Hazard Planning in Tasmania

2.1 Overview

The Tasmanian Government initiated the Mitigating Natural Hazards through Land Use Planning (MNHLUP) project in 2011 to help managing risks from natural hazards. Through the MNHLUP, the State Government intends to adopt a hazard treatment approach, where stakeholders:

- Collectively define the hazard
- Consider available evidence and identify options for mapping areas that might be exposed to hazards
- Define the boundaries of hazard bands; and
- Develop planning, building, and emergency management outcomes that apply within each hazard band.

In 2012, the Tasmanian Government implemented Sea Level Rise Planning Allowances (SLRPAs) across the state so that sea level rises (SLR) are considered in planning decisions, and to reduce uncertainty around sea level rise management in coastal areas. The State Government then commissioned CSIRO in 2016 to model hazards in coastal council areas in line with Scenario RCP8.5 - the highest baseline future greenhouse gas and aerosol emissions scenario – set out in the International Panel on Climate Change (IPCC)'s Fifth Assessment Report (AR5).

In response to this modelling, the Tasmanian Government's hazard planning matrices[7] for both coastal erosion and coastal inundation were created that describe hazard exposure, control intent (whether planning or building controls are necessary) and strategic planning considerations for each hazard band.

> Hazard bands indicate the risk posed in specific locations and determine what planning and building controls are needed. They do not indicate that land *will* be inundated or eroded, only that the land is *susceptible*.[8]

This report utilises the SES 2016 coastal hazard modelling. At the time of this project, an update of coincidental flood modelling for the Derwent River was being undertaken. A request for this flooding information was made but the modelling had not concluded in time to be included in this project. To counter this, the SES 2016 coastal hazard modelling was verified using Climatics modelling which mostly aligns with the current coastal hazard mapping available.

[7] Tasmanian Government Department of Premier and Cabinet 2016, *Coastal Hazards in Tasmania – Summary Report of Coastal Hazards Technical Report*, https://www.dpac.tas.gov.au/__data/assets/pdf_file/0027/63855/Coastal_Hazards_report_Version_7_20161201_-_Summary_report.pdf

[8] Tasmanian Government Department of Justice (2021), 'State planning provisions – coastal hazards'.

2.2 Coastal Erosion Hazards

The Tasmanian Government's 2016 *Coastal Hazards Technical Report*[9] defines coastal erosion as:

> 'the wearing away of coastal land by water, wind, general weather conditions or human intervention'.

Coastal erosion may take the form of:

- hazardous erosion (short-term erosion of sandy or soft shorelines),
- coastal recession (long-term erosion of sandy or soft shorelines) and
- landslides (downslope movement of land usually caused by storms or waves removing material at the foot of the landslide).

Areas along Tasmania's coastline have been classified into coastal erosion hazard bands using coastal geomorphology and sea level rise data. The bands describe susceptibility to coastal erosion and shoreline recession when considering current and anticipated conditions by 2100.

The coastal erosion bands are:

- Acceptable – area is unaffected by coastal recession until after 2100; not subject to controls,
- Low – areas vulnerable to coastal recession by 2100 or is protected by coastal defences,
- Medium – areas vulnerable to coastal recession by 2050,
- High – areas is currently vulnerable to coastal recession; typically on sand dunes.

In addition, areas without erosion risk are identified as 'acceptable', and areas with unknown hazard exposure due to limited data on geomorphological conditions, are identified as 'coastal erosion investigation areas'.

The Coastal Erosion Hazard Code applies to land that is either in a low, medium, high or unknown hazard band. The code requires that planning application submissions include a Coastal Erosion Hazard Report for properties in these bands. If a site within a Coastal Erosion Investigation Area is assessed and determined to be in a low, medium or high hazard band area, a Coastal Erosion Investigation Area Report will be required in addition to a Coastal Erosion Hazard Report when submitting a planning application.

2.3 Coastal Inundation Hazards

Coastal inundation occurs when low-lying coastal land is flooded by the sea and can be either temporary or permanent. Temporary coastal inundation is caused by floods, tides, storm surge and

[9] Tasmanian Government Department of Premier and Cabinet 2016, *Coastal Hazards Technical Report*, https://www.dpac.tas.gov.au/__data/assets/pdf_file/0025/63853/Coastal_Hazards_Report_version_7_-_20161201.pdf

storm events, which is usually measured by annual exceedance probability (AEP). Whereas permanent coastal inundation is a result of sea level rise (SLR) and measured from the mean high tide (MHT) line.[10]

A range of data was used to assess coastal inundation in Tasmania, including sea level rise planning allowances (SLRPAs), storm tide event information, the median high tide line, 10m contour line and the LiDAR digital elevation model (DEM). Areas along the coastline were also classified into coastal inundation hazard bands according to their vulnerability to coastal inundation when considering current and anticipated conditions by 2100:

- Acceptable – area is unaffected by coastal inundation until after 2100
- Low – area is vulnerable to a 1% AEP storm event by 2100; medium-term flooding issue
- Medium – area is vulnerable to a 1% AEP storm event by 2050; will be impacted by a 0.8m SLR by 2100
- High – area will be within 0.2m SLR from MHT line by 2050; currently impacted by the Highest Astronomical Tide; or
- Coastal Inundation Investigation Areas – area is not covered by LiDAR and is below the 10m contour line and within the coastal zone; yet to be classified due to incomplete or unavailable elevation data.

The Coastal Inundation Hazard Code applies to land that is either in a low, medium, or high hazard band, and requires a Coastal Inundation Hazard Report for planning application submissions. If a site within a Coastal Inundation Investigation Area is assessed and determined to be in a low, medium, or high hazard band area, results from the assessment will be required to accompany the Coastal Inundation Hazard Report when submitting a planning application.

2.4 Brighton Planning Scheme

Hazard Codes

The *C10.0 Coastal Erosion Hazard Code* and *C11.0 Coastal Inundation Hazard Code* of the Brighton Planning Scheme outline the purpose and application of the coastal hazard bands, as well as use and development standards.

Table 4 shows the coastal inundation hazard bands and the projected water level heights of different localities in the Brighton municipality. Hazard bands and areas are then visualised in the Land Information System Tasmania map (LISTmap).

These areas are subject to the planning requirements set out for each band by State Planning Provisions. The Brighton Planning Scheme does not currently contain any additional local provisions relevant to coastal hazards.

[10] Ibid.

Hazard bands indicate the risk posed in particular locations and determine what planning and building controls are needed. They do not indicate that land *will* be inundated or eroded, only that the land is *susceptible*.[11]

TABLE 4: BRI-C11.1 COASTAL INUNDATION HAZARD BANDS AND PROJECTED SEA HEIGHTS (AHD LEVELS)

Locality	High Hazard Band (mAHD)	Medium Hazard Band (mAHD)	Low Hazard Band (mAHD)	Defined Flood Level (mAHD)
	Sea Level Rise 2050	1% annual exceedance probability 2050 with freeboard	1% annual exceedance probability 2100 (design flood level) with freeboard	1% annual exceedance probability 2100
Bridgewater (Site B)	0.9	2.0	2.6	2.3
Dromedary (Site A)	0.9	1.9	2.6	2.3
Gagebrook (Site C)	0.9	2.0	2.6	2.3
Old Beach (Site C)	0.9	2.0	2.6	2.3
All other locations	0.9	2.0	2.6	2.3

Source: Brighton Planning Scheme, Tasmanian Government n.d.

Notes: Freeboard is the height difference between the 100-year flood level and the floor level of a building.

[11] Tasmanian Government Department of Justice (2021), 'State planning provisions – coastal hazards'.

2.5 Local Strategies and Plans

Analysis of Brighton Council's strategies and plans indicates how the Council is responding to current, and future, coastal hazards. In Table 5, the following documents are summarised:

- Brighton Climate Change Resilience Strategy 2017
- Open Space Strategy 2012
- Bridgewater Parkland 2016-2026
- Weed Management Strategy 2021-2026
- Greening Brighton Strategy 2016-2021

TABLE 5: SUMMARY OF COUNCIL PLANS AND STRATEGIES

Plans and Strategies	Summary
Brighton Climate Change Resilience Strategy 2019	The Climate Change and Resilience Strategy is Council's framework to help mitigate and plan for climate change, with directions to achieve greater sustainability and resilience. In this strategy, Council recognises the need to manage climate related risks and prepare the community for climate change. As part of this, Council is helping to develop the Regional Coastal Hazards Strategy, which will be relevant to the study areas in this project. Council's objectives that are relevant to coastal hazards are to: 4. improve Council's understanding of climate change risks and opportunities, and 5. improve the resilience of Council infrastructure. The strategy identifies a key action to achieve these objectives, which is to *ensure future asset maintenance and replacement programs consider climate change, including coastal hazards and inundation modelling*. This project gives effect to the strategy in helping Council to understand the risk impacts of the study area.
Open Space Strategy 2012	The Open Space Strategy intends to guide Council with the planning, development and management of open space in the LGA. Open space (including coastal fore dunes) has been identified as a means to mitigate climate change adaptation and mitigation through its role as a foreshore buffer to rising sea levels and ability to absorb impacts of storm surge. This strategy lists opportunities to improve gaps in the provision of local parks, which fall outside of the study areas of this project and are unlikely to be impacted by coastal recession and coastal inundation.

Plans and Strategies	Summary
Bridgewater Parkland 2016-2026	This masterplan of Bridgewater Parkland provides an idea of what the parkland could look like, to improve its current usage. It includes a section of study area Site B, which is proposed to be an extension of a foreshore trail upon development of the land. The area is likely to be affected by coastal erosion and inundation in the future.
Weed Management Strategy 2021-2026	The Weed Management Strategy guides priority weed management and investment in Brighton Council. Sites A and B are part of the foreshore-walking trail weed eradication zone, and weeds will need to be removed for native vegetation to help combat rising sea levels.
Greening Brighton Strategy 2016-2021	The Greening Brighton Strategy sets a framework for Council to increase the number of trees across urban areas of the LGA, which will improve amenity and help tackle climate change. The strategy identifies high, medium, and low priority streets to be planted with trees in Bridgewater, Gagebrook and Herdsman's Cove. As these priority areas do not fall into the costal erosion or costal inundation hazard bands, they are unlikely to be impacted by coastal recession and coastal inundation.
Natural Resource Management Strategy 2023	The Natural Resource Management (NRM) Strategy provides strategic direction to enable Brighton Council and other stakeholders to work collaboratively to improve NRM. It outlines directions for climate, natural resources, cultural landscapes, water, biodiversity, people and context for delivering NRM. Relevant to this study is incorporating NRM into managing risks and planning adaptation pathways.

Source: SGS Economics and Planning, 2022

The development of adaptation pathways (Stage 3 of this project) will take into consideration Council's existing policies and strategies.

2.6 Natural hazard and climate projections used in this report

Principles

The natural hazard data on present day and projected future risks that informed the coastal hazard bands (inundation and erosion) were developed some years ago (between 2014 and 2016 indicatively). The projections are based on the Fifth Assessment Report from 2014. While unavailable, it should be noted that the climate modelling under the hazard layers is due to be updated as per the Tasmanian Climate Change Action Plan Tasmania's Draft Climate Change Action Plan 2023-25.

Since, new climate change projections have been published by the ICCP as part the Sixth Assessment Report from 2022. In general terms, this report confirms the earlier projections and adds further detail. It does appear that the rate of climate change assessed in the latest publication is higher than the earlier version.

In consultation with the Department of Premier and Cabinet, it was suggested that while the rate of sea level rise is faster, the implications in terms of the accuracy and applicability of the existing hazard bands is small. Similarly, the information for decision makers climate modelling undertaken by Climate Futures, University of Tasmania for local government in 2019, outlines sea level rise figures consistent with other comments on accuracy and applicability of hazard bands.

Further, in 2022, State Emergency Services embarked on a project to undertake flood modelling for all main rivers in Tasmania, including the Derwent River. This work is currently underway, and the full results are not yet available.

To gain a better understanding of the accuracy of the coastal risk data, SGS therefore decided to use an alternate source of information: Climatics, which is a comprehensive database of historical to present day severe weather events. Climatics is a product from the Early Warning Network, and its data can be used to identify changes in the intensity and severity of weather events in specific locations.

A verification process was applied to understand if the present-day risks (i.e., likelihood of inundation) as recorded by Climatics align with the hazard bands. Please note that the Climatics data only refer to present-day risk, and therefore the verification process is limited to confirming whether locations are within the 'high hazard band' or not. The process enables to identify for the locations whether they are correctly identified as being in or outside the high hazard band.

Where the verification process identified discrepancies, this is incorporated into the report. Overall, the differences were small: areas identified as being in the high hazard band were confirmed by the data, and some areas identified as being in the medium hazard band were deemed to at risk today and should therefore be in the high hazard band.

While the results largely confirm the hazard bands are applicable and suitable to the current situation, it also shows that coastal risks are worsening. It should be noted that the hazard bands as used by the planning system, when they refer to 'present-day' it refers to the baseline year of 2010. It is therefore logical that now, in 2023, the high hazard band starts to shift as it includes 13 more years of climate change.

In conclusion, the hazard bands as used in the planning system remain largely accurate. In some areas, risk levels have increased since the base-year of the hazard bands, which is 2010.

3. Site A – Sunrise Avenue

3.1 Site overview

Site A is located in Dromedary, approximately 14 kilometres west of the suburb of Brighton. The following features as described are shown in Figure 3 overleaf. The site contains land zoned Rural Living. There are numerous dwellings, some situated in the low-lying land abutting the foreshore marshlands (see Figure 3). There are no commercial businesses located in Site A.

There is one Aboriginal Heritage item on Site A, inland from the Derwent River (see Figure 3).[12]

The site includes a substantial foreshore area around Sunrise Avenue which consists of marshlands, much of the area is classified threatened native vegetation and is a designated environmental management zone. Two waterways flow into the site from the north, Dean Brook and Millvale Creek. Both waterways, the marshlands and the Derwent River foreshore, are covered by a waterway and coastal protection area overlay. Figure 4 shows the coastal vegetation while Natural values refer to the variety of life-forms, including plants, animals, and micro-organisms, and the ecosystems they belong to, including land forms, soils, and water. One of the crucial natural values in Site A are the wetlands to the south of the rail line, which, the Derwent Estuary Natural Values dataset (see Figure 5) lists the majority of the wetlands as a high priority site, the highest importance rating. Similarly, the wetlands, are deemed to have a Very High integrated conservation value, as determined by the Conservation of Freshwater Ecosystem Values (CFEV). This is the highest classification which expresses the relative importance of an ecosystem.

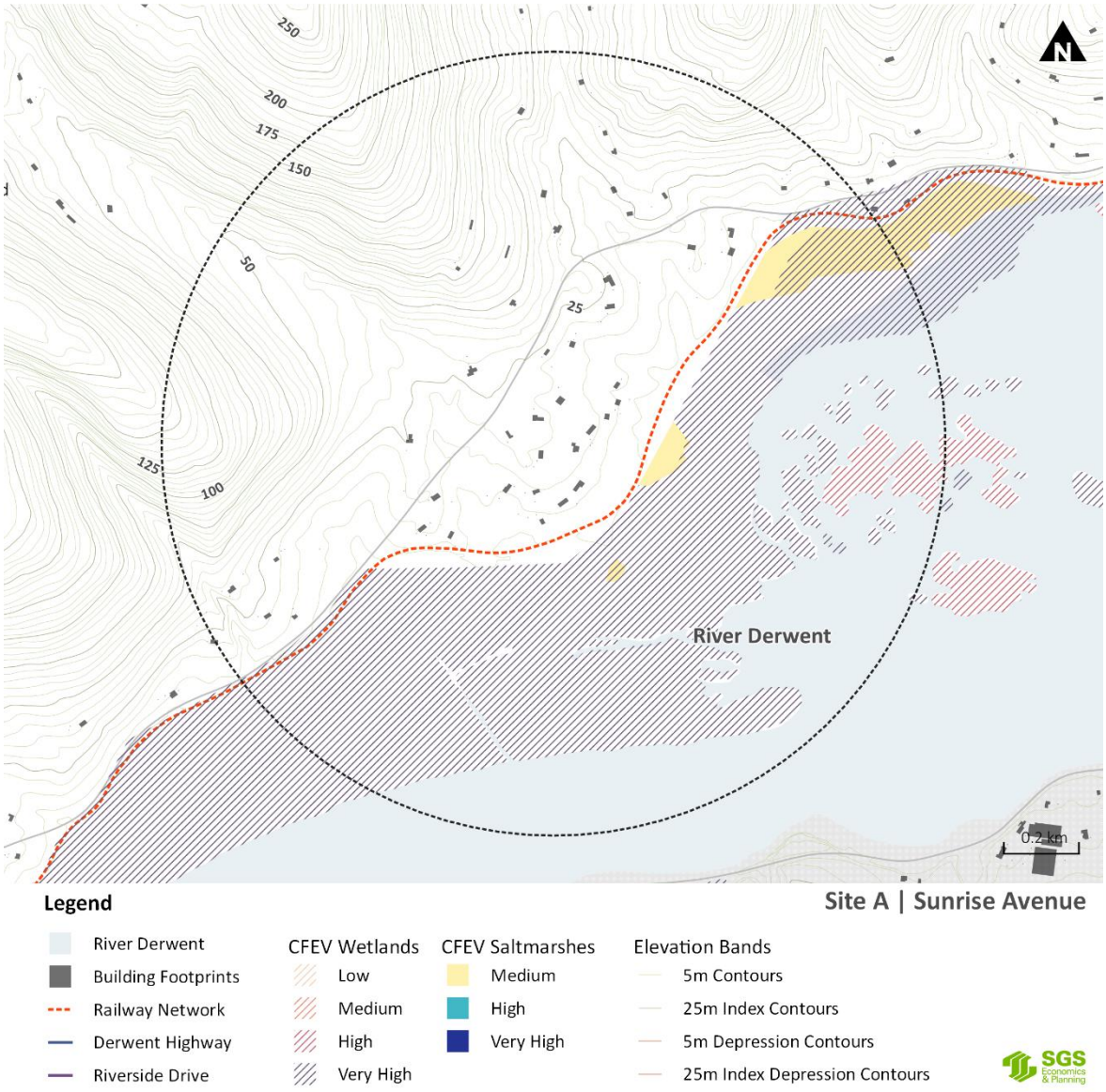
Figure 5 shows the natural values of the site.

A state road, B10 (Boyer Road), passes through the site from south-east to south-west. At the centre of the site is Sunrise Avenue, a road maintained by Brighton Council. The Derwent Valley Railway line also runs through the site, dividing the private land and foreshore on either side. The railway line is currently an in-operational heritage line, having closed its service in 2005. The railway line has been in government ownership since 2006, however a non-profit group (The Derwent Valley Railway) is actively campaigning to gain access to the railway and fundraise to refurbish the tracks and sleeper carriages. with the aim of re-establishing the railway line to service the tourist industry.[13]

[12] Brighton Council (2022), Aboriginal Heritage Tasmania Sunrise Avenue Map.

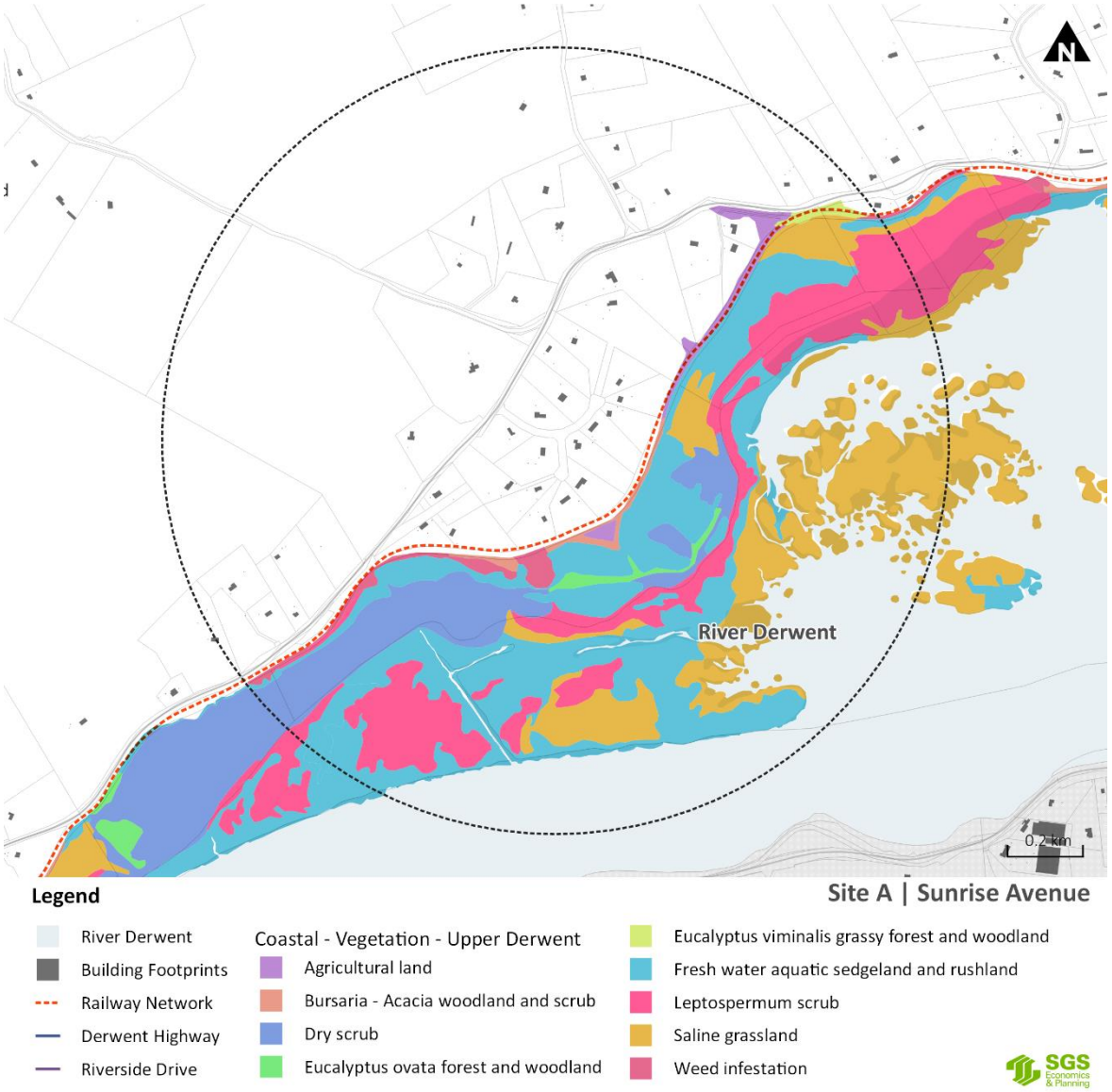
[13] Derwent Valley Railway (2023), https://www.dvr.org.au/

FIGURE 3: SITE A CONTEXT MAP



Source: SGS Economics and Planning, 2023

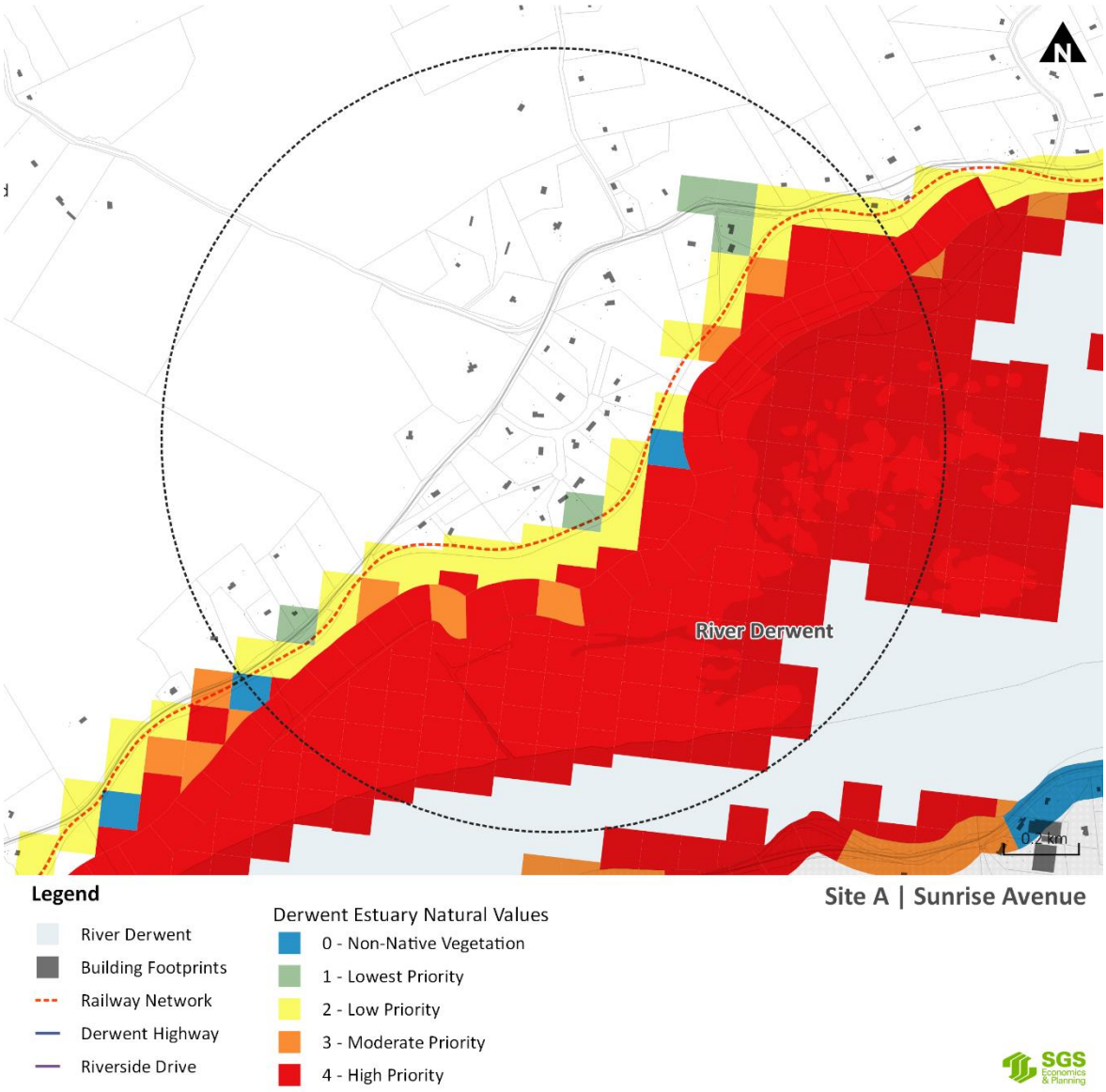
FIGURE 4: SITE A CONTEXT - COASTAL VEGETATION



Source: SGS Economics and Planning, 2023

Natural values refer to the variety of life-forms, including plants, animals, and micro-organisms, and the ecosystems they belong to, including land forms, soils, and water. One of the crucial natural values in Site A are the wetlands to the south of the rail line, which, the Derwent Estuary Natural Values[14] dataset (see Figure 5) lists the majority of the wetlands as a high priority site, the highest importance rating. Similarly, the wetlands, are deemed to have a Very High integrated conservation value, as determined by the Conservation of Freshwater Ecosystem Values[15] (CFEV). This is the highest classification which expresses the relative importance of an ecosystem.

FIGURE 5: SITE A CONTEXT - NATURAL VALUES



Source: SGS Economics and Planning, 2023

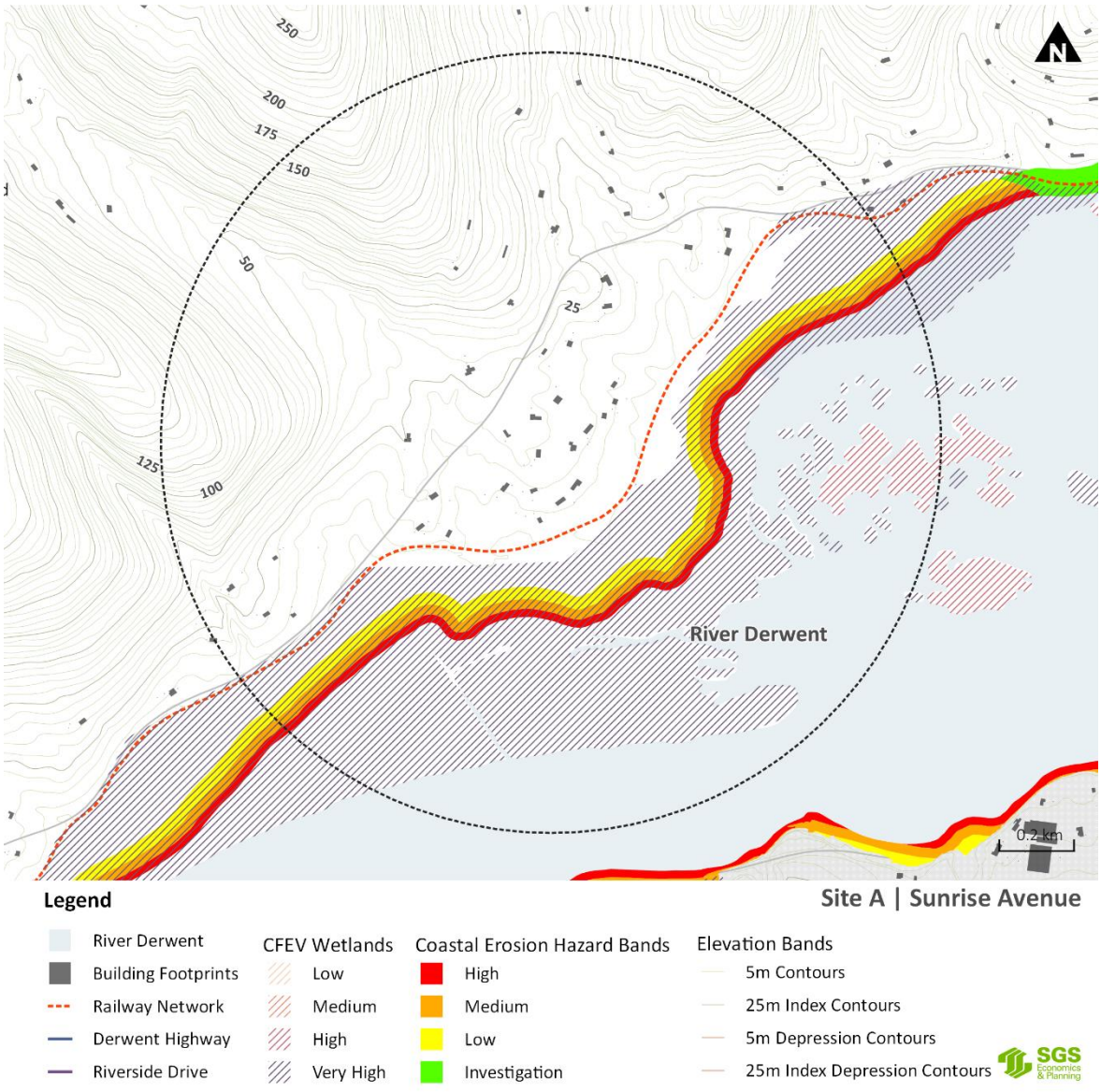
[14] https://services.thelist.tas.gov.au/arcgis/rest/services/Public/NaturalEnvironment/MapServer/106
[15] https://services.thelist.tas.gov.au/arcgis/rest/services/Public/NaturalEnvironment/MapServer/60

3.2 Coastal Erosion Hazards

The potential coastal erosion susceptibility hazard bands for the study area are shown in Figure 6. The map shows that there are areas within the high, medium, and low coastal erosion hazard bands:

- High hazard band: the area along the low-lying public land of the Derwent River foreshore is *currently* vulnerable to coastal recession, that is without further sea level rise.
- Medium hazard band: directly abutting the area defined as a high hazard band, moving inland. This land is vulnerable to coastal recession to 2050 as sea level rise progresses to 0.2m.
- Low hazard band: set back from the medium hazard band, moving inland, the area is vulnerable to coastal recession to 2100 as sea level rise progresses to 0.8m.

FIGURE 6: SITE A - COASTAL EROSION



Source: SGS Economics and Planning, 2023

3.3 Coastal Erosion Assets at Risk

The modelling indicates that no residential properties are directly at risk of erosion at present or in the future. Seven residential plots of land may be susceptible to some level of erosion but at these sloping properties, where the dwellings are located at higher ground away from the foreshore. The houses themselves are not at risk, now or in the future to 2100. No risk to public infrastructure has been identified.

Some of the foreshore is at risk. Most of the area classified at risk is crown land; a small amount is privately owned. The size of the open space at risk is indicated in Table 6.

TABLE 6: NON-VALUED ASSETS AT RISK - EROSION

	High Risk Hazard Band	Medium Risk Hazard Band	Low Risk Hazard Band
Open space (ha)	6.49	10.96	13.09

Source: SGS Economics and Planning, 2023

The Aboriginal Heritage item located inland in Site A is not expected to be affected by coastal erosion.

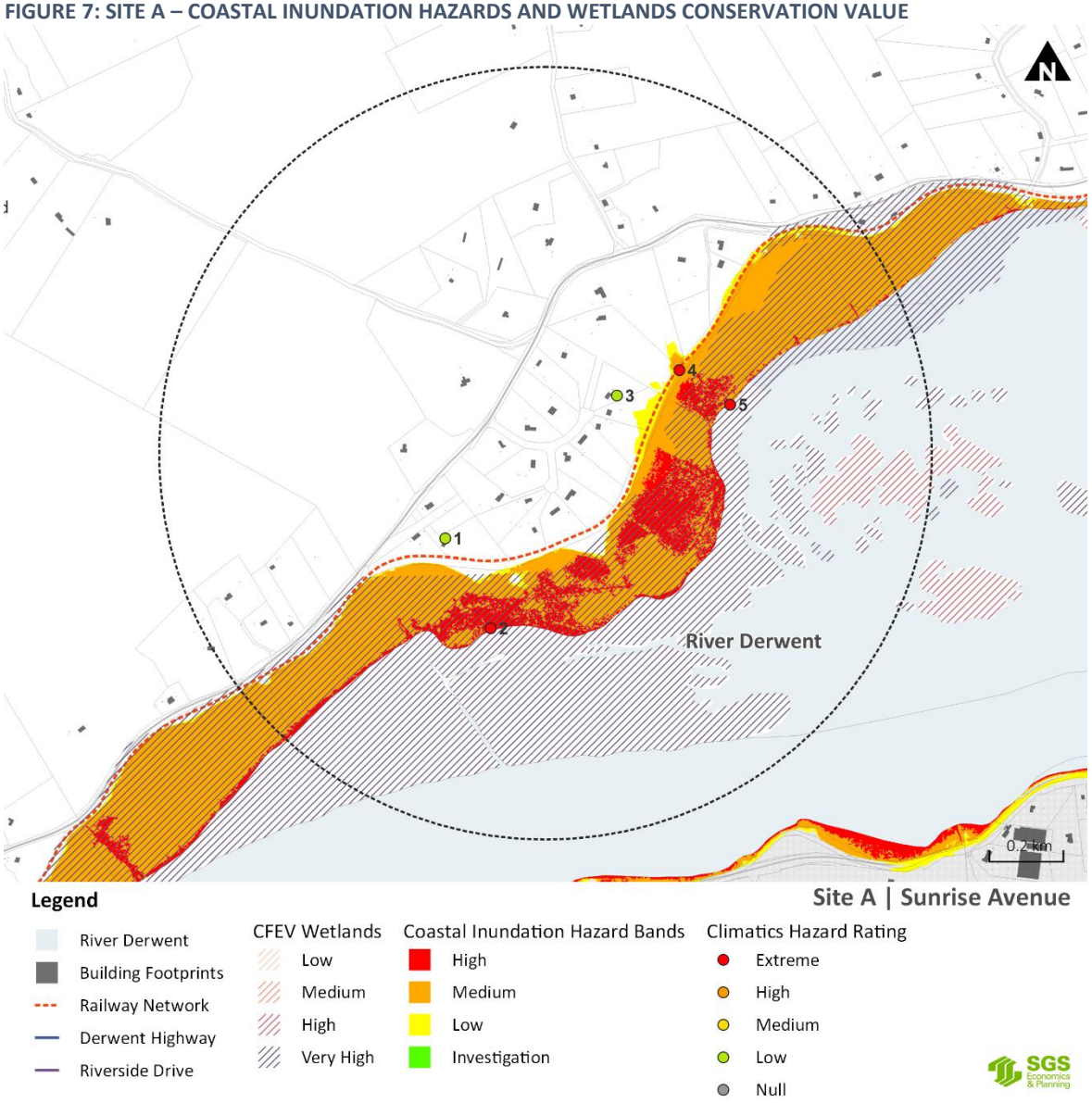
The wetlands which are classified as Very High CFEV classifications extend up to the rail line, where the risk of coastal erosion intersects this critical ecosystem, as shown in Figure 6. This indicates that the wetlands area located in the high-risk hazard band and beyond are currently vulnerable to recession, while the areas at risk of recession will encroach further inland by 2100.

3.4 Coastal Inundation Hazards

Future coastal inundation risks will increase as climate change leads to sea levels rising. Coastal sea level rise mapping of Site A (Figure 7) reveals areas with low, medium, and high coastal inundation hazard bands:

- High hazard band: a significant area of land between the Derwent Valley Railway line and the marshlands will be within 0.2m SLR from MHT line by 2050 and is currently impacted by the Highest Astronomical Tide.
- Medium hazard band: all land between the Derwent Valley Railway line and the marshlands is classified as a medium hazard band (where it is not classified as 'high'), meaning the area is vulnerable to a 1% AEP storm event in 2050 and will be impacted by a 0.8m SLR by 2100. In some areas, the medium hazard band applies to the Derwent Valley Railway line.
- Low hazard band: land abutting the medium hazard band, inland and adjacent to the Derwent Valley Railway line, is vulnerable to a 1% AEP storm event in 2100 and medium-term flooding issues. In some areas, the low hazard band applies to the Derwent Valley Railway line.

FIGURE 7: SITE A – COASTAL INUNDATION HAZARDS AND WETLANDS CONSERVATION VALUE



Source: SGS Economics and Planning, 2023

Verification with Climatics

SGS used Climatics data to verify the coastal inundation risk ratings identified by the Department of Premier and Cabinet (DPAC) by distinguishing several representative locations within the site to assess their exposure to fluvial flooding. In Figure 7 above, five sites are listed showing risk ratings for fluvial flooding at these locations from Climatics. Overall the risk analysis from Climatics at site A broadly aligns with the Coastal Inundation Hazard bands, which demonstrates that most of the wetlands to the south of the railway are at medium to high risk of inundation. However, specifically at location 4, Climatics does predict a higher risk of flooding than the coastal inundation hazard band at that location. North of the rail line, the risk of fluvial flooding is low, while there are no coastal inundation hazard bands applicable to this area. Table 7 below summarises the alignment between the two risk rating systems.

TABLE 7: RISK RATING ALIGNMENT BETWEEN CLIMATICS AND DPAC, SITE A

Location	Climatics risk rating	DPAC Hazard band	Alignment
1	Low: no direct impact on this site from river flooding	Null	Both predict no direct impact from flooding
2	Extreme: Flooding impact on this site with 5% AEP	High	Both fall into respective highest risk category.
3	Low: no direct impact on this site from river flooding	Null	Both predict no direct impact from flooding
4	Extreme: Flooding impact on this site with 5% AEP	Medium	Climatics (5% AEP currently) predicts greater risk than DPAC (1% AEP by 2050)
5	Extreme: Flooding impact on this site with 5% AEP	High	Both fall into respective highest risk category.

Source: Climatics; DPAC; SGS Economics and Planning, 2023

Throughout site A, Climatics generally predicts a somewhat higher risk of fluvial flooding at these locations than DPAC does for coastal inundation. The hazards being assessed are not identical and this may cause some of the misalignment in risk ratings between the two datasets, rather than one systematically overstating or understating risk. In any case, the outlook for the wetlands to the south of the rail line is poor, with both datasets assigning their respective highest risk ratings to areas within the wetlands for each hazard. Figure 8 below shows the incidence of flood events at site A and demonstrates a trend of increasing frequency, even in the last decade.

FIGURE 8: TIMELINE OF FLOOD EVENTS AT SITE A

Source: Climatics

3.5 Coastal Inundation Assets at Risk

No dwellings are projected to be affected by coastal inundation up to 2100. However, eight residential plots of land are likely to be at risk of partial inundation. These are sloping properties, where the dwellings are located at higher ground away from the foreshore. The houses themselves are not at risk, now or in the future to 2100.

With climate change and sea level rise, the marshlands will increasingly be at risk of inundation. Most of the marshland is at risk of inundation during extreme storm events by 2050. As sea levels continue to rise, the marshlands will become more permanently wet as the drainage capacity deteriorates and will become more frequently inundated towards 2100. If nothing is done to manage the marshlands, the character will change, and its ecosystem values diminish. Marshlands are often important as breeding and nursery grounds for bird and fish species. The presence of the rail line may prevent the marshlands from moving landward (if nothing is done to manage the risks).

By 2100, a larger area will be at risk of inundation due to extreme storm events including areas beyond the railway track boundary. Inundation would likely affect open space and railway tracks. The railway tracks may become overtopped or undermined if nothing is done to manage the risk.

TABLE 8: NON-VALUED ASSETS AT RISK - INUNDATION

Asset	High Risk Hazard Band	Medium Risk Hazard Band	Low Risk Hazard Band
Open space (ha)	18.59	40.67	40.67
Railway network (m)	0	162	689

Source: SGS Economics and Planning, 2023

The Aboriginal Heritage item which is located inland in Site A is not expected to be affected by coastal inundation.

The wetlands to the south of the rail line have a Very High integrated conservation value. Throughout Site A, this Very High classifications extends up to the rail line, overlapping almost entirely with the medium and high-risk hazard bands for coastal inundation, suggesting that these wetlands are potentially wholly at risk from sea level rise by 2100, if not damaged or destroyed by 1% AEP events before then. These wetlands are also considered to be a threatened native vegetation community, a state-wide mapping layer showing the indicative extent of these vegetation communities[16]. The same mapping layer shows that there is a pocket of Eucalyptus ovata forest and woodlands to the south of the rail line within the wetlands, which is covered by the high-risk coastal inundation hazard band. There are salt marshes adjacent to the rail line which are part of the wetlands, which are likewise at risk of coastal inundation, predominantly medium risk.

There are no flora or fauna species for conservation significance within Site A.

3.6 Stormwater Hazards

There are no stormwater hazards present in Site A.

3.7 Summary

Many of the land and assets at risk are exposed to both natural hazards, but inundation is the most predominant risk. There is a substantial foreshore area in Site A that is expected to be at risk of erosion, storm events and inundation[17], along with parts of the Derwent Valley Railway network. While this has not been valued in monetary terms due to limited data, the area impacted by risk has been summarised in the following table.

TABLE 9: NON-VALUED ASSETS AT RISK – OF INUNDATION AND/OR EROSION

Asset	High Risk Hazard Band	Medium Risk Hazard Band	Low Risk Hazard Band
Open space (ha)	18.66	40.67	40.67

[16] https://services.thelist.tas.gov.au/arcgis/rest/services/Public/NaturalEnvironment/MapServer/2

Railway network (m)	0	162	689

Source: SGS Economics and Planning, 2023

The Aboriginal Heritage item in Site A is unlikely to be affected by coastal erosion, inundation or stormwater.

The wetlands to the south of the rail line are entirely covered by coastal inundation hazards bands Medium and High, while having a Very High integrated conservation value, the highest importance classification. These critical wetlands are in areas that will likely be entirely inundated by sea-level rise alone (if not storm-tide events), by 2100. The threat of coastal erosion already affects some of the wetlands, with parts of them already vulnerable to coastal recession, while by 2100, wetland area further inland will also be vulnerable to encroachment.

4. Site B – Riverside Drive

4.1 Site overview

Site B, Riverside Drive, is in Bridgewater, a suburb approximately 19 kilometres north of Hobart. The site contains a diverse range of land uses, including grazing pastures, rural residential, urban residential, horticulture, transport and communication, and nature conservation. There are 614 residential properties within the site. These consist of a mix of rural living and general residential areas. A parcel of land to the east of the site, is zoned for future urban development and contains a heritage registered property (Genappe - 50 Boyer Road).

There are also numerous businesses that form a small activity centre in the mixed-use zone along Old Main Road and the Midland Highway and a high school (Northern Christian School) is situated to the north of the site.

The site has several open space and recreational areas, including the Nielsen Esplanade Park and Bridgewater Memorial Reserve. Abutting Riverside Drive Road along the Derwent River is an area of marshlands that are managed according to a waterway and coastal protection overlay. At the end of Riverside Drive is a popular fishing jetty and parking area. The jetty located in Nielsen Esplanade is to be replaced in a similar location as part of the Bridgewater Bridge project. It also marks the start of the Riverside Drive Foreshore Trail, a 2.7-kilometre trail which stretches west towards Boyer.[18]

The site is located directly adjacent to the Bridgewater Bridge which is a crucial transport link connecting the area to Granton in the south via the Midland Highway. The construction of the new Bridgewater Bridge is currently underway, and its impacts on erosion and inundation appear to be negligible according to a technical report[19] prepared as part of the new bridge project. The South Line railway also runs across the bridge and north through the site, however the line is no longer operational since the purpose-built Brighton Transport Hub. The Derwent Valley Line, not in operation intersects the site.

Also contained within the site are six Aboriginal Heritage items (see Figure 9). [20]

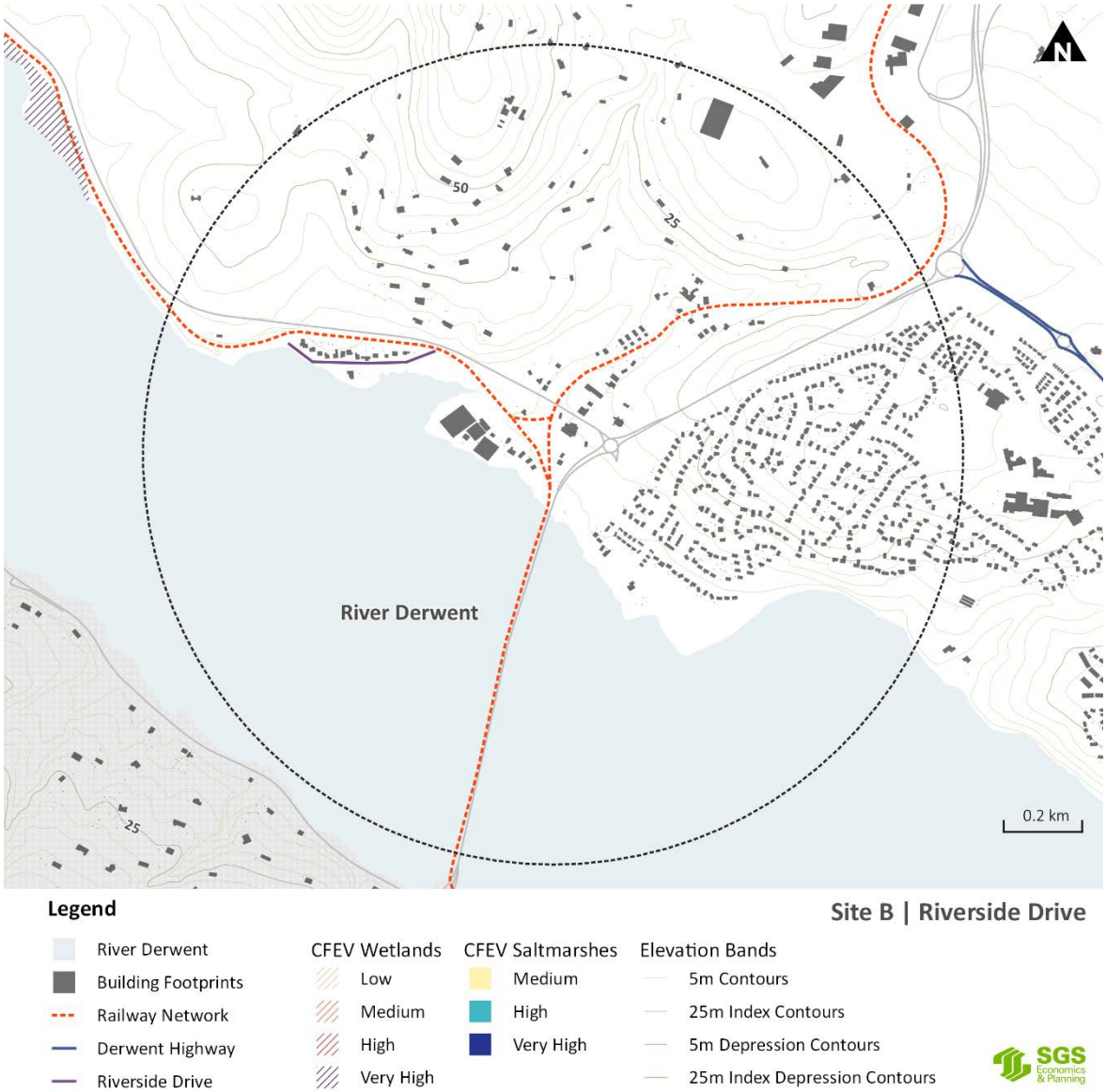
The site contains threatened wetland vegetation (see Figure 9). The environment contains natural values as illustrated in Figure 10.

[18] Great Hobart Trails (2023) https://www.greaterhobarttrails.com.au/tracks/riverside-drive-foreshore-trail

[19] Hydo-Electric Corporation, 2021, New Bridgewater Bridge Flood Hazard Report.

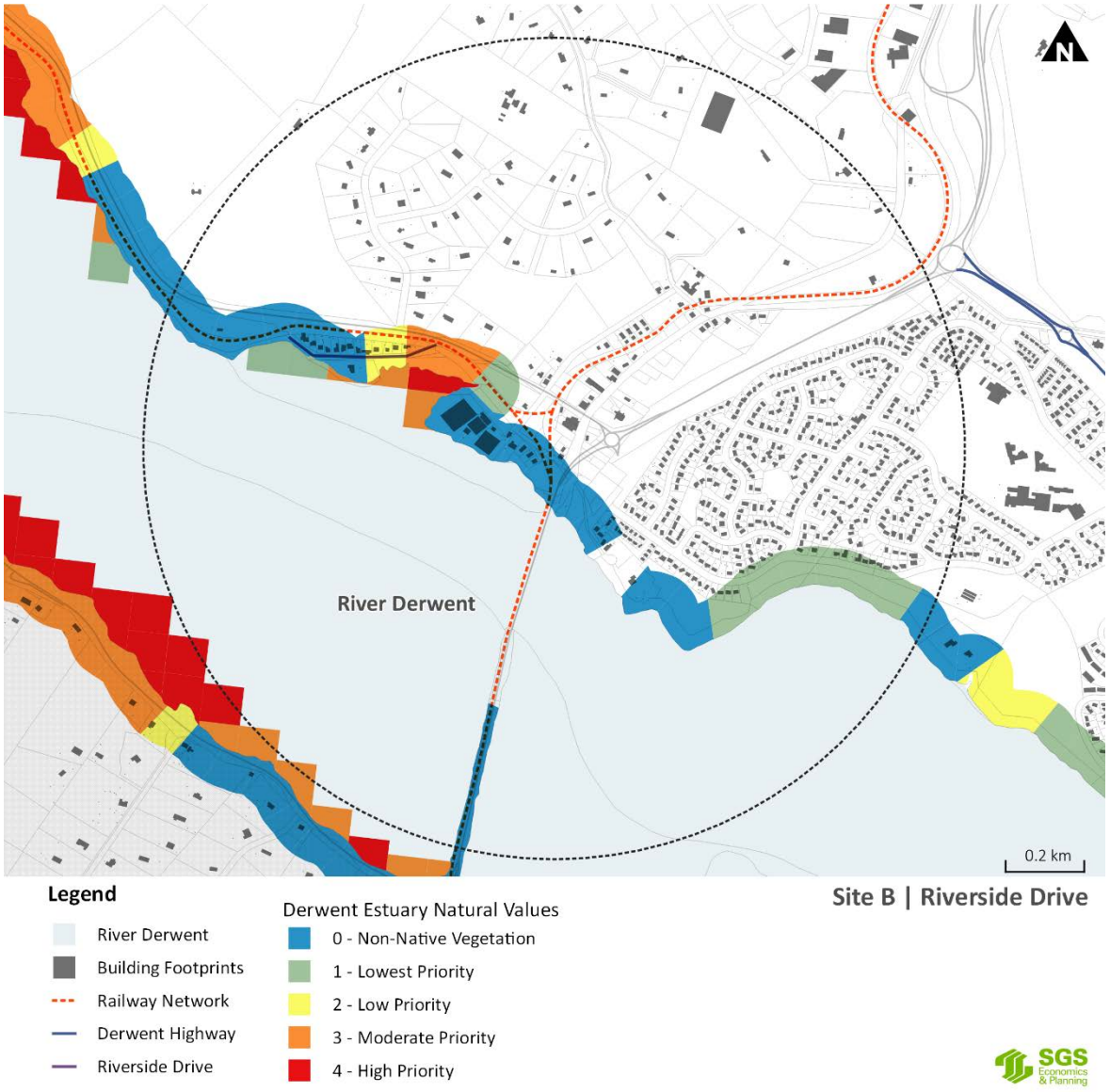
[20] Brighton Council (2022), Aboriginal Heritage Tasmania Riverside Drive Map.

FIGURE 9: SITE B CONTEXT MAP



Source: SGS Economics and Planning, 2023

FIGURE 10: SITE B CONTEXT - NATURAL VALUES



Source: SGS Economics and Planning, 2023

4.2 Coastal Erosion Hazards

Erosion modelling and spatial data enable the identification of areas that are at risk of erosion. The potential coastal erosion susceptibility hazard bands for the study area are shown in Figure 11. The map shows that there are high, medium, low and investigation coastal erosion hazard bands all present in Site B:

- High hazard band: a significant area of public land to the north west of the Bridgewater Bridge along the low-lying land of the Derwent River foreshore is *currently* vulnerable to coastal erosion.

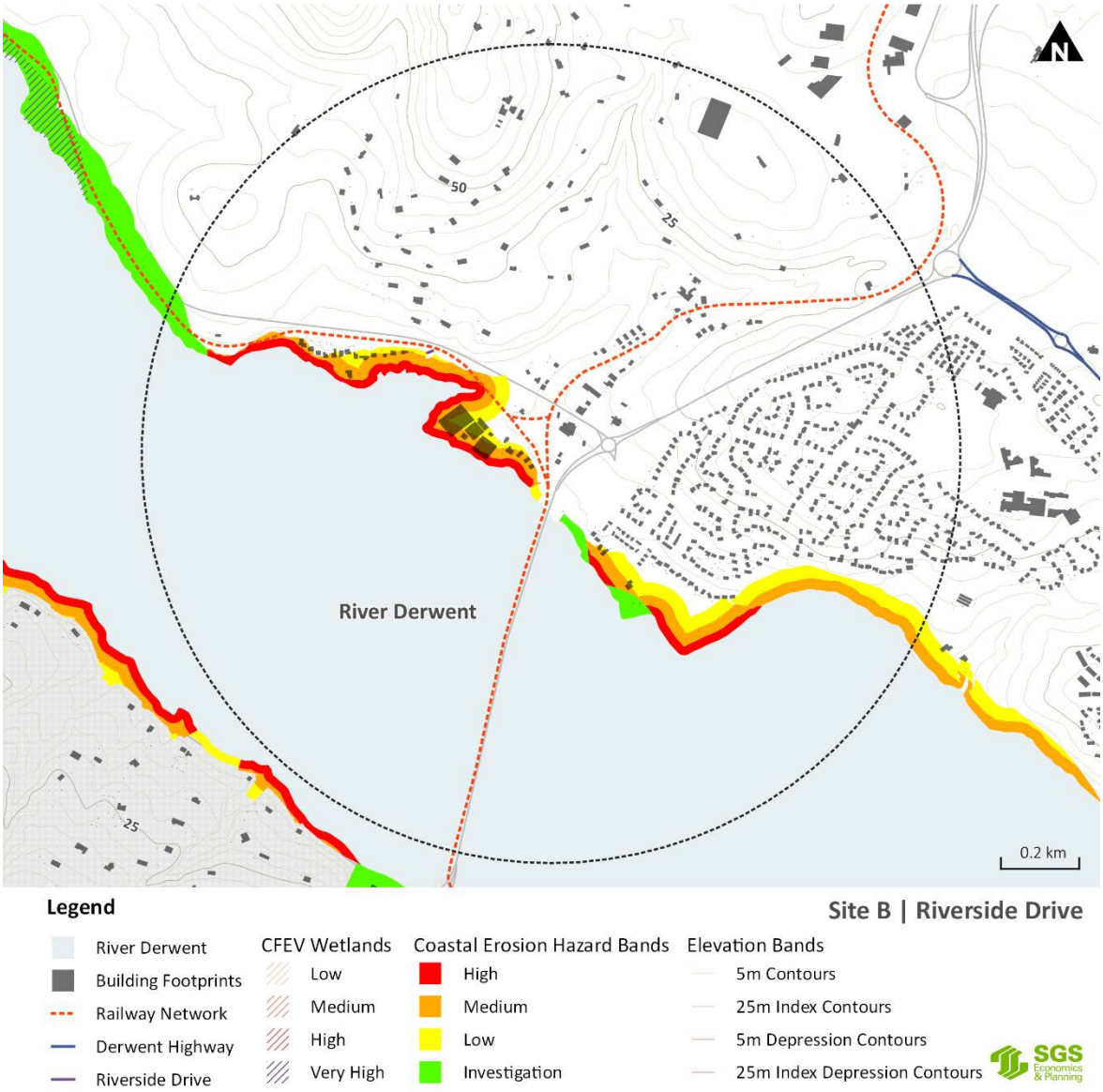
This includes private properties on Wallace Street. A smaller area along Nielsen Esplanade along the foreshore, south of the bridge, is also classified as a high coastal erosion hazard band.

- Medium hazard band: Along Riverside Drive and Wallace Street, north of the Bridgewater Bridge, several private properties are within the medium hazard band, exposing them erosion risk by 2050. South of the bridge, an area to the east of the site boundary is also within the medium erosion band, including Bridgewater Parkland.
- Low hazard band: set back from the medium hazard band, moving inland, the area is vulnerable to coastal erosion to 2100 as sea level rise progresses to 0.8m.

Investigation hazard band: two areas within Site B contain an investigation hazard band, the first to the north east along the Derwent River foreshore and Dromedary walking path, the second to the south of the Bridgewater Bridge. These areas are adjacent to coastlines but yet to be classified due to incomplete or unavailable landform data.

The map shows that the primary area of concern are the private properties along Wallace Street. As sea levels rise, the properties are at increasing risks, to the extent that a high tide could lead to erosion by 2100 (if nothing is done to manage the risk).

FIGURE 11: SITE B - COASTAL EROSION



Source: SGS Economics and Planning, 2023

4.3 Coastal Erosion Assets at Risk

While at present no buildings are at risk of erosion, with climate change and associated sea level rise, this is set to change towards 2050. By then, approximately 18 buildings (dwellings and greenhouses) with a total capital value of $6.6 million will be at risk if nothing is done to manage the risk. As sea levels continue to rise, buildings on another 21 properties may be at risk if nothing is done to manage the risk.

TABLE 10: CAPITAL VALUES OF BUILDINGS AT RISK – EROSION RISK

Asset	High Risk Hazard Band		Medium Risk Hazard Band		Low Risk Hazard Band	
	Capital Value ($)	Count	Capital Value ($)	Count	Capital Value ($)	Count
Private properties	0	0	6,607,500	18	7,290,000	21

Source: SGS Economics and Planning, 2023

The boat ramp, a small section of the hiking track and the playground are currently at risk of erosion. Sections of road and the track are likely to be exposed to erosion as sea levels rise. Overall, the capital values at risk, is estimated to be $112,585 in 2050, to increasing to $482,482 in 2100.

TABLE 11: VALUES OF PUBLIC INFRASTRUCTURE AT RISK – EROSION RISK

Asset	High Risk Hazard Band		Medium Risk Hazard Band		Low Risk Hazard Band	
	Capital Value ($)	Count	Capital Value ($)	Count	Capital Value ($)	Count
Boat Ramp	$37,433	1	$37,433	1	$37,433	1
Roads	$4,917	0.0km	$21,552	0.1km	$334,749	0.8km
Hiking Track	$22,300	0.2km	$53,600	0.5km	$110,300	1.1km
Total	**$64,650**	**N/A**	**$112,585**	**N/A**	**$482,482**	**N/A**

Source: SGS Economics and Planning, 2023
Note: Boat Ramp derived from costs of land backed wharve (precast concrete interlocking piles and reinforced concrete ground slab) (no electrical and water services), Roads based on composite price of suburban road with in situ concrete kerbs (6m wide), Trail calculated based on paved footpath (1500mm wide)

Overtime, an increasing amount of open space is likely to be at risk of erosion including the playground.

TABLE 12: NON-VALUED ASSETS AT RISK – EROSION RISK

Asset	High Risk Hazard Band	Medium Risk Hazard Band	Low Risk Hazard Band
Open space (ha)	1.42	3.76	4.81

Source: SGS Economics and Planning, 2023

Four Aboriginal Heritage items are located within the High Erosion Hazard Band, while a further two straddle the High/Medium Erosion Hazard band, indicating that all six items are at high risk of erosion.

Much of the natural value in Site B is identified by the Derwent Estuary Natural Values dataset to be either non-native vegetation or the in the lowest priority band. There is a pocket of moderate and high priority natural value to the south of the intersection between Riverside Drive and Boyer Road, at the mouth of Derwent River. The entire shoreline of Site B is vulnerable to coastal erosion of low to high risk. This natural value site is on the shoreline and therefore overlaps with the high-risk hazard band for

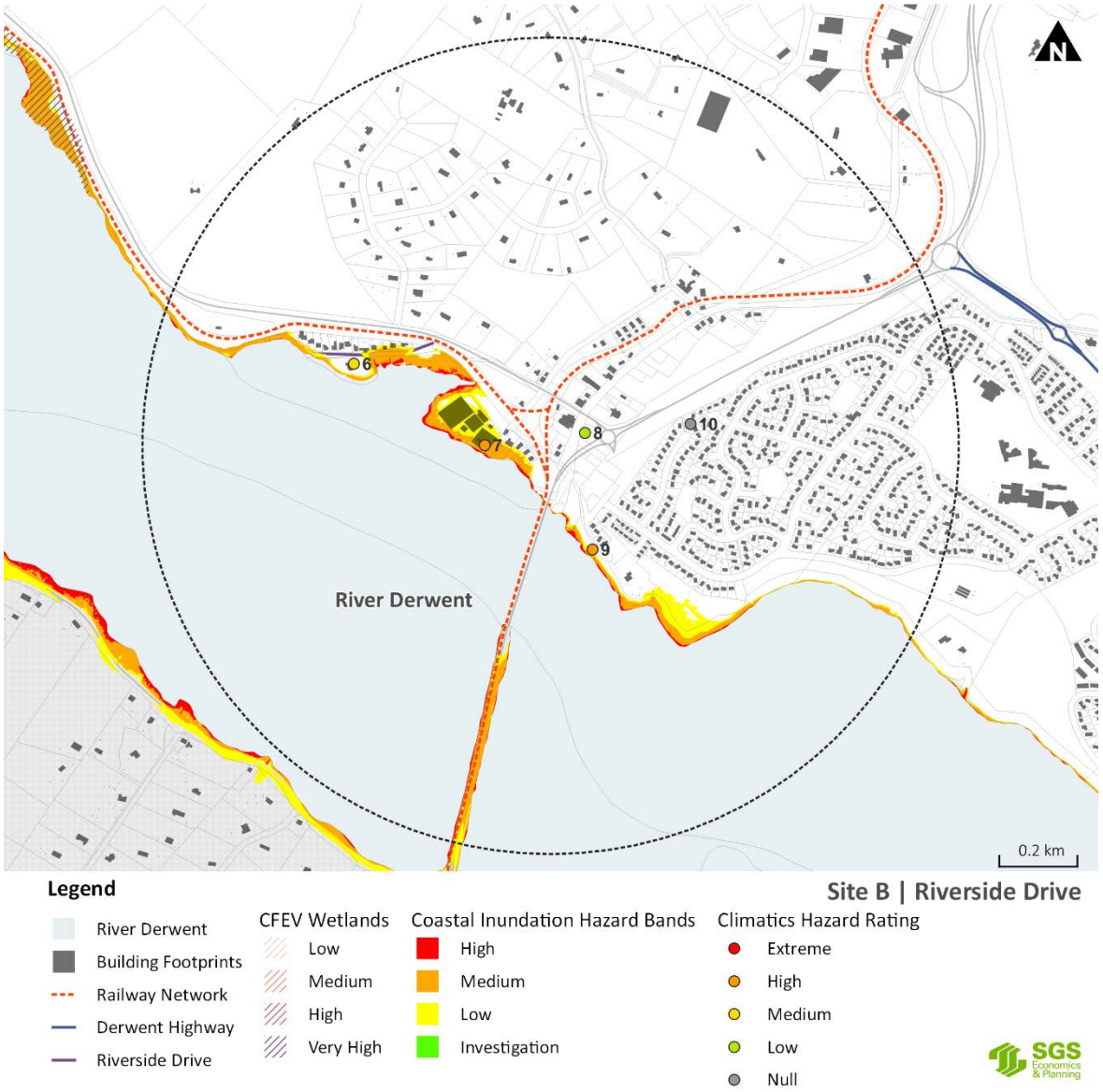
coastal erosion, indicating that this pocket of high priority vegetation is currently at risk of coastal recession.

4.4 Coastal Inundation Hazards

Future coastal inundation risks will increase as climate change leads to sea levels to rise. Coastal sea level rise mapping of Site B (Figure 12) shows areas with low, medium and high coastal inundation hazard bands:

- High hazard band: Several properties on Riverside Drive and Wallace Street (including private properties), and south side of the Bridgewater Bridge. The width of the high hazard band is limited, meaning there are no direct threats to buildings on the land parcels identified.
- Medium hazard band: all land along the Derwent River foreshore in Site B is within the medium hazard band, meaning the area is vulnerable to a 1% AEP storm event by 2050 and will be inundated at a regular basis by 2100. The medium hazard band encompasses private properties on Wallace Street and Riverside Drive, as well as the south side of the Bridgewater Bridge. By 2050, some of the buildings on these parcels will be at risk.
- Low hazard band: land abutting the medium hazard band, inland, is vulnerable to a 1% AEP storm event in 2100 and medium-term flooding issues. In some areas, the low hazard band applies to private properties on Wallace Street and Riverside Drive.

FIGURE 12: SITE B - COASTAL INUNDATION



Source: SGS Economics and Planning, 2023

Verification with Climatics

SGS has analysed several representative locations within Site B using Climatics to assess their exposure to fluvial flooding. As Figure 12 shows, the coastal land surrounding Bridgewater Bridge is at risk of coastal inundation, as well as from fluvial flooding, represented by the numbered locations on the map. Land immediately adjacent to the bridge entrance is at high risk of fluvial flooding, which is to say that these sites have a predicted 2% AEP for a direct impact from the Derwent River flooding. One site identified is a greenhouse to the northwest of the Bridge entrance, while on the other side, the foreshore walk south of Gunn Street is at the same risk level. Both sites are directly on the foreshore, while locations further inland are at medium, low or no risk. This aligns with the high-risk rating along the foreshore identified by DPAC, while the drop off in risk further inland also holds. Nevertheless,

certain locations analysed in Climatics are shown to be at some level of risk from flooding, with no coastal inundation hazard band coverage. This is summarised in Table 13 below.

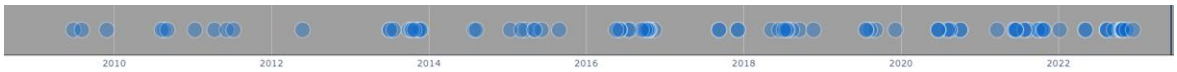
TABLE 13: RISK RATING ALIGNMENT BETWEEN CLIMATICS AND DPAC, SITE B

Location	Climatics risk rating	DPAC Hazard band	Alignment
6	Medium: flooding impact on this site with 1% AEP	Null	Climatics identifies flooding risk at this site while DPAC does not.
7	High: Flooding impact on this site with 2% AEP	Medium	Both fall into respective second highest risk category, but Climatics risk rating is more severe.
8	Low: no direct impact on this site from river flooding	Null	Both predict no direct impact from flooding
9	High: Flooding impact on this site with 2% AEP	Low	Climatics (2% AEP currently) predicts greater risk than DPAC (1% AEP by 2100).
10	Null	Null	Both datasets identify no flooding or inundation risk at this location.

Source: Climatics; DPAC; SGS Economics and Planning, 2023

The coastal inundation hazard bands from DPAC do not extend far inland but do suggest that there is a high risk on the coast around Bridgewater Bridge. Climatics analysis of locations within site B predicts that the risk of fluvial flooding extends somewhat further inland, with medium and high-risk ratings applying to locations not covered by the DPAC hazard bands. Figure 13 below shows a timeline of flood events at the coastline of site B. It demonstrates that flood events are becoming more frequent, even within the last decade.

FIGURE 13: TIMELINE OF FLOOD EVENTS AT SITE B



Source: Climatics

4.5 Coastal Inundation Assets at Risk

Inundation risk is contained mainly in areas also facing coastal erosion risk. The present risk of inundation is very minimal, with an impact on one greenhouse. The extent exacerbates when the risk moves to medium risk, with the risk of a 1% AEP storm event in 2050, or 0.8m sea level rise by 2100 developing up 50m from the riverbanks, at its most vulnerable point. Three properties will be at risk in this scenario. As the risk of 1% AEP storm event approaches in 2100, there may be a further five properties at risk of inundation and will inundate the large parcel of land at the end of Wallace Street.

TABLE 14: VALUES OF PROPERTIES AT RISK (ADJUSTED CAPITAL, EXCLUDING LAND VALUES) – INUNDATION RISK

Asset	High Risk Hazard Band		Medium Risk Hazard Band		Low Risk Hazard Band	
	Capital Value ($)	Count	Capital Value ($)	Count	Capital Value ($)	Count
Private properties	0	0	900,000	3	2,540,000	8

Source: SGS Economics and Planning, 2023

Similarly, with coastal erosion, the disused boat ramp and roads may be marginally affected on Site B. Impact of potential inundation on public infrastructure is likely to be negligible with present-day risk. However, this impact is expected to grow by approximately four folds in the medium term (1% AEP in 2050). More roads and parts of the walking track will be at risk of inundation in the long term (1% AEP storm event in 2100).

TABLE 15: VALUES OF PUBLIC INFRASTRUCTURE AT RISK – INUNDATION RISK

Asset	High Risk Hazard Band		Medium Risk Hazard Band		Low Risk Hazard Band	
	Capital Value ($)	Count	Capital Value ($)	Count	Capital Value ($)	Count
Boat Ramp	$0	0	$37,433	1	$37,433	1
Roads	$8,820	0.2km	$158,572	0.4km	$726,694	1.8km
Hiking Track	$461	0.0km	$183,173	1.8km	$218,086	2.2km
Total	**$9,281**	**N/A**	**$379,178**	**N/A**	**$982,213**	**N/A**

Source: SGS Economics and Planning, 2023
Note: Boat Ramp derived from costs of land backed wharve (precast concrete interlocking piles and reinforced concrete ground slab) (no electrical and water services), Roads based on composite price of suburban road with in situ concrete kerbs (6m wide), Trail calculated based on paved footpath (1500mm wide)

The likelihood of inundation risk affecting open space is expected to be low across various inundation hazard bands, although it may have an impact on the local playground.

TABLE 16: NON-VALUED ASSETS AT RISK – INUNDATION RISK

Asset	High Risk Hazard Band	Medium Risk Hazard Band	Low Risk Hazard Band
Open space (ha)	0.32	1.64	1.64

Source: SGS Economics and Planning, 2023

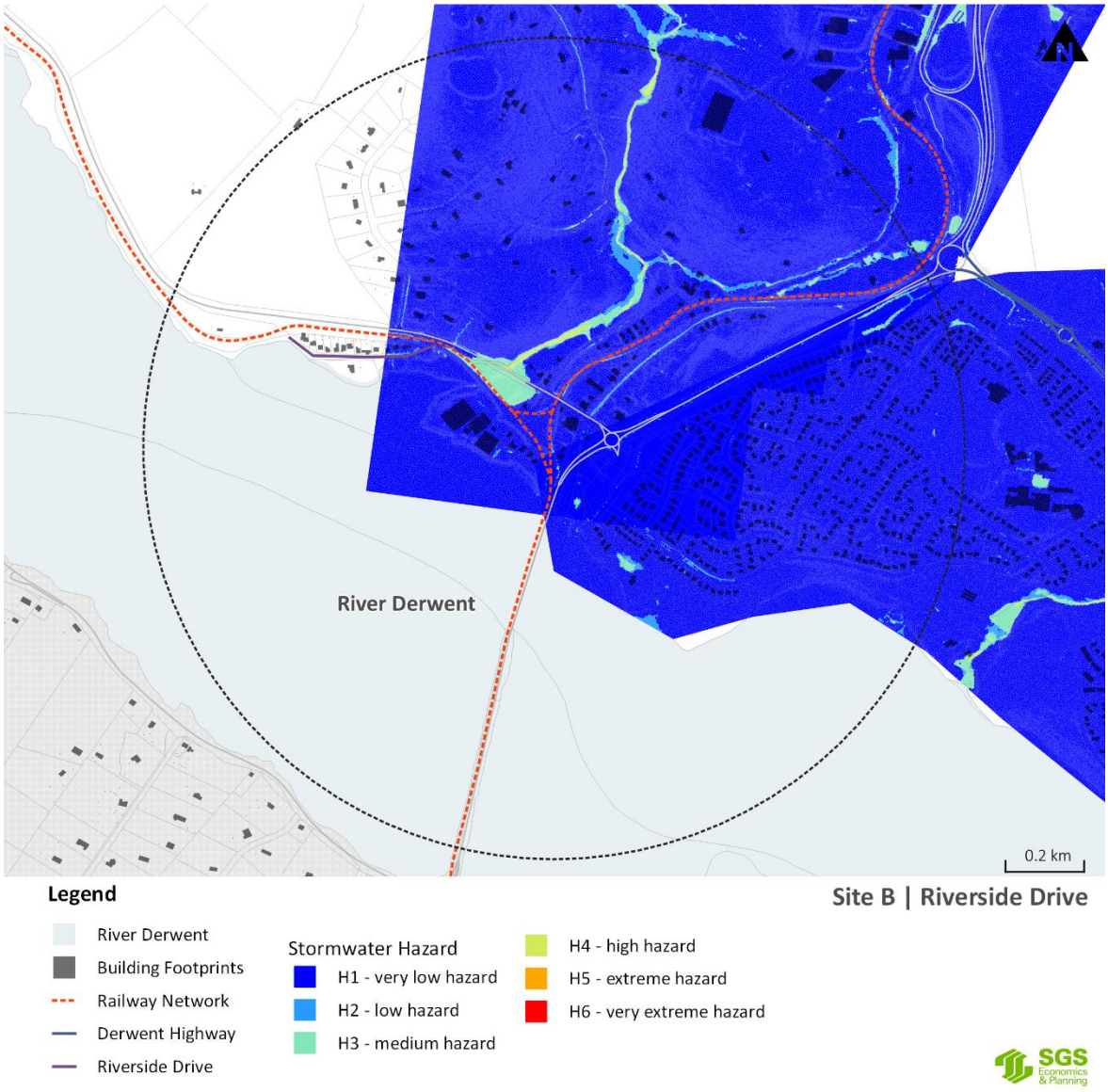
In total, four Aboriginal Items are at risk of inundation. Three Aboriginal Heritage Items are located within the Medium Inundation Hazard Band (774, 1384, 1381), one straddles the High/Medium Inundation Hazard band (7776). Two items (7775, and 1383) appear to not be at risk of inundation.

Coastal inundation proves to be less threatening to the vegetation in Site B than at Site A, due to a more severe slope from the banks of the river. Nevertheless, the area to the south of Riverside Drive and Boyer Road, which is considered moderate to high priority in the Derwent Estuary Natural Values dataset, is also covered by medium to high-risk hazard bands for coastal inundation. This means that this pocket of open space is vulnerable to sea-level rise by 2100, and parts of it will be vulnerable by 2050, if not already damaged or destroyed by a 1% AEP storm event before then.

4.6 Stormwater Hazards

The majority of Site B is vulnerable to stormwater drainage hazards (Figure 14). This area includes recreation and urban uses. With sea level rise it is reasonable to assume that stormwater drainage issues, such as the need to manage stormwater via the overflow, will gradually increase over time. Contributing factors are an increased water table and higher storm surges.

FIGURE 14: SITE B - STORMWATER HAZARDS



Source: SGS Economics and Planning, 2023

A few hundred houses and other buildings are at a very low risk from stormwater.

All six Aboriginal Heritage items are at very low risk from stormwater hazards.

As Figure 14 shows, the majority of land within Site B is vulnerable to stormwater hazards, predominantly low to very low risk. However, there is a pocket of medium to high risk which intersects with the high priority area identified in the Derwent Estuary Natural Values dataset. This is shown in Figure 14 at the intersection between the railway network, Riverside Drive and Boyer Road. With sea level rise and increasing storm surge resulting from climate change, the vulnerability of this site will likely increase over time.

4.7 Summary

Site B is susceptive to coastal hazards, however, both inundation and coastal erosion are likely to be relatively mild due to the geographical location of the study area, as well as due to land utilisation. Similar to Site A, the land is relatively low density and is characterised by limited land uses.

Most assets are likely to be exposed to both coastal erosion and inundation risks.

Currently, no residential properties are at risk of coastal hazards. As the potential for erosion and inundation escalates to the medium hazard band, approximately 18 residential properties may be at risk, with a total value of about $6.6 million. This value is expected to grow with a low-risk hazard band, whereby, a total of 22 properties are potentially at risk of erosion and inundation due to extreme events. The total value of these properties is around $7.5 million.

TABLE 17: VALUES OF PROPERTIES AT RISK (ADJUSTED CAPITAL, EXCLUDING LAND VALUES)

Asset	High Risk Hazard Band		Medium Risk Hazard Band		Low Risk Hazard Band	
	Capital Value ($)	Count	Capital Value ($)	Count	Capital Value ($)	Count
Private properties	0	0	6,607,500	18	7,535,000	22

Source: SGS Economics and Planning, 2023

Built public infrastructure are also at risk of coastal hazards, such as roads and footpaths. Infrastructure in the study area that carries some level of risk include a hiking trail, roads, boat ramp and a local playground[21].

TABLE 18: VALUES OF PUBLIC INFRASTRUCTURE AT RISK

Asset	High Risk Hazard Band		Medium Risk Hazard Band		Low Risk Hazard Band	
	Capital Value ($)	Count	Capital Value ($)	Count	Capital Value ($)	Count
Boat Ramp	37,433	1	37,433	1	37,433	1
Roads	197,475	0.5km	421,935	1.0km	599,888	1.5km
Hiking Track	22,761	0.1km	184,550	0.7km	243,382	0.7km
Total	**257,668**	**N/A**	**643,918**	**N/A**	**880,702**	**N/A**

Source: SGS Economics and Planning, 2023
Note: Boat Ramp derived from costs of land backed wharve (precast concrete interlocking piles and reinforced concrete ground slab)

[21] Note: Playgrounds have not been measured as this has not been detailed in Rawlinson's.

(no electrical and water services), Roads based on composite price of suburban road with in situ concrete kerbs (6m wide), Trail calculated based on paved footpath (1500mm wide)

There is also foreshore area in Site B that is expected to be at risk of erosion, storm events and inundation[22], along with parts of the Derwent Valley Railway and the South Line network. While this has not been valued due to limited data, the area impacted has been summarised in the following table.

TABLE 19: NON-VALUED ASSETS AT RISK

Asset	High Risk Hazard Band	Medium Risk Hazard Band	Low Risk Hazard Band
Open space (ha)	1.42	3.76	4.82

Source: SGS Economics and Planning, 2023

All six Aboriginal Heritage items in Site B are at very low risk from stormwater hazards, and high/medium risk of erosion. Four of the items are at risk of inundation.

The urban development at Site B extends towards the shore line across much of its river banks, meaning that there are relatively fewer natural values at risk from coastal hazards. However, a small pocket of open space that is considered moderate to high priority is at risk particularly from coastal inundation, as a low-lying area on the banks of the Derwent River. It is vulnerable to sea level rise by 2050 to 2100, if not storm events before then. This site is also currently at the intersection of low to medium stormwater hazard risk.

[22] Willingness to pay (WTP) through comparable studies can suggest the value of public-owned foreshores, through the benefit transfer approach. However, this has not been valued at this stage as it is unclear about the significance of the marshlands that reside in this study area and whether this WTP value can be applied. This will be informed and investigated through stakeholder engagement in a later stage of the study.

5. Site C – Old Beach

5.1 Site overview

Situated on the southern boundary of Brighton LGA, Site C (Old Beach) is the largest of the three sites. The site has a diversity of land uses close to the river foreshore, mostly residential and open space. An electricity transmission corridor also runs through the site.

The Derwent River foreshore stretches along the site from the south of Herdsman's Cove to Old Beach at the boundary of the LGA and is covered by a waterway and coastal protection overlay. The popular council-maintained Old Beach walking track lines the foreshore. This area is Crown land and maintained according to its waterway and coastal protection overlay. The site boasts natural assets including the Clarrie's Creek and Gagebrook tributary, saltmarshes, and numerous open spaces. There is threatened native vegetation within the site (see Figure 17). The natural values within the site are shown in Figure 18.

The site also contains 25 known Aboriginal Heritage Shell Middens[23] and several Artefact Scatters[24] predominantly along the Old Beach walking track[25] (Figure 16).

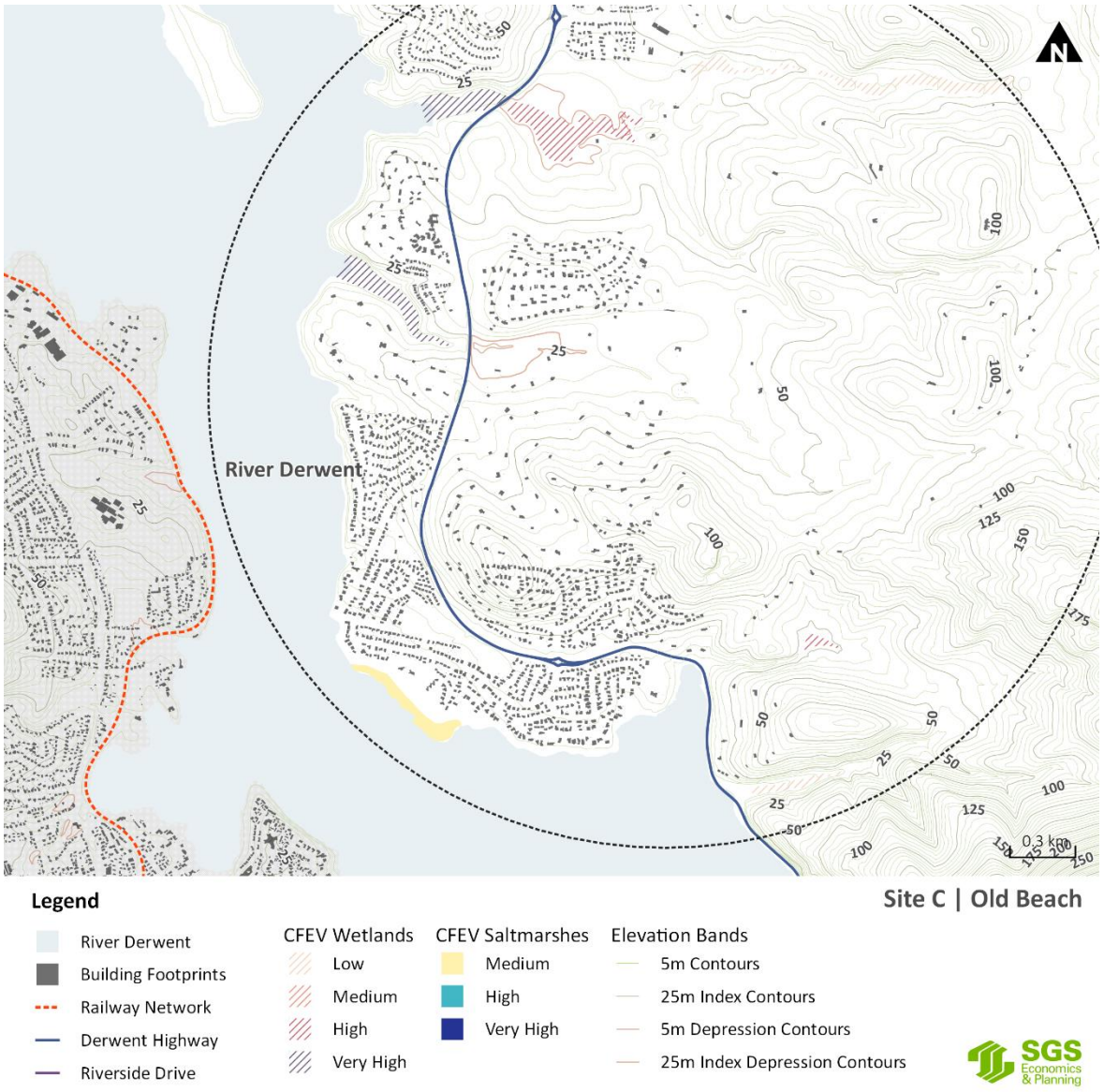
FIGURE 15: FORESHORE WALKWAY AT OLD BEACH

Source: SGS Economics and Planning, 2023

[23] Distinct concentrations of discarded shell that have accumulated as a result of past Aboriginal camping and food processing activities.
[24] A stone artefact is any stone or rock fractured or modified by Aboriginal people to produce cutting, scraping or grinding implements.
[25] Brighton Council (2022), Aboriginal Heritage Tasmania Old Beech Map.

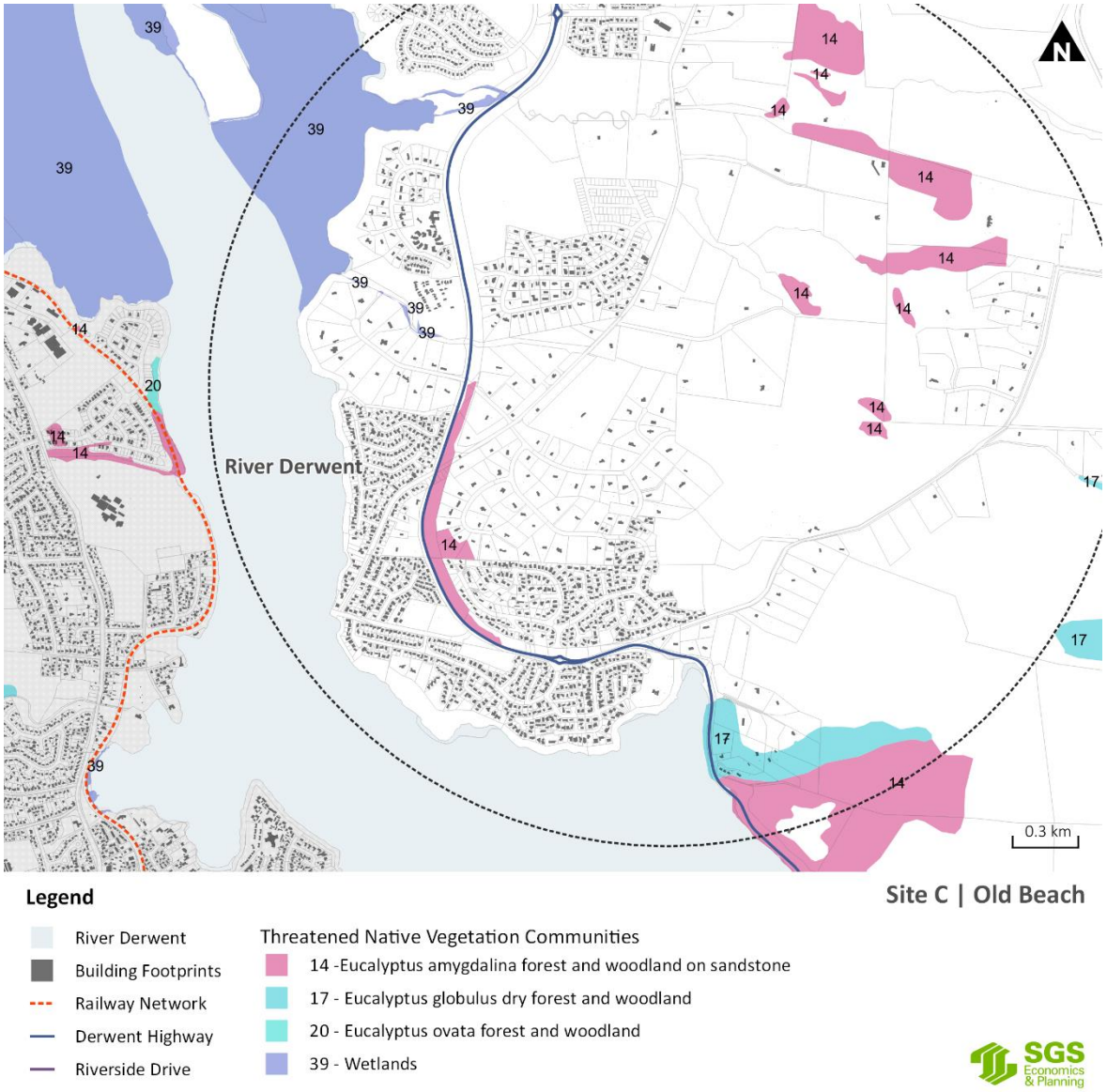
The East Derwent Highway is the primary route of entry/exit to the municipality and Jetty Road provides boat access to the Derwent River via the Old Beach Jetty. There is a walkway planned (currently a sand footpath) for the north of the Jetty.

FIGURE 16: SITE C CONTEXT MAP



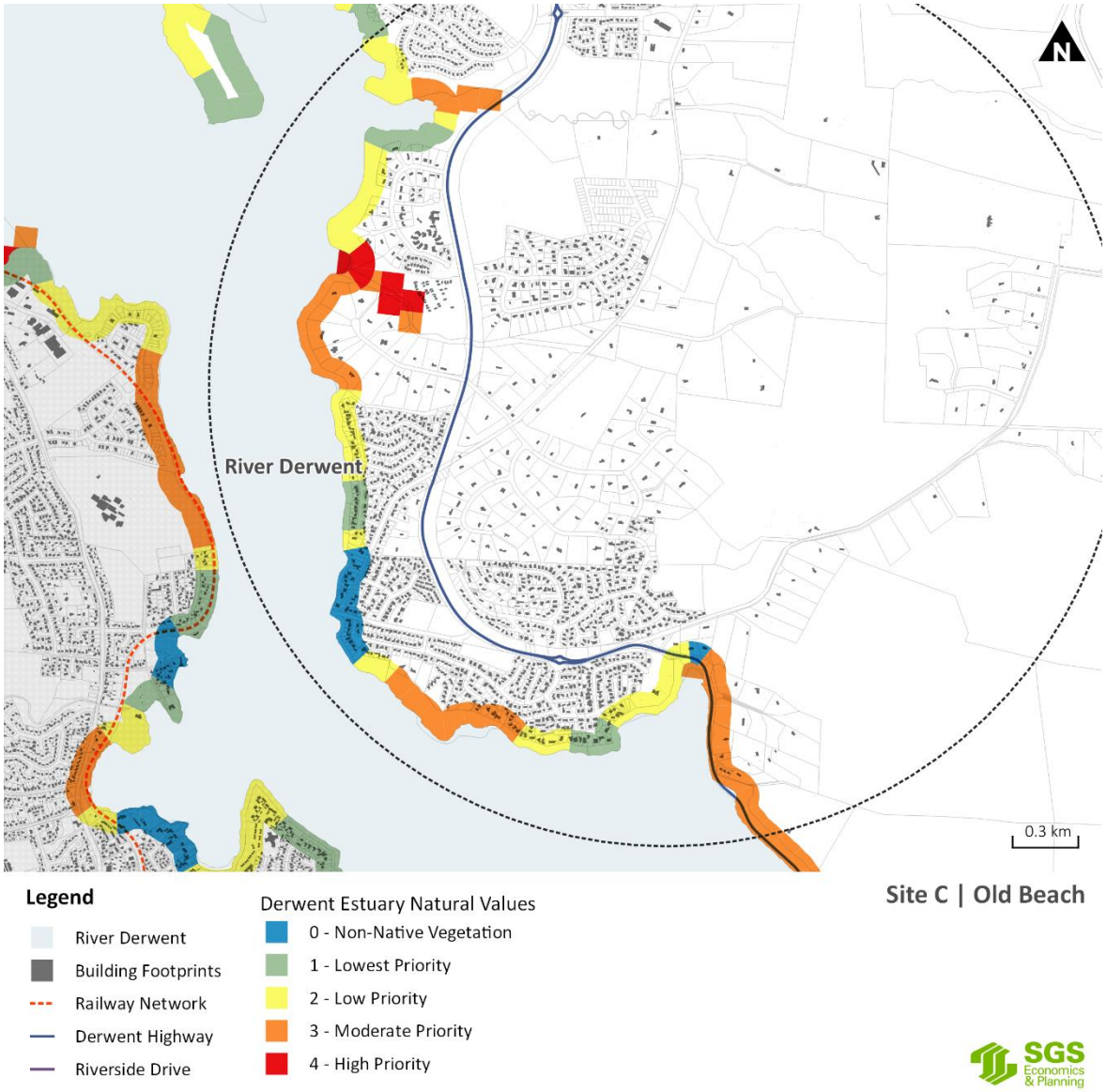
Source: SGS Economics and Planning, 2023

FIGURE 17: SITE C CONTEXT - THREATENED NATIVE VEGETATION



Source: SGS Economics and Planning, 2023

FIGURE 18: SITE C CONTEXT - NATURAL VALUES



Source: SGS Economics and Planning, 2023

5.2 Coastal Erosion Hazards

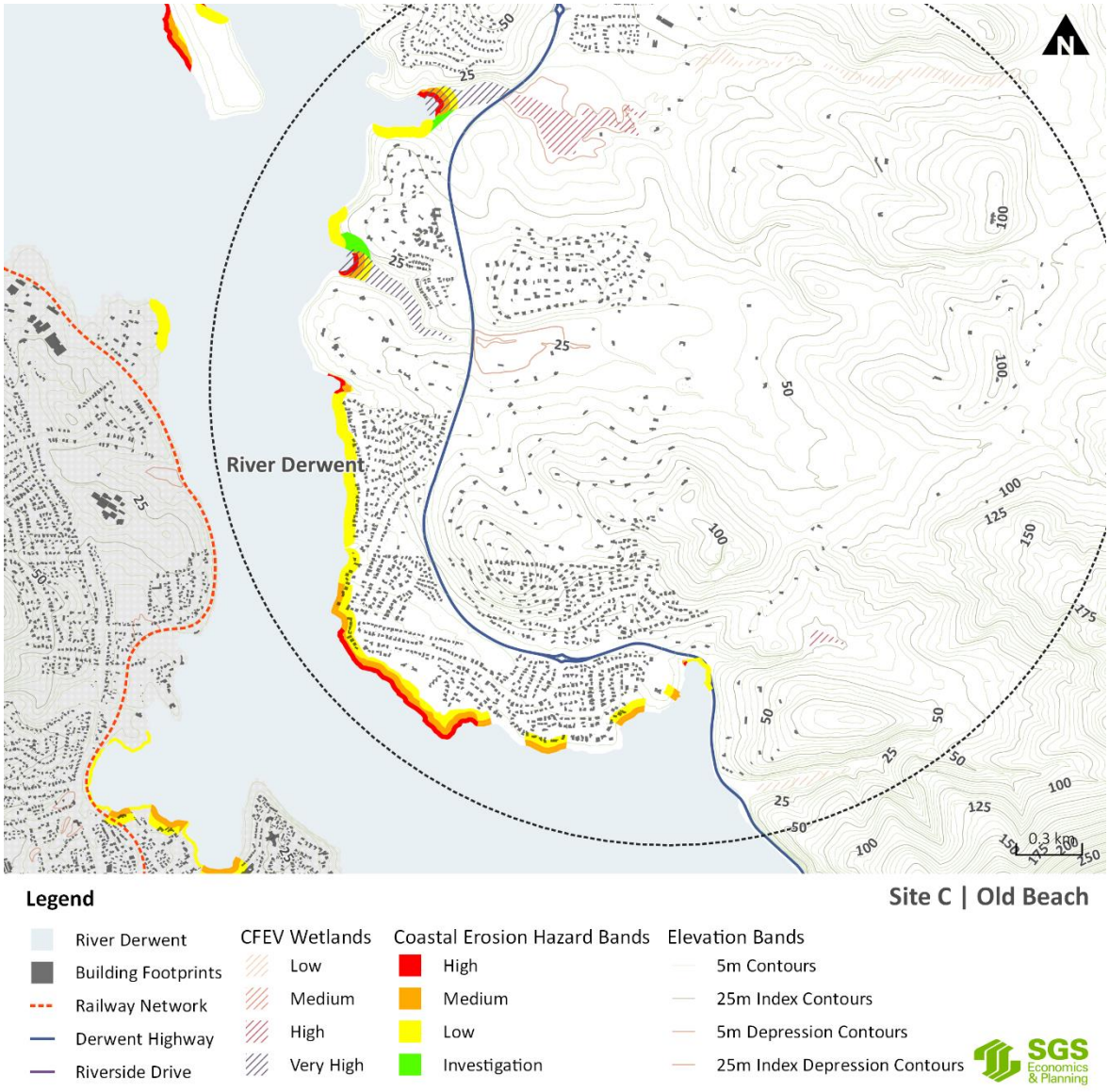
The coastal erosion susceptibility hazard bands for the study area are shown in Figure 19. The map shows that there are high, medium, low and investigation coastal erosion hazard bands all present in Site C:

- High hazard band: four sections of land along the Derwent River foreshore are *currently* vulnerable to coastal recession. The most significant of these is the open space south of the boat ramp (off Jetty Road) and along the Old Beach walking track. Over time, with sea level rise, erosion will increasingly become a risk, if nothing is done to manage the risk.

- **Medium hazard band**: directly abutting the area defined as a high hazard band, moving inland, is vulnerable to coastal recession to 2050 as sea level rise progresses to 0.2m. Most significantly, the medium coastal erosion hazard band encompasses the Old Beach walking track itself, several private properties and the boat ramp on Jetty Road.
- **Low hazard band:** set back from the medium hazard band, moving inland, the area is vulnerable to coastal erosion by 2100 as sea level rise progresses to 0.8m. There is also a significant stretch of land along the River Derwent foreshore, north of the boat jetty, that is classified as a low hazard band. This area captures private properties on Morrisby Road.

Investigation hazard band: two areas to the north of Site C contain an investigation hazard band, two of which encompasses the Clarries Creek tributary and Gage Brook tributary. These areas are adjacent to coastlines yet to be classified due to incomplete or unavailable landform data.

FIGURE 19: SITE C - COASTAL EROSION



Source: SGS Economics and Planning, 2023

5.3 Coastal Erosion Assets at Risk

In terms of present-day risk, coastal erosion is relatively sparse, primarily limited to marshlands located south of the Jetty Road Boat Ramp or within a small section of Site C's coves. A small section of the East Derwent Highway (State Government owned) at the southern end of the Old Beach site is within the low erosion hazard band.

Currently, the land is expected to recede by approximately 20 meters from the riverbanks. However, by 2050, this recession is projected to grow, affecting not only these areas but also other parts of the study area. With the potential erosion, the land may recede by up to 30 meters inland. As a result of this progression, three residential properties, a boat ramp, a minor section of a vehicle track, and a few segments of a hiking trail are likely to be impacted.

The projected impact in 2100 suggests that not only the current areas but also additional regions will be negatively affected, with exacerbated risk. The land may recede by 60 meters inland at its most vulnerable point. As a result, the community will experience significant consequences, particularly as 30 residential properties face long-term risks.

TABLE 20: VALUES OF BUILDINGS AT RISK – EROSION RISK

Assets	High Risk Hazard Band		Medium Risk Hazard Band		Low Risk Hazard Band	
	Capital Value ($)	Count	Capital Value ($)	Count	Capital Value ($)	Count
Private properties	0	0	2,180,000	4	15,907,500	30

Source: SGS Economics and Planning, 2023

TABLE 21: VALUES OF PUBLIC INFRASTRUCTURE AT RISK – EROSION RISK

Assets	High Risk Hazard Band		Medium Risk Hazard Band		Low Risk Hazard Band	
	Capital Value ($)	Count	Capital Value ($)	Count	Capital Value ($)	Count
Boat Ramp	$0	0	$126,294	1	$126,294	1
Roads	$4,917	0.0km	$21,552	0.1km	$334,749	0.8km
Hiking Track	$22,300	0.2km	$53,600	0.5km	$110,300	1.1km
Total	**$64,650**	**N/A**	**$201,446**	**N/A**	**$571,343**	**N/A**

Source: SGS Economics and Planning, 2023
Note: Boat Ramp derived from costs of land backed wharve (precast concrete interlocking piles and reinforced concrete ground slab) (no electrical and water services), Roads based on composite price of suburban road with in situ concrete kerbs (6m wide), Trail calculated based on paved footpath (1500mm wide)

The foreshore area is likely to see a moderate impact from erosion, which is expected to increase as land recession risk develops in the future.

TABLE 22: NON-VALUED ASSETS AT RISK – EROSION RISK

Asset	High Risk Hazard Band	Medium Risk Hazard Band	Low Risk Hazard Band
Open space (ha)	5.13	8.02	15.53

Source: SGS Economics and Planning, 2023

Two shell middens appear to lie in land marked in high erosion hazard band, three are in the medium risk band, while seven are in the low hazard band. Altogether this indicates that twelve items in Site C are at risk of erosion.

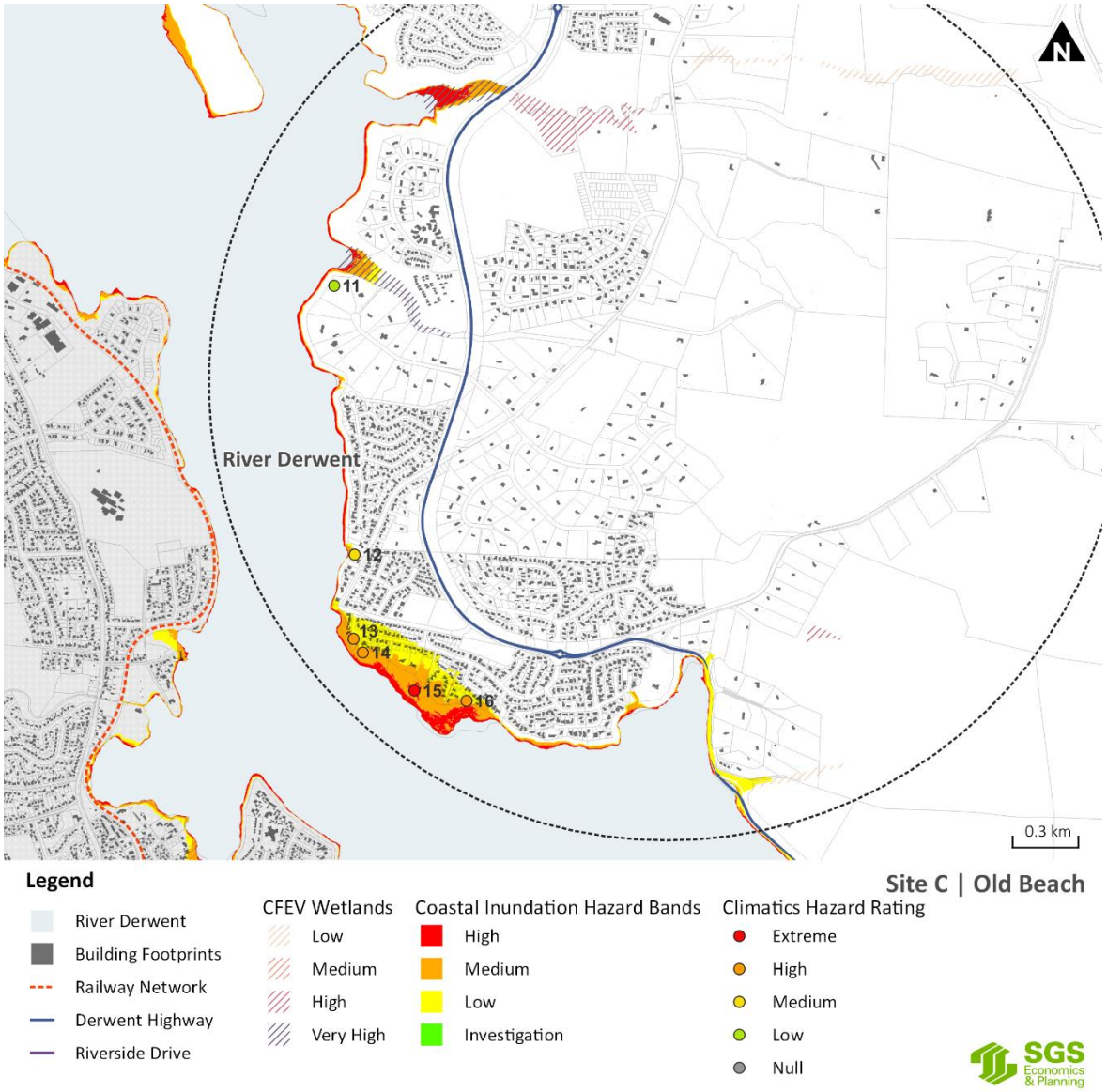
Most of the shoreline at Site C is vulnerable to coastal erosion to some degree, while there are a variety of natural values with which these hazard bands intersect. There are multiple inlets along the shoreline, the northernmost two of which are considered to have Very High integrated conservation value by CFEV. These inlets also have high risk hazard band coverage for coastal erosion, suggesting that they are currently vulnerable to coastal recession. These sites are also considered to have moderate to high priority in the Derwent Estuary natural values dataset. There are also multiple threatened native vegetation communities, including wetlands which incorporate the above-mentioned vulnerable inlets, along the northern coast of Site C, which is vulnerable to coastal erosion. This is shown in Figure 17, which also highlights pockets of threatened Eucalyptus amygdalina and Eucalyptus globulus dry forest and woodland, at the southern end of Site C's coastline. However currently, these natural values are not at risk of coastal erosion.

5.4 Coastal Inundation Hazards

Future coastal inundation risks will increase as climate change leads to sea levels to rise. Coastal sea level rise mapping of Site C (Figure 20) reveals areas with low, medium and high coastal inundation hazard bands:

- High hazard band: the entire length of the foreshore along the Derwent River is classified as a high coastal inundation hazard band and will be within 0.2m SLR from MHT line by 2050 and is currently impacted by the Highest Astronomical Tide. During extreme events, inundation affects land across the walking track, and in some cases, water has already flowed over the track without causing (substantial) damage.
- Medium hazard band: set back from the medium hazard band along the Derwent River foreshore, moving inland, land is classified as a medium hazard band, meaning the area is vulnerable to a 1% AEP storm event in 2050 and will be impacted by a 0.8m SLR by 2100. Most significantly, the medium hazard band encompasses private properties on Sun Valley Drive and Fouche Avenue, south of the boat ramp. The medium hazard band also covers the Gage Brook tributary, to the north of the site, and stretches inland to the East Derwent Highway.
- Low hazard band: land abutting the medium hazard band, inland, is vulnerable to a 1% AEP storm event in 2100 and medium-term flooding issues. Most significantly, the low hazard band encompasses private properties on Jetty Road, Sun Valley Drive and Fouche Avenue, south of the boat ramp.

FIGURE 20: SITE C - COASTAL INUNDATION



Source: SGS Economics and Planning, 2023

Verification with Climatics

As Figure 20 shows, effectively the entire foreshore of Site C is at some level of risk from coastal inundation. The worst affected area is the council-maintained Old Beach foreshore walk, where the inundation risk extends inland further than along the rest of the foreshore. SGS used Climatics data to verify these hazard risks, by identifying several representative locations within Site C to assess their exposure to range of climate hazards. The open space to the south of the foreshore walk is assessed to be at extreme risk, or that there is a theoretical direct impact from a 1-in-20-year flooding event. Elsewhere along the foreshore, areas are at medium to high risk, including residential land near the foreshore walk. This aligns with the coastal inundation hazard bands identified by DPAC, some of which cover residential land adjacent to the foreshore walk.

TABLE 23: RISK RATING ALIGNMENT BETWEEN CLIMATICS AND DPAC, SITE C

Location	Climatics risk rating	DPAC Hazard band	Alignment
11	Low: flooding impact on this site with 1% AEP	Null	Both predict no direct impact from flooding
12	Medium: Flooding impact on this site with 1% AEP	Low	Climatics (1% AEP currently) predicts greater risk than DPAC (1% AEP by 2100).
13	High: Flooding impact on this site with 2% AEP	Medium	Climatics (2% AEP currently) predicts greater risk than DPAC (1% AEP by 2050).
14	High: Flooding impact on this site with 2% AEP	Medium	Climatics (2% AEP currently) predicts greater risk than DPAC (1% AEP by 2050).
15	Extreme: Flooding impact on this site with 5% AEP	Medium	Climatics (5% AEP currently) predicts greater risk than DPAC (1% AEP by 2100). This is the biggest deviation across all locations.
16	High: Flooding impact on this site with 2% AEP	Medium	Climatics (2% AEP currently) predicts greater risk than DPAC (1% AEP by 2050).

Source: Climatics; DPAC; SGS Economics and Planning, 2023

The Derwent River foreshore walk is an area of particular concern, identified by both datasets. The coastal inundation hazard bands extend further inland in this area than along the rest of the foreshore, and the sites analysed using Climatics data all demonstrated high to extreme risk. Figure 21 below demonstrates a trend of increasing frequency of flood events over the last decade along the Derwent River foreshore walk.

FIGURE 21: TIMELINE OF FLOOD EVENTS AT SITE C

Source: Climatics

5.5 Coastal Inundation Assets at Risk

Inundation is the most significant risk to this study area, and over time will increasingly expose both public assets and private dwellings, if nothing is done to manage the risk. Especially the number of dwellings at risk in the future is a point of concern. Initially Crown land and public assets such as the walking track will be at risk, but as sea levels continue to rise, these risks will also affect dwellings. Notably, a small section of the East Derwent Highway (State Government owned) at the southern end of the Old Beach site is also at risk.

Currently, the extent of inundation is very limited and does not affect existing residential dwelling, although parts of the land of properties is at a low-level risk (i.e., gardens). There are several vacant land parcels that will need to consider inundation risk in their design to withstand 1%AEP events in the future. However, as the risk increases, it is anticipated that 19 properties may face the possibility of being inundated by a 1% AEP storm event in 2050. And these properties would be regularly inundated by 2100 or a sea level rise of 0.8m.

Over the long term, the risk of a 1% AEP storm event in 2100 will continue to escalate, leading to a significant number of additional houses being at risk of inundation, which include an additional 62

properties. As well, a larger amount of public infrastructure will also be susceptible to inundation as the timeframe progresses.

TABLE 24: VALUES OF PROPERTIES AT RISK (ADJUSTED CAPITAL, EXCLUDING LAND VALUES) – INUNDATION RISK

Asset	High Risk Hazard Band		Medium Risk Hazard Band		Low Risk Hazard Band	
	Capital Value ($)	Count	Capital Value ($)	Count	Capital Value ($)	Count
Private properties	0	0	8,297,500	18	35,577,500	79
Government-owned properties	0	0	102,500	1	103,300	2
Total	**0**	**0**	**8,400,000**	**19**	**35,680,800**	**81**

Source: SGS Economics and Planning, 2023

Note: Includes 20 properties that may be affected by a low risk of inundation on Morrisby Rd. Values have been estimated based on average prices for Site C.

Certain parts of the hiking trail are at risk at present day, and this will increase substantially over time with greater parts of the Crown land and public infrastructure at risk.

TABLE 25: VALUES OF PUBLIC INFRASTRUCTURE AT RISK – INUNDATION RISK

Asset	High Risk Hazard Band		Medium Risk Hazard Band		Low Risk Hazard Band	
	Capital Value ($)	Count	Capital Value ($)	Count	Capital Value ($)	Count
Boat Ramp	$0	0	$37,433	1	$37,433	1
Roads	$0	0	$110,934	0.27km	$489,050	1.19km
Hiking Track	$0	0	$26,144	0.3km	$26,144	0.3km
Total	**$0**	**N/A**	**$174,511**	**N/A**	**$552,627**	**N/A**

Source: SGS Economics and Planning, 2023

Note: Boat Ramp derived from costs of land backed wharve (precast concrete interlocking piles and reinforced concrete ground slab) (no electrical and water services), Roads based on composite price of suburban road with in situ concrete kerbs (6m wide), Trail calculated based on paved footpath (1500mm wide)

The study area has a relatively large parcel of foreshore Crown land which is particularly vulnerable to inundation, particularly the area adjacent to the hiking trail. Most highlighted in the table below is that inundation from a 1% AEP storm event poses a high risk to the present day.

TABLE 26: NON-VALUED ASSETS AT RISK – INUNDATION RISK

Asset	High Risk Hazard Band	Medium Risk Hazard Band	Low Risk Hazard Band
Open space (ha)	12.55	15.03	15.03

Source: SGS Economics and Planning, 2023

Approximately, 21 Aboriginal Heritage items are covered by high coastal inundation hazard bands in Site C. About four items are not at risk of inundation.

The northern inlets which are considered to have Very High integrated conservation values are also at risk from coastal inundation, high and medium hazard bands. This suggests that these wetlands and other natural values at these locations are vulnerable to sea level rise by between 2050 and 2100, if not affected by storm events prior. The threatened native vegetation clusters containing eucalyptus globulus and eucalyptus amygdalina dry forest and woodland communities are threatened by low to medium hazard bands for coastal inundation, indicating vulnerability to sea level rise by the end of the century. At the Derwent River foreshore walk, there is a pocket of medium integrated conservation value saltmarsh identified by CFEV that are covered by medium to high coastal inundation hazard bands.

5.6 Stormwater hazards

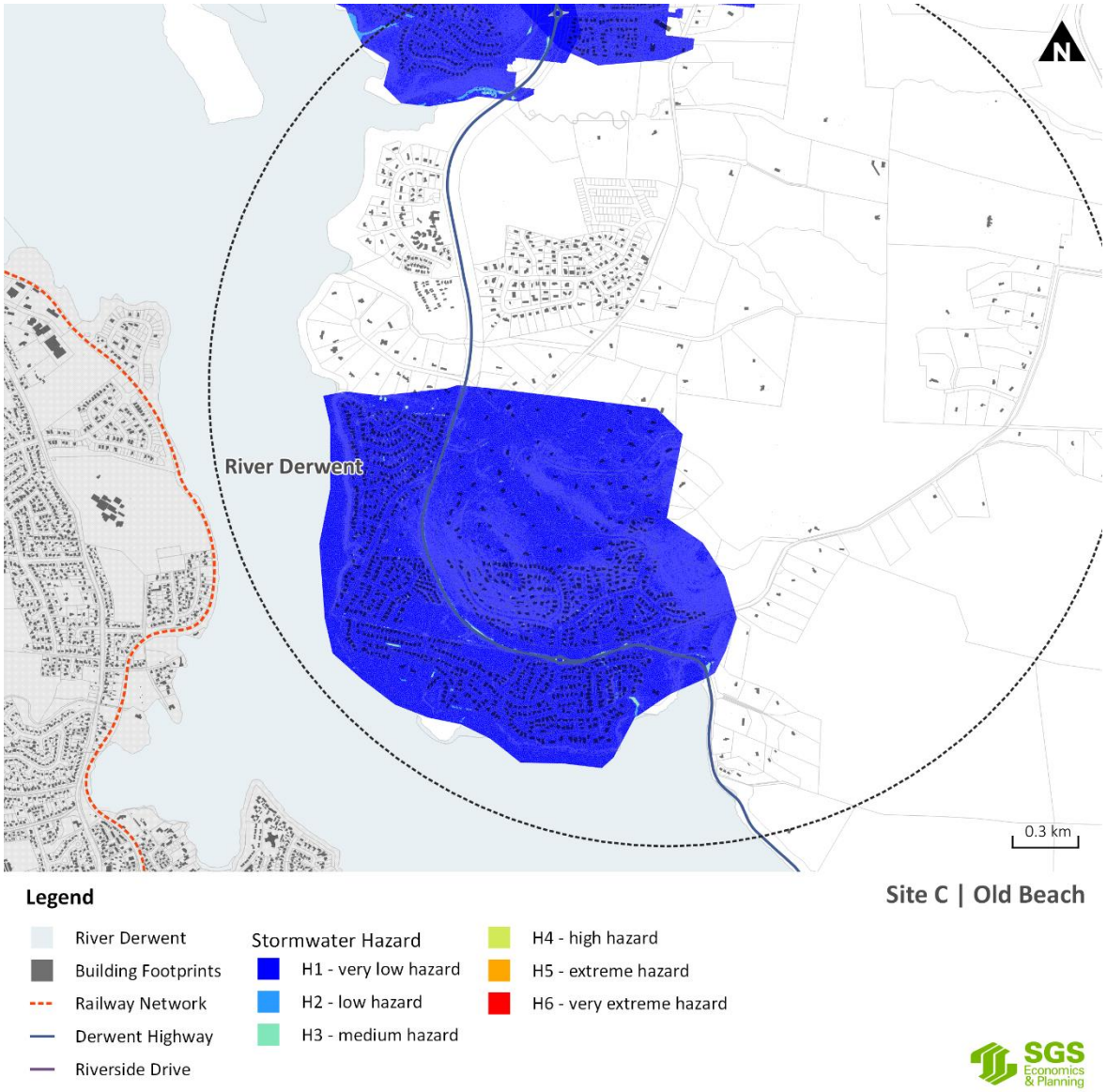
A significant area of land in Site C is vulnerable to stormwater drainage hazards (Figure 22). This area includes residential, recreational, and private uses. With sea level rise it is reasonable to assume that stormwater drainage issues, such as the need to manage stormwater via the overflow, will gradually increase over time. Contributing factors are increased water table and higher storm surges.

Several hundred houses and other buildings are at very low risk. Public infrastructure at very low risk includes the East Derwent Highway (State Government owned) and the Old Beach Jetty.

About 11 Aboriginal Heritage items are at a very low risk from Stormwater hazards.

The area of stormwater hazard overlaps with areas assessed with natural values ranging from lowest to moderate priority along the coastline, including the Old Beach saltmarshes.

FIGURE 22: SITE C - STORMWATER HAZARDS



Source: SGS Economics and Planning, 2023

5.7 Summary

Site C stands out as the most concentrated and densely populated area compared to the other sites and is home to a relatively larger community. Consequently, the risk of both coastal erosion and inundation, although primarily confined to the vicinity of the riverbank, is projected to have a more significant impact on the community residing in Site C. Despite numerous businesses and organisations located here, they are unlikely to be affected by coastal hazards as they are located inland away from hazards.

At present day, there are no residential properties potentially at risk of either erosion or inundation. As the potential for erosion and inundation escalates to the medium hazard band, approximately 20

residential properties may be impacted, with a total value of about $9.6 million. This value is expected to grow with a low-risk hazard band, whereby, a total of 101 properties is potentially at risk of erosion and inundation due to extreme events. The total value of these properties is around $47.1 million.

TABLE 27: VALUES OF PRIVATE PROPERTIES AT RISK (ADJUSTED CAPITAL, EXCLUDING LAND VALUES)

Asset	High Risk Hazard Band		Medium Risk Hazard Band		Low Risk Hazard Band	
	Capital Value ($)	Count	Capital Value ($)	Count	Capital Value ($)	Count
Private properties	0	0	9,500,000	20	46,998,300	100
Government-owned properties	0	0	102,500	1	103,300	1
Total	**0**	**0**	**9,602,500**	**21**	**47,101,600**	**101**

Source: SGS Economics and Planning, 2023

Site C is also home to public assets that is expected to be at risk of erosion, storm events and inundation, including roads, footpaths and a boat ramp.

TABLE 28: VALUES OF PUBLIC INFRASTRUCTURE AT RISK

Asset	High Risk Hazard Band		Medium Risk Hazard Band		Low Risk Hazard Band	
	Capital Value ($)	Count	Capital Value ($)	Count	Capital Value ($)	Count
Boat Ramp	0	0	126,294	1	126,294	1
Roads	4,917	0.0km	93,343	0.2km	1,079,989	2.6km
Track	22,761	0.2km	184,550	1.8km	243,382	2.4km
Total	**153,971**	**N/A**	**404,187**	**N/A**	**1,449,664**	**N/A**

Source: SGS Economics and Planning, 2023
Note: Boat Ramp derived from costs of land backed wharve (precast concrete interlocking piles and reinforced concrete ground slab) (no electrical and water services), Roads based on composite price of suburban road with in situ concrete kerbs (6m wide), Trail calculated based on paved footpath (1500mm wide)

The foreshore is expected to be at risk of erosion, storm events and inundation, summarised in the following table.

TABLE 29: NON-VALUED ASSETS AT RISK

Asset	High Risk Hazard Band	Medium Risk Hazard Band	Low Risk Hazard Band
Open space (ha)	12.83	15.61	19.65

Source: SGS Economics and Planning, 2023

12 Aboriginal Heritage items are at varying risks from coastal erosion, while 21 are at high risk from inundation. About 11 Aboriginal Heritage items are at a very low risk from stormwater hazards.

Site C is home to a variety of natural values, including threatened native vegetation communities, in particular wetlands in the north of the site, which include inlets that are considered to have Very High integrated conservation value. These natural values are particularly vulnerable to both coastal erosion – being at risk of coastal recession currently – and coastal inundation, with sea level rise posing the risk of submerging the sites by between 2050 and 2100.

6. Adaptation pathways

6.1 Overview

Adaptation pathways consist of complementary options that can be implemented simultaneously and consecutively over time to manage coastal risk and protect values. Adaptation pathways may vary from 'protect at all cost' to 'planned retreat' and anything in between. Each pathway has its own consequences. For example, the construction of levees may protect property from floods and erosion but reduce the recreation and natural values of the foreshore. A retreat pathway could mean that an area at risk may no longer be suitable for residential or recreational purposes but natural values may be retained.

Pathways are described further in the following section.

6.2 Pathways considered

Business as usual

This pathway may also be referred to as the 'do nothing' pathway, however it would be an active decision to follow it. Doing nothing comes with its own costs and consequences, such as the forced retreat of housing, infrastructure and services from the affected coastline, as well as any damage caused to the natural and built environments as a result of the increasing severity of coastal hazards. Recurrent repair costs for affected properties would build up without the intervention of adaptation measures.

Pathway 1 – minimum intervention

This pathway allows maximum freedom for natural foreshore processes to unfold with a minimum of intervention from existing or new development, or flood and erosion protection works. Where erosion threatens structures with failure in the short term, they would be removed. Likewise, where inundation repeatedly impacts a property, it would eventually become not worth repairing and would likely be abandoned. Little to no development would be allowed in hazard areas, and there would be no intensification in existing at-risk areas.

Property owners would be allowed to take action that extends the life of their existing structures, within their own property boundary if it has no impact on adjacent properties or areas. Filling and raising land would generally not be allowed, nor would hardening shorelines with rocks or concrete or even dune or beach nourishment.

Implications and Costs under pathway 1

The most significant costs would be the loss of the foreshore walkway and of residential land as a result of retreat (in the ballpark of $16 million). Management options, for which the costs are uncertain, include vegetation management, emergency management planning, managed retreat (deconstruction

and decommissioning structures and services) and the fact that (infill) development would no longer be allowed, which could result in an opportunity cost for some properties.

Specifically, the potential implications and costs of pathway 1 are:

- Flood/erosion damages to the walkway
- Flood/erosion damage expenses to dwellings, sheds and other structures. The amount depends upon level of reinvestment/maintenance of property in hazard areas, degree of investment in protection, effectiveness of warnings and community response
- Land value lost to current owners
- Emergency services expenditure (limited if residents leave before major event- unlikely; higher if leave after major event, but depending on effectiveness of emergency planning)
- Some other infrastructure reconfiguration
- Reduced community use and sense of place due to loss of walkway and foreshore access.
- Psychological impact of 'decline' of a coastal community

Pathway 2 – protecting the coast

This pathway concentrates on protecting the existing future community and property. It assumes that the rate and extent of change in erosion and inundation hazards will be manageable using any necessary protection and adaptation options. This includes some of the adaptation measures not permitted under the previous pathway, including filling and raising land, rock revetment and seawall construction. It is assumed that these adaptation measures would be paid for, at least in part by the beneficiaries; the property owners.

Intensification is permitted where it does not compromise community values for the suburb, and can be proven to be safe given the adaptation measures taken. Intensification of residential development enables more parties to contribute to the costs of protection. While natural areas may be affected, they will adapt in their own way or become modified in ways that the community accepts.

How might things proceed with this pathway?

The foreshore public open space area will be made more amenable and have higher recreation values. The foreshore along the Old Beach Foreshore Trail will need, in addition to vegetation management, to be hardened with a rock revetment to prevent ongoing erosion, which is likely needed around 2030.

Hardening of the shore would protect the community from shoreline erosion and recession for a long time (but not indefinitely). A revetment would reduce the need for individual properties to address erosion hazards. The costs of the revetment, to be borne by those who benefit from it, are substantial. Significant intensification of development would be a means to reduce the burden of costs per property owner. This would change the character of the neighbourhood. The foreshore around the Old Beach Boat Ramp and to the north along Jetty Road, may need armouring to prevent undermining of foreshore properties.

New development and redevelopment/major extensions would be required to be built in a way to withstand erosion risks for the lifetime of the asset and/or with the floor above the expected maximum annual high tide for the lifetime of the structure plus a freeboard allowance.

The low-lying land that is susceptible to inundation, now and in the future, would need to be filled and infrastructure and services would need to be raised as they become exposed to inundation risks. To prevent adverse effects on adjoining residential properties there will be a need for a stormwater drainage plan which allows parts of the neighbourhood to be filled and raised gradually over time. Consistent filling of land will also minimise overflowing issues with septic systems.

Areas potentially becoming wetlands (if not filled) would be filled to allow for intensification of development in the community. This could have impacts on flood risks from stormwater due to rainfall. There would be a need to invest in stormwater drainage channels/pipes as flow dynamics may be altered due to the filling of land. The reclamation of wetland areas increases the value of land from what is typically for environmental land to the value of low and medium density residential land. The cost of filling the land may be offset by rezoning and related value uplift.

Likely options within this pathway

The main options within this pathway are: vegetation management, revetment wall and raising land and infrastructure assets.

FIGURE 23: EXAMPLES OF OPTIONS ALLOWABLE UNDER PATHWAY 2

Armouring river banks NSW

Rock revetment that is aesthetically pleasing, Hawkesbury River

Fill to raise land levels

Improved stormwater drainage

Other implications and costs include:

- Reduced flood/erosion direct and indirect damage expenses (private and public property)
- Much less property lost

- Reduced emergency services expenditure
- Community value of enhanced foreshore recreation value
- Some other infrastructure reconfiguration.

6.3 Community feedback on pathways

Through a community workshop held on 7th November 2023, participants explored the consequences of following the above pathways, including the positive and negatives and how would the pathway happen?

Participants were generally more supportive of Pathway 2 that protects the existing and future assets and community values, especially for site C where there are a greater number of assets to protect. Participants were receptive to Pathway 1 for Site A, where there are fewer built assets to protect. Table 30 summarises discussions on each pathway.

TABLE 30: COMMUNITY FEEDBACK ON PATHWAYS 1 & 2

	Adaptation pathway 1	Adaptation pathway 2
Description	Maximum freedom of natural foreshore processes is allowed to unfold with minimum intervention or resistance	Protecting existing and future community and property using any necessary protection and adaptation options
Pros	▪ It allows current residents to take action ▪ Less impact on wildlife (compared to pathway 2) ▪ It provides an opportunity for community to work together, demonstrating collective responsibility ▪ Aboriginal Middens are left as they are ▪ Brighton Council would be invested in planning to find solutions (prevention before crisis)	▪ Properties and the foreshore would be protected ▪ Allow for intensification of development, therefore enabling more participants to contribute to the costs of protection works ▪ Protection works could help to stabilize insurance costs ▪ IT would protect community values of shared, recreational spaces such as the river path and jetty ▪ Costs could be shared more easily between stakeholders (including state and local government) ▪ It provides an opportunity to invest in stormwater waste management for all of Brighton municipality ▪ It is an opportunity for Bright Council to be 'ground-breakers' and leaders of climate action along with property owners
Cons	▪ The foreshore walkway and recreation areas would be lost ▪ Loss of saltwater marshes ▪ There would be a risk of flooding ▪ Homeowners would be liable ▪ There would be cost implications for some residents ▪ It would not address stormwater issues ▪ Properties may lose value and/or become unsellable	▪ The cost of protection works ▪ The inconvenience of protection works caused to residents ▪ There are potential unknown consequences in this pathway, such as, the consequences of protection works on the environment. The protection works could result in changed to the river which may impact the saltmarshes and river flow ▪ It may take too long to formulate solutions

	Adaptation pathway 1	Adaptation pathway 2
	▪ Residents may not have the opportunity to stay in their homes ▪ There would be limited opportunity for residents to protect their property ▪ Other stakeholders (organisations, local government) may install infrastructure and not share it with the community	▪ There is potential for lobby groups, or others, to influence the outcomes of this pathway ▪ The protection works rely on expert advice, which may be inconsistent and result in different strategies to mitigate issues
Further considerations and requirements	▪ Further community consultation would be required to meet a consensus on the pathway ▪ Who gets to determine property value? ▪ What level of government assistance is expected? ▪ What recreation spaces will replace the loss of the walkway and/or jetty? ▪ Council would need to be transparent, continually updating the community on the process ▪ There should be research on how other local areas are addressing similar issues ▪ Council and government could formulate policy and guidelines for homeowners to take action ▪ A federal strategy could provide greater guidance ▪ There could be a land swap incentive for affected properties	▪ A levy and/or rates ▪ Tas Rail should pay to protect existing rail infrastructure ▪ There needs to be continuous community engagement and stakeholder engagement, whereby everyone is given an equal voice ▪ The wellbeing areas of the riverfront should be promoted to the broader community to help them understand why it is important to protect

Source: SGS Economics and Planning, 2023

7. Cost benefit analysis

7.1 Overview

To understand which pathway may generate the best overall outcomes to the community, a Cost-Benefit Analysis (CBA) is a useful economic appraisal tool. CBAs compare the costs and benefits of a base case against a project case(s). The Net Present Value (NPV) represents the incremental benefits generated in the project case less the incremental costs incurred. That is, the benefits and costs realised above what would have been realised in the base case. Likewise, the Benefit-Cost Ratio (BCR) represents the incremental benefits divided by the incremental costs, otherwise, the return on investment.

- Base Case: Business as Usual (BaU) or doing nothing (i.e. not managing the risk)
- Project Case 1: Adaptation pathway 1
- Project Case 2: Adaptation pathway 2

While performance indicators like BCR and NPV are relevant, it should be stressed that not all costs and benefits can be expressed in dollar terms. Community wellbeing, social cohesion and preservation of Aboriginal heritage are just a few values that have not been expressed in dollar terms in this study, which is not an indication that they are less important than those benefits that have been monetised. The performance indicators should be interpreted in combination with the qualitative valuation of these important attributes.

In addition, planning for adaptation is subject to a range of uncertainties:

- The rate and level of climate change induced impacts, i.e. sea level rise and coastal erosion. Climate change and its impacts are now fairly well understood. But the exact amount of change by for instance 2050 and 2100 is still somewhat uncertain.
- The interaction with other changes, climate related or not, such as a trend towards more extreme rainfall events and its impact on drainage and flows in streams.
- The effectiveness of adaptation options and the costs.
- Changes in the world around us in terms of economic growth, demographic change and technological change.

The adaptation actions examined in this CBA have been derived by a literature review, but more accurate results could be derived with an engineer making site-specific estimates.

Our sensitivity analysis shows how adaptation options and their effectiveness may be impacted by these uncertainties.

7.2 Costs and Benefits

This section describes the costs and benefits of the two adaptation pathways for each of the three sites; and makes recommendations in relation to the preferred way forward.

The Types of Costs and Benefits

TABLE 31: COST ITEMS FOR BASE CASE AND ADAPTATION PATHWAYS

Base Case – Do nothing	Pathway 1: Foreshore increasingly erodes and community retreats early	Pathway 2: Protect development and support intensification as long as possible
Emergency management planning	Emergency management planning	Filling low-lying land to raise land levels and relocation of infrastructure and services
	Vegetation management	Investment in stormwater drainage infrastructure
	Property owners acting withing their property boundaries	Rock revetment OR Seawall construction to prevent erosion
	Installation of Culverts	Installation of Culverts
		Vegetation management

Source: SGS Economics and Planning, 2023

For the purposes of this CBA, the cost items presented Table 31 above have been grouped into a single item called adaptation costs for each of the base case and adaptation pathways. This is in order to examine the incremental costs incurred in each pathway above that which would have been incurred in the base case.

TABLE 32: BENEFIT ITEMS FOR BASE CASE AND ADAPTATION PATHWAYS

Pathway 1: Foreshore increasingly erodes and community retreats early	Pathway 2: Protect development and support intensification as long as possible
Avoided damage costs from reduced hazards	Avoided damage costs from reduced hazards
Retained natural values	Retained natural values
Improved community wellbeing	Land value uplift
	Improved community wellbeing

Source: SGS Economics and Planning, 2023

Details about the valuation of these costs and benefits are covered in Appendix D.

Costs – Site A

Base case

The base case is the 'do-nothing' scenario, and therefore, there are no adaptation costs relating to the prevention of the impacts of coastal erosion and inundation. However, it is assumed that investment in emergency management planning would occur in the form of a community awareness and evacuation program. This would not prevent any damage to the land or structures that are threatened, but would allow residents to safely evacuate in the event of flooding in particular, which will become more common over the remainder of the century. This costs $139,130 to establish (assumed to be in 2030), and $6,956 a year to maintain from then on. This is presented in Table 33 below.

TABLE 33: ADAPTATION COSTS UNDER THE BASE CASE, SITE A, 2024-2100

Adaptation	Lifecycle cost*	Present value*
Community awareness and evacuation program	$626,000	$158,000

Source: SGS Economics and Planning, 2023
* rounded to the nearest $1,000

Pathway 1

As above, there is an investment in a community awareness and evacuation program to protect residents. Given that this cost is incurred in both the base case and pathway 1, it would be excluded from the analysis of this pathway as it is not an *incremental* cost. Other adaptation actions aimed at preventing damage from coastal inundation and erosion are applicable in this pathway, which are incremental costs to the base case. Across all sites, this includes, vegetation management, which would occur along the coast that is vulnerable to coastal erosion. The entire coastline in Site A is currently exposed to the high hazard band of coastal erosion. Wetlands would need to move landward. The installation of culverts would enable this. In Pathway 1, this has been assumed to occur in 2030, until which, some of the natural values of the wetlands may be lost. The total cost of adaptation pathway 1 is presented in Table 34 below.

TABLE 34: ADAPTATION COSTS UNDER PATHWAY 1, SITE A, 2024-2100

Adaptation	Lifecycle cost*	Present value*
Community awareness and evacuation program	$626,000	$158,000
Vegetation management	$3,687,000	$747,000
Installation of culverts	$2,087,000	$934,000
Incremental costs	**$5,774,000**	**$1,681,000**

Source: SGS Economics and Planning, 2023
* rounded to the nearest $1,000

Pathway 2

Pathway 2 is focussed on protecting private property. While there are no private properties that fall within the respective hazard bands for coastal erosion and inundation, the severe risk posed to the wetlands that are the backyard of these properties suggests that in this pathway, houses would still opt for protection. This means that the land of these properties is filled and raised above flood levels, as well as to fortify it against coastal erosion. Likewise, foreshore hardening would occur along the affected coastline. This would mean that the wetlands would be completely lost, while the properties would be protected. The costs are presented in Table 35 below.

TABLE 35: ADAPTATION COSTS UNDER PATHWAY 2, SITE A, 2024-2100

Adaptation	Lifecycle cost*	Present value*
Community awareness and evacuation program	$626,000	$158,000
Vegetation management	$461,000	$369,000
Filling and raising land	$1,316,000	$924,000
Foreshore hardening	$14,567,000	$9,707,000
Incremental costs	**$16,344,000**	**$11,000,000**

Source: SGS Economics and Planning, 2023
* rounded to the nearest $1,000

Benefits – Site A

This section describes the benefits of the adaptation pathways for Site A against the base case, i.e. the do nothing scenario.

Avoided damage costs

Pathway 1

In pathway 1, it is assumed that as sea level rises and the wetlands slowly becomes wetter, the culverts are installed, and that the wetlands have the ability to move landward, channelled to safer, higher ground, north of the railway track. Other benefits, such as community wellbeing and land value uplift are not applicable to Site A as there are no private properties at risk. The rail line between the wetlands and private properties is at risk, however. It is assumed that the installation of culverts as well as other techniques like vegetation management have some mitigating effect on damage to the railway line, and so half of potential damage to it has been modelled to be avoided.

The natural values of the wetlands at Site A have not been specifically valued, although wetlands can be of significant monetary value in certain contexts. A 2014 US study[26] found that the median value which

[26] Costanza, R., De Groot, R., Sutton, P., Van der Ploeg, S., Anderson, S. J., Kubiszewski, I., ... & Turner, R. K. (2014). Changes in the global value of ecosystem services. Global environmental change, 26, 152-158.

is $12,163 per hectare per year (A25,343 today). However, there is no detailed understanding of the ecological values of the wetlands at Site A. The benefit is shown in Table 36 below.

TABLE 36: AVOIDED COST OF RISK UNDER PATHWAY 1, SITE A 2024-2100

Avoided cost of risk	Lifecycle cost*	Present value*
Avoided cost of risk (rail line)	$1,467,000	$157,000

Source: SGS Economics and Planning, 2023
* rounded to the nearest $1,000

Pathway 2

In pathway 2, interventions are taken to protect private property, rather than the wetlands. This means that the potential loss of natural values is not avoided, as the wetlands would be inundated and lost while protections would be implemented further inland, where there are private properties.

As there are no private dwellings at risk, the only asset at risk to inundation is the rail line in the medium to long term. The benefit of the avoided damage is presented in Table 37 below. However, as SGS has been unable to consult with TasRail, the cost of risk may be under- or overestimated.

TABLE 37: AVOIDED COST OF RISK UNDER PATHWAY 2, SITE A, 2024-2100

Avoided cost of risk	Lifecycle cost*	Present value*
Avoided cost of risk (rail line)	$2,834,000	$313,000

Source: SGS Economics and Planning, 2023
* rounded to the nearest $1,000

Improved community health and wellbeing

With no private properties or community infrastructure at risk at site A, there is a negligible impact on community health and wellbeing.

Retention of foreshore amenity

There is significant foreshore amenity in Site A, due the presence of the wetlands and salt marshes on the banks of the River Derwent. The loss of wetlands would likely reduce the amenity of the foreshore for residents, in a similar way as the base case.

Costs – Site B

Base case

The base case in Site B is the same as the base case in Site A, as it is the 'do-nothing' scenario.

Pathway 1

As above, there is an investment in an community awareness and evacuation program to protect residents. In addition, adaptation actions are aimed at preventing damage from coastal inundation and

erosion. This includes, most notably, vegetation management. Under pathway 1, all coastline exposed to erosion.

Both north and south of the bridge several private properties are at risk of erosion and inundation in the short, medium and long term. 18 are at risk by 2050, and 21 are at risk by 2100.

Property owners would be able to act within their property boundaries to protect their assets from the coastal hazards under this pathway. They would not be allowed to harden foreshore under this pathway. Rather, they would be allowed to undertake vegetation management, raise buildings, move buildings out of harm's way and/or protect them with flood skirts. The total cost of adaptation pathway 1 is presented in Table 38 below, and estimated to have a present value of approximately $1 million.

TABLE 38: ADAPTATION COSTS UNDER PATHWAY 1, SITE B, 2024-2100

Adaptation	Lifecycle cost*	Present value*
Community awareness and evacuation program	$626,000	$158,000
Vegetation management	$3,461,000	$611,000
Property owners' adaptation	$1,171,000	$363,000
Incremental costs	**$4,632,000**	**$974,000**

Source: SGS Economics and Planning, 2023
* rounded to the nearest $1,000

Pathway 2

Pathway 2 involves a series of more capital-intensive adaptation measures aimed at protecting the private property at risk of erosion and inundation.

There are 18 properties directly on the foreshore north of Bridgewater Bridge, intersected by medium-to-high hazard bands. To the south of it, a further three properties are at low-to-medium risk. Table 45 below presents the cost estimates for the options. Given that there are more intensive protective measures in place in pathway 2 for site B, it is assumed that there would not be a need for a community awareness and evacuation program, as the intention of this pathway would be to prevent damage to residential property.

Low lying areas will be filled and provided with improved stormwater drainage. The rock revetment will be placed along the foreshore areas that are susceptible to erosion once the erosion risk becomes too high. Until that time, erosion will be managed through vegetation management. Foreshore hardening would be implemented at the sites of most acute need. In site B, this would be to the north of Bridgewater Bridge and has been assumed to occur in 2030, due to several properties being at high risk already. These cost items are demonstrated in Figure 24 in Appendix D, while the cost items are shown in Table 39 below.

TABLE 39: ADAPTATION COSTS UNDER PATHWAY 2, SITE B, SITE B, 2024-2100

Adaptation	Lifecycle cost*	Present value*
Property owners' adaptation	$1,171,000	$363,000
Foreshore hardening	$8,170,000	$3,169,000
Stormwater drainage investment	$2,446,000	$352,000
Vegetation management	$2,265,000	$368,000
Incremental costs	**$13,501,000**	**$4,165,000**

Source: SGS Economics and Planning, 2023
* rounded to the nearest $1,000

Benefits – Site B

Avoided damages

Pathway 1

In pathway 1, shoreline recession will result in some loss of land over time similar to the base case. Adaptation does enable private properties to be occupied for longer resulting in avoided damages compared to the base case. The present value of avoided damages is around $573,000 (Table 40).

TABLE 40: AVOIDED DAMAGES UNDER PATHWAY 1, SITE B 2024-2100

Avoided cost of risk	Lifecycle cost*	Present value*
Avoided cost of risk (capital value)	$13,573,000	$573,000

Source: SGS Economics and Planning, 2023
* rounded to the nearest $1,000

Pathway 2

In pathway 2, it is assumed that where foreshore hardening occurs, all damage from coastal erosion and inundation is able to be prevented, provided there is adequate expenditure on maintenance and repairs of the preventative infrastructure. This means that residents would be protected from being forced to demolish or relocate their dwellings. Therefore, the benefit exists of avoided damages and avoided need to demolish and relocate. The present value of avoided costs is approximately $3.2 million compared to the base case. This is shown in Table 41.

TABLE 41: AVOIDED COST OF RISK UNDER PATHWAY 2, SITE B, 2024-2100

Avoided cost of risk	Lifecycle cost*	Present value*
Avoided cost of risk (capital value)	$20,583,000	$886,000
Avoided loss of property value	$2,612,000	$66,000
Avoided relocation costs	$26,996,000	$2,231,000
Incremental benefit	**$50,191,000**	**$3,183,000**

Source: SGS Economics and Planning, 2023
* rounded to the nearest $1,000

Avoided cost of risk represents the damage that would be avoided by the adaptation measures taken. For example, if filling and raising a property successfully protects it from a coastal inundation event, then the damage avoided would be avoided cost of risk.

Avoided loss of property value refers to those properties that would not be abandoned under pathway 2 as they have been successfully protected from coastal erosion by the adaptation measures taken. Likewise, when properties would be abandoned under the base case, the residents would also have to relocate. Avoided relocation costs represents the benefit of not being forced to relocate away from the coast.

Land value uplift

There are no vacant lots in Site B that would be able to be developed under either pathway. Development should be discouraged along the coast in this highly constrained area.

Improved community health and wellbeing

The mental health impacts of repeated exposure to climate hazards has been quantified by NSW Treasury in their flood CBA tool technical note[27]. The cumulative mental health cost for a flood event that is less than 30cm above floor level is $5,331 per household. For a flood event between 30cm and 1 metre above floor level, this cost rises to $8,586, and for floods over 1 metre, $11,651. SGS has assumed the middle figure of $8,586 to represent the mental health impacts of a flood on each household.

The improvement in terms of avoided mental health costs is the highest for pathway 2, as more property is protected. This is presented in Table 48 below with a mental health benefit for pathway 2 of $33,000 (present value), and $19,000 for pathway 1 (Table 42).

[27] https://www.treasury.nsw.gov.au/sites/default/files/2023-10/20231030_flood-cost-benefit-analysis-tool_technical_note.pdf

TABLE 42: IMPROVED COMMUNITY WELLBEING - MENTAL HEALTH - IN EACH PATHWAY, SITE B, 2024-2100

Benefit	Lifecycle cost*	Present value*
Pathway 1	$659,000	$19,000
Pathway 2	$997,000	$33,000

Source: SGS Economics and Planning, 2023
* rounded to the nearest $1,000

Aboriginal Cultural heritage

Shell middens are collections of remains of meals of shellfish once gathered and eaten by Aboriginal people on the foreshore. Though they have not been quantified, they are protected by law, by the *Aboriginal Heritage Act 1975*, and therefore protection of this Tasmanian Aboriginal cultural heritage should be considered when determining the best adaptation pathway. It is important to understand the preferred methods of preservation of these shell middens, which do not necessarily entail protecting the physical materials. In fact, some of the more intensive adaptation actions like rock revetment could actually redirect damage to other parts of the coast which could contain other sites of cultural importance.

There are six known Aboriginal cultural heritage items that are intersected by the coastal inundation hazard bands in Site B. Under the base case, these shell middens would inevitably be destroyed. Under pathway 1, these shell middens may be protected from the impacts of coastal inundation, however as sea level rise continues to increase over the rest of the century, these sites would inevitably be inundated. Under pathway 2, rock revetment would protect these sites, and their loss may be slowed by the interventions taken. Given that there are likely to be undiscovered shell middens, it is also possible that the interventions themselves could damage some sites. However, this would still be the best scenario for physically protecting these sites.

Reduced emergency services expenditure

Emergency services expenditure after a natural disaster will vary depending on the severity and spread of the impacts, as well as what type of response is required, which cannot be predicted accurately over a long period of time. The Australia Government Disaster Recovery Payment (AGDRP) provides a single payment for residents adversely affected by the floods that affected Tasmania in October 2022, of $1,000 per adult and $400 per child, which can be taken as a proxy for disaster recovery expenditure.

However, the NSW treasury guidelines for flood CBAs suggest that emergency management - including the cost of evacuations, rescue and supply of essential goods and services – should not be included[28], and therefore, this benefit has not been quantified.

[28] https://www.treasury.nsw.gov.au/sites/default/files/2023-10/20231030_flood-cost-benefit-analysis-tool_technical_note.pdf, table 11

Costs – Site C

Base case

The base case in Site C is the same as the base case in Sites A and B, as it is the 'do-nothing' scenario.

Pathway 1

As above, there is an investment in a community awareness and evacuation program to protect residents. In Site C, there is an area of rocky shore that is already relatively protected from coastal hazards as shown in Figure 25 in Appendix D. Vegetation management would mostly occur along the along the foreshore walkway, as well as at some high risk inlets in the north of the site. Property owners would also be able to act within their own boundaries to protect their assets from the coastal hazards. The total cost of adaptation pathway 1 is presented in Table 43 below, and is estimated to be close to a present value of $800,000.

TABLE 43: ADAPTATION COSTS UNDER PATHWAY 1, SITE C, 2024-2100

Adaptation	Lifecycle cost*	Present value*
Community awareness and evacuation program	$626,000	$158,000
Vegetation management	$3,254,000	$498,000
Property owners' adaptation	$2,211,000	$296,000
Incremental costs	**$5,464,000**	**$794,000**

Source: SGS Economics and Planning, 2023
* rounded to the nearest $1,000

Pathway 2

In pathway 2 Low lying areas will be filled and provided with improved stormwater drainage. The rock revetment will be placed along the foreshore areas that are susceptible to erosion once the erosion risk becomes too high. Until that time, erosion will be managed through vegetation management. As Figure 25 in Appendix D shows, the coastline along which the foreshore walkway runs, is predominantly covered by high hazard band for coastal erosion, and this is where foreshore hardening such as rock revetment would be implemented, assumed to occur first in 2030. It would be further extended around 2050 to cover areas exposed to the medium hazard band. The cost items presented in Table 44 below.

TABLE 44: ADAPTATION COSTS UNDER PATHWAY 2, SITE C, 2024-2100

Adaptation	Lifecycle cost*	Present value*
Property owners' adaptation	$2,211,000	$296,000
Rock revetment	$9,964,000	$4,196,000

Adaptation	Lifecycle cost*	Present value*
Stormwater drainage investment	$2,446,000	$352,000
Vegetation management	$232,000	$123,000
Incremental costs	**$14,227,000**	**$4,809,000**

Source: SGS Economics and Planning, 2023
* rounded to the nearest $1,000

Benefits Site C

Avoided damages

Pathway 1

In pathway 1, some damage to the properties is avoided, while the land is eventually lost due to erosion. Impacted houses will have to be abandoned and demolished or relocated. The avoided damages have a present value of $578,000 (Table 45).

TABLE 45: AVOIDED COST OF RISK UNDER PATHWAY 1, SITE C, 2024-2100

Avoided cost of risk	Lifecycle cost*	Present value*
Avoided cost of risk (capital value)	$20,565,000	$578,000

Source: SGS Economics and Planning, 2023
* rounded to the nearest $1,000
** Not included as the value of wetlands is unknown

Pathway 2

In pathway 2, it is assumed that the interventions can prevent all damage from coastal erosion and inundation, provided there is adequate expenditure on maintenance and repairs of the preventative infrastructure. It also means that residents would be protected from being required to demolish or relocate their dwellings. The benefit is shown Table 46 below.

TABLE 46: AVOIDED COST OF RISK UNDER PATHWAY 2, SITE C, 2024-2100

Avoided cost of risk	Lifecycle cost*	Present value*
Avoided cost of risk	$35,697,000	$1,224,000
Avoided loss of property value	$4,548,000	$109,000
Avoided relocation costs	$20,766,000	$168,000

Avoided cost of risk	Lifecycle cost*	Present value*
Incremental benefit	$61,011,000	$1,502,000

Source: SGS Economics and Planning, 2023
* rounded to the nearest $1,000

Land value uplift

There is no land value uplift in the base case or under pathway 1.

Pathway 2

Pathway 2 would enable 11 currently undeveloped lots to be developed without substantial protection or engineering works to reduce risk exposure.

Assuming these lots would gradually be developed over time under pathway 2, there is a land value uplift of $423,498[29] per lot compared to the base case. The cumulative net benefit is around $3.4 million as presented in Table 47.

TABLE 47: LAND VALUE UPLIFT UNDER PATHWAY 2, 2024-2100

Benefit	Lifecycle benefit	Present value
Value of developed land	$4,658,000	$3,398,000

Source: SGS Economics and Planning, 2023
* rounded to the nearest $1,000

Improved community health and wellbeing

Both pathway 1 and 2 would reduce the repeated exposure of the community to floods. As explained earlier, this helps preventing mental health and wellbeing costs. The avoided health costs are greater for pathway 2 as private property is protected and adds up to $39,715 to 2100. For pathway 1 it is estimated to be lower around $17,637. This is presented in Table 48 below.

TABLE 48: IMPROVED COMMUNITY WELLBEING - MENTAL HEALTH - IN EACH PATHWAY, 2024-2100

Benefit	Lifecycle cost	Present value
Base Case	$0	$0
Pathway 1	$524,356	$17,637
Pathway 2	$1,251,175	$39,715

Source: SGS Economics and Planning, 2023

[29] The average capital improved value of houses along the Brighton foreshore – data provided by Brighton Council

* rounded to the nearest $1,000

Retained natural values

Due to the additional vegetation management, both pathways generate benefits in terms of improved natural values, compared to BaU. Under pathway 1, the saltmarsh would be able to migrate landward and its values may be retained in the long term. Under pathway 2, the saltmarshes would not be able to migrate landward as a result of rock revetments.

Aboriginal Cultural heritage

There are 25 known Aboriginal cultural heritage items within Site C at risk of inundation between now and 2100, and 10 that are at risk from erosion by 2100.

Under the base case, these shell middens would inevitably be lost. Under pathway 1, some of these shell middens would be protected from the impacts of coastal inundation, however as foreshore recession continues to worsen over the rest of the century, the 10 known sites would eventually be lost in the same way as the base case.

Under pathway 2, while erosion may be slowed by the interventions taken, shell middens would still be threatened if they are between the shore and the foreshore hardening (assuming foreshore hardening itself would avoid damaging the middens).

Retention of foreshore amenity

The Derwent foreshore walkway along Old Beach anecdotally provides significant amenity to local residents and is an important part of Brighton's character. Given that there is no available data on visitation and use of the foreshore walkway, it was not possible to monetise the recreation and wellbeing benefit of the continued use of the foreshore walkway. It is clear from consultation that this walkway is highly valued. The benefits of walking are estimated to be $4.40 per person per kilometre[30], which could be substantial, depending on the level of use of the foreshore walkway.

Under pathway 1, as well as the base case, the foreshore walkway would by 2050, be susceptible to a 1% AEP flood event, and it would be reasonable to conclude that the amenity of the foreshore walkway would have been reduced to some degree by mid-century, and entirely lost by the end of the century.

Under pathway 2 however, while the foreshore walkway would be protected and the benefits of its prolonged use would be enjoyed by the entire community.

Reduced emergency services expenditure

Emergency services expenditure after a natural disaster will vary depending on the severity and spread of the impacts, as well as what type of response is required, which cannot be predicted accurately over a long period of time.

7.3 Results

The costs and benefits included in this analysis are high-level and should be taken as indicative. Nevertheless, the results of the analysis provide useful insight into the relative performance of each

[30] Australian Transport Assessment and Planning Guidelines, M4 Active Travel, Table 6

pathway. That is, the return on investment in adaptation pathways, the benefits of which manifest predominantly as avoided damage from coastal hazards up to 2100. Further planning stages would require site-specific designs and engineering appraisals and costings.

There are also many unquantified benefits, because they cannot be monetised appropriately, or because of a lack of data. However, they are of equal weight to the quantified benefits and should be considered in addition to the results presented in Table 49 below.

For some benefits that have not been quantified, qualitative assessments have been made for each pathway, with more '+'s representing a relatively better outcome. A '-' represents a neutral outcome, i.e., no difference from the base case.

Neither pathway provides a positive NPV or a BCR greater than 1 at any of the three sites. However, this does not imply that the adaptation pathways are unsuitable investments. The NPV does not include the benefits that could not be monetised, including retention of natural values and foreshore amenity.

It is critical to understand that the negative NPV's of each pathway at each site do not mean that the pathways represent worse outcomes than the base case. In the base case, not only would there be no avoided cost of risk, all of the non-monetised benefits would also not be realised, undoubtedly leading to worse outcomes for the Brighton community. It is the lack of quantitative values for these benefits that leads to the negative NPV, rather than poor investments.

Pathway 2 provides greater benefits to sites B and C, given the significant presence of private property at risk in these sites, while at Site A, it is primarily the wetlands that are at risk. It suggests that the higher intensity adaptations pursued in pathway 2 are better suited to those areas where private property is at risk. Pathway 1 is the preferred option at Site A, not only because of its much lower cost, but also because it would facilitate the retention of the wetlands, which has not been quantified. Had the wetlands economic value been quantified, it would only strengthen the case for pathway 1 as the preferred option for site A. Table 49 below presents these results.

TABLE 49: COST-BENEFIT ANALYSIS RESULTS FOR EACH ADAPTATION PATHWAY, ALL SITES

Incremental costs ($ millions)	Pathway 1			Pathway 2		
	Site A	Site B	Site C	Site A	Site B	Site C
Adaptation costs	1.68	0.97	1.15	11.00	4.16	5.17
Incremental benefits ($ millions)						
Avoided cost of risk	0.16	0.57	0.58	0.31	3.18	1.50
Land value uplift	0	0	0	0	0	3.40
Improved community wellbeing	+	0.02	0.02	++	0.03	0.04
Retained natural values	+++		+++	-		-

Incremental costs ($ millions)	Pathway 1			Pathway 2		
	Site A	Site B	Site C	Site A	Site B	Site C
Retained Aboriginal cultural heritage	-	+	+	-	++	++
Retention of foreshore amenity	++	++	+	+	++	+
Reduced emergency services expenditure	+	+	+	+	++	++
Subtotal	0.16	0.59	0.48	0.31	3.21	4.94
Net present value (NPV) ($ millions)	-1.52	-0.38	-0.32	-10.69	-0.95	-0.23
Benefit-Cost ratio (BCR)	0.09	0.61	0.60	0.03	0.77	0.96

Source: SGS Economics and Planning, 2023
Figures are in millions and discounted to present day values

The present value of the incremental costs and benefits is the result of a discounted cash flow (DCF) analysis, whereby future costs and benefits are expressed in present values, using a discount rate of 7%. This has the effect of reducing the impact of costs and benefits that are incurred far into the future, meaning that the temporal distribution of these items has a material impact on the results of the analysis. As such, sensitivity tests which adjust this discount rate have been undertaken and the results provided in Table 50 and Table 51 in the following section.

Sensitivity testing

As Table 50 below shows, reducing the discount rate significantly improves the results of the CBA across all sites and pathways, which is due to the long timeframe of the analysis, and the clustering of many of the effects towards the end of the CBA, as the impacts of climate change become more severe. However, it does not change the preferred options, with pathway 1 being stronger at Site A, and pathway 2 remaining the better investment choice at Sites B and C.

TABLE 50: COST-BENEFIT ANALYSIS RESULTS WITH 4% DISCOUNT RATES

Incremental costs	Pathway 1			Pathway 2		
	Site A	Site B	Site C	Site A	Site B	Site C
NPV ($ millions)	-2.06	0.26	0.19	-12.32	2.96	3.06
BCR	0.14	1.17	1.10	0.05	1.53	1.43

Source: SGS Economics and Planning, 2023

Likewise, Table 51 demonstrates the extreme impact of changing the discount rate. In this sensitivity test, increasing the discount rate reduces the long term benefits of these adaptation measures

drastically, as most of them are concentrated towards the end of the century, and are therefore being discounted heavily. Nevertheless, as above, the preferred options do not change.

TABLE 51: COST-BENEFIT ANALYSIS RESULTS WITH 10% DISCOUNT RATES

Incremental costs	Pathway 1			Pathway 2		
	Site A	Site B	Site C	Site A	Site B	Site C
NPV ($ millions)	-1.22	-0.45	-0.60	-9.19	-1.92	-0.57
BCR	0.07	0.39	0.28	0.02	0.43	0.86

Source: SGS Economics and Planning, 2023

8. Next steps

The CBA provides an evidence base of the costs and benefits associated with taking a particular course of action in response to coastal hazards. During community consultation, community members called for further community engagement about the adaptation pathways to reach more residents and other groups who may be impacted by inundation, erosion, and stormwater risks.

Participants also suggested that the project would benefit from greater communication about what is at stake. For the broader community, who may not have property at risk, it is important that they understand the community values of the areas that are at risk such as the foreshore and walking track. This will ensure that the community broadly understands what is being protected and what is at stake if no action is taken.

It is recommended to engage with TasRail, to understand how it may seek to protect the rail line through Site A and how TasRail could potentially contribute to the broader adaptation pathways being sought. This is likely to also require engineering advice regarding the feasibility of culverts in this location.

For Site B, the assets at risk are mainly private property and would likely require contributions from property owners. Specific consultation and contribution plans should be undertaken for pathways associated with Site B.

Through further engagement with the community and key stakeholders, once a preferred pathway has been established, in keeping with the principles of TCAP, the community should be brought along with further engagement on the concept designs and implementation. This will contribute to broader understanding and shared ownership.

Appendix A: Bridgewater Bridge

Bridgewater Bridge

The Bridgewater Bridge (the bridge) is Tasmania's largest transport project.

This Project ***does not*** include an assessment of the land and infrastructure associated with the upgrade of the Bridgewater Bridge – climate change impact assessments are a separate piece of work being carried out by Brighton Council.

The bridge, which will replace an existing crossing and will be completed by the end of 2024. It is a critical part of the transport and freight link between the northern and southern regions of Tasmania. The bridge will consist of a four-lane road for vehicles and crossing for pedestrian and cyclists.

The new bridge crosses the Derwent River, a major freshwater inflow to the Derwent Estuary. As such, the following marine and coastal works associated with the project include:

- Temporary works including access structures, hardstands and piled structures for the construction of the bridge substructure and superstructure
- Formation of new bridge abutments landside of the river (Granton and Bridgewater)
- Piling works within the waterways including concrete pile caps and piers
- Demolition of the existing bridge and rehabilitation of areas
- Land reclamation on coastal areas for construction access and temporary works
- Modifications to existing and creation of new stormwater infrastructure
- Barge and work boats for construction activities
- New load out ramps and structures for construction access from land to river.[31]

The Department of State Growth commissioned a series of assessments to assess the implications of the project on coastal hazards, the key findings are summarised in the table below.

TABLE 52: BRIDGEWATER BRIDGE COSTAL HAZARDS

Assessment	Implications for coastal hazards
Coastal Inundation Assessment	- The bridge extents are generally outside the inundation and erosion risk areas.

[31] Burbury Consulting, 2021, 'New Bridgewater Bridge Costal Inundation Assessment', Department of State Growth, pp. 4-6.

Assessment	Implications for coastal hazards
	- The bridge will not increase the risk of inundation to the upstream or downstream causeway areas or banks.
Coastal Erosion Assessment	- There will be no measurable increase risk in erosion of the coastal areas the planned works are constructed on or adjacent to due to the construction or operation of the bridge. - The bridge will not lead to worsening of the flow regime of the Derwent River and consequent erosion. - Any new shoreline reclamation or building pads constructed into the waterways should be armoured with appropriate rock protection to minimise the risk of erosion from waves,, stormwater or flooding.
Aquatic Risk Assessment	- The construction of the bridge poses considerable risks to the aquatic environment. The key risks are through sediment disturbance and changes to hydrodynamics. - The project will cause an unavoidable loss of a relatively large area of *Ruppia megacarpa* (TSPA-listed rare plant species) directly beneath the bridge. It is possible that this plant may also be lost further downstream as a result. - Plants and animals may be impacted by the project due to elevated metal concentrations, reduced light through suspended sediment, reduced dissolved oxygen and epiphytic algal overgrowth. - If construction follows mitigation measures, the aquatic risk and long-term impact of the project can be considered 'low'.
Flood Hazard Report	- The bridge will not significantly alter the water levels in the Derwent River. - Future flooding caused by 1% AEP events and exacerbated by climate change water-level and rain intensity increases, is expected to cause increased flooding throughout the Derwent Estuary and River system regardless of the development. - The design of the new bridge should include provision for water level rises anticipated due to climate change and, additionally, for flooding associated with 1% AEP events.
Hydrodynamic Modelling	- The impacts of the project on water quality are mostly confined to be close to the works, and mainly to the southern shore of the Derwent River downstream to the confluence with the Jordan River.

Source: Burbury Consulting (2021), Marine Solutions (2021), Entura (2021).

Notes: Annual Exceedance Probability (AEP) 1% translates to a 1 in 100-year occurrence.

Appendix B: Community Engagement Report

11 / 2023

Stakeholder Engagement Summary

SGS Economics & Planning

Certified B Corporation

Derwent River Coastal Hazards Project
Brighton Council

Contents

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01

Project Overview

Project aims and overview

The aim of the project is to understand and plan for coastal hazards at three locations along the Derwent River foreshore. With climate change, many natural hazards, including coastal hazards, are expected to exacerbate. With this project, Council and the community intend to build capacity for decision making.

To build this capacity, this project will provide information about the risks and adaptation options and improve community understanding about risk reduction. The project is expected to broadly reflect the Tasmanian Coastal Adaptation Pathways (TCAP) process.

The project involves a coastal hazards assessment, a risk assessment, community values assessment, adaptation pathways and a cost-benefit analysis of the pathways. In addition, SGS will provide input into Council presentations, and project communication materials like brochures and documents.

As part of the project, the SGS Economics and Planning team will support Council to undertake stakeholder engagement with landowners and asset managers in the three study areas (depicted overleaf). The benefits and an overview of stakeholder engagement for a TCAP-style project are outlined at the end of this section.

The project will be undertaken in three stages, with completion anticipated by the end of December 2023:

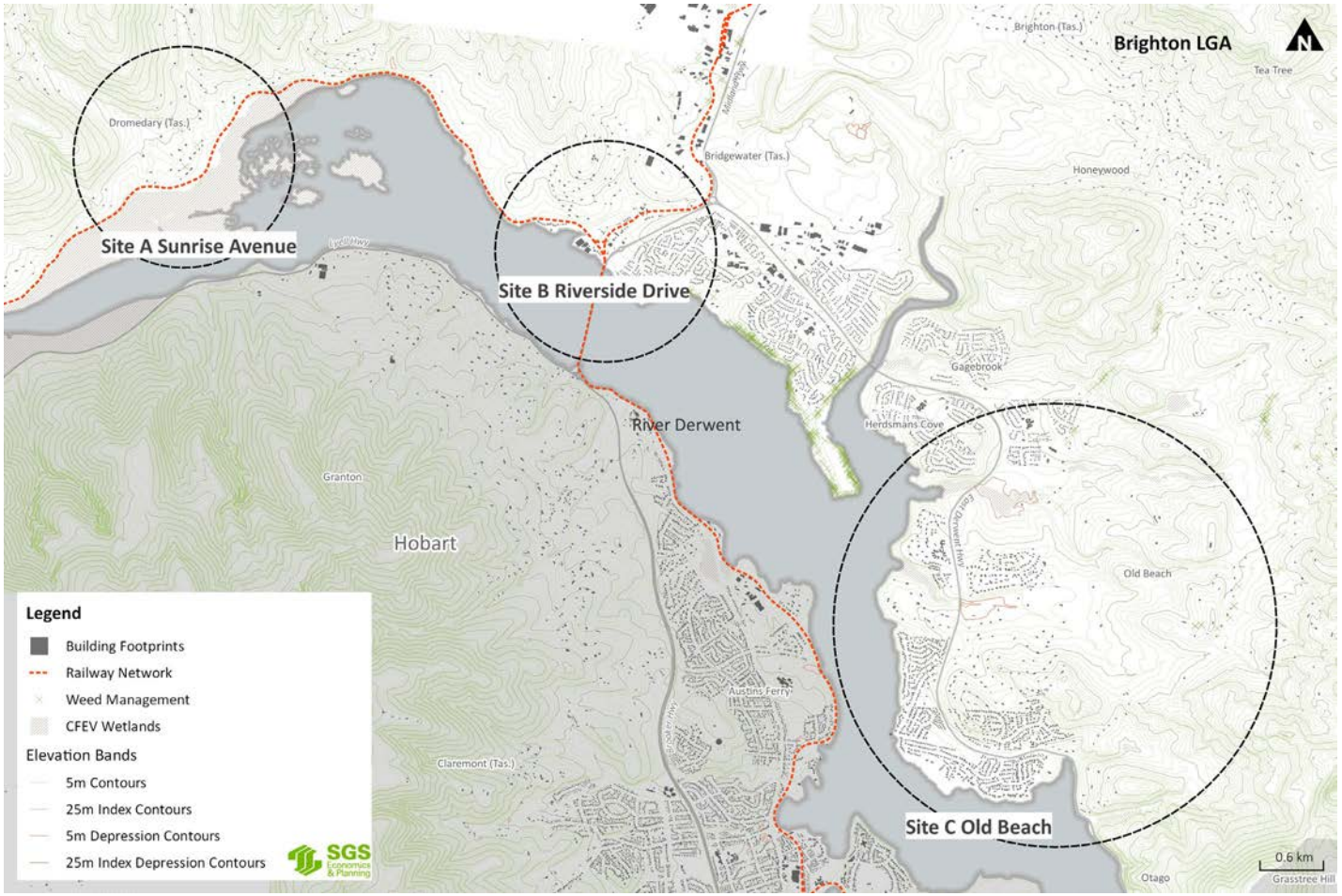
- Stage 1: Coastal Hazards and Values and Risk Assessment.
- Stage 2: Community and Stakeholder Engagement.
- Stage 3: Adaptation Planning.

At the time of engagement, SGS have prepared the first report from Stage 1 of the analysis. The information and analysis uncovered in Stage 1 informed discussion with stakeholders (including community members/landowners), regarding:

- Preliminary hazard mapping
- Values at risk
- Planning scheme context
- Preliminary adaptation pathways for further discussion with stakeholders.

This document outlines the findings of the Stakeholder and Community Engagement.

Study areas


Brighton LGA
Site A Sunrise Avenue
Site B Riverside Drive
Site C Old Beach
River Derwent
Hobart
Brighton (Tas.)
Tea Tree
Dromedary (Tas.)
Bridgewater (Tas.)
Honeywood
Gagebrook
Herdsmans Cove
Granton
Old Beach
Austins Ferry
Claremont (Tas.)
Otago
Grasstree Hill
0.6 km
Legend
Building Footprints
Railway Network
Weed Management
CFEV Wetlands
Elevation Bands
5m Contours
25m Index Contours
5m Depression Contours
25m Index Depression Contours
SGS Economics & Planning

02

Engagement approach

Stakeholder engagement

One of the most recognised benefits of a TCAP approach is the effective inclusion of stakeholder engagement in the true sense of the word. Adaptation is a long-term and ongoing process, and in some ways this type of project is one of the first marked steps to engage the community.

A robust and transparent engagement approach is crucial and contributes to trust and confidence-building among the community, and between the community, Council, and other levels of Government. It provides a steppingstone for future decision-making processes.

The engagement process is based on communicating clearly and honestly about the projected changes, engaging communities to explore how their futures may look, what their preferences are, and the steps involved to achieve a preferred future state.

A targeted stakeholder workshop was held with interested/affected community members and landowners, to explore different pathways to adapt to the risks associated with foreshore coastal hazards along the Derwent River. Feedback on the pathways was also gained from Essential Services via email and from Council's online consultation 'Have Your Say'.

During the workshop, participants were split into two groups to explore the two adaptation pathways. For each adaptation pathway, the following questions were discussed:

- "What are the positives? The negatives?
- What does the overall balance feel like?
- Is it 'desirable'? Is it a plausible scenario? Can I imagine this actually happening? Is it likely to happen? If not, why not? Could it be made to happen and if so, what would be required? Would that be desirable or acceptable?
- What if changes occur more slowly or more rapidly than expected?
- Who decides to implement options and when?
- Who pays, and how?"

Extent of stakeholder engagement and involvement

A targeted approach to stakeholder engagement has been undertaken for this project, both with landowners/residents and business owners, as relevant to each study area.

A core function of the engagement activities for the TCAP process is to improve community understanding of environmental hazards, and to work together to identify a preferred way of managing and adapting to hazards in the future. A focus of discussions was to enhance community appreciation that business as usual (BAU) is a decision with consequence just as choosing a different path is.

With this project, Council and the community intend to build capacity for decision making. To build capacity, the project is expected to provide information about the risks and adaptation options and improve community understanding about risk reduction.

Engagement in the project was undertaken according to the Core Values for the Practice of Public Participation (International Association for Public Participation – IAP2). Public participation:

- Is based on the belief that those who are affected by a decision have a right to be involved in the decision-making process.
- Includes the promise that the public's contribution will influence the decision.
- Promotes sustainable decisions by recognizing and communicating the needs and interests of all participants, including decision makers.
- Seeks out and facilitates the involvement of those potentially affected by or interested in a decision.
- Seeks input from participants in designing how they participate.
- Provides participants with the information they need to participate in a meaningful way.
- Communicates to participants how their input affected the decision.

03

Key findings

Community workshop – Adaptation pathway 1

Participants explored pathway 1 – the pathway whereby maximum freedom of natural foreshore processes is allowed to unfold with minimum intervention or resistance – answering 'What are the positives and negatives?' and 'How would it happen?'.

Participants identified the positives and negatives associated with pathway 1, however, the negatives outweighed the positives. The positive factors included:

- The pathway allows current residents to take action
- Less impact on wildlife (compared to pathway 2)
- It provides an opportunity for community to work together, demonstrating collective responsibility
- Aboriginal Middens are left as they are
- Brighton Council would be invested in planning to find solutions (prevention before crisis)

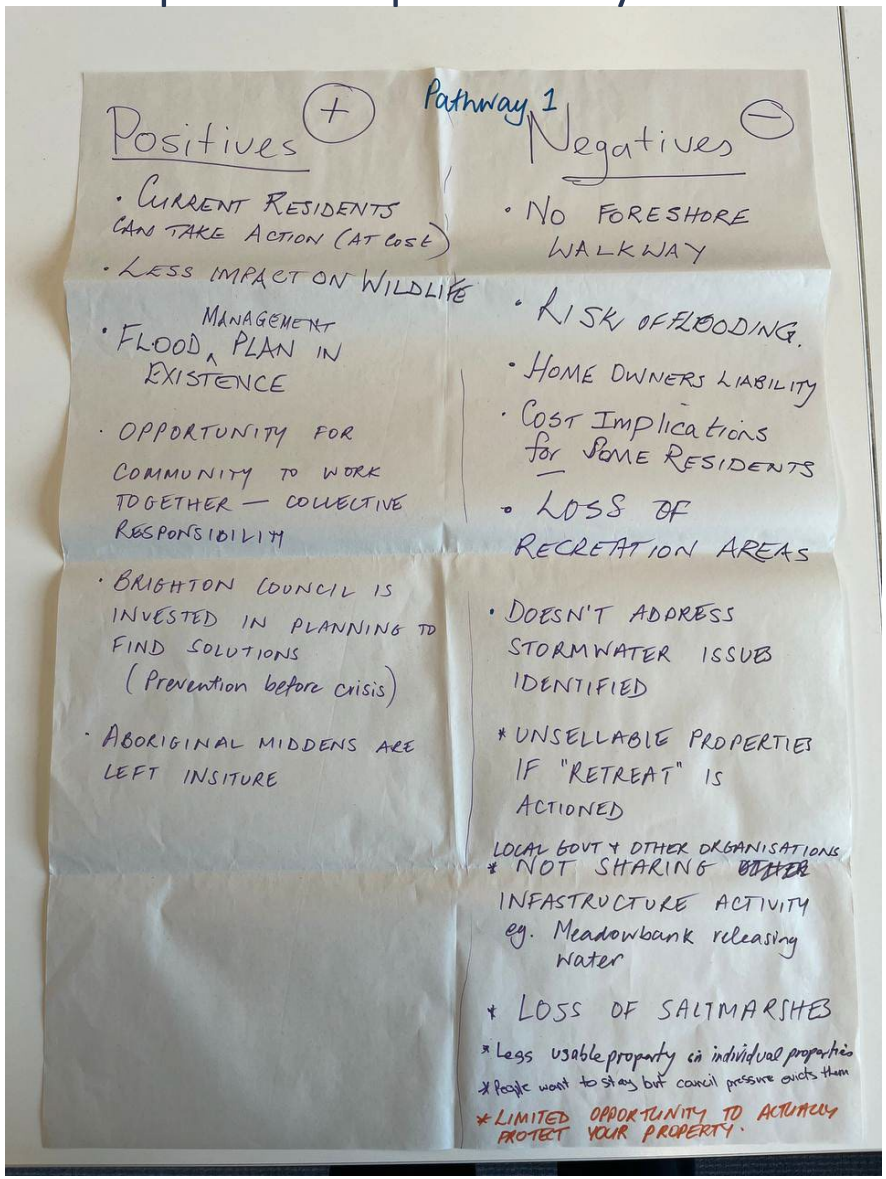
Negative factors of pathway 1 identified by the community included:

- The foreshore walkway and recreation areas would be lost
- Loss of saltwater marshes
- There would be a risk of flooding
- Homeowners would be liable
- There would be cost implications for some residents
- The pathway would not address stormwater issues
- Properties may lose value and/or become unsellable
- Residents may not have the opportunity to stay in their homes
- There would be limited opportunity for residents to protect their property
- Other stakeholders (organisations, local government) may install infrastructure and not share it with the community

Participants identified the following requirements and considerations to make pathway 1 happen:

- Further community consultation would be required to meet a consensus on the pathway
- Who gets to determine property value?
- What level of government assistance is expected?
- What recreation spaces will replace the loss of the walkway and/or jetty?
- Council would need to be transparent, continually updating the community on the process
- There should be research on how other local areas are addressing similar issues
- Council and government could formulate policy and guidelines for homeowners to take action
- A federal strategy could provide greater guidance
- There could be a land swap incentive for affected properties

Adaptation pathway 1 workshop



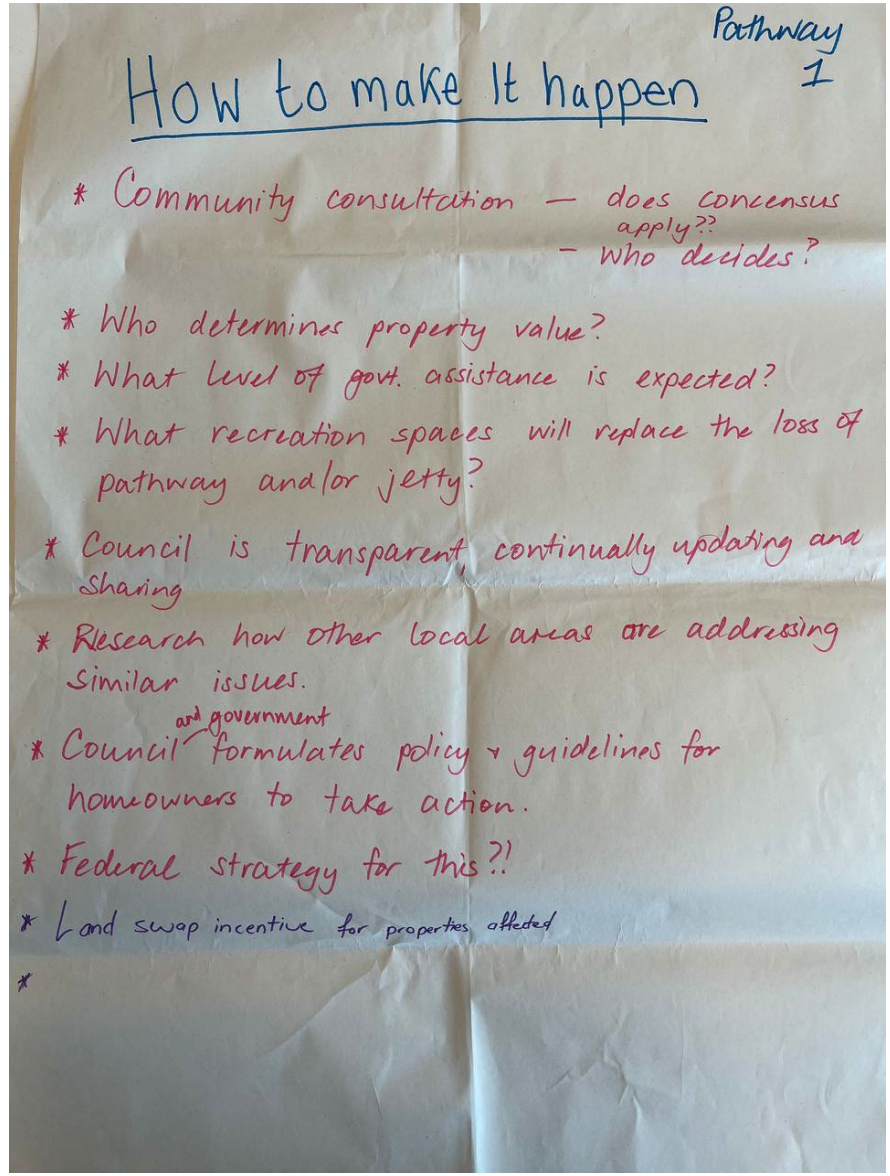
Pathway 1

Positives (+)

- CURRENT RESIDENTS CAN TAKE ACTION (AT COST)
- LESS IMPACT ON WILDLIFE
- FLOOD MANAGEMENT PLAN IN EXISTENCE
- OPPORTUNITY FOR COMMUNITY TO WORK TOGETHER — COLLECTIVE RESPONSIBILITY
- BRIGHTON COUNCIL IS INVESTED IN PLANNING TO FIND SOLUTIONS (Prevention before crisis)
- ABORIGINAL MIDDENS ARE LEFT INSITURE

Negatives (−)

- NO FORESHORE WALKWAY
- RISK OF FLOODING.
- HOME OWNERS LIABILITY
- Cost Implications for SOME RESIDENTS
- LOSS OF RECREATION AREAS
- DOESN'T ADDRESS STORMWATER ISSUES IDENTIFIED
- * UNSELLABLE PROPERTIES IF "RETREAT" IS ACTIONED
- LOCAL GOVT & OTHER ORGANISATIONS * NOT SHARING ~~OTHER~~ INFASTRUCTURE ACTIVITY eg. Meadowbank releasing water
- * LOSS OF SALTMARSHES
- * Less usable property on individual properties
- * People want to stay but council pressure evicts them
- * LIMITED OPPORTUNITY TO ACTIVELY PROTECT YOUR PROPERTY.



Pathway 1

How to make it happen

* Community consultation — does concensus apply?? – Who decides?
* Who determines property value?
* What level of govt. assistance is expected?
* What recreation spaces will replace the loss of pathway and/or jetty?
* Council is transparent, continually updating and sharing
* Research how other local areas are addressing similar issues.
* Council and government formulates policy & guidelines for homeowners to take action.
* Federal strategy for this?!
* Land swap incentive for properties affected
*

Community workshop – Adaption pathway 2

Participants explored pathway 2 – the pathway that concentrates on protecting existing and future community and property using any necessary protection and adaptation options – answering 'What are the positives and negatives?' and 'How would it happen?'.

Participants identified positives and negatives with pathway 2, with many of the positives focused on the protection of assets and community values and the key negative being the cost. The positive factors included:

- Properties and the foreshore would be protected
- The pathway would allow for intensification of development, therefore enabling more participants to contribute to the costs of protection works
- Protection works could help to stabilize insurance costs
- The pathway would protect community values of shared, recreational spaces such as the river path and jetty
- Costs could be shared more easily between stakeholders (including state and local government)
- The pathway provides an opportunity to invest in stormwater waste management for all of Brighton municipality
- The pathway is an opportunity for Bright Council to be 'ground-breakers' and leaders of climate action along with property owners

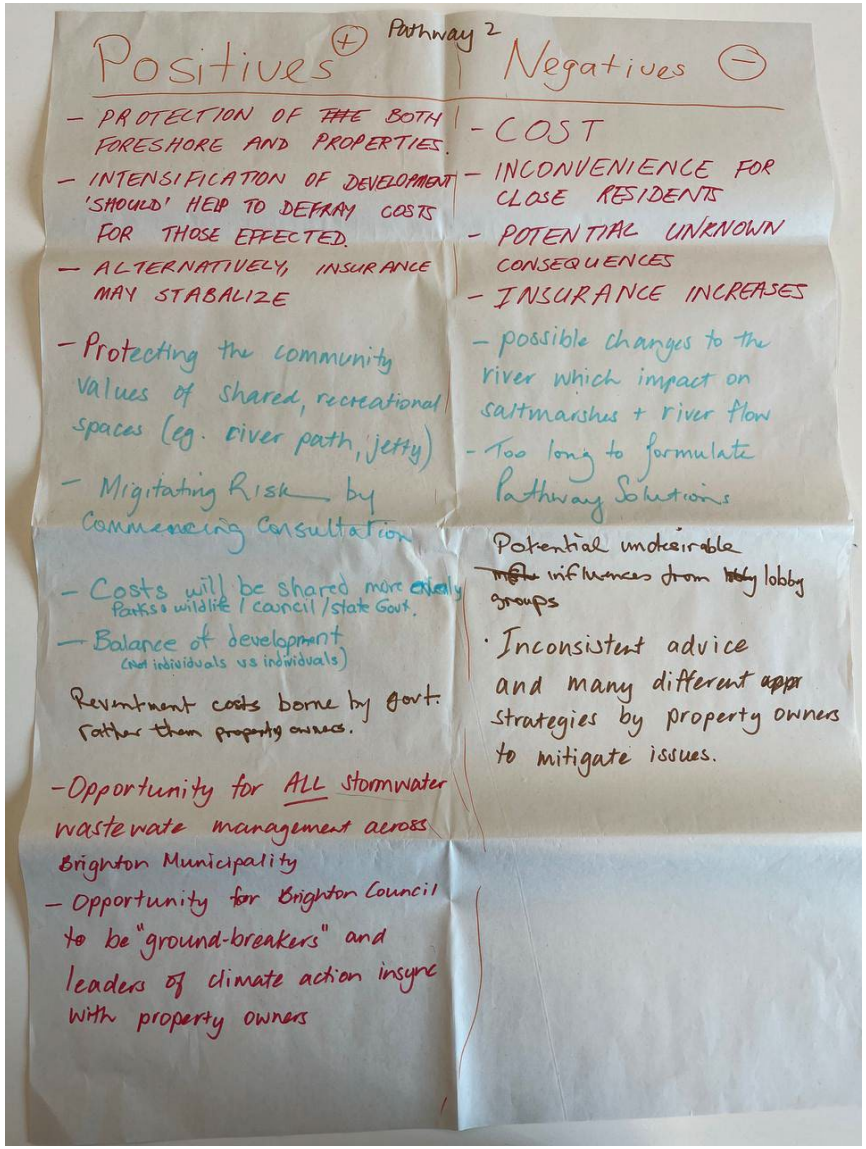
The Negative factors of pathway 2 identified by the community included:

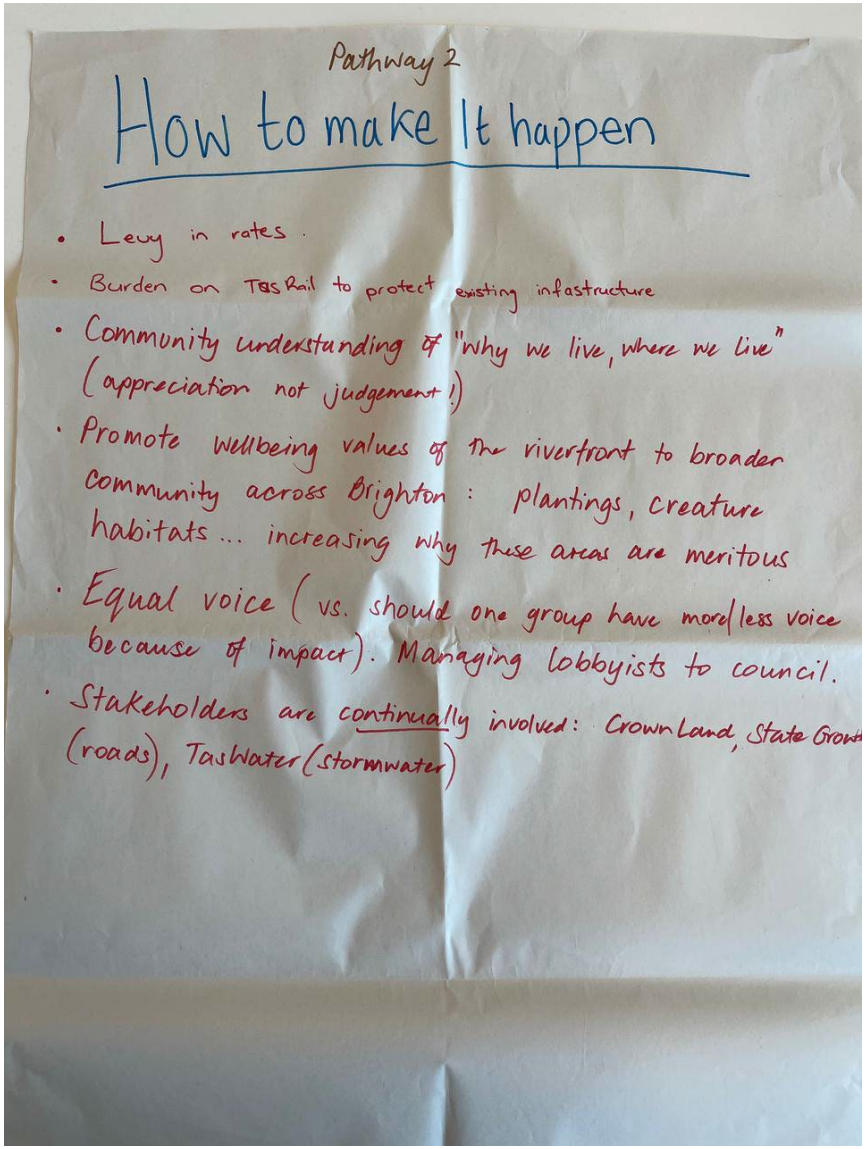
- The cost of protection works
- The inconvenience of protection works caused to residents
- There are potential unknown consequences in this pathway, such as, the consequences of protection works on the environment. The protection works could result in changed to the river which may impact the saltmarshes and river flow
- It may take too long to formulate solutions
- There is potential for lobby groups, or others, to influence the outcomes of this pathway
- The protection works rely on expert advice, which may be inconsistent and result in different strategies to mitigate issues

Participants identified the following requirements and considerations to make pathway 2 happen:

- A levy and/or rates
- Tas Rail should pay to protect existing rail infrastructure
- There needs to be continuous community engagement and stakeholder engagement, whereby everyone is given an equal voice
- The wellbeing areas of the riverfront should be promoted to the broader community to help them understand why it is important to protect

Adaptation pathway 2 workshop





Community workshop – Summary

The community workshop revealed positives and negatives with both adaptation pathways. However, participants typically responded positively to a pathway that protects the existing and future assets and community values. The workshop also raised further considerations for the next steps of the project.

Key findings from the engagement included:

- Participants were more supportive of adaptation pathway 2, especially on site C where there are a greater number of assets to protect.
- Participants were receptive to pathway 1 for site A, where there are fewer built assets to protect.

Key considerations for the next steps included:

- Participants called for more community engagement on the adaptation pathways to reach everyone in the community and other groups who would be impacted by inundation, erosion and stormwater risks, such as the boating community.
- Participants also suggested that the project would benefit from greater communication about what is at stake. For the broader community, who may not have property at risk, it is important that they understand the community values of the area that are at risk so that they understand what we are trying to protect and what is at stakes if we don't take action.
- Tas Rail have not responded to requests for consultation. It will be important for future stages of this project, as participants were keen to understand how Tas Rail seek to protect the rail line on site A and how they would potentially contribute to the adaptation pathways.

Appendix C: CBA Methodology

Cost of risk

In order to determine the cost of risk, understanding the likelihood of hazard events occurring was required. According to Climate Futures for Tasmania, a 1% AEP coastal flood event in the baseline year (2010), would become a 5-10% AEP event by 2030. A growth factor was applied to the risk of flooding that each hazard band is exposed to, such that a 1% AEP flood event in 2010, would become a 7.5% AEP (mid-range) flood event in 2030. The impacts of risk for each hazard band are shown in Table 53 below. It assumes that value lost is replaced by residents until such time where it is no longer viable to do so, which is assumed to be when the risk reaches 100%, or alternatively that the property would be expected to be impacted by a hazard event every year.

A hazard event is not expected to wipe out the entire property every time, rather a proportion of the capital value is expected to be wiped out. For this study, 20% was assumed to be the value of capital wiped out by each incident. This means that cost of risk is the cumulative product of the probabilities of a hazard event occurring in each hazard band with the total value at risk in each hazard band, all multiplied by 20%. The progressive increase in risk is demonstrated in Table 53 below.

TABLE 53: PROBABILITY OF HAZARD EVENT OCCURRING OVER TIME FOR EACH HAZARD BAND

Hazard band	2010	2024	2030	2050	2090	2100
High	1.00%	5.55%	7.50%	15.00%	20.00%	21.00%
Medium	0.02%	0.07%	0.13%	1.00%	15.00%	16.25%
Low	0.00%	0.00%	0.00%	0.01%	0.37%	1.00%

Source: SGS Economics and Planning, 2023

Cost benefit analysis

One of the main costs of BaU is the escalating risk of floods and erosion damaging property and other values: this is referred to as the cost of risk. Cost of risk calculations consider the likely damages of extreme events and the probabilities of these extreme events over time. The total cost of risk is the sum of the (discounted) annual expected damages for various extreme events over time (2010-2100). For the purposes of this CBA, avoided cost of risk – that is, the cost of damage avoided by choosing one of the adaptation pathways – will be treated as a benefit.

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In line with convention and recommendations from Infrastructure Australia[32], we have applied a 7% discount factor to the stream of costs and benefits in this analysis.

Performance indicators

The costs and benefits are then compared utilising discounted cashflow analysis (DCF). DCF involves comparing all the costs and benefits over time, with future costs and benefits discounted (converted) to today's dollar values. The DCF produces performance measures which allow the project to be considered in terms of the scale of benefits generated in comparison with the costs.

In line with convention, the CBA has been undertaken on an 'incremental' basis. This measures the performance of the project against the base case by subtracting costs and benefits that would have occurred regardless of investment.

Two performance measures are subsequently generated:

- Net Present Value (NPV) and
- Benefit Cost Ratio (BCR).

Details on how these measures are calculated and how they should be interpreted are summarised in Table 54 below.

TABLE 54: INTERPRETATION OF PEROFMANCE INDICATORS

Performance measure	Estimation method	Decision rule
Net Present Value (NPV)	A number generated by deducting the present value of the stream of costs from the present value of the stream of benefits (with the present value of costs and benefits determined by using an appropriate discount rate)	▪ Accept options with a positive NPV ▪ Reject options with a negative NPV ▪ The greater the NPV, the better.
Benefit Cost Ratio (BCR)	The ratio of the present value of the stream of benefits to the present value of the stream of costs	▪ Accept options with a BCR > 1 ▪ Reject options with a BCR < 1 ▪ The greater the BCR, the better.

Source: SGS Economics and Planning (2023)

[32] Infrastructure Australia (2021) Infrastructure Australia Assessment Framework, Box 12: Discount rates

Appendix D: CBA Inputs and assumptions

The costs presented in the following sections have not been provided by an engineering assessment and should be taken as indicative only.

Assumptions

Emergency management planning

This adaptation measure is applicable to the base case and pathway 1.

According to the Department of Climate Change, Energy, the Environment and Water's (DCCEEW) 2010 report, the upfront capital costs associated with setting up an early flood warning system and an awareness campaign are assumed to cost around $140,000, with recurrent costs of approximately $7,000 per annum, indexed to 2023 Australian Dollars[33]. In the event of a pending flood, households and businesses are expected to incur some loss of productive time in order to prepare for a flood. An additional day per person per household and a day of lost trade for business has been included as an inconvenience cost[34].

This cost is incurred in the base case and under pathway 1, while under pathway 2, the more intensive adaptation measures are assumed to supersede the need for an early flood warning system.

Vegetation management

This adaptation measure is applicable to pathways 1 and 2.

Vegetation management is expected to occur along the affected coastline as necessary. That is, for the coastline that is in the high hazard band, or at risk today, vegetation management should already be being considered. For the coastline intersected by the medium hazard band, vegetation management would occur by 2050, and by 2100 for the coastline intersected by the low hazard band. For Old Beach, almost the entire coastline is affected by 2100.

Unless already protected by another more intensive intervention – in the case of pathway 2, such as foreshore hardening – vegetation management is assumed to be applied to the part of the foreshore that is exposed to the high hazard band. For Site A, the entire shoreline is exposed to the high hazard band. In site B, there is a large length of coast exposed to the high hazard band north of Bridgewater Bridge, as well as two smaller pockets south of the bridge. Likewise, In site C, much of the foreshore walkway along Old Beach is exposed to the coastal erosion high hazard band, as well as along inlets north of the foreshore walkway. The exposure within each site is shown in Table 55 below.

[33] DCCEEW (2010) Coastal Inundation at Narrabeen Lagoon

[34] Average wages have been used as a proxy for a lost day for residences and average profit as a proxy for a lost day for commercial businesses.

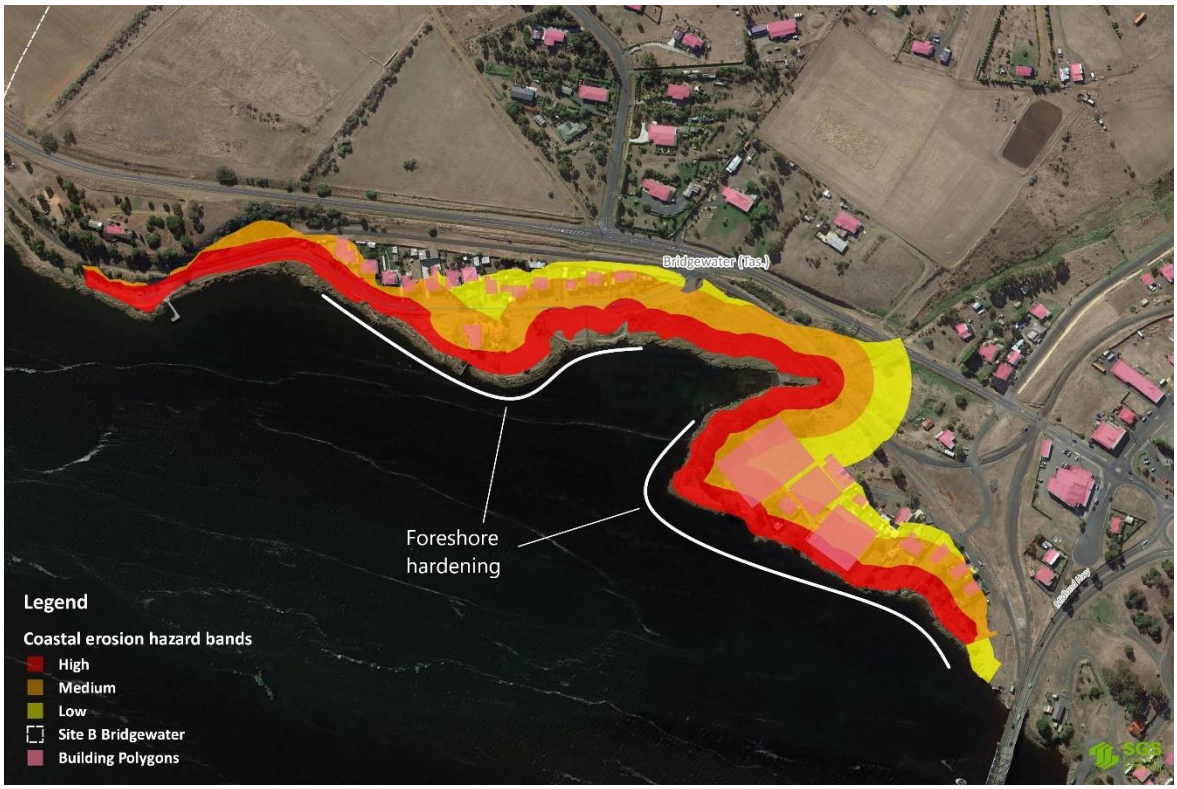
TABLE 55: COASTAL EROSION HAZARD BANDS EXPOSURE BY SITE

Hazard band	Site A	Site B	Site C	Total
High	1,423 metres	1,836 metres	2,369 metres	**5,629 metres**
Medium	854 metres	560 metres		**1,414 metres**
Low	1,292 metres	44 metres		**1,335 metres**

Source: SGS Economics and Planning (2023)

The area highlighted in Figure 24 below shows the parts of the coastline that would be subject to foreshore hardening under pathway 2, and therefore where vegetation management would not be required under this scenario. In Site B, two stretches of coastline that have both commercial and residential development adjacent to the shoreline, would be protected by foreshore hardening, while vegetation management would occur across the rest of the exposed coastline. These two developed areas account for about 770 metres.

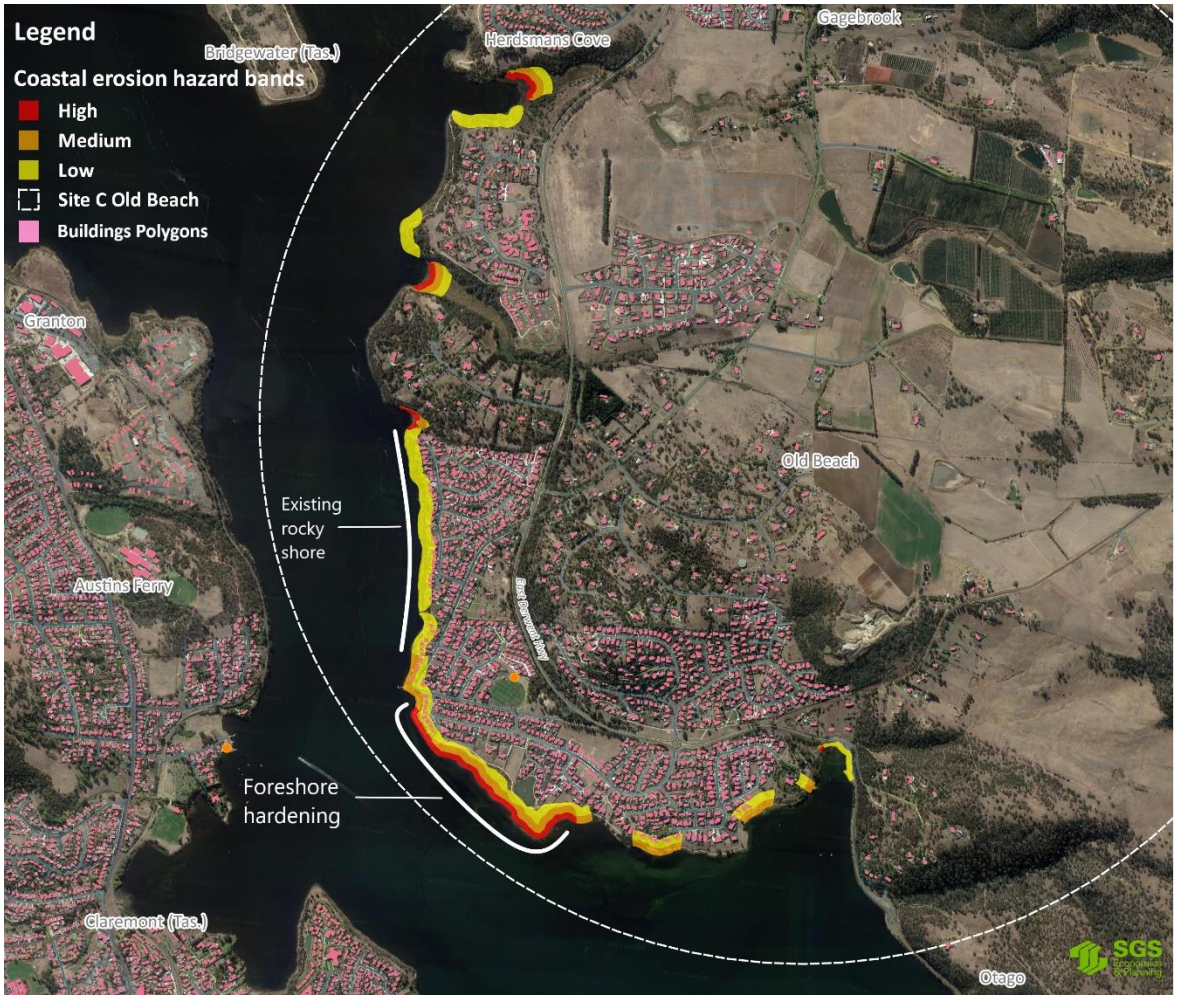
FIGURE 24: COASTAL EROSION HAZARD BANDS AND THE APPLICATION OF FORESHORE HARDENING IN SITE B



Source: SGS Economics and Planning, 2023

So, in pathway 2, vegetation management is assumed to only be required along the 478 metres of coastline exposed to the high hazard band, beyond the foreshore walkway stretch. Figure 25 shows where foreshore hardening would occur in Site C.

FIGURE 25: COASTAL EROSION HAZARD BANDS AND THE APPLICATION OF FORESHORE HARDENING IN SITE C



Source: SGS Economics and Planning, 2023

Vegetation management costs about $50 per linear metre, depending on a range of factors including the width of planting, and also assuming that planting is undertaken by volunteer members of the community[35]. In New Zealand, the Bay of Plenty dune restoration had over 1,500 volunteer members contribute to the planting process. However this is not a reliable assumption, and SGS has assumed that the cost would be double this, assuming that the custodians of the vegetation management are paid, particularly over the long timeframe that it is needed. Dune management can be highly effective however it relies on community knowledge and limited access so that the vegetation is not trampled. Given that vegetation management will occur along the popular foreshore walkway, community understanding of how to protect the vegetation is critical. Taking this into consideration, it has been assumed that revegetation and maintenance works would need to occur every 5 years, in line with other Australian councils' analysis[36].

[35] https://www.igci.org.nz/dunes/costs
[36] https://www.noosa.qld.gov.au/downloads/file/3287/fact-sheet-dune-beach-management

Under pathway 1, all exposed coastline would be managed with vegetation. However under pathway 2, Table 56 shows how much coastline would be protected with vegetation, given that other parts of exposed coastline would be protected by foreshore hardening.

TABLE 56: VEGETATION MANAGEMENT IN PATHWAY 2

Hazard band	Site A	Site B	Site C	Total
High	478 metres	1,067 metres	2,369 metres	**3,915 metres**
Medium	1,040 metres	1,628 metres	2,369 metres	**5,037 metres**
Low	1,423 metres	1,671 metres	2,369 metres	**5,463 metres**

Source: SGS Economics and Planning (2023)

Protection of individual properties

This adaptation measure is applicable to pathway 1.

Protecting individual properties from erosion and inundation can be done in different ways:

- Piles or foundations to resist loss of foundation stability by erosion
- Elevated substructures (raised slab or floor, poles, non-inhabited ground floor) above flood levels
- Moveable dwellings
- Water proof or resistant construction not affected by temporary flooding
- Floatable dwellings.

These actions are permissible under pathway 1 as long as they do not impact on neighbouring properties, which rules out some of the points above, particularly moveable and floatable dwellings.

Flood barriers either placed directly against the structures wall or free standing barriers can be used to protect existing dwellings. Most of the other options apply for new construction but could be used on extensions or where a building undergoes extensive renovation.

The cost per built structure would vary considerably with the extent of exposure, and the size and design of the building. Protections against coastal inundation have been assumed to cost about $13,000 per property, while the cost to protect a property from coastal erosion is assumed to be about double the cost. More properties are exposed to coastal inundation hazards than coastal erosion, with none exposed to the high hazard band of either. SGS has modelled the homes exposed to the medium hazard bands of each hazard engage in this adaptation measure in 2030, and those exposed to the low hazards band do so in 2075, as it assumed that residents would want to protect their homes before they become acutely at risk.

Foreshore hardening and seawall construction

This adaptation measure is applicable to pathway 2.

Foreshore hardening refers to a range of adaptation measures that are predominantly substitutable, and therefore only one such measure would be needed. It is assumed the cheapest method would be chosen. They include rock revetment, rock groynes, and seawall construction. All of these measures are relatively expensive compared to the other adaptation measures for pathways 1 and 2. One of the

more sustainable and long-lasting foreshore hardening techniques involves rip-rap rock revetment, which can cost between $3000[37] – 11,000 per linear metre[38]. Figure 26 overleaf shows the total length of foreshore exposed to the high hazard band across all sites. The length of this stretch is 5,629 metres, while an additional (not directly behind high hazard band) 1,414 metres is exposed to the medium hazard band. SGS has taken an average of several estimates for rock revetment of about $6,000 per metre. Applying this across the entire foreshore exposed to the high hazard band would cost nearly $35 million.

However, with the availability of more cost-effective and less intensive interventions like vegetation management, it is assumed that foreshore hardening would only be invested in at the sites of most acute need, as presented in Figure 24 and Figure 25 above. If rock revetment was undertaken only to protect those highlighted areas, and this would cost over $10 million. It would then cost an additional nearly $2 million in 2050 to upgrade the rock revetment to cover the parts of the foreshore walkway that would become vulnerable to coastal recession, i.e., the medium hazard band. The stretch of the foreshore walkway shoreline exposed to the medium hazard band is 292 metres long.

A recent case study is in Collaroy-Narrabeen beach in Sydney which was impacted by a June 2016 storm surge with a return period of 50-60 years (~2% AEP). It caused severe damage primarily from erosion but also likely in part due to inundation impacts. Following the storm, a seawall has begun being constructed, with the benefitting residents contributing 80% of the cost. On average, the cost to residents for the seawall is $230,000 per property[39], meaning the total cost was $287,500 per resident. The wall extends across 250 metres of coastline, and cost a total of $25 million, or $100,000 per metre, protecting 49 private properties and 11 public land parcels[40]. Building a sea wall at this cost along the entire coastline exposed to the coastal erosion high hazard band would cost $142 million. Building one that protects the foreshore walkway would cost $95 million, making it a less financially viable option than other foreshore hardening techniques. Even more conservative estimates from a review of cost estimates for flood adaptation in the publication *Water* demonstrate that seawalls are potentially prohibitively expensive. A seawall in the United States could cost between $13.8-29.3 million USD per kilometre in 2016, equivalent to $42.1 million AUD per kilometre in 2023[41]. With a near kilometre stretch of the foreshore walkway shoreline already exposed to the high hazard band, it would cost nearly $40 million to construct a seawall to protect it at this more conservative price.

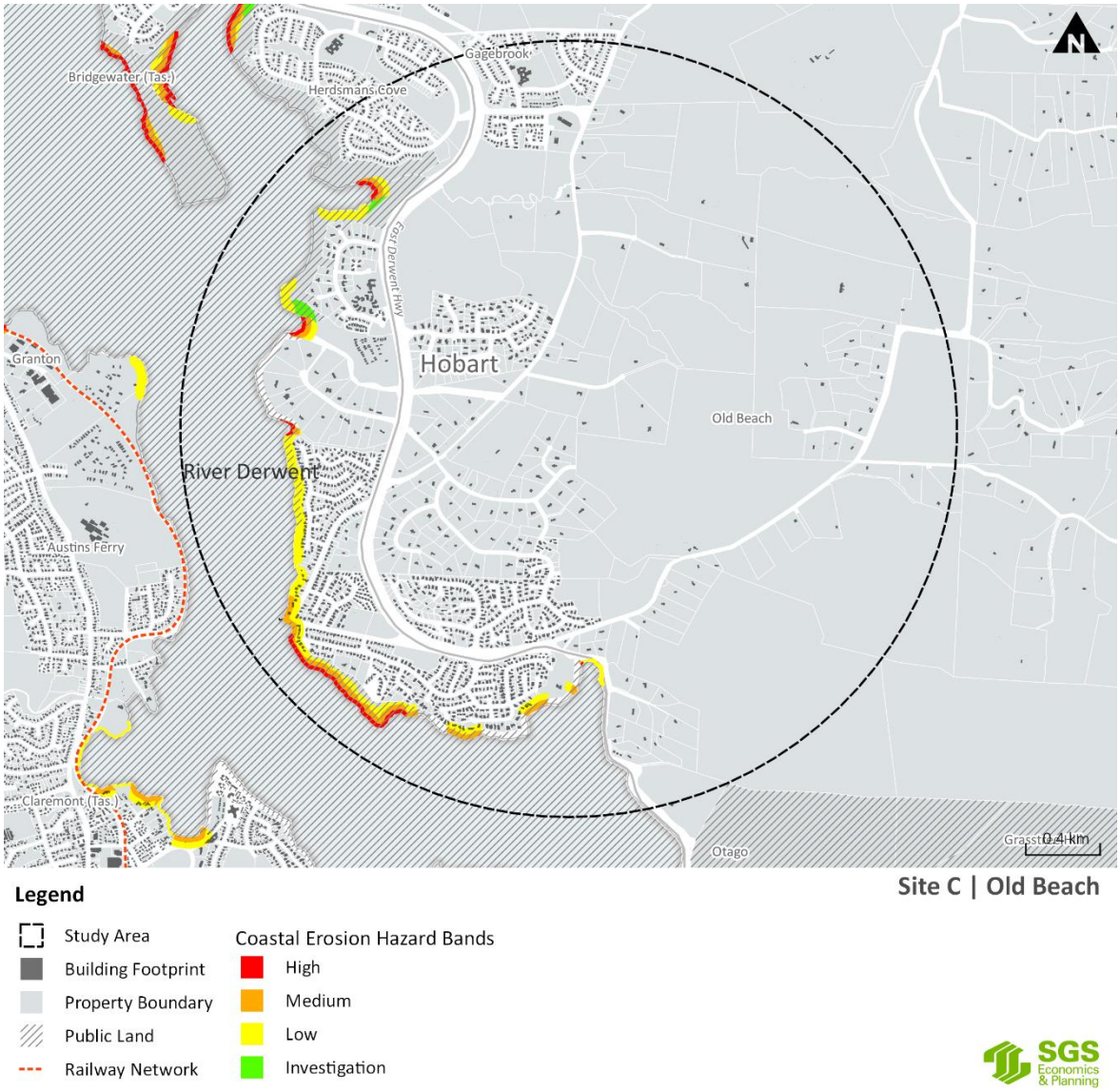
Much of Site C's foreshore, specifically the area to the north of the Old Beach Jetty and boat ramp, is already made up of rocky foreshore that does not require hardening. However, there are high and medium coastal erosion hazard bands effective to the south of the boat ramp and other isolated pockets of hazardous areas. These areas have been assumed to progressively require foreshore hardening if pathway 2 were to be chosen, as extensions and repairs are required to maintain the efficacy of this adaptation.

The Collaroy Narrabeen seawall has been a controversial project and even been referred to as the 'ugliest wall in Australia'[42] and this adaptation measure may reduce the amenity of the Brighton

[37] https://assets.publishing.service.gov.uk/media/6034ee168fa8f5432c277c23/Cost_estimation_for_coastal_protection.pdf
[38] White Lake Dock & Dredge Inc (2023), Rip Rap Shoreline Protection. $2,200 USD per linear foot converted to $AUD per linear metre
[39] ICA (2021), Climate Change Impact Series: Actions of the Sea and Future Risks, Insurance Council of Australia
[40] Sydney Morning Herald (2021), Construction begins on Northern Beaches sea wall despite 'vexed' funding issues
[41] Aerts JCJH. A Review of Cost Estimates for Flood Adaptation. Water. 2018; 10(11):1646. https://doi.org/10.3390/w10111646
[42] The Guardian (2022) Beachfront homeowners push to extend Collaroy seawall to protect property from erosion

foreshore walkway. As there is no data on the visitation and use of the foreshore walkway, this potential consequence has not been quantified.

FIGURE 26: SITE C COASTAL EROSION HAZARD BANDS



Source: SGS Economics and Planning, 2023

Filling and raising land

This adaptation measure is applicable to pathway 2.

The cost of raising land levels will depend on the availability and cost of suitable fill. Sometimes fill material may be available for free. Costs of placing and grading may be quite modest, with higher costs for the load bearing area under the structure where consolidation and suitable material is required. An indicative cost to raise land level by up to one metre may be $13 - $40 per square metre. A midpoint of $26 has been assumed. For existing development there would be additional cost if these structures

have to be lifted. In general, one would time the raising of the land to coincide with the redevelopment of a structure or normal rebuilding cycle for roads or other infrastructure.

The recommended average household size for flood risk management measures from the NSW Department of Planning and Environment is 220 square meters[43].

Roads can be raised above flood levels, or at least to depths that allow continued access during flood events. Raising roads may be necessary to provide access to properties that are not directly affected by coastal hazards but depend upon roads in the flood hazard area for access.

In low lying areas, raising roads implies continued commitment to maintaining a community in an area that is expected to be exposed to current or future flood hazards. Indicative cost to raise roads for suburban roads is $526 per metre to raise 0.5 metres[44]. It is most cost effective to raise roads at the time of significant maintenance. Raising roads may have significant effects on drainage patterns and could affect low lying properties adversely.

If the filling is done in stages there may be issues where filled land could increase the flooding of adjacent unfilled land. Such a patchwork filling approach may create problems with drainage unless some considerable thought and planning is put in place to anticipate and manage this issue. An overall filling and drainage plan would be required to avoid the worst foreseeable problems. A patchwork approach to filling will enable properties, infrastructure and land to be filled at the time it is (re)developed, thereby minimising the additional cost of adaptation.

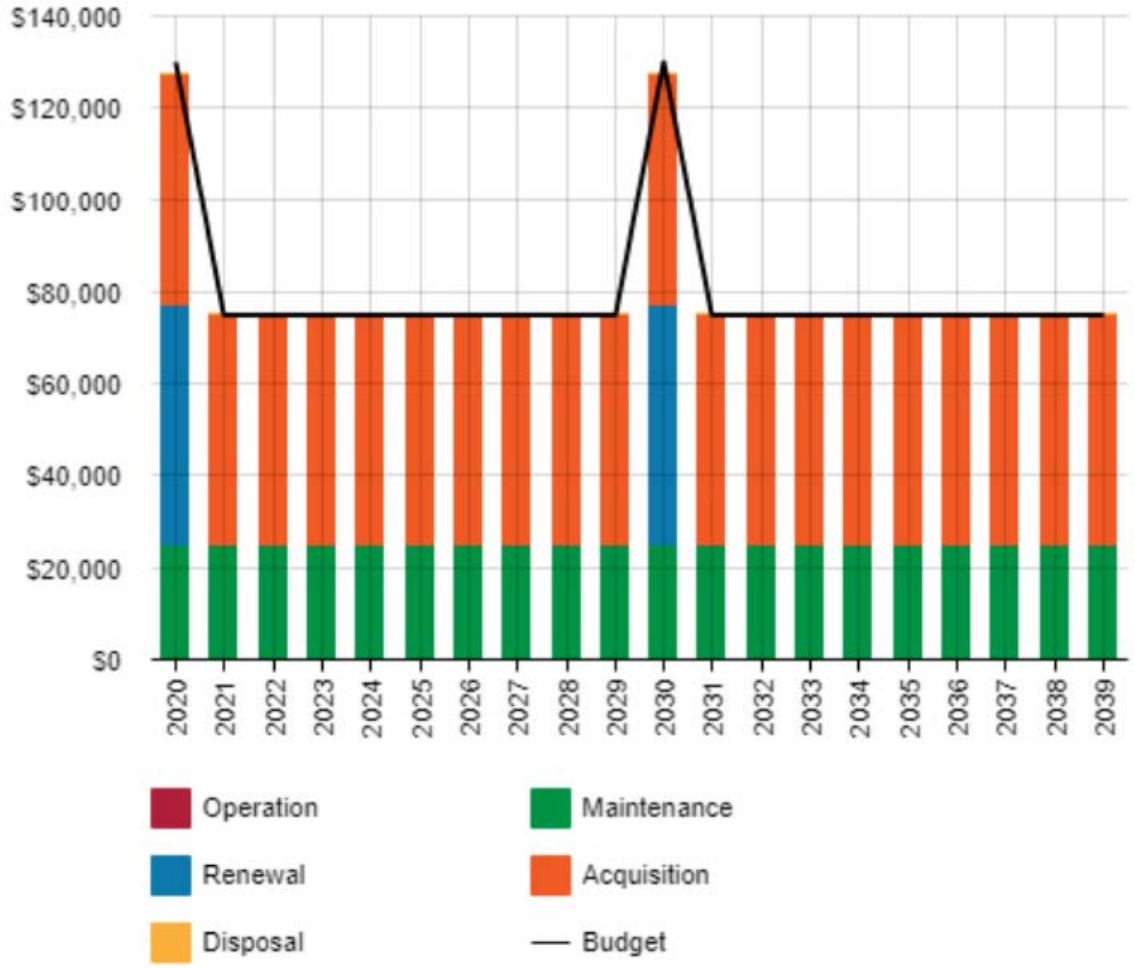
Stormwater drainage investment

This adaptation measure is applicable to pathway 2.

Brighton Council's stormwater management plan sets out the budget for stormwater infrastructure at $80,500 a year for two decades (from 2020 to 2039), with renewal works worth about $50,000 occurring at the start of each decade[45], as shown in below. A simple assumption that investment in stormwater infrastructure is doubled from 2030 onwards has been applied, however the distribution of this investment is not provided in the budget. Therefore, it has been assumed that about 40% of this additional investment would occur within site C, worth $32,200 every year, with an additional $20,000 spent at the beginning of each decade on renewal. The costs in Section 7 represent the *additional* investment in stormwater infrastructure, above that which would occur without intervention.

[43] DPE NSW (2023), Flood risk management measures, table 13
[44] SGS (2013) TCAP Garden Island Creek
[45] https://www.brighton.tas.gov.au/wp-content/uploads/2021/08/Stormwater-Management-Plan-Final-December-2020.pdf

FIGURE 27: FORECAST LIFECYCL COSTS AND PLANNED BUDGETS FOR STORMWATER INFRASTRUCTURE



Source: Brighton Council, 2020

Cost of relocation

A case study in the town of Tangier in Chesapeake Bay in America provides insight into the potentially prohibitive costs of relocation. The town has lost 62% of its inhabitable land since 1967, and much of its population too. It is estimated that the cost to relocate the 436 remaining residents would be between $100-200 million USD. The midpoint of this estimate is equivalent to $229 million AUD, or $524,450 per resident. Taking the average household size in Brighton of 2.6, this would equate to almost $1.4 million to relocate a household. However, as this relates to the relocation of an entire town, it is likely that this figure overstates the cost to relocate an individual house as needed. A review of cost estimates for flood adaptation in the publication *Water*, suggests that the cost to relocate an average building is $349,000 in 2015 US dollars[46]. This is equivalent to $692,203 AUD in 2023.

As the risk increases over time for the households in each hazard band, so too does the probability of a house needing to be relocated, which is reflected in the assessment of the benefits of each pathway.

[46] Aerts JCJH. A Review of Cost Estimates for Flood Adaptation. Water. 2018; 10(11):1646. https://doi.org/10.3390/w10111646

Land value uplift

This adaptation measure is applicable to pathway 2.

Under the base case and pathway 1, there would eventually need to be retreat from the foreshore as coastal erosion and inundation make the area unliveable, while allowing natural processes to run their course. The adaptation measures available under pathway 2 however, would protect the foreshore from coastal erosion and inundation, which would make it viable for infill development. In fact, the cost of these adaptation measures may be offset by the value uplift of the land as a result of allowing it to be developed for residential use. To determine the value uplift of infill development, the average capital value of homes in Site C – Old Beach was taken as a proxy. That is, the total value of land parcels with residential structures on them, less the value of the land itself. This value is $423,498.

Cost to install culverts

As part of the Brown Hill Keswick Creek Stormwater Project, in South Australia, a section of Brown Hill Creek in Forestville was diverted by the Department of Planning, Transport and Infrastructure in 2013. The creek was diverted to into underground culverts such as this one.

FIGURE 28: UNDERGROUND CULVERT IN BROWNHILL CREEK, SOUTH AUSTRALIA

Source: Brown Hill Keswick Creek Stormwater Project

Another part of the project that was not completed was for 102 culverts spread across the length Malcolm Street to Victoria Street in Brownhill Creek. The total cost of this was nearly A$25 million[47], or about A$304,000 each in present-day values. As this was not completed, and the appendix does not include the distance along which the culverts would have been spread, another estimate for how spread apart these culverts must be.

[47] https://bhkcstormwater.com.au/wp-content/uploads/2014/09/Appendix-17-estimated-costs-of-high-flow-bypass-culverts-A4.pdf

The Oakajee Port and Rail: Surface Water Management report prescribes that culverts along Oakajee River, north of Perth should have 1.5 to 2 culverts per kilometre of railway track[48]. This means that along the railway track, which is where culverts would be installed, would require up to 5 culverts along its 2.4 km stretch within the bounds of site A. A 1% annual maintenance cost has been assumed too.

Value of wetlands

A 2014 study updating the value of ecosystem services in the wake of worsening climate change placed the average annual value of US wetlands at $140,174 per hectare in 2011 USD (A$292,069 present value). However this is likely skewed by several extremely high value wetlands and Brighton's is more likely closer to the median value which is $12,163 per hectare per year (A25,343 present value)[49].

Additional inputs

Coastal hazard risks

TheLIST map provides resources on coastal hazards threatening Tasmania's coastline. These include hazard bands which correspond to probabilities of impacts now and in the future[50]. The hazard bands are defined as follows in Table 57 and Source: SGS Economics and Planning (2023)

Table 58 below. These are important as they are a key input into the cost of risk calculations, by defining the probability that the value at risk is actually damaged or destroyed.

TABLE 57: COASTAL INUNDATION HAZARD BANDS DEFINITIONS

Hazard band	Implication
High	Areas vulnerable to a 1% AEP storm event, or a mean high tide by 2050
Medium	Areas vulnerable to a 1% AEP storm event in 2050
Low	Areas vulnerable to a 1% AEP storm event in 2100

Source: SGS Economics and Planning (2023)

TABLE 58: COASTAL EROSION HAZARD BANDS DEFINITIONS

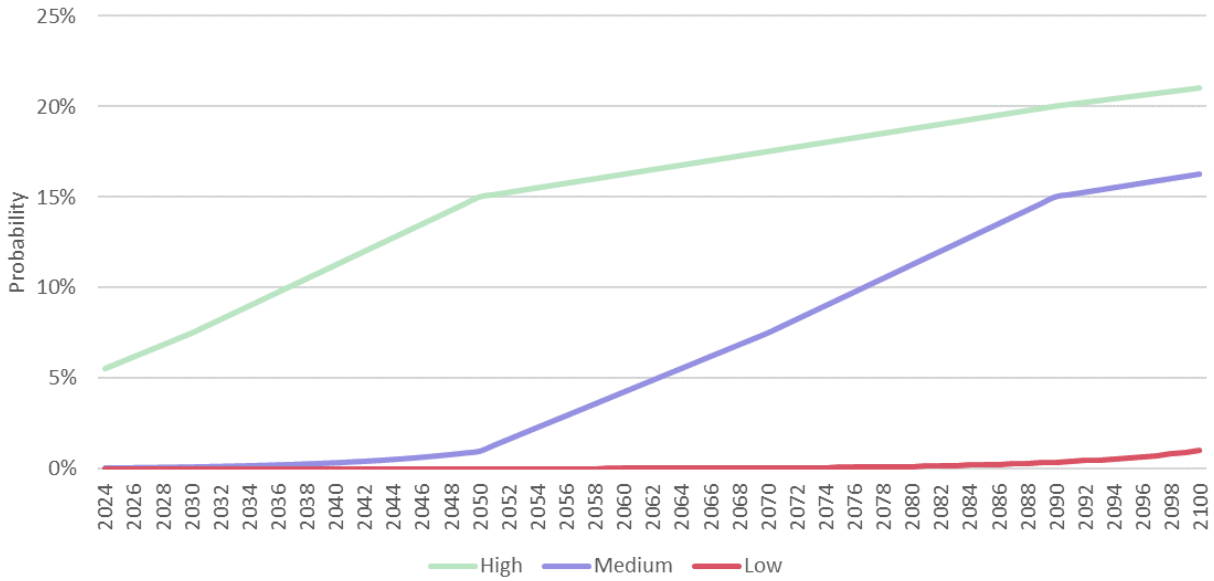
Hazard band	Implication
High	Areas currently vulnerable to coastal recession, typically sand dunes
Medium	Areas vulnerable to coastal recession by 2050
Low	Areas vulnerable to coastal recession by 2100, or protected by coastal defences

[48] https://www.epa.wa.gov.au/sites/default/files/PER_documentation/1881-PER-Appendix%203%20-%20Surface%20Water%20Assessment.pdf
[49] Costanza, R., De Groot, R., Sutton, P., Van der Ploeg, S., Anderson, S. J., Kubiszewski, I., ... & Turner, R. K. (2014). Changes in the global value of ecosystem services. Global environmental change, 26, 152-158.
[50] https://listdata.thelist.tas.gov.au/public/outgoing/sif/metadata/Coastal_Inundation_Mapping_Stage4_1.pdf

Source: SGS Economics and Planning (2023)

However, these risks are not stagnant over time. Climate Futures for Tasmania provides an understanding of how the likelihood of a 1% AEP flood event in the baseline year (2010) will evolve over time. It is expected that such an event would be a 5-10% AEP event in 2030, and a 20% AEP in 2090. From these three points, a relationship between the probability of an event occurring over time can be extrapolated, and this relationship is demonstrated in Figure 29 below.

FIGURE 29: PROBABILITY OF COASTAL HAZARD BY HAZARD BAND OVER TIME



Source: SGS Economics and Planning, 2023

Value at risk

One of the key inputs into the CBA is value at risk (VaR), which is the total value of the land and structures (i.e. capital improved value) threatened by coastal erosion and inundation hazards over the rest of the century. To find this value, we used the cadastral parcel information within Site C – Old Beach, including the land and capital value of all private parcels, and overlayed them with the coastal erosion and inundation hazard bands from theLIST map. This represents the total possible damages of a sufficiently severe hazard event represented by the hazard bands, and therefore appear substantial. However, the probability of such an event occurring is often quite low and therefore, the total risk (in $) is likely to be considerably lower than the *potential* damages of an extreme event.

Cost of risk

Cost of risk was one of the key inputs in this CBA as it defines what is at stake in the base case, and what could be saved under each pathway. In other words, one of the key benefits of each adaptation pathway is the cost of risk avoided as a result of the adaptation measures taken.

It is important to note that the likelihood of extreme events is an area of adaptation planning that is still developing, and future weather conditions are still very difficult to predict accurately. Therefore, cost of risk calculations should be interpreted as indicative estimates only. The total cost of risk calculations are summarised in Table 59 below.

TABLE 59: COST OF RISK FROM INUNDATION AND EROSION – ALL SITES

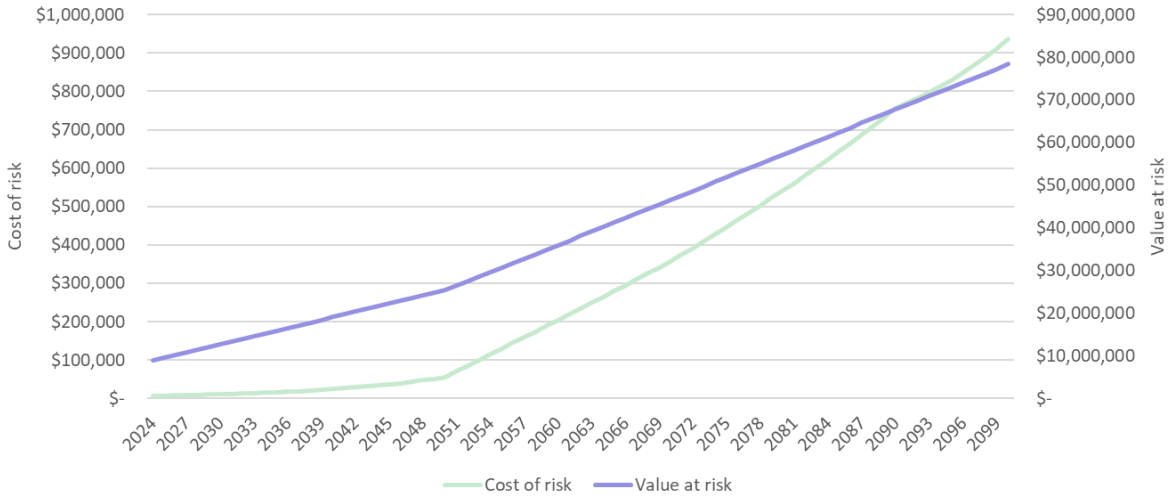
	Baseline (2010)	By 2050	By 2100
Value at risk – properties	$0	$24,586,380	$76,372,950
Value at risk – transport	$231,652	$769,473	$1,997,203
Subtotal	$231,652	$25,355,853	$78,370,152
Cost of risk*	**$6,648**	**$56,222**	**$936,704**

Source: SGS Economics and Planning, 2023

* Hazard bands represent vulnerability to 1% AEP (1-in-100 year event), so cost of risk is 1% of cumulative value at risk

Cost of risk is derived by multiplying the proportion of value at risk by the probability of an event occurring in that hazard band, as described in Figure 29 above. The cost of risk overtime escalates gradually, however as the properties firstly exposed to the high hazard band are eventually abandoned, they are no longer counted in cost of risk – they are simply lost value, which leads to a less smooth temporal distribution of cost of risk. This is demonstrated in Figure 30 below.

FIGURE 30: VALUE AT RISK AND COST OF RISK – ALL SITES



Source: SGS Economics and Planning, 2023

An additional cost of risk that does not relate to the property values at risk is the replacement value of personal property such as vehicles and home contents. The NSW Department of Planning and Environment provides guidance on these costs, which include $15,000 for external damage, $3,750 for vehicle damage and $490 for damage to contents[51]. This has been included in the CBA.

[51] https://www.environment.nsw.gov.au/-/media/OEH/Corporate-Site/Documents/Water/Floodplains/flood-risk-management-measures-230282

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SGS Economics & Planning

Certified B Corporation

Brighton Council

Formal Response to Coastal Hazards Report

JUNE 2024

Brighton going places

We acknowledge the traditional owners who once walked this country: the Mumirimina people.

The Mumirimina belonged to the Oyster Bay tribe. This was the largest tribe in Tasmania and covered 8000 square kilometres. kutalayna levee in Brighton was a significant meeting place where hundreds of generations of Aboriginal families hunted, gathered, corroboreed, camped and traded.

In the course of colonisation, dispossession of the Mumirimina was early, rapid and extensive.

We acknowledge the Tasmanian Aboriginal Community today as the continuing custodians of this land, and pay our respects to Elders past and present. Through our words and actions we strive to build a community that reflects and respects the history and hopes for all the people of Brighton.

Contents

Executive Summary

Climate change is expected to exacerbate coastal hazards in the Derwent River Foreshore through increased frequency and severity of storm events, flooding and erosion. In response, Brighton Council secured funding through the Australian Government's Preparing Australian Communities – Local Stream Program, to develop a project to investigate coastal hazards in the municipality.

Through Brighton's coastal hazards project, SGS Economics & Planning were engaged to assess current and future coastal erosion, inundation, and stormwater hazards at three sites, including:

- Site A - Sunrise Avenue, Dromedary
- Site B - Riverside Drive, Bridgewater
- Site C - Old Beach

SGS delivered a report with their findings to council in March 2024. The report found that coastal hazards have current and future potential to impact private property, Aboriginal heritage sites, natural values, and public infrastructure across the three identified sites in the Brighton municipality. More specifically, coastal hazards are already threatening Aboriginal heritage sites and natural values, while significant threats to private property and public infrastructure are expected closer to 2050 and beyond.

This current document is a formal response to the SGS report, and outlines recommendations for Brighton Council regarding the identified coastal hazards. The recommendations address the physical and legal risk presented by coastal hazards and investigates who is responsible for taking what action.

Recommendations include communicating the risk of coastal hazards to the community and conducting further engagement with key stakeholders; taking a coordinated approach to coastal hazards with other councils and state government; developing a coastal hazards policy and considering the need for coastal management plans for impacted sites; using a climate legal risk decision-making framework to consider possible actions; reviewing coastal hazard modelling as new data becomes available; and, considering possible planning provisions.

1. What is the physical risk?

The short answer

Coastal hazards including erosion, inundation and stormwater, have current and future potential to impact private property, Aboriginal heritage sites, natural values, and public infrastructure across the three identified sites in the Brighton municipality. More specifically, coastal hazards are already threatening Aboriginal heritage sites and natural values, while significant threats to private property and public infrastructure are expected closer to 2050 and beyond.

The detailed answer

Climate change is expected to exacerbate coastal hazards in the Derwent River Foreshore, increasing the frequency and severity of storm events, flooding and erosion. In response to this, Brighton Council secured funding through the Australian Government's Preparing Australian Communities – Local Stream Program, to engage consultants, SGS Economics & Planning, to assess current and future coastal hazards at three sites in the municipality:

- Site A - Sunrise Avenue, Dromedary
- Site B - Riverside Drive, Bridgewater
- Site C - Old Beach

The SGS report produced for Brighton Council in March 2024 identifies private property, Aboriginal heritage, natural values, and public infrastructure at risk of coastal erosion, coastal inundation and stormwater hazards in each of the three sites. SGS have used the State Government's hazard modelling and hazard bands for erosion and inundation to identify coastal hazard risk. This modelling was verified using Climatics modelling which mostly aligns with the current coastal hazard mapping available. However, there were some discrepancies that suggest the risk from inundation, particularly in Old Beach, may be at higher than what the state mapping indicates.

In addition to the identified risks, several adaptation pathways have been proposed to respond to coastal hazards. These include:

- Base Case – business as usual
- Pathway 1 – minimal intervention
- Pathway 2 – protect the coast

A cost benefit analysis has been performed for each pathway at each site. However, there are limitations with the cost benefit analysis as only costs and benefits that can be monetised are included. This means that private property and public infrastructure are privileged over things not able to be costed, including the preservation of Aboriginal heritage items, natural values, community wellbeing and social cohesion. For example, wetland communities are among the most productive

native ecosystems in Tasmania. They provide important habitat, including breeding grounds for fish, frogs, water birds, and invertebrates. Wetlands provide important ecosystem services, filtering water and storing large amounts of carbon within relatively small areas. They also increase the capacity of an area to absorb and retain water and disperse heavy flows in times of flood. For this reason, the cost benefit analysis should be considered in conjunction with other information and not be the only decision-making tool.

In addition to this, it is important to note that adaptation actions are not limited to the pathways defined in the report and could include a sequence of actions that will follow changing circumstances over time. A 'pathways approach', as defined by CoastAdapt, is designed to schedule adaptation decision-making by identifying the decisions that need to be taken now and in the future. The approach supports strategic, flexible and structured decision-making.

A summary of findings for each site has been outlined below.

Site A: Sunrise Avenue, Dromedary

Site Overview

Private Property	There are numerous dwellings on Site A, some situated in the low-lying land abutting the foreshore marshlands. The site contains land zoned Rural Living.
Aboriginal Heritage	There is one Aboriginal Heritage item on Site A, inland from the Derwent River.
Natural Values	The site includes a substantial foreshore area around Sunrise Avenue which consists of marshlands. Much of the area is classified threatened native vegetation and is a designated environmental management zone. The wetlands south of the rail line is listed as a high priority site in the Derwent Estuary Natural Values dataset and deemed to have Very High integrated conservation value, as determined by the Conservation of Freshwater Ecosystem Values. This is the highest classification which expresses the relative importance of an ecosystem.
Public Infrastructure	A state road, B10 (Boyer Road), passes through the site from south-east to south-west. At the centre of the site is Sunrise Avenue, a road maintained by Brighton Council. The Derwent Valley Railway line also runs through the site, dividing the private land and foreshore on either side. The railway line is currently an in-operational heritage line and has been in government ownership since 2006. A non-profit group, Derwent Valley Railway, would like to re-establish the railway line to service the tourist industry.

Coastal Erosion

Private Property	No properties in Site A have been identified as at risk of coastal erosion now or in the future to 2100. Seven residential plots of land may be susceptible to some level of erosion, but the dwellings are located on higher ground and are not at risk.

Aboriginal Heritage	The Aboriginal Heritage item located inland in Site A is not expected to be affected by coastal erosion.
Natural Values	The wetlands area is currently vulnerable to coastal erosion, which will continue to encroach further inland by 2100.
Public Infrastructure	No risk to public infrastructure has been identified.

Coastal Inundation

Private Property	The modelling indicates there is no immediate or future threat of inundation to properties in Site A. Eight residential plots of land are likely to be at risk of partial inundation, but the houses themselves are not at risk.
Aboriginal Heritage	The Aboriginal Heritage item located inland in Site A is not expected to be affected by coastal inundation.
Natural Values	Most of the marshland is at risk of inundation during extreme storm events by 2050. As sea levels continue to rise, the marshlands will become more permanently wet as the drainage capacity deteriorates and will become more frequently inundated towards 2100. If nothing is done to manage the marshlands, the character will change, and its ecosystem values diminish including as breeding and nursery grounds for bird and fish species. The presence of the rail line may prevent the marshlands from moving landward (if nothing is done to manage the risks). There is also a pocket of Eucalyptus ovata forest and woodlands to the south of the rail line within the wetlands, which is currently at risk of coastal inundation.
Public Infrastructure	By 2100, inundation would likely affect open space and railway tracks. The railway tracks may become overtopped or undermined if nothing is done to manage the risk.

Stormwater

There are no stormwater hazards present in Site A.

Cost Benefit Analysis

The cost benefit analysis conducted by SGS indicates that Pathway 1 (minimum intervention) is the preferred option at Site A, not only because of its much lower cost, but also because it would facilitate the retention of the wetlands, which has not been quantified. Had the wetlands economic value been quantified, it would only strengthen the case for Pathway 1 as the preferred option for Site A.

Site B: Riverside Drive, Bridgewater

Site Overview

Private Property	There are 614 residential properties within Site B. These consist of a mix of Rural Living and General Residential zoning. A parcel of land to the east of the site, is zoned for future urban development and contains a heritage registered property.
Aboriginal Heritage	Site B contains six Aboriginal Heritage items.
Natural Values	Abutting Riverside Drive along the Derwent River is an area of marshlands that is managed according to a waterway and coastal protection overlay. The site also contains threatened wetland vegetation.
Public Infrastructure	Site B contains several open space and recreational areas, including the Nielsen Esplanade Park. At the end of Riverside Drive there is a fishing jetty and parking area that marks the start of the 2.7 kilometre Riverside Drive Foreshore Trail. A new jetty and boat ramp will replace the old one on Nielsen Esplanade as part of the Bridgewater Bridge project.

Coastal Erosion

Private Property	No properties in Site B are currently at risk of coastal erosion. By 2050, 18 buildings (dwellings and greenhouses) with a total capital value of $6.6 million will be at risk and by 2100, and additional 21 properties with a total capital value of $7.3 million will be at risk.
Aboriginal Heritage	Four Aboriginal heritage items are currently at risk of coastal erosion, with a further two items at risk by 2100.
Natural Values	There is a pocket of high priority vegetation south of the intersection between Riverside Drive and Boyer Road that is currently at risk of coastal recession, which will continue to worsen into the future.
Public Infrastructure	The boat ramp and some public lands zoned for utilities and open space, are at risk of present-day and future coastal erosion. A small level of risk of erosion has been indicated for the railway track and playground area.

Coastal Inundation

Private Property	The modelling indicates there is no immediate threat of inundation to properties in Site B. However, the risk of inundation intensifies significantly, as areas become susceptible to a 1% AEP storm event by 2050, and/or face the prospect of a 0.8m sea level rise by 2100. Three properties with a total capital value of $0.9 million are at risk by 2050, and 8 properties with a total capital value of $2.5 million are at risk by 2100.

Aboriginal Heritage	Four Aboriginal heritage items are at risk of inundation by 2100.
Natural Values	The area to the south of Riverside Drive and Boyer Road, which is considered moderate to high priority in the Derwent Estuary Natural Values dataset is vulnerable to sea-level rise by 2100, and parts of it will be vulnerable by 2050, if not already damaged or destroyed by a 1% AEP storm event before then.
Public Infrastructure	Assets at risk by 2050 include the boat ramp, playground, open space and roads. By 2100, there is an increased risk to additional roads and sections of the hiking track.

Stormwater

Private Property	Several hundred houses and other buildings in Site B are at a very low risk from stormwater hazards.
Aboriginal Heritage	All six Aboriginal Heritage items are at very low risk from stormwater hazards.
Natural Values	The pocket of open space considered moderate to high priority is at the intersection of low to medium stormwater hazard risk.
Public Infrastructure	The majority of Sit B is vulnerable to stormwater drainage hazards, including areas for recreation and urban uses.

Cost Benefit Analysis

According to the cost benefit analysis conducted by SGS, Pathway 2 provides greater benefits to site B, given the significant presence of private property at risk in this site. It suggests that the higher intensity adaptations pursued in Pathway 2 are better suited to those areas where private property is at risk.

Site C: Old Beach

Site Overview

Private Property	Site C is the largest of the three sites and has a diversity of land uses close to the river foreshore, including residential and open space.
Aboriginal Heritage	The site contains 25 known Aboriginal Heritage Shell Middens and several Artefact Scatters predominantly along the Old Beach walking track.
Natural Values	The Derwent River foreshore stretches along the site from the south of Herdsman's Cove to Old Beach at the boundary of the LGA and is covered by a waterway and coastal protection overlay. The site's natural assets include the Clarrie's Creek, Gagebrook tributary, and saltmarshes. There is threatened native vegetation within the site.
Public Infrastructure	The council-maintained Old Beach walking track lines the foreshore. The East Derwent Highway is the primary route of entry/exit to the municipality and Jetty Road provides boat access to the Derwent River via the Old Beach Jetty. There is a walkway planned (currently a sand footpath) for the north of the Jetty. An electricity transmission corridor also runs through the site.

Coastal Erosion

Private Property	No properties in Site C are currently at risk of coastal erosion. By 2050, 4 properties with a total capital value of $2.2 million will be at risk and by 2100, an additional 30 properties with a total capital value of $15.9 million will be at risk. By 2100, the land may recede by up to 60 meters at its most vulnerable point.
Aboriginal Heritage	Two Aboriginal heritage items are currently at risk of coastal erosion. By 2050 an additional three items will be at risk and by 2100 a further seven items will be at risk.
Natural Values	Most of the shoreline at Site C is vulnerable to coastal erosion to some degree. There are multiple inlets along the shoreline, the northernmost two of which are considered to have Very High integrated conservation value by the Conservation of Freshwater Ecosystem Values and moderate to high priority in the Derwent Estuary natural values dataset. These sites face current and future vulnerability to coastal recession. There are also multiple threatened native vegetation communities, including wetlands which incorporate the above-mentioned vulnerable inlets, along the northern coast of Site C, which is vulnerable to coastal erosion.
Public Infrastructure	The boat ramp will be at risk from coastal erosion by 2050, as will sections of the road and hiking track, which will continue to increase as land recession risk develops in the future.

Coastal Inundation

Private Property	The modelling indicates there is no immediate threat of inundation to properties in Site C. However, the risk of inundation intensifies significantly, as areas become susceptible to a 1% storm event by 2050, and/or face the prospect of a 0.8m sea level rise by 2100. Nineteen properties with a total capital value $8.4 million are at risk by 2050, and a further 62 properties with a capital value of $35.7 million are at risk by 2100.
Aboriginal Heritage	Twenty-one Aboriginal heritage items are currently at risk of inundation.
Natural Values	The northern inlets which are considered to have Very High integrated conservation values are vulnerable to sea level rise by between 2050 and 2100, if not affected by storm events prior. The threatened native vegetation clusters containing eucalyptus globulus and eucalyptus amygdalina dry forest and woodland communities are vulnerable to sea level rise by the end of the century. At the Derwent River foreshore walk, there is a pocket of medium integrated conservation value saltmarsh identified by Conservation of Freshwater Ecosystem Values that are vulnerable to coastal inundation by between 2050 and 2100.
Public Infrastructure	Open space and parts of the hiking trail are at risk in the present day. As the risk increases, more of these areas could become inundated, along with other assets, including several roads and the boat ramp. Notably, a small section of the East Derwent Highway (State Government owned) at the southern end of the Old Beach site is also at risk.

Stormwater

Private Property	Several hundred houses and other buildings are at very low risk from stormwater hazards.
Aboriginal Heritage	Approximately 11 Aboriginal Heritage items are at a very low risk from stormwater hazards.
Natural Values	The area of stormwater hazard overlaps with areas assessed with natural values ranging from lowest to moderate priority along the coastline, including the Old Beach saltmarshes.
Public Infrastructure	Public infrastructure at very low risk from stormwater hazards includes the East Derwent Highway (State Government owned) and the Old Beach Jetty.

Cost Benefit Analysis

According to the SGS cost benefit analysis, Pathway 2 provides greater benefits to Site C, given the significant presence of private property at risk in this site. It suggests that the higher intensity adaptations pursued in Pathway 2 are better suited to those areas where private property is at risk.

The SGS report clearly identifies the current and future risk of coastal hazards to private property, Aboriginal heritage, natural values, and public infrastructure across the three sites. However, it does not make clear who should take responsibility for responding to these hazards. Therefore, Section 2 below aims to outline current understanding around the role and responsibility of local government in responding to coastal hazards.

2. Who is responsible for managing physical risk?

The short answer

There are no clear roles or responsibilities when it comes to responding to coastal hazards. There is consensus that it is not the responsibility of local council to protect private property from coastal hazards. However, local council may have a coordinating role to play in managing responses.

The detailed answer

There are several pieces of legislation in Tasmania that have relevance to the power and responsibilities of governments in planning for public and private property and the management of coastal environments. These include the Land Use Planning and Approvals Act 1993, Local Government Act 1993, Crowns Land Act 1976, Aboriginal Lands Act 1995, and the Tasmanian Planning Scheme.

In addition to legislation, Tasmania has several accompanying policies and regulations that consider how coastal protection works should be planned and undertaken. These include the Tasmanian Planning Scheme State Planning Provisions, the Tasmanian Coastal Works Manual (2010), the State Coastal Policy 1996, and Regional Land Use Strategies.

Despite all of this, the current legislative framework does not provide clear roles and responsibilities for the management and coordination of coastal management and adaptation. Yet, there is a need to ensure that developing risks are actively managed, with private property owners, the community and other stakeholders not best placed individually to coordinate and manage responses.

The sections below detail the current state, regional and local council understanding of responsibility for managing responses to coastal hazards.

State government response to coastal hazards

Natural Resources and Environment Tasmania (NRE Tas) has adopted the following principles to communicate its approach and responsibilities to the management of coastal land; and to underpin its land-use planning and decision-making in coastal risk areas:

- Coastal processes and hazards such as flooding, storms, erosion, landslip, littoral drift, dune mobility and sea-level rise are natural processes and the risks to properties from these processes appropriately rest with the property owners, whether they be public or private.

- Under both statute and common law, the Crown does not have, nor does it accept, specific future obligations to repair or reduce the impacts of natural coastal hazards on private property.
- Unless otherwise agreed, the Crown does not accept obligations to repair or reduce the impacts of natural coastal hazards on any non-Government owned or managed assets sited on public land.
- NRE Tas will use an open, evidence-based, risk-based approach to land use planning and decision-making in coastal hazard areas and will consider both the short and longer-term consequences of planning and land use decisions.
- Best practice coastal protection works can reduce the risk of coastal hazards, however coastal defences and other physical interventions with the coastline that are not informed by appropriate and relevant professional expertise, can have expensive and unforeseen consequences (potentially shifting, exacerbating or not resolving coastal hazard issues in the longer-term).
- On land that NRE Tas manages in coastal hazard areas, NRE Tas will generally avoid intensifying use or development, and will progressively reduce vulnerable infrastructure as resources permit.
- NRE Tas will work with other organisations and agencies in assisting the development of whole-of government strategies to deal with ongoing and changing or developing coastal processes and hazards.
- NRE Tas will support individuals and organisations to understand risks from coastal processes and hazards through the provision of information and advice.

Copied from https://nre.tas.gov.au/about-the-department/governance-policies-and-legislation/managing-coastal-hazards on 11 June 2024.

Regional response to coastal hazards

A *Regional Strategy – adapting to a changing Tasmanian coastline* was prepared by the Southern Tasmanian Councils Authority climate program in 2022 and endorsed by the 10 southern Tasmanian coastal councils, including Brighton Council. The purpose of this strategy is to help Councils employ a strategic approach to existing or potential hazards on the coastline that threaten harm to public and natural assets, infrastructure, people or property.

The strategy outlines six principles that should guide local council response to coastal hazards (see Appendix B for full list of principles). In line with the NRE Tas principles, the regional strategy highlights the principle of private property. That “private property owners occupy coastal areas at their own risk” and “are responsible for managing risks to their property from coastal hazards in accordance with relevant policies and regulations.” In addition to this, the principle of local government outlines that “councils are not responsible for the cost of coastal hazard impacts on private property or on private assets located on public land.”

Local council response to coastal hazards

Kingborough Council and Clarence City Council have both developed their own coastal hazards policies to inform their response. Detailed policies can be found on the respective council websites via the links in Appendix C.

The two policies are roughly aligned with the regional strategy and the state's position. There are also a number of commonalities between the policies. There is consensus that:

- Coastal hazards are the result of natural processes, which are being exacerbated by climate change.
- Natural processes will be allowed to occur without intervention unless extreme risk arises.
- Council will aim to achieve a balance between providing safe access and recreational amenity while allowing natural processes to occur.
- Intervention or engineering solutions will only be considered where and when public benefit outweighs the cost.
- Council is not responsible for protecting private property from coastal hazards. Tasman Council also state on their website that the council "is not responsible for the cost of coastal hazard impacts on private property."

Both Kingborough and Clarence councils have stated that they will develop local Coastal Management Plans for impacted areas. The local area coastal management plans are for areas requiring long term coordinated responses to coastal hazards and will be based on coastline monitoring, evidence-based local and national data and expert knowledge.

While many other councils across Tasmania have undertaken coastal hazard risk assessments, it is unclear from publicly available information how they intend to respond. In addition to this, anecdotal evidence suggests there is very little coordination across local councils and with state government on this issue currently.

Therefore, while there is some agreement that it is not the responsibility of local council to protect private property from coastal hazards, there is likely still an important role for council in any localised response. Importantly for council, any response that is taken should consider the potential legal risks outlined in Section 3 below and how these could be mitigated through sound decision-making.

3. What are the legal risks?

The short answer

There are many areas of decision-making related to coastal hazards that may give rise to climate legal risk. A decision-maker requires factual and legal certainty about the information available to make an assessment about the acceptability of the risk to take the proposed action. This may not prevent a matter from ending up in court but may give the decision-maker a strong defence. If there is insufficient certainty, the decision-maker should consider whether it is possible to seek further factual information or legal advice.

The detailed answer

A number of areas of government decision-making may give rise to climate legal risk. The following have been summarised from CoastAdapt's Information Manual 6, *Legal risk and adaptation*.

Release of hazard risk information

The legal risks associated with the release of hazard information are twofold.

Correct information, decrease in property value

A landholder may argue that a government negligently caused economic loss through the release of information that has reduced property values. This issue has not been considered by Australian courts but may not succeed because it is consistent with the policy of the law that risk information should be made available to allow people to make their own choices.

Incorrect information

Negligence liability is a higher possibility where the hazard information released is incorrect. Governments should take care to ensure that information provided is accurate. This can be difficult due to uncertainty inherent in risk information concerning natural hazards that may be exacerbated by climate change. Disclaimers may be appropriate in situations of high uncertainty.

Failure to release hazard information

There are two different scenarios in which possible claims may arise.

Government does not have risk information

A landholder may commence legal proceedings on the basis that a government failed to obtain and make available information concerning risk. However, if the government does not have hazard risk information due to a genuine lack of funds, and decides to allocate funds elsewhere, a successful challenge to this decision is unlikely.

Government has risk information but fails to release it

Failure to disclose information that a government does have may be classified as negligent misstatement, particularly when the information is specifically requested. It is less likely that a failure to release hazard risk information to the public generally will be negligent.

Strategic planning

There may be an argument that failure to account for climate change in the planning scheme can be challenged. However, the challenge would be unlikely to succeed as it is a well-established principle of administrative law that a failure to enact legislation is not a reviewable decision and courts have generally found high-level strategic policy exempt from negligence liability.

It may be good for government to have a strategic policy stating what types of development will be permitted and in what locations. This will provide for consistency and predictability in decision-making, which may lower the risk of legal challenge in these individual cases.

Development approvals

When making a decision about a particular development approval, a decision-maker may have some possible risk of short-term legal challenge (like in administrative law) regardless of what decision is ultimately made. There is also a risk of long-term legal challenge: for example, if a property is affected as a result of a climate change-related hazard, a landholder may commence proceedings against a government in negligence.

Although legal outcomes cannot be predicted with any certainty, it would be prudent for decision-makers to make decisions according to any scientific data and hazard risk information in their possession.

Protective infrastructure – provision or maintenance

A government is not obliged to provide infrastructure to protect against climate change hazards (e.g., a seawall). If a seawall or other protective structure is not built on the basis of resourcing decisions, this is unlikely to be considered negligent. In contrast, where a government does have control of a hazard, liability in negligence or nuisance may arise. For example, if a government does construct protective infrastructure or storm water infrastructure, it will need to maintain it. A failure to maintain may be considered negligence. There may also be an argument on the grounds of private nuisance, for example, if intermittent stormwater incursion occurred over an extended period of time where the council controlled the drainage system.

Approval of private coastal protection works

A decision-maker may be the subject of a legal challenge regardless of whether a proposal is approved or refused. A refusal may result in a landholder challenge to the decision. However, if a government approves a seawall and the structure subsequently causes loss or damage to an adjacent property, that property owner may commence proceedings in negligence.

Disclaimers

- This list of possible areas of climate legal risk is not exhaustive.
- Some of these areas of decision-making are especially problematic as climate legal risk may arise no matter what decision is made. In these circumstances, a decision-maker can only make the best decision possible on the information available. This may not prevent a matter from ending up in court but may give the decision-maker a strong defence.
- Decision-makers should be especially cautious to take a long-term approach to decisions, to prevent future government officials and constituents from having to bear the cost of inappropriate decisions.

Climate legal risk decision-making

In order to assist decision makers to navigate climate legal risks, a decision-making framework has been developed by CoastAdapt (see Appendix D). Recognising and acknowledging uncertainty is key when considering climate legal risk. There are two general elements of potential uncertainty for decision-makers:

1. The facts may be uncertain because climate change impacts remain uncertain.
2. The law may be uncertain because, in many cases, there are no clear legislative standards to guide government decision-making.

If there is certainty as to the facts and certainty as to the law, then we can expect the level of risk associated with the outcomes of the decision to be minimised or avoided. However, if there is some level of uncertainty as to the facts and/or the law, then it becomes difficult to assess the level of risk, making it more difficult to determine how to proceed, and how to assess the possibility of a litigious (court-based) outcome.

Therefore, applying the climate legal risk decision-making framework when council is considering its response to coastal hazards has the potential to reduce legal risk.

4. Recommendations

1. Communicate the risk

Prepare a communications plan that outlines how Brighton Council will communicate the risk of coastal hazards to the community to ensure public safety, inform property owner decision-making, and outline Councils role in responding.

2. Conduct further stakeholder engagement

The Council should undertake further detailed engagement with key stakeholders to better understand the consequences and response options to coastal hazard impacts on Aboriginal heritage sites, natural values, and public infrastructure. Key stakeholder groups include, but are not limited to, Aboriginal Heritage Tasmania, Kutalayna Collective, Derwent Catchment Project, TasRail and relevant state government departments.

3. Coordinate responses at the regional and state level

Work collaboratively with other councils and state government to enable a coordinated and consistent approach to managing coastal hazards across Tasmania while not diminishing localised responses.

4. Develop a Coastal Hazards Policy

Develop a Coastal Hazards Policy to guide all decisions made by Brighton Council in regard to current and future coastal hazards. The policy should follow the principles outlined in the Southern Councils Regional Strategy - *Adapting to a changing coastline in Tasmania* (see Appendix B), previously endorsed by Council.

5. Consider the need for Coastal Management Plans for impacted sites

Local coastal management plans for each site would be developed with stakeholders and the community to outline what actions, if any, will be implemented at that site. The plans should identify clear objectives, actions, responsibilities and performance indicators. It is important that any management plans developed are in line with the recommended Coastal Hazards Policy, the Tasmanian State Coastal Policy, and the Regional Strategy – *Adapting to a changing coastline in Tasmania*.

6. Use climate legal risk decision-making framework

The climate legal risk decision-making framework (outlined in Appendix D) should be used when considering council's response/s to coastal hazards in order to make legally robust decisions and alleviate the risk of litigation.

7. Review modelling as new data becomes available

The Council should review coastal hazards modelling as new data becomes available and update its response as necessary.

8. Investigate possible planning interventions

The Council should investigate opportunities to treat the risk of coastal hazards through planning interventions.

Appendix A: Definitions

Term	Definition
Coastal Erosion	The Tasmanian Government's 2016 Coastal Hazards Technical Report defines coastal erosion as: 'the wearing away of coastal land by water, wind, general weather conditions or human intervention'. Coastal erosion may take the form of: • hazardous erosion (short-term erosion of sandy or soft shorelines), • coastal recession (long-term erosion of sandy or soft shorelines) and • landslides (downslope movement of land usually caused by storms or waves removing material at the foot of the landslide).
Coastal Erosion Hazard Bands	The bands describe susceptibility to coastal erosion and shoreline recession when considering current and anticipated conditions by 2100. The coastal erosion bands are: • Acceptable – area is unaffected by coastal recession until after 2100; not subject to controls, • Low – areas vulnerable to coastal recession by 2100 or is protected by coastal defences, • Medium – areas vulnerable to coastal recession by 2050, • High – areas is currently vulnerable to coastal recession; typically on sand dunes.
Coastal Inundation	Coastal inundation occurs when low-lying coastal land is flooded by the sea and can be either temporary or permanent. Temporary coastal inundation is caused by floods, tides, storm surge and storm events, which is usually measured by annual exceedance probability (AEP). Whereas permanent coastal inundation is a result of sea level rise (SLR) and measured from the mean high tide (MHT) line.

Coastal Inundation Hazard Bands	Areas along the coastline were classified into coastal inundation hazard bands according to their vulnerability to coastal inundation when considering current and anticipated conditions by 2100: • Acceptable – area is unaffected by coastal inundation until after 2100 • Low – area is vulnerable to a 1% AEP storm event by 2100; medium-term flooding issue • Medium – area is vulnerable to a 1% AEP storm event by 2050; will be impacted by a 0.8m SLR by 2100 • High – area will be within 0.2m SLR from MHT line by 2050; currently impacted by the Highest Astronomical Tide; or • Coastal Inundation Investigation Areas – area is not covered by LiDAR and is below the 10m contour line and within the coastal zone; yet to be classified due to incomplete or unavailable elevation data.
Highest Astronomical Tide	The highest level of water that can be predicted to occur under average meteorological conditions and any combination of astronomical conditions.
Natural Values	Natural values refer to the variety of life-forms, including plants, animals, and micro-organisms, and the ecosystems they belong to, including land forms, soils, and water.
1% Annual Exceedance Probability (1%AEP)	1% AEP event (e.g., storm, flood) is an event that has a 1% chance of occurring, or being exceeded, in any one year.

Appendix B: Principles to guide adaptation

The principles outlined below from the Regional Climate Change Initiative's *Regional Strategy: Adapting to a changing coastline in Tasmania* reflect the knowledge and expertise of local government policy makers and resource managers with direct experience in developing or applying knowledge about adapting to climate change impacts on the coastline.

The principles are:

1. Public Safety
   A. Human safety is paramount. Areas of unacceptable risk should be identified and exposure to risk minimised or if risk is unavoidable, identify retreat pathways.
   B. The community will be provided with up-to date climate change and coastal hazards information to inform decision-making and to provide opportunities to participate in response planning.

2. Private Property
   A. Private property owners occupy coastal areas at their own risk.
   B. Property owners are responsible for managing risks to their property from coastal hazards in accordance with relevant policies and regulations and based on expert coastal advice.
   C. Where private coastal protection works are undertaken by property owners, beneficiaries should pay.

3. Local government
   A. Councils should actively monitor coastal risks and hazards within their municipal areas.
   B. Councils are responsible for the management and cost of coastal hazard impacts on their own assets and services.
   C. Councils are not responsible for the cost of coastal hazard impacts on private property, or on private assets located on public land.
   D. Access to public coastal land will not be available to private property owners for coastal protection works, except where significant public benefit is demonstrated.

4. Legal risk and adaptation
   A. Coastal legal risks can be identified, managed and reduced but can't be avoided.
   B. Well-developed policy and action now will minimise the risk of legal challenges and liability in the future.

5. Coastal management and planning
   A. Coastal hazard planning is enhanced where there is consultation between relevant levels of government, the private sector, community and other key stakeholders.
   B. Planning provisions (such as Local Provisions Schedule; Specific Area Plans) can be used so coastal hazard management plans are prepared in areas identified as risky or hazardous, and can then be applied to statutory planning decisions.
   C. A pathway of adaptive responses to coastal hazards, informed by up-to date climate science should be adopted and intervention by humans in natural processes should be minimised.
   D. Public access and community services should be maintained wherever possible where consistent with the principles of public safety, risk and financial considerations.
   E. When Councils make decisions based on the projected asset life of infrastructure, they must factor the risks of coastal sea level rise hazards in the calculation of asset life.
   F. Intensification of use or development should be avoided in public coastal hazard areas managed by Councils unless significant public benefit is demonstrated.

6. Coastal Values
   A. The importance of ecological and cultural values, including Aboriginal heritage, will be recognised when responding to coastal hazards.
   B. Coastal hazards management will consider the impact of any action or inaction on ecological and heritage values. This requires sound contemporary understanding of the values present and an integrated approach to managing them and the hazard
   C. Understanding climate change impacts to Aboriginal sites and landscapes will require input from Aboriginal Heritage Tasmania to gain access to data that may not be publicly available and to ensure a culturally appropriate response and compliance with legislative requirements.

Appendix C: Coastal hazard policies and positions

Kingborough Council

Kingborough Council's coastal hazard policy can be seen here: https://www.kingborough.tas.gov.au/wp-content/uploads/2023/09/Policy-6.9-Coastal-Hazards-v1.pdf

Clarence City Council

Clarence City Council's coastal hazard policy can be seen here: https://www.ccc.tas.gov.au/wp-content/uploads/2021/03/Coastal-Hazards-Policy.pdf

Tasman Council

Tasman Council's information on coastal hazards can be found here: https://tasman.tas.gov.au/development-planning/development-in-a-coastal-risk-area/

Appendix D: Climate legal risk decision-making framework

The climate legal risk decision-making flowchart steps the decision-maker through the legal decision-making process to help make informed and holistic decisions. By following the framework, decision-makers can expect to be better able to make legally robust decisions and alleviate the risk of litigation.

There are three steps to take:

1. Does the decision make have the power or authority to make a decision?
    a. Identify the sources from which the decision-making power is derived (e.g., regulatory instruments)
    b. Understand the limits of the functions, responsibilities and duties vested in the decision-maker by that power
    c. Understand any built-in immunities or exclusions of liability
2. Is there factual certainty?
    a. Determine whether the factual information is sufficient to make the decision (i.e., whether the evidence used to establish the impacts is current and reliable)
    b. If not, seek further information
3. Is there legal certainty?
    a. Determine whether there is sufficient legal certainty to make the decision (i.e., has the issue been given consideration by the courts?)
    b. If not, seek further advice

If there is both sufficient factual and legal certainty, the decision-maker can make an assessment about the acceptability of the risk to take the proposed action. If there is insufficient certainty, the decision-maker should consider whether it is possible to seek further factual information or legal advice.

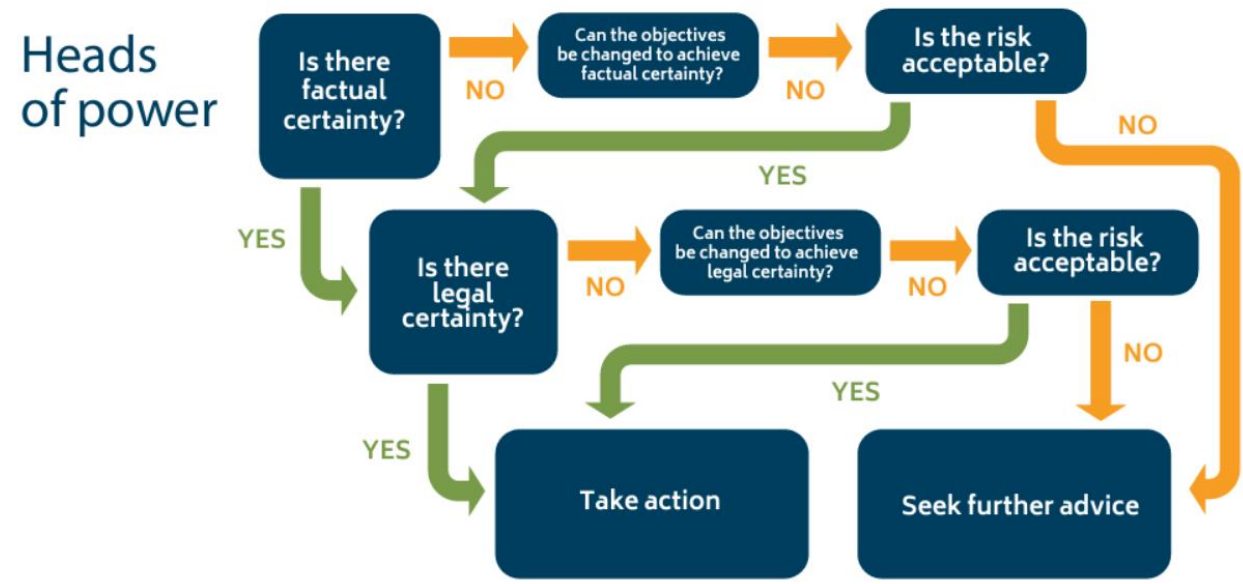

Figure 1 Climate legal risk decision-making flowchart. Source: Developed by Mark Baker - Jones.

ATTACHMENT A
AGENDA ITEM 13.4

SOUTHERN COUNCILS CLIMATE COLLABORATION

CARBON AND ENERGY FOOTPRINT

BRIGHTON COUNCIL CORPORATE INVENTORY AND OPPORTUNITIES REPORT

Brighton Council

Southern Tasmanian Councils Authority

Regional Climate Change Initiative

ABOUT THE COUNCIL CARBON AND ENERGY FOOTPRINT

The Council Carbon and Energy Footprint (CEF) has been developed as part of the Southern Councils Climate Collaboration. The Collaboration is an initiative of the Southern Tasmanian Councils Authority climate program, the Regional Climate Change Initiative. It is supporting the 12 southern councils to build capacity and capability to develop climate responses, to reduce their carbon emissions, and respond to the challenges and opportunities of a changing climate.

The Collaboration uses a common and consistent approach to work with councils to find local solutions. The approaches and resources used in the Collaboration have been developed specifically to meet the role and functions of councils and enable actions to be scaled between councils or regionally resulting in greater efficiencies and avoid duplication and maladaptive responses.

To support councils in understanding their carbon footprints and energy use the Collaboration purposely built a Tasmanian Councils Carbon Calculator that can readily be used in-house by councils to regularly update their Carbon Footprints. It can inform the development of science based targets and is leveraged from the City of Hobart's climate program that has resulted in savings on their energy bills of over $1 million annually since 2014.

The Calculator's data inputs are from sources already collected, or can be accessed by the councils, such as bills: electricity and fuel (petrol, diesel, LPG) and waste tonnages from council kerbside collection services and waste delivered to waste transfer stations or landfills. It emphasises operations and services that the councils are directly responsible for and can take action to reduce greenhouse gas emissions and energy use. It is straight forward to use and flexible, which means that councils can readily calculate their annual Footprint and track progress towards targets to reduce emissions.

The Calculator uses national carbon accounting methods set out by the Australian Government in its National Greenhouse and Energy Reporting (Measurement) Determination 2008 legislation

This Carbon and Energy Footprint has been prepared by:

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Katrina Graham, Senior Climate Change Officer, City of Hobart, and STCA RCCI Program Coordinator

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- City of Hobart experiences based on its delivery of corporate energy and greenhouse targets from 2010 to 2020 and its Global Covenant of Mayors reporting commitments.

CONTENTS

AT A GLANCE

Brighton's Greenhouse Gas Emissions and Energy Use

Table 1: Greenhouse Gas Emissions (in tonnes CO_2-e)

Year	Total GHG Emissions	Landfilled Waste	Non-landfill Organic Waste	Metered Electricity	Street Lighting	Fleet Fuel	Other Fuel
2019/20	11,604.5	11,252.0	1.1	50.5	54.3	246.4	0.2
2020/21	11,670.4	11,252.0	1.1	80.5	27.6	309.0	0.2
2021/22	3,494.3	2,963.6	61.7	112.2	25.6	266.6	64.6
Change 19/20 to 21/22	-8,110.2	-8,288.5	60.6	61.8	-28.7	20.2	64.4
% change 19/20 to 21/22	-69.9%	-73.7%		122.4%	-52.9%	8.2%	39,779%

Table 2: Energy Use (in gigajoules)

Year	Total Energy Use	Mains Electricity	Street Lighting	Fleet Fuel	Other Fuel
2019/20	6,027	1,211	1,303	3,510	3
2020/21	6,695	1,704	585	4,404	3
2021/22	7,963	2,525	575	3,797	1,066
Change 19/20 to 21/22	1,936	1,314	-728	287	1,063
% change 19/20 to 21/22	32.1%	108.5%	-55.9%	8.2%	39,779%

Table 3: Ten Highest Electricity Usage Sites in 2021/22

Site	Electricity Use (kWh)
Brighton Council Chambers and Offices, 1 Tivoli Rd, Old Beach	180,400
Works Depot, 2 Cobbs Hill Road, Bridgewater	126,667
Brighton Civic Centre, 25 Green Point Road, Bridgewater	110,910
Pontville Football and Cricket Club, 325 Brighton Rd, Pontville	73,892
205 Brighton Road, Brighton	56,670
Pontville Community Centre, 371 Brighton Road, Pontville	27,828
Bridgewater Coronation Hall, 25 Old Main Road, Bridgewater	24,802
Brighton Oval, 325 Brighton Rd, Pontville	24,770
Bridgewater Parklands, 2B Eddington Street, Bridgewater	19,506
Pontville Memorial Hall, 325 Brighton Road, Pontville	17,664

Table 4: Solar Power Systems and Generation

Site	Capacity (kW)	2021/22 Electricity (kWh)	2021/22 Electricity (GJ)
Brighton Council Offices, 1 Tivoli Rd, Old Beach	65.5	83,752	301.5
Brighton Civic Centre, 25 Green Point Rd, Bridgewater	50.0	5,199	18.7
Works Depot, 2 Cobbs Hill Road, Bridgewater	30.0	38,725	139.4
Old Beach Cricket Club, 84 Jetty Rd, Old Beach	7.0	1,495	5.4

Table 5: Solar Power Generation, Use and Export 2019/20 to 2021/22 (in GJ)

Year	Solar Generation (GJ)	Solar Power Used on Site (GJ)	Solar Power Export (GJ)
2019/20	389.3	253.8	135.5
2020/21	389.1	253.6	135.4
2021/22	465.0	286.4	178.6

BRIGHTON COUNCIL – CARBON INVENTORY AND OPPORTUNITIES REPORT

INTRODUCTION

This Carbon and Energy Footprint (CEF) provides a summary of the Brighton Council's corporate greenhouse gas emissions and energy consumption over the three financial years 2019/20, 2020/21 and 2021/22. It also provides some potential opportunities to reduce emissions, energy use and/or associated costs.

The CEF inventory covers all of the significant sources which result from the council's operations and from its role in the management of wastes generated in the municipality.

The sources include:

- Use of fuels, which generate carbon dioxide and minor amounts of other greenhouse gases when combusted such as in vehicle engines, generators or gas fired heating or hot water systems.

  These are known as Scope 1 emissions, which are directly emitted from owned or controlled sources.

- Electricity used in metered supplies to council sites and that used by unmetered public lighting assigned to the council. These emissions do not arise directly from the council's own operations, they are created in the generation of electricity. While nearly all of Tasmania's electricity is generated from hydroelectricity and wind, this does not mean that the electricity in Tasmania has net zero emissions. At times some electricity (including from coal fired power stations) is imported via Basslink, the gas-fired power stations at Bell Bay are operated when required and there are some greenhouse gas emissions associated with hydroelectricity including methane emissions from storage reservoirs.

  These are known as Scope 2 emissions which are indirect through the purchase of electricity.

- Waste that is managed or controlled by the council, including from kerbside collection and waste which is delivered to council managed waste transfer stations. The waste related emissions covered in this Footprint are those from the treatment, processing or disposal of the waste, including landfill gas and emissions from composting operations.

  These emissions have been calculated as equivalent to Scope 1 emissions at the facilities which process the waste. The emissions generated by contractors engaged by the council to collect or transport waste are not included.

This Footprint does not include emissions generated in the provision of goods and services to the council apart from those listed above. These "third party" emissions could be considered to be part of the council's greenhouse gas emissions footprint. However, it is challenging to obtain such information, as many providers do not currently have relevant data. In addition, councils purchase a wide range of goods and services meaning that there would need to be engagement with numerous providers to calculate these emissions.

A summary of greenhouse gas emissions and energy usage for the 2021/22 is provided initially, followed by a summary for the three years 2019/20 to 2021/22, and a list of general opportunities to reduce emissions and energy.

SUMMARY FOR 2021/22

Greenhouse Gas Emissions

The greenhouse gas emissions from Brighton Council's corporate operations totalled 3,494 tonnes carbon dioxide equivalent (tCO_2-e) in the 2021/22 financial year.

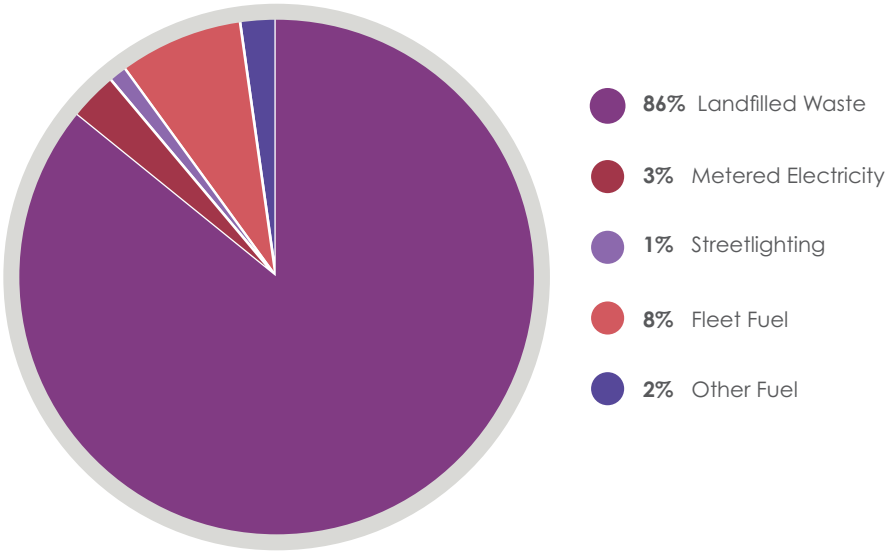
Of this total about 86% of the emissions (3,025 tCO_2-e) were from disposal and treatment of waste managed by the council. This waste includes that disposed to landfill (6,235 tonnes), the food organics and garden organics (FOGO) waste kerbside collection (1,317 tonnes), which is composted at the Pure Living Soil facility and green waste from the council's own parks operations (24 tonnes).

The refuse is disposed of at the Southern Waste Solutions landfill at Copping. While this landfill has landfill gas collection, there are residual emissions of methane which it is not possible to collect. There are 61 tCO_2-e emissions associated with composting of the FOGO waste and 1 tCO_2-e of emissions from the council's parks green waste. Composting emissions are about 90% less than those from a landfill with gas collection.

The next largest category of corporate emissions was from fuel being used by vehicles and plant. The emissions generated from this source were 267 tCO_2-e in 2021/22 (about 8% of the total). Most of these emissions were from major plant and large trucks with 215 tCO_2-e from diesel and 51 tCO_2-e from use of petrol. In addition, 2% of total emissions (64 tCO_2-e) were contributed by the use of LPG at several council sites, primarily sporting facilities.

The emissions from the use of metered electricity were 112 tCO_2-e, while an amount of 26 tCO_2-e was from electricity used by unmetered public street lighting. Together electricity use comprised about 4% of the emissions total. Electricity exported to the grid from solar panel systems at council facilities reduced emissions by to 7.9 tCO_2-e using the state coefficient for electricity and this has been incorporated into the metered electricity information.

Figure 1. Greenhouse Gas Emissions Percentage by Category for 2021/22 Year



Energy Use

The total net energy use by Brighton Council corporate operations was 7,963 gigajoules (GJ) in 2021/22. For comparison the typical energy usage of a household with a three-bedroom house and two cars is about 100 GJ, with annual usage of about 30 GJ for electricity in the house and about 35 GJ per car.

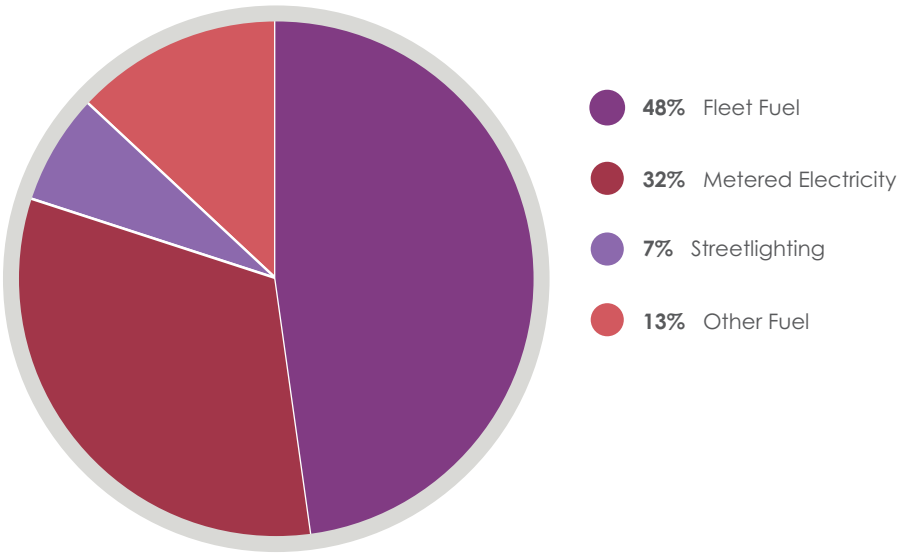
Fleet fuel use was the single biggest category with 3,797 GJ having been used, which represented about 48% of the total energy consumption. Stationary fuel use, ie LPG used at council facilities, was 1,066 GJ or about 13% of the total.

Electricity consumption at metered sites was 2,525 GJ or just under 32% of the total energy usage. Electricity used for unmetered public street lighting totalled 728 GJ (7.2% of total use).

Four of the council's facilities had solar panel systems as at June 2022, of which two commenced operation during the year. Total electricity generated in the 2021/22 year was 129,171 kWh (465 GJ) and of this 49,613 kWh (179 GJ) was fed into the grid.

While electricity is measured in kilowatt-hours (kWh) this unit is specific to electricity only. To more generally compare different types of energy used by the council the unit of gigajoules (GJ) is used, with 1,000 kWh equating to 3.6 GJ.

Figure 2. Energy Use Percentage by Category for 2021/22 Year



SUMMARY OF 2019/20 TO 2021/22

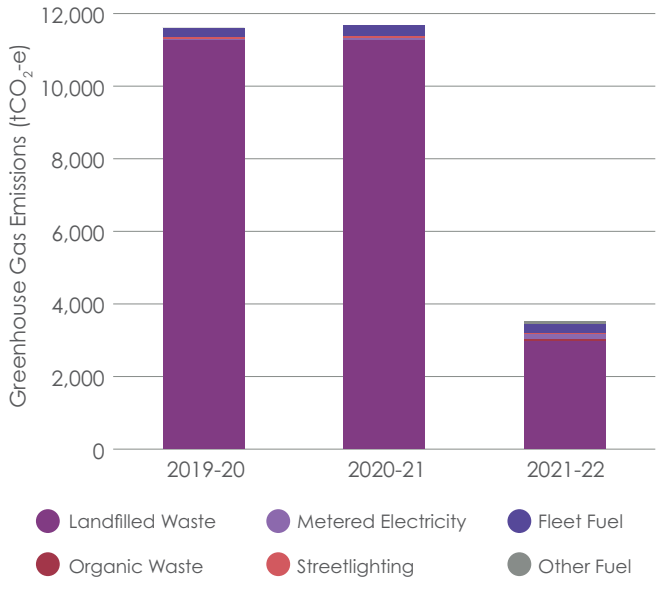
Greenhouse Gas Emissions

The council's corporate greenhouse emissions have been assessed for the three years from 2019/20 to 2021/22. During this period there have been significant impacts on the use of council facilities resulting from COVID related restrictions including the operations of sporting and community facilities. However, having information over the three year period provides a baseline for assessing future changes to the council's emissions.

The total greenhouse gas emissions from the council's operations decreased significantly over the three years. The emissions in 2019/20 were 11,605 tCO_2-e, remaining basically constant at 11,670 tCO_2-e in 2020/21 and then dropping by about 70% to 3,494 tCO_2-e in 2021/22.

The largest component of the emissions is that from waste, which comprised 96-97% of emissions in the first two years, and then dropping to 87% in 2021/22. Emissions from fleet fuel use rose slightly between 2019/20 and 2021/22 when they comprised about 8% of that year's emissions. Electricity use contributed about 1% of emissions in each of the first two years, but the percentage increased to 4% of the total due to the reduction in waste emissions.

Figure 3. Annual Greenhouse Gas Emissions from 2019/20 to 2021/22



The trend in emissions from waste to landfill is similar to that in overall emissions total, with a decrease from 11,252 tCO_2-e in 2019/20 to 2,964 tCO_2-e in 2021/22. The major factor in this reduction was the transfer of waste disposal from the Peppermint Hill landfill, which does not have landfill collection to the Copping landfill where the gas is collected and used mostly to generate electricity or is flared. The introduction of the FOGO kerbside collection service also had a major impact by diverting waste from landfill to composting. The emissions from composting are about 90% lower than from a landfill with gas collection. The emissions from the council's parks green waste were almost unchanged at about 1 tCO_2-e in each year, while the composting of the FOGO collection waste generated about 61 tCO_2-e in 2021/22.

Fleet fuel emissions increased slightly from 246 tCO_2-e in 2019/20 to 267 tCO_2-e in 2021/22 (or just over 8%). Diesel consumption increased by about 12.5%, which was partially offset by a 7% reduction in the usage of petrol.

Emissions from the use of LPG at council's sites increased by about 64 tCO_2-e, with the rise largely attributable to outdoor sporting facilities.

Emissions from metered mains electricity usage rose by 122% over the same period. The large majority of this was due to an increase in electricity consumption, with a minor portion of the increase due to a 6% rise in Tasmania's greenhouse gas coefficient for electricity. The largest increases were at some of the sporting facilities, the works depot and the council offices.

Emissions from electricity used for streetlighting fell by 53% due to changeover of a large number of streetlights to LED from less energy-efficient technologies.

A table summarising data for the three years in provided in the At a Glance.

Energy Use

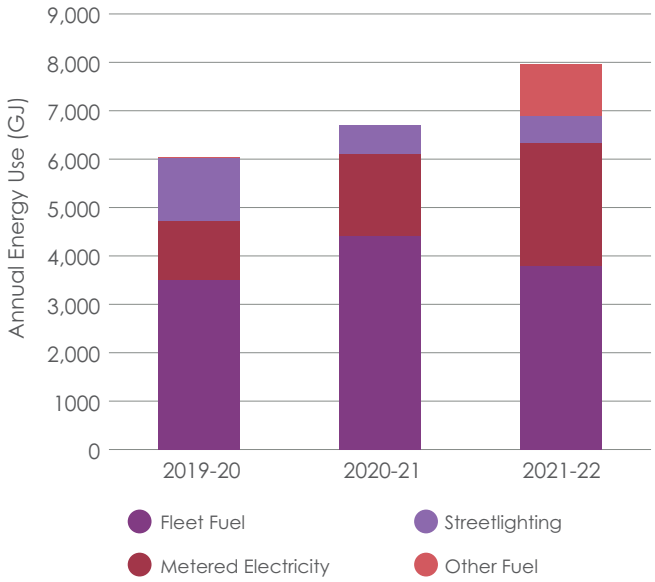
From 2019/20 to 2021/22, overall energy use increased from 6,027 gigajoules (GJ) to 7,963 GJ, or a rise of over 100%, with all types of energy use increasing except for electricity used by unmetered public street lighting.

Fleet fuel varied between about 50% and 65% of energy use over the period, while the contribution from LPG used at facilities increased from a small amount to about 13% in 2021/22. The remainder of energy use was sourced from electricity.

Fleet fuel use rose by 287 GJ, equivalent to an 8% increase, with the rise in diesel consumption partially offset by a drop in petrol use.

The use in LPG at council sites increase by 1,063 GJ, with about 90% of the consumption occurring at sporting facilities.

Figure 4. Annual Energy Use from 2019/20 to 2021/22



Metered electricity usage increased by 1,314 GJ (aver 100%) between 2019/20 and 2021/22. There were significant increases in consumption at a number of sporting and community facilities, along with the works depot and the council offices. At least some of this increase is likely to have been due to the reduced usage of facilities in 2020 from the impacts of COVID-related restrictions on council services.

Electricity used for unmetered public streetlighting decreased by about 53% over the three years, which largely was a result of about 900 streetlights being changed from mercury vapour or compact fluorescent to more energy-efficient LED technology between 2019/20 and 2021/22.

A table with the energy usage data for the three-year period is provided in the At a Glance.

OPPORTUNITIES FOR REDUCING GREENHOUSE GAS EMISSIONS AND ENERGY USE

WASTE

The biggest source of greenhouse gas emissions is waste to landfill, even though there is landfill gas collection at the Copping landfill. Along with the change of disposal site from the landfill at Peppermint Hill to that at Copping, the introduction of the FOGO collection service and associated diversion of this waste from landfill has meant significantly lower emissions being generated. While residents typically divert much of their green waste to a FOGO collection service when it is introduced, it can take some time for residents to transfer a higher proportions of food waste from general refuse. Ongoing education of residents will likely support the maximisation of future-food waste diversion rates.

The state-wide waste levy commenced on 1 July 2022 at $20 per tonne of waste to landfill, and the levy will rise to $40 per tonne in 2024 and $60 per tonne in 2026. While this levy will increase the cost of waste disposal, it will also improve the economics for actions which divert waste from landfill disposal.

It is considered that a review of further potential waste reduction actions may be warranted in light of the introduction of the levy to minimise overall waste management costs, if the council is not already taking action on this front.

FUEL

Along with being a significant contributor to greenhouse gas emissions fleet fuel use is the largest component of the council's energy consumption. This is typical of local government due to the amount of vehicle and plant use needed to deliver the services being provided to the community.

Trucks and major plant are typically the largest users of fuel for councils for works such as road maintenance.

There are several options to reduce greenhouse gas emissions from fleet operations. The two main categories are fuel substitution from fossil fuels to electricity or other low-emission technologies and the other is to minimise the consumption of diesel and petrol.

In regard to fuel substitution the technology considered to have the most potential at this time is battery-powered electric vehicles and plant. The other main alternative, hydrogen fuel cell technology, is far less advanced and is more problematic given the issues with distribution and storage of hydrogen and that there is little "green" hydrogen currently being made.

While electric vehicle technology is advancing, there are several issues which mean that currently it is not generally viable for the council's fleet. These issues include the purchase cost, supply constraints, a limited range of vehicles available in Australia, particularly in the commercial and utility types of vehicles, and travel range of electric vehicles, though this is improving.

Thus there are some significant limitations, including capital cost, in moving towards fleet electrification at present, though the council may wish to trial one or more vehicles to commence familiarisation with the technology. Recent changes to fringe benefits tax arrangements for electric vehicles have reduced the net cost to local government for those vehicles to which FBT applies. This factor, along with lower fuel and maintenance costs, means that overall life cycles may be similar or cheaper in some instances than the equivalent petrol/diesel alternatives.

Over the next few years it is anticipated that battery-electric options will become the preferred technology as prices drop, the types of vehicles and plant that are battery powered expands and battery capacity increases.

Actions which could be taken to reduce fuel consumption include:

- Fuel efficiency should be included as a significant factor is assessing the purchase of new or replacement vehicles
- Vehicles should undergo regular maintenance, including correct inflation pressure of tyres
- Regularly review of fuel use performance (eg litres per 100 kilometres or per hour of operation) for individual items of fleet and plant to identify reductions in fuel efficiency
- Driver education in fuel efficient driving techniques could be provided
- The distances being travelled by vehicles or hours of operation of plant should be optimised, such as including this issue included in route and works planning and reviewing the frequencies of regular activities such as inspections.
- Identify where it may be possible to reduce travel through the use of technology such as virtual meetings

There is a significant consumption of LPG at council facilities. Typically a large proportion of LPG use is for the supply of hot water or to provide space heating, with smaller amounts used for cooking appliances.

Given the relative cost of LPG and electricity, there may be potential in investigating switching services and appliances from LPG to electricity as the energy source.

For space heating heat pumps can be very energy efficient, as they can transfer three times the energy of that in the electricity that is used. For hot water services there are solar and heat pump-based systems, which can replace gas water heaters. Given the low greenhouse gas coefficient for electricity, switching to these alternatives would result in large percentage drop in the associated emissions.

ELECTRICITY

While electricity use makes a relatively small contribution to council's greenhouse gas emissions, it comprises about 40% of the total energy use.

A table is provided in At a Glance listing the ten sites that used the most electricity in 2021/22 year. In total these sites combined consumed 88% of the metered electricity total. Thus these are the sites where potential for savings is likely to be the most significant, where there haven't been recent major upgrades to or significant energy reduction works at the facilities.

The main options to reduce electricity use are to undertake energy-efficiency upgrades and to install renewable energy such as solar photovoltaic (PV) systems.

Energy Efficiency

With respect to energy efficiency, it is usually possible to identify measures with payback periods of 5 years or less for up to 30% of the electricity used at a site, where there hasn't been a recent upgrade or works previously undertaken to reduce electricity use. The particular actions which are financially viable depend on the type of fittings, equipment and appliances that are installed and how many hours a year the facility operates.

Some of the typical actions that can cost effectively reduce energy use are:

- Upgrading all lighting to LED technology, in many instances this only involves replacing the light bulb or tube with an LED equivalent, but can involve replacing whole fittings (LEDs reduce electricity use by 60-90% depending on the technology it replaces, and also have a significantly longer life thus reducing maintenance costs)
- Installing lighting controls such as timers or motion sensors
- Replacing hot water services with solar or heat pump technology or small instantaneous on demand systems
- Replacing direct electric space heating with heat pumps, which can also provide cooling
- Replacing appliances that are used regularly or continuously such as refrigerators with higher energy star rating models
- Reducing leaks and draughts in buildings
- Installing insulation in the ceiling cavity for buildings which do not have insulation and the roof space is readily accessible
- Installation of skylights may reduce the need for lighting during the daytime

Many buildings, particularly those built more than several years ago, will have poor thermal efficiency thus requiring more energy for heating and cooling. With the possible exception of installing ceiling insulation, it is generally not cost effective to undertake specific works to improve the situation such as the installation of double glazing or insulation in walls or floor. However, where a building is to undergo a major refurbishment, then the opportunity should be taken to improve the energy rating of the building.

Renewable Energy

Another alternative to reduce net electricity use is to install renewable energy generation at council facilities. The only economically viable technology is currently solar panels with small scale wind generation generally not being cost effective.

As at the end of June 2022, there were four council facilities at which solar panel systems were installed including a 65.5 kW system at the council offices, a 50 kW system at the Brighton Civic Centre (commenced operating in March 2022), a 30 kW system at the works depot and a 7 kW system at the Old Beach Cricket Club (commenced operation in May 2022).

Given the likely future increases in electricity prices, the viability of installing solar PV systems should be reviewed for some of the other sites with higher electricity use, such as:

- Sporting Facilities,
  325 Brighton Rd, Pontville
- Pontville Community Centre,
  371 Brighton Road, Pontville
- Bridgewater Coronation Hall,
  25 Old Main Road, Bridgewater
- Pontville Memorial Hall,
  325 Brighton Road, Pontville

These sites each have usage of over 15,000 kWh per annum and all appear to have good solar access and sufficient roof area with reasonable orientation for solar access. Some of the council's smaller electricity consumption sites may also be suited, but generally the smaller the usage the less cost effective the installation. At very low usage sites there can be instances where a mains electricity supply could be cost effectively replaced by a solar and battery combination, depending on the specific circumstances.

The cost to install a solar power system is about $1,000 to $1,500 per kW depending on site issues, with savings in the order of 15c/kWh, which is equivalent to about $180 per year per kW.

Solar power is more cost effective where the predominant usage at a site is during daylight hours, such as offices and works depots. It is likely not to be viable where most of the electricity use is at night such as metered outdoor public lighting.

At current costs, the installation of a battery to store excess electricity from the solar panels is usually not cost effective, but this may be option to consider if there are frequent outages of mains electricity and the facility needs to have a more reliable power supply. The battery can provide power during the outages, as long as the site electrical load is not excessive relative to the battery size.

At some sites a solar panel and battery combination may potentially be used to replace a mains electricity connection and thus save the daily connection charges, which are about $400 per year.

Electricity Tariffs

A review of electricity tariffs will not reduce energy use, but it may provide an opportunity to lower energy costs.

The tariff that has in the past applied to most council sites is the small business tariff (tariff 22). There is the alternative of a peak/shoulder/off-peak tariff (tariff 94) which may well achieve lower costs for sites with significant usage at night (such as park lighting) or a facility mostly used on weekends. The shoulder (7am to 10pm on weekends) and off-peak (10pm to 7am all days) charges are significantly lower than the standard business rate.

There may be value to the council in undertaking a tariff review to ensure that each site is on the most cost-effective charges.

Streetlighting

As at June 2022 over 90% of the unmetered streetlights that the council pays for had been upgraded to energy-efficient LED technology. There were still 12 mercury vapour lights and 9 compact fluorescent lights remaining, which could also be replaced with LED lights. The other non-LED lights are sodium vapour lights (65 in total) which are relatively energy efficient. TasNetworks is replacing this older technology with LED as the existing lights fail, which over time will further reduce electricity use.

REGIONAL
CLIMATE CHANGE
INITIATIVE

The Corporate inventories and Opportunities Report has been prepared under the auspices of the Southern Tasmanian Councils Authority, Regional Climate Change Initiative by the 12 Councils of southern Tasmania: Brighton, Clarence City, Central Highlands, Derwent Valley, Glamorgan Spring Bay, Glenorchy City, City of Hobart, Huon Valley, Kingborough, Sorell, Southern Midlands and Tasman.

It was endorsed by the STCA Board on 23 August 2022.

Southern Tasmanian Councils Authority
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Southern Tasmanian
COUNCILS AUTHORITY

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Photography unless otherwise indicated: Katrina Graham, Senior Climate Change Officer, City of Hobart.

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ATTACHMENT B
AGENDA ITEM 13.4

SOUTHERN COUNCILS CLIMATE COLLABORATION

COMMUNITY CARBON EMISSIONS AND ENERGY FOOTPRINT

BRIGHTON LOCAL GOVERNMENT AREA 2023

Brighton Council

Southern Tasmanian Councils Authority

Regional Climate Change Initiative

ABOUT THE COMMUNITY CARBON EMISSIONS AND ENERGY FOOTPRINT

The Community Carbon Emissions and Energy Footprints (community footprint) have been developed as part of the Southern Councils Climate Collaboration. The Collaboration is an initiative of the Southern Tasmanian Councils Authority's (STCA) climate program, the Regional Climate Change Initiative (RCCI). It is supporting the 12 southern councils to build capacity and capability to develop climate responses, to reduce carbon emissions and energy use, and respond to the challenges and opportunities of a changing climate.

The Collaboration uses a common and consistent approach to work with councils to find local solutions. The approaches and resources used in the Collaboration have been developed specifically to meet the role and functions of councils and enable actions to be scaled between councils or regionally resulting in greater efficiencies and avoid duplication.

To support councils in understanding carbon footprints and energy use within their municipal areas the Collaboration developed a peer reviewed open-source model that uses reliable historic and current energy trends, which uses publicly available Australian Energy Statistics and National Greenhouse Accounts Factors data and is supported by other key government datasets. It is freely available to the Australian local governments, Australia-wide, to encourage common and pragmatic reporting and scalability of actions across the sector.

The Community Footprint uses national carbon accounting methods set out by the Australian Government in its National Greenhouse and Energy Reporting (Measurement) Determination 2008 legislation.

This project complements the Council Carbon and Energy Footprints that support Councils in understanding their own corporate emissions and where there are opportunities exist to reduce these.

METHOD

This report has been created by local government, using national and State Government statistics.

Southern Tasmanian and Launceston City councils have worked with TasNetworks to publish data on electricity used by households and businesses and show localised electricity generation, which is not widely available in other jurisdictions.

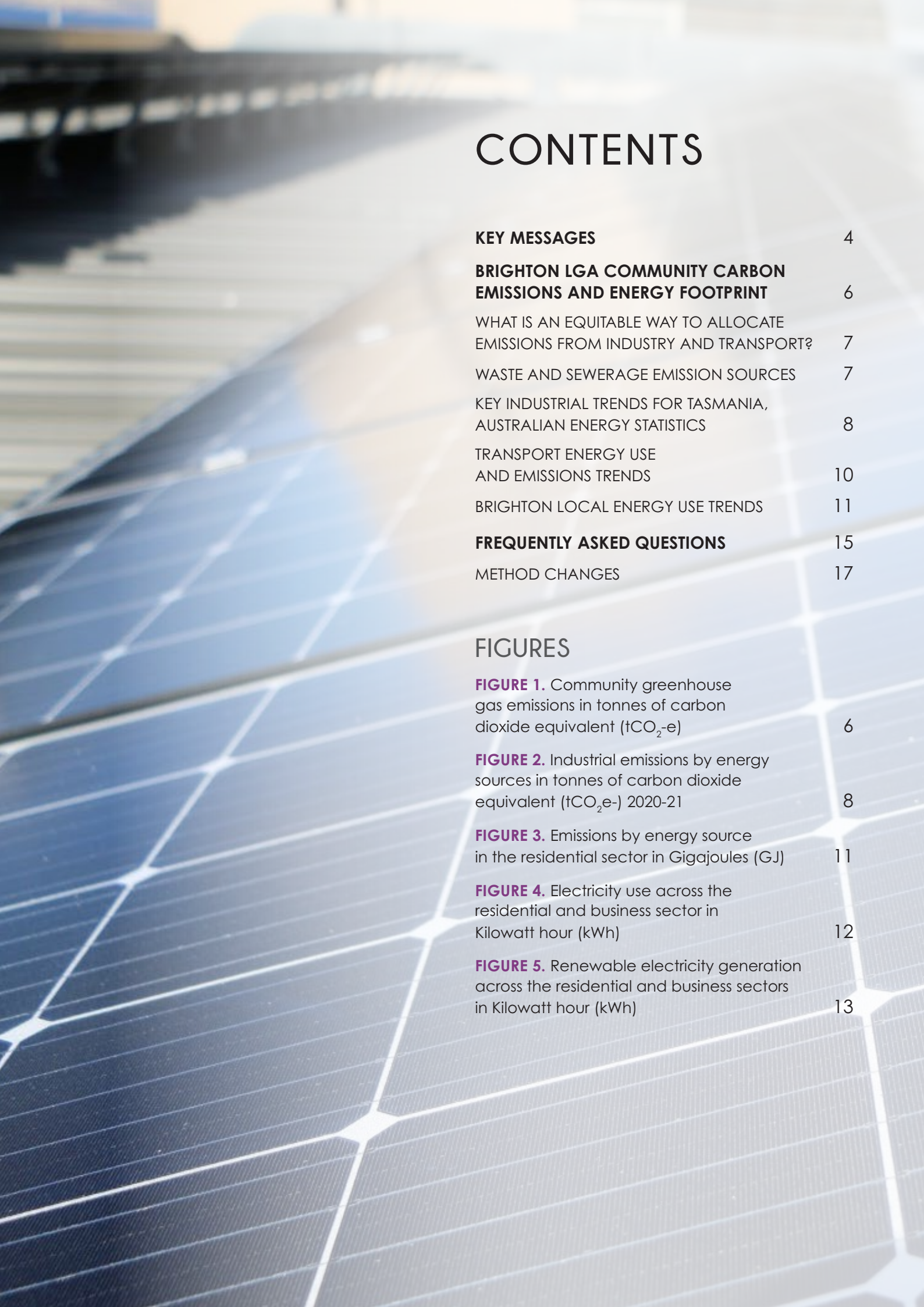
This Carbon Emissions and Energy Footprint has been prepared by:

LEAD ANALYST and PROJECT COORDINATOR: Alison Johnson, Climate Change Officer, Brighton Council.

Acknowledgments

The STCA acknowledges organisations that assisted with the finalisation of the community greenhouse gas and energy profile:

- City of Hobart developed and piloted the initial methodology for community emissions
- TasNetworks provided residential and commercial/industrial sector electricity data
- Brighton Council, provided in-kind expertise and technical support
- TasWater, providing water and sewerage emissions data
- STCA RCCI provided waste data for councils across the southern region
- Katrina Graham, Ex-Project Coordinator, Regional Climate Change Initiative, STCA – for the guidance and assistance delivering community emissions profiles across the southern region for many years (2016–2023)



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The 2023 Community Carbon Emissions and Energy Footprints, produced for the 12 southern Tasmanian councils highlights more needs to be done to reduce emissions.

Higher impact emission reduction efforts are required as more than 139,000 tonnes of carbon dioxide equivalent (tCO_2-e) are released into the atmosphere every year from activities in the Brighton Local Government Area (LGA). This is equivalent to 30,932 petrol/diesel vehicles driving around for one year.

Greenhouse gas emissions, mainly come from burning fossil fuels (coal, petrol and diesel, gas), and must *urgently* be reduced if we are to avoid the worst impacts of climate change.

Industrial and transport sector energy use are clearly the largest emitters (over half of community emissions) and a key focus for government, community, and private sector emission reductions. Combined the commercial and residential sectors contribute 15% of community emissions and the waste, sewerage and agricultural sectors contribute 10%. Emission reduction actions are needed across all sectors to meet Australia's goals of a 43% reduction from 2005 levels by 2030 and net zero emissions by 2050.

Leading International Climate Change Bodies, scientists, and governments around the world have determined that greenhouse emissions must *urgently* be halved if we are to limit more than 1.5C of warming.

The Intergovernmental Panel on Climate Change (IPCC) is the leading international body for assessing climate change science. In the most recent, the Sixth Assessment Report March 2023, there are warnings that urgent action is required to cut emissions by nearly half by 2030 to limit warming to 1.5C for a safe and liveable planet.

Local governments throughout Australia are acting to reduce greenhouse gas emissions and prepare for the changing climate.

The 12 southern Tasmanian councils, collaborating through a regional climate alliance, developed a community (municipal) emissions methodology for waste and energy based on current reporting methods and protocols. Community greenhouse and energy footprints were completed for each of the councils in 2019 and updated in March 2023.

This report identifies emissions sources that require substitution with low emission fuels, products, and services.

Recording and reporting community emissions, technology adoption and energy use can reveal successes over time, highlight the role of emerging industries, and increase accountability towards a low to zero emission future.

Energy statistics show emerging technologies that are making a difference.

Rooftop solar installations have more than doubled across the LGA in the last nine years and provide 5.2 million units generated locally back to the grid.[1] Electric vehicle adoption is low with 7 registered vehicles in 2020, growing from 4 in 2018.

We all have a role to play to reduce emissions. The world is moving towards zero emissions, achieving this is a huge challenge that requires all members of the community to do their part. Local governments have a key role increasing public understanding by being a corporate leader in the commercial sector, and through communicating successful local initiatives to our households and communities.

1 Standard electricity meters only provide exported electricity to the grid, this is the majority of the dataset available. This means onsite rooftop solar technologies contribution to the energy mix is underrepresented as there is electricity (can be the same amount as exported) used onsite generated by rooftop solar. Smart meters are becoming more prevalent and measure onsite use as well as exports.

Community energy use and waste greenhouse gas emissions footprints	Community footprint 2023 tonnes of carbon dioxide equivalent (tCO_2-e)
Brighton community	451,003
Regional community	2,795,680
Tasmanian community	4,010,000

Sources (left to right, top to bottom): Regional Community Energy Use and Greenhouse Gas Footprint, STCA, 2023; Australian Energy Statistics, Australian Government, 2023; Australian Greenhouse Gas Accounts Factors (Tasmania) 2022. Tasmanian Greenhouse Gas Emissions Report 2023, Renewable Energy Climate Future Industries Tasmania 2023.

Small actions together can have a large impact.

The southern Tasmanian local government areas are responsible for over half of Tasmania's energy and waste emissions.

We can make a difference – our combined efforts have flow on impacts around the world.

Switching away from fossil fuels and other emissions sources such as coal (from manufacturing) continues to contribute the most, as well as gas, diesel, petrol, and wood, will work to reduce the impact of climate change. While Tasmania is a smaller contributor to Australia's emissions, than other states and territories, due to a high percentage of renewables in the electricity mix, greenhouse gas emissions are currently contributing to global warming across all sectors.

Southern Tasmanian councils are leading and encouraging permanent community emission and energy reductions.

There are key areas for climate action moving forward:

1. Warm healthy homes
2. Low carbon transport
3. Energy efficient businesses
4. Minimise methane emissions from waste and sewerage

Individual households can reduce their emissions through the following measures:

- Switching from wood fires or gas heaters to heat pumps
- Electrifying all appliances i.e. replacing a gas water heater/cooker with electric equivalent
- Installing rooftop solar
- Reducing vehicle trips with cycling, walking or car sharing
- Replacing a petrol or diesel vehicles with lower emission vehicles (such as electric options)
- Home composting or using a Food Organics and Garden Organics (FOGO) service

There are always options to reduce emissions. These range from low-cost measures such as switching to energy efficient light bulbs, through to behaviour change actions such as influencing friends and family to switch to lower emission products, services and technologies.

On behalf of researchers, public officials, decision makers, community sustainability champions and students who can all access this information to help inform the debate on best practice abatement (emissions reductions), Tasman Council makes special acknowledgement of:

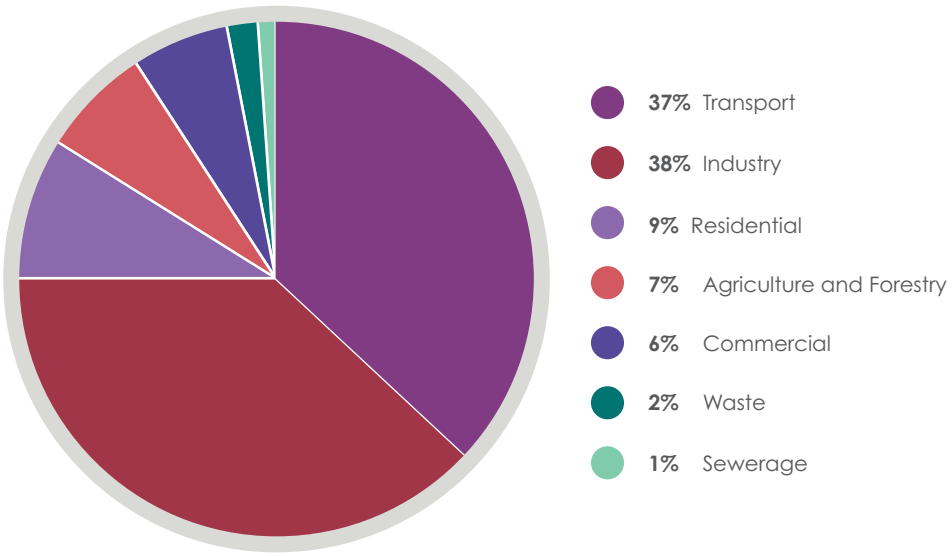
- TasNetworks for providing metered electricity data for the residential, commercial (and industrial sectors as part of the commercial data);
- RCCI members for ongoing review, support and data testing; and
- The Local Government Association of Tasmania for advocacy.

BRIGHTON LGA COMMUNITY CARBON EMISSIONS AND ENERGY FOOTPRINT

Brighton Community Carbon Emissions and Energy Footprint results show that 139,000 tonnes of carbon dioxide emissions (tCO^2-e) were released in 2021-22.

The municipality's biggest source of energy and waste emissions continues to be transport (37%), followed by the industrial (38%) residential (9%), and commercial (6%) sectors and then agriculture and forestry (7%), waste (2%) and sewerage (1%) sectors.

Figure 1. Community greenhouse gas emissions in tonnes of carbon dioxide equivalent (tCO_2-e)



Source: Southern Tasmanian Councils Authority, 2023.
Data sources: Australian Energy Statistics, 2023, TasNetworks, 2023.

Overall energy and waste community greenhouse gas emissions have decreased by 19%.

Energy emissions have decreased by 14%, the reductions were most significant from industry (19,707 tCO_2-e), followed by the commercial (3,383 tCO_2-e) and residential (2,701 tCO_2-e) sector. Waste emissions have decreased by 8,228 tCO_2-e.

What is an equitable way to allocate emissions from industry and transport?

Transport emissions are created from passenger vehicles (travelling to work and play), travelling by road, as well as rail, freight, by boat and by aeroplane travel.

The challenge is location specific models will allocate airports to the LGA they are located, when emissions here are the responsibility of everyone who flies.

In the future there may be highly accurate mobile phone data on journey's travelled and locations, this is still in its infancy for smaller cities such as Brighton.

Road transport is the largest creator of transport emissions, particularly from petrol and diesel. In this community profile transport emissions are allocated based on per capita, rather than location. It is likely that the larger cities have more of an emissions footprint, due to the volume of people.

Industrial emissions are also allocated per capita across municipalities, even though a few key locations are responsible for a large portion of industry sector emissions.

Industrial and transport emissions might not reflect local trends as data sources are based on Statewide trends. Until all local industrial companies volunteer their emissions data to a central reporting agency or the Australian Government regulatory reporting bodies negotiate commercial in confidence concerns for public data release these datasets will be largely inaccessible.

Waste and sewerage emission sources

Emissions from waste are sourced from kerbside collection figures and Waste Transfer Station tonnages from council records. The Australian Government provides a waste emissions methodology that outlines the emissions from organic matter rotting in landfill that creates emissions. Community (including corporate) waste emissions are:

Financial Year	Total waste emissions (tCO_2-e)
2019/20	11,253
2020/21	11,253
2021/22	3,025

Source: Brighton Council and Southern Tasmanian Councils Authority 2023

Waste emissions increase due to a range of factors, however, population growth from 17,674 in 2019-20 to 18,995 in 2021-22 is likely to have an impact.

Sewerage emissions estimated are calculated on a per capita basis. TasWater provides an estimate for water, sewer, and other emissions per capita for Tasmania, then this factor is multiplied by the population.

The biggest contribution to emissions from waste are from methane generated from organic wastes going to landfill.

However, as the process does not capture 100% of methane emissions the most effective way to reduce overall emissions is to reduce the amount of organic waste going to landfill.

Emission reductions occurred in the industrial, commercial, and residential sectors, in part due to Covid lockdowns.

Covid restrictions reduced travel, reduced the viability of some commercial businesses, and shifted electricity use from the commercial sector to residential as more people worked from home. National and state policies, market trends and commercial supply lines have been having a large impact on industry trends, while local electricity use trends reflect population growth, local climate conditions and economic growth. The emissions coming from Tasmanian electricity use also decreased over the last decade, even though this rose slightly in the last year.

Key industrial trends for Tasmania, Australian Energy Statistics

Industrial emissions mainly come from burning black coal (29%), coke (15%), petroleum products (18%) and diesel oil (13%).

Figure 2. Industrial emissions by energy sources in tonnes of carbon dioxide equivalent (tCO_2-e)

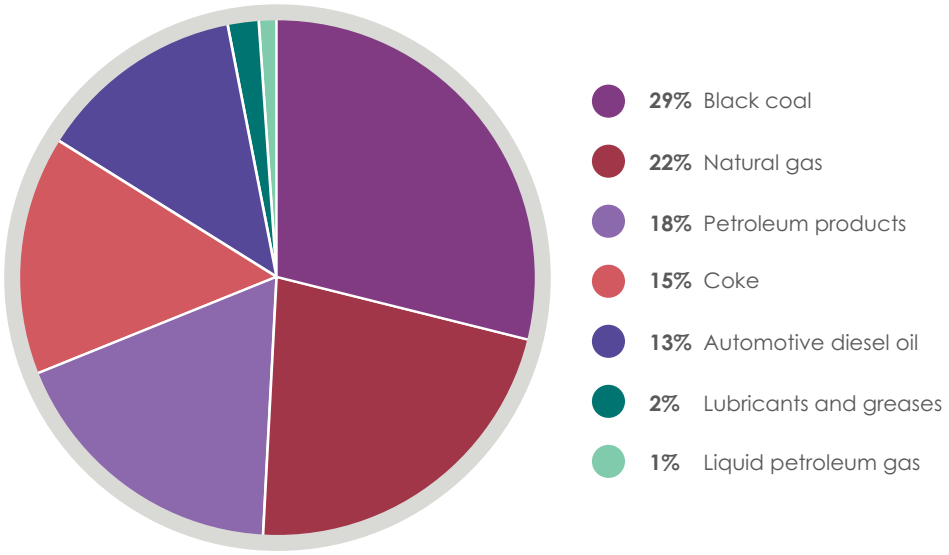


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Table 1: Community greenhouse gas emissions in tonnes of carbon dioxide equivalent (tCO_2-e)

GHG emissions	2010-11 (tCO_2-e)	2020-21 (tCO_2-e)	Growth % over the decade	Total difference between 2010-11 and 2020-21 (tCO_2-e)
Agriculture and Forestry	5,825	10,429	57	4,604
Commercial	11,216	7,833	-36	-3,383
Industry	73,112	53,405	-31	-19,707
Residential	15,108	12,407	-20	-2,701
Transport	52,331	52,267	0	-64
Waste	11,253	3,025	-115	-8,228
Sewerage	1,025	1,492	37	467
Grand Total	**169,870**	**140,859**	**-19**	**-29,011**
Subtotal energy	**157,592**	**136,341**	**-14**	**-21,250**

Source: Southern Tasmanian Councils Authority, 2023. Data sources: Australian Energy Statistics, 2023, TasNetworks, 2023. Australian Greenhouse Gas Accounts Factors (Tasmania) 2022.The Midpoint method for determining growth rates is used.

Brighton community energy use has slightly increased by 5% from 2010-11 to 2020-21, down to 2,604,284GJ.

Industrial energy use decreased by 36% and transport decreased 0% and slightly reduced (-1,033GJ), residential energy use increased by 65%, as well as agricultural (57% growth) and commercial (16% growth).

Table 2: Community energy use in Gigajoules (GJ)

Energy use (GJ)	2010-11	2020-21	Growth % over the decade	Total difference between 2010-11 and 2020-21
Agriculture and Forestry	83,186	149,035	57	65,849
Commercial	150,890	176,386	16	25,496
Industry	1,028,810	718,099	-36	-310,711
Residential	362,647	710,894	65	348,248
Transport	850,903	849,870	0	-1,033
Grand Total	**2,476,436**	**2,604,284**	**5**	**127,848**

NB: change in residential energy use is in part due to increasing the accuracy of postcode energy use divisions between shared postcodes.
Source: Southern Tasmanian Councils Authority, 2023. Data sources: Australian Energy Statistics, 2023, TasNetworks, 2023. The Midpoint method for determining growth rates is used.

Transport energy use and emissions trends

Emissions from transport have changed over time. Before the year 2020-11 transport emissions consistently increased over time. Since 2020-11 emissions fell to an all-time low in 2017-18. Emissions rose since then and decreased during the covid period of 2019-20, then increased again in 2020-21, yet overall led to a decrease compared to a decade ago.

Table 3: Transport sector greenhouse gas emissions in tonnes of greenhouse gas emissions equivalent tCO_2-e

Brighton I Transport GHG emissions tCO_2-e			
Transport energy sources	**2010-11**	**2020-21**	**Difference between 2010-11 and 2020-21**
Auto gasoline – unleaded	29,044	19,748	-9,296
Aviation gasoline	75	20	-55
Aviation turbine fuel	2,230	1,215	-1,015
Fuel oil	225	382	157
Natural gas	0	0	0
Petroleum products	0	0	0
Kerosene and heating oil	145	39	-106
Lubricants and greases	4	0	-4
Liquid Petroleum Gas	604	0	-604
Automotive Diesel Oil	20,004	30,745	10,741
Liquid/Gas Biofuels	0	117	117
Total GHG emissions	**52,331**	**52,267**	**-64**

Source: STCA, RCCI, 2023. Data sources: Australian Energy Statistics, 2023.

The clear switch from petrol to a higher emission fuel, diesel, led to an increase in emissions. The table above shows that there is a technology/user preference trend towards diesel vehicles, driving up diesel fuel use, while petrol use has decreased.

Emissions footprint from each Gigajoule generated		
Energy sources	**Emissions per unit of energy used**	**Footprint from example 60,000 GJ per annum**
LPG	61.5 $kgCO_2$-e /GJ	3,690,000 $kgCO_2$-e
Auto gasoline-unleaded	67.42 $kgCO_2$-e /GJ	4,045,200 $kgCO_2$-e
Diesel	70.5 $kgCO_2$-e/GJ	4,230,000 $kgCO_2$-e
Electricity (Tasmania)	39 $kgCO_2$-e /GJ	2,340,000 $kgCO_2$-e

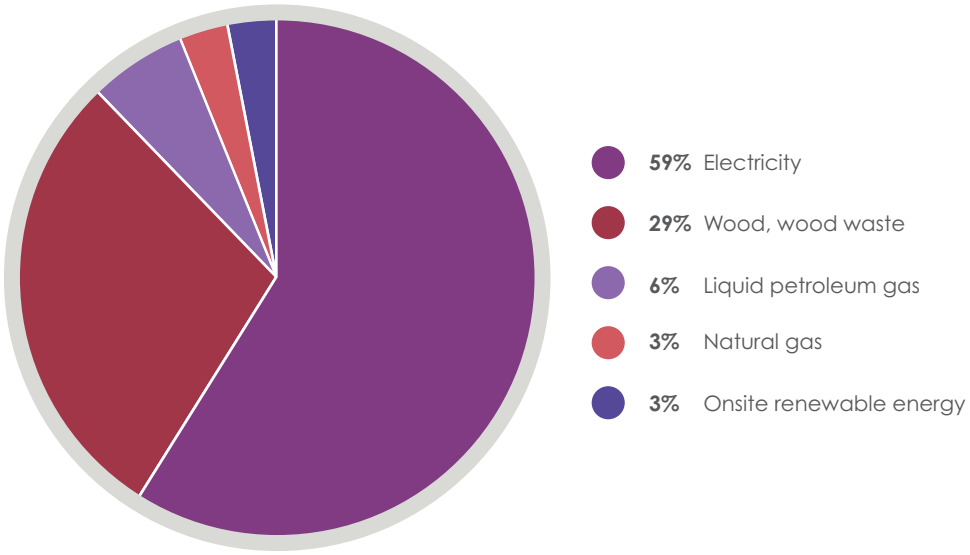
Diesel emissions are 184 tonnes of CO_2-e more than petrol in the example used in the table above. If vehicles use electricity the emissions footprint is even lower, saving an estimated 1,890 tonnes of CO_2-e per annum.

Source: National Greenhouse Accounts Factors, Australian Government 2022

Electricity use is more than half of residential and commercial sector energy use, providing a good indication of energy trends in the sectors.

Metered electricity use and generation data provides high accuracy localised energy use information, improving insights into local electricity use.

Figure 3. Energy use emissions sources in the residential sector in Gigajoules (GJ)



Source: Southern Tasmanian Councils Authority, 2023.

Data sources: Australian Energy Statistics, 2023, TasNetworks, 2023.

Brighton local energy use trends

Emissions factors have decreased significantly from 2010-11, which has the greatest effect (mainly due to electricity use being the main residential sector energy use) on an overall emissions reduction.

Average residential electricity use has remained relatively similar over the last 5 years, while average commercial electricity use has increased in 2021-22, after a steady increase in the Covid lockdown period. New business meter connections increased by over 58 connections after Covid lockdowns, at the same time there was a steady overall increase in the total amount of business electricity use.

Contrary to the Tasmanian Energy Statistics, which suggest a halving of wood use over the last decade, Brighton, as a peri-urban area, is likely to have larger wood heating use due to wood technology preferences in more rural areas. LPG use has doubled over the same time across Tasmania in the residential sector. Hot water systems, cooking and barbeques are likely to be the main gas users in homes.

Brighton LGA has a more moderate local climate as it experiences a moderating effect from proximity to the ocean, though there is the localised Derwent River jerry, creating a cooler microclimate and there is farmland in Tea Tree further inland.

Total electricity was higher in 2021-22 compared to 2018-19.

Households are using on average slightly higher amounts of electricity in 2021 compared to 2016 in Brighton and total residential electricity use is slightly higher, though in 2021-22 electricity use reduced from the year before. There was an increase of 1,977 household meter connections since 2016 and 58 commercial meter connections.

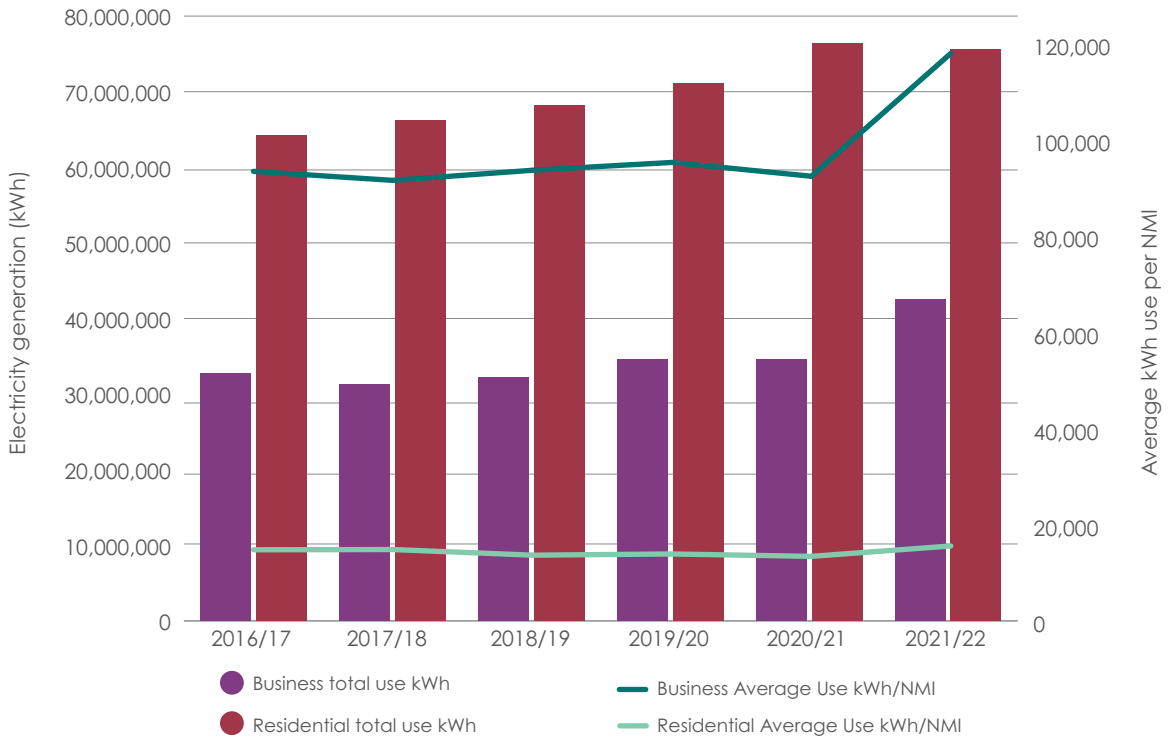
Table 4: Residential and commercial electricity National Meter Identifiers (NMI) connections

Values	2016-17	2017-18	2018-19	2019-20	2020-21	Growth
Business NMIs	822	841	840	873	880	58
Residential Use NMIs	7,400	7,596	8,745	8,731	9,377	1,977

Data source: TasNetworks, 2023.

NB: Electricity meter connections are based on National Meter Identifier (NMI) data. Electricity use is represented as kilowatt hour (kWh). One kWh is equal to one unit on electricity bills. This includes both commercial and industrial facilities to protect the identification of facilities at a local level. Boundary adjustments of the data sets where shared postcodes exist across LGAs can alter the number of metered households and businesses.

Figure 4. Electricity use across the residential and business sector in Kilowatt hour (kWh)



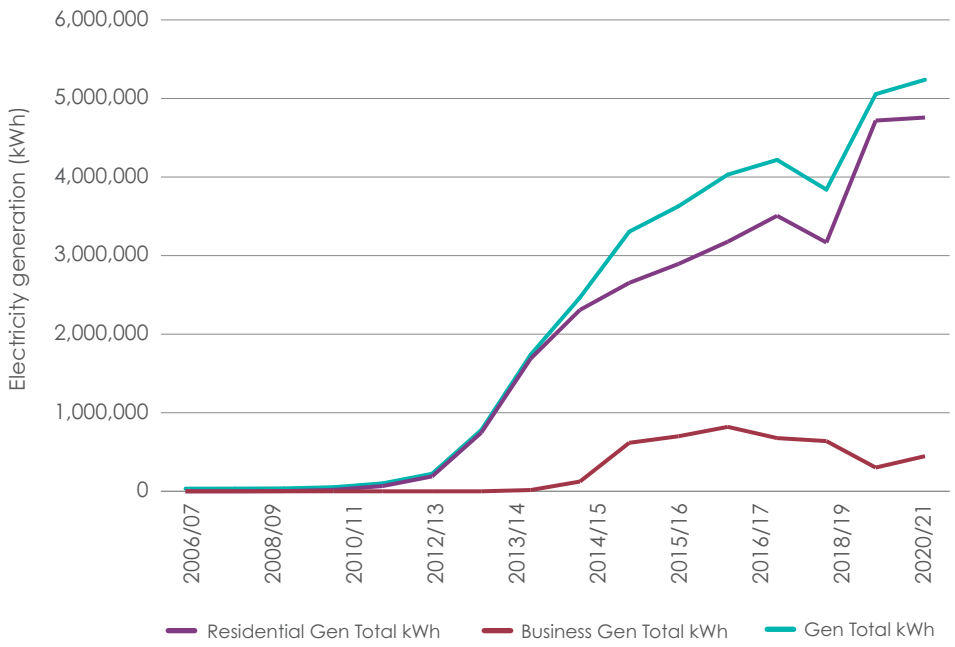
Data source: TasNetworks, 2023.

NB: Electricity meter connections are based on National Meter Identifier (NMI) data. Electricity use is represented as kilowatt hour (kWh). One kWh is equal to one unit on electricity bills. This includes both commercial and industrial facilities to protect the identification of facilities at a local level.

Emerging electric vehicle technologies and the prevalence of rooftop solar continue to have a positive impact, reducing emissions and changing the way the electricity sector interacts with household and business consumers.

In the Brighton LGA, there were 4 registered electric vehicles in 2018 increasing to 7 in 2020. Locally 1,924 homes and businesses are generating to supply renewable energy onsite in addition to exporting approximately 5.2 million units or kWh to the electricity grid. The bulk of renewable energy systems are likely to be the more dominant technology of rooftop solar photovoltaic systems.

Figure 5. Renewable electricity generation across the residential and business sectors in Kilowatt hour (kWh)



Data source: TasNetworks, 2023.

NB: Electricity meter connections are based on National Meter Identifier (NMI) data. Electricity use is represented as kilowatt hour (kWh). One kWh is equal to one unit on electricity bills. This includes both commercial and industrial facilities to protect the identification of facilities at a local level. A decrease in the number of renewable energy generation could mean expanding system sizes in the business sector as larger scale systems are delineated by TasNetworks data. In addition, the accuracy over shared boundaries between LGAs has increased in recent years.

Southern Tasmanian councils are at the forefront of information provision to target permanent emission and energy reductions.

There are key areas for climate action where energy and greenhouse gas information can assist with community project/program development and implementation:

- Energy efficient businesses – the industrial and commercial sectors can often represent a larger portion of local community emissions. Developing local partnerships via a climate action agreement can help promote local champions, provide data reporting, accountability, and case studies to stimulate further action across the sector.
- Agricultural and forestry energy use is primarily focused on energy use associated with businesses. Energy audits, such as walk through audits, can help identify key areas for energy bill savings, develop case studies, and identify the best possible tariff arrangements, or result in early issue identification. Total commercial electricity use per meter or average electricity use can help measure the effectiveness of any interventions.
- Low carbon transport – Transport is a key area for emission reductions. There is a strong push to change to electric vehicles, yet currently these are a very small portion of the transport market. The Australian Bureau of Statistics provides the number of registered vehicles in local areas, gives an indication of the adoption of electric vehicles, the age of vehicles selected, the number of vehicles per household and user technology/energy preferences. Active transport planning can encourage consumers to choose public transport or walk/ride.
- Warm healthy homes – support measuring the effectiveness of programs that can improve the energy efficiency of the home and improve other health outcomes, such as reduced mould from warmer, drier homes. Mould and asthma can be the cause of underlying respiratory problems in the very young or elderly. Total household electricity use and average household electricity use provides an indication of the effectiveness of home energy use awareness raising programs and alongside the Home Energy Audit Toolkit (HEAT), available for free from councils, can provide the top 10 ways to reduce residential energy use.
- Minimising methane emissions from waste are directly linked to the amount of organic matter rotting in landfill. Greater organic waste recycling will decrease emissions and can be measured via the tonnes of waste to landfill. Food Organics and Garden Organics waste services reduce the total immediate emissions coming from landfill as do awareness raising programs that work with local businesses and schools.
- Sewerage emissions can be reduced through the types of sewerage collection i.e. from remote sewerage tanks to specifically designed treatment facilities that can capture the methane gas or alter the composition of the material to reduce emissions. TasWater is the primary agency responsible for water and sewerage decisions.

FREQUENTLY ASKED QUESTIONS

Why report community emissions?

Local governments voluntarily report to a range of bodies on community emissions and answer a range of queries from individual community members, scientists, researchers, policy makers and program developers. Having clear evidence regarding source emissions helps plan and guide decision-making for the transition to a low carbon economy.

Why provide local energy and emission trends?

Greenhouse gas emissions accounting relies on energy use information, such as measured electricity generation. This project provides community access to local energy use by postcode. Each council is provided with this data from reliable government and government business enterprises so communities across the southern region of Tasmania can access energy and greenhouse gas information compiled at a local level. This includes detailed and accurate electricity data measured at the meter by TasNetworks which provides insights into electricity use and onsite renewable energy generation trends at a household and business level. Completing an initial energy and greenhouse gas snapshot provides a starting point whereby targets can be set, plans developed, and community projects can be evaluated over time. This reflects a well-established international framework for driving and documenting community climate change action to reduce greenhouse gas emissions.

What do the changes identified mean for our communities?

The results show common ground and unique energy and greenhouse trends across communities. Common findings across municipalities show average residential electricity use does not jump considerably suggesting households have improved the energy efficiency of buildings or are responding to other factors that drive electricity use to find savings. Consumer behaviour in commercial premises and the home have been influenced by increasing awareness of energy costs and actions as well as factors such as:

- the weather
- population or business growth
- price signals
- the use of energy efficient appliances and materials
- government programs
- energy efficiency measures, such as insulation, buffer the impact of extreme temperature events reducing the demand for heating and cooling, decreasing power use
- renewable energy is expanding in every municipality, with solar photovoltaics (PV) the most popular technology
- electric vehicles are gaining in popularity with exponential growth in the southern region

For unique trends in each municipality see the individual summary papers or regional summary document.

How else can this information be used?

Electricity use data is metered, so it can be used to measure the effectiveness of programs following the installation of energy saving measures such as insulation, efficient heating, and draught proofing. This evidence can then be used to guide program priorities or the development of improved programs. By outlining how energy and greenhouse estimates are made, and providing a clear methodology, the energy and greenhouse gas footprints can be repeated over time. This is a nationally and internationally accepted process. Developing a baseline energy and greenhouse summary is one of the first steps to taking effective mitigation action. To achieve net zero emissions there needs to be a transition from LPG and wood heating to electric options and from petrol/diesel vehicles to low emission or electric vehicles. This is likely to increase residential electricity use (but is an essential step).

Why are local governments involved in providing climate change information?

Tasmanian councils are required by the Local Government Act to provide for the health, safety, and welfare of their communities. Although not specifically detailed, it is self-evident that climate change impacts on communities, not only in terms of increased temperatures and weather-related events, but also in terms of efforts to reduce energy use and greenhouse gas emissions as we transition to a low carbon future. Therefore councils, as well as considering climate matters in their programs and services, also have a key role in supporting communities to ensure relevant information is available to enable informed decision making. The provision of current and accurate energy and greenhouse data by councils helps the community to know where they can most effectively act, as society transitions to a low carbon future, such as whether to invest in an energy upgrade, or renewable energy technologies, or participate in activities within their communities to facilitate change.

It is self-evident that climate change impacts on communities, not only in terms of increased temperatures and weather-related events, but also in terms of efforts to reduce energy use and greenhouse gas emissions as we transition to low carbon future.

How accurate are the results using this method?

This method is a robust and sound approach as it relies on government verified energy statistics (the Australian Energy Statistics for Tasmania, applied per capita) and substitutes Tasmanian estimates with more accurate local data, where available. The accuracy of the results has been significantly increased by using metered electricity data from TasNetworks. In the residential and commercial sectors this means around half of the energy information provided is very accurate, as electricity use is a large portion of the results. Standard government determined emissions factors (Australian National Greenhouse Accounts Factors), are used for all energy uses, such as electricity, diesel, and petrol, and have been used to calculate greenhouse gas emissions. As with any method for estimating energy use and greenhouse gas emissions there are areas that can be improved over time. These include estimates for wood use and non-energy related emissions (currently excluded) such as industrial chemical emissions, forestry, and agricultural emissions.

METHOD CHANGES

Since the last reports were completed, councils reporting in 2023 have tried to improve reporting by addressing the following challenges:

Most up-to-date information – the Australian Energy Statistics for Tasmania, National Greenhouse Gas Accounts factors and Australian Bureau of Energy statistics (electric vehicles census data) have been updated yearly since 2019, so this round of reporting includes several more years of data.

Increasing scope of emissions included – estimates for waste and sewerage have been included for the first time. Both areas do not cover all emissions from each sector, rather a portion. For example, waste emissions are taken from the corporate inventories reported across the region and include only the measured waste to landfill, not commercial waste delivered outside of this. In the sewerage sector an estimate per capita has been used and does not account for the differing sewerage arrangements in regional areas, such as septic tanks, that have differing emissions profiles.

Population growth now included – the last iteration of reporting used standard population figures and now these population figures are updated yearly, better reflecting growth and per capita energy use.

Tasmania's emissions factors fluctuate due to variations in our energy mix (for example an increase in natural gas due to the Basslink failure saw an increase in the emissions factor for Tasmania) so emissions factors are revised yearly and have been revised historically sometimes changing the total emissions reported in hindsight.

Factors such as seasonal change continue to be hard to separate out: It is a significant challenge to identify a single factor influencing yearly electricity use results – this is an area for further research. Heating Degree Days indicate whether there have been seasonal changes to heating and cooling needs. Project data is received on an annual basis, which does not allow for more detailed analysis of the impact of seasonal changes from year to year.

The range of data on transport is represented in the detailed data rather than summary reports. The Australian Bureau of Statistics has a range of information on local transport trends such as the southern Tasmanian region age of vehicle stock, fuel choices, commuter choices such as public transport, walking or cycling support.

State-wide energy statistics have been used for sectors such as industry, transport, and agriculture, suggesting any change in the larger industries impacts results in all communities. This is due to the lack of complete, up to date, and accurate local data on energy use available. This requires further work and more detailed localised datasets.

Please email if there are datasets available that would be of use to local government community emission footprints going forward:

greenhousefootprintsstcarcci@gmail.com

REGIONAL
CLIMATE CHANGE
INITIATIVE

BRIGHTON COMMUNITY ENERGY USE AND GREENHOUSE GAS FOOTPRINT SUMMARY

PUBLISHING DETAILS The Southern Tasmanian Regional and Municipal Energy and Emissions Project 2018, was endorsed in the Regional Climate Change Initiative (RCCI) Action Plan 2021, by the Board of the Southern Tasmanian Councils Authority (STCA) in November 2021. First version by Southern Tasmanian Councils Authority, Regional Climate Change Initiative April 2019. Second publishing 2023.

STCA RCCI PO Box 503 Hobart TAS 7001 **stca.tas.gov.au**

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While reasonable efforts have been made to ensure that the contents of the Report are correct, the Southern Tasmanian Councils Authority does not accept responsibility for the accuracy or completeness of its contents and shall not be liable for any loss or damage that may be occasioned directly or indirectly through the report.

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ATTACHMENT
AGENDA ITEM **13.5**

SOUTHERN TASMANIA REGIONAL LAND USE STRATEGY

STATE OF PLAY REPORT

Southern Tasmania
REGIONAL PLANNING PROJECT

July 2024

ACKNOWLEDGEMENT

We acknowledge the palawa/Tasmanian Aboriginal people as the traditional owners of lutruwita (Tasmania) and their enduring custodianship of this island.

We pay our respects to their Elders, past and present and to all Aboriginal people who live and work in Southern Tasmania today.

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

Cover Image: View of Hobart city from kunanyi / Mt Wellington
Credit: Tasmanian Government, Department of Premier and Cabinet

CONTENTS

Image: Hobart aerial
Credit: Luke Tscharke

Part 1
Introduction

1.1 Updating the Southern Tasmania Regional Land Use Strategy

Regional Land Use Strategies are an important part of the Tasmanian Planning System. They plan up to 25 years ahead and set the direction for how land use change, growth and development in Tasmania's Regions will be managed. The main purposes of the Regional Land Use Strategies are to:

- Implement the Tasmanian Planning Policies at a regional scale, and in ways that are appropriate to each of Tasmania's regions.
- Guide local strategic planning and the preparation of planning schemes in the councils that make up each region. Planning schemes must be consistent with the relevant Regional Land Use Strategy.

The Tasmanian Minister for Planning can declare Regional Land Use Strategies under the Tasmanian Land Use Planning and Approvals Act 1993 (LUPAA). The LUPAA also sets out how Regional Land Use Strategies should be prepared and amended, and requires periodic reviews and updates.

The Southern Tasmania Regional Land Use Strategy (STRLUS) is one of three Regional Land Use Strategies in Tasmania. The STRLUS was first declared in 2011. Since 2011, Southern Tasmania has experienced population growth and the economic, social and environmental conditions have changed. There have also been changes to planning policy and legislation such as the introduction of the Tasmanian Planning Scheme and the Tasmanian Planning Policies.

The twelve local governments of Southern Tasmania in conjunction with the Tasmanian Government State Planning Office are working together to update the STRLUS.

1.2 The State of Play Report

This State of Play Report is the first step in updating the STRLUS. It summarises available data and information on a range of topics to understand the key issues and influences in the Region and the causes of growth and change. It addresses what has been learnt from past experience in the Region, what is currently happening, and (for some issues) projections of what may occur over the next 25-30 years.

Southern Tasmania is unique, complex, and diverse. The State of Play Report documents the things that make parts of the Region unique, that the community values, and that are important to address for the benefit of people, the economy, and the climate and landscape that shapes the region.

The findings from the State of Play Report will inform updates to the STRLUS by identifying key land use planning issues for the Region that the STRLUS needs to address. The State of Play Report is structured using key themes that cover related topics:

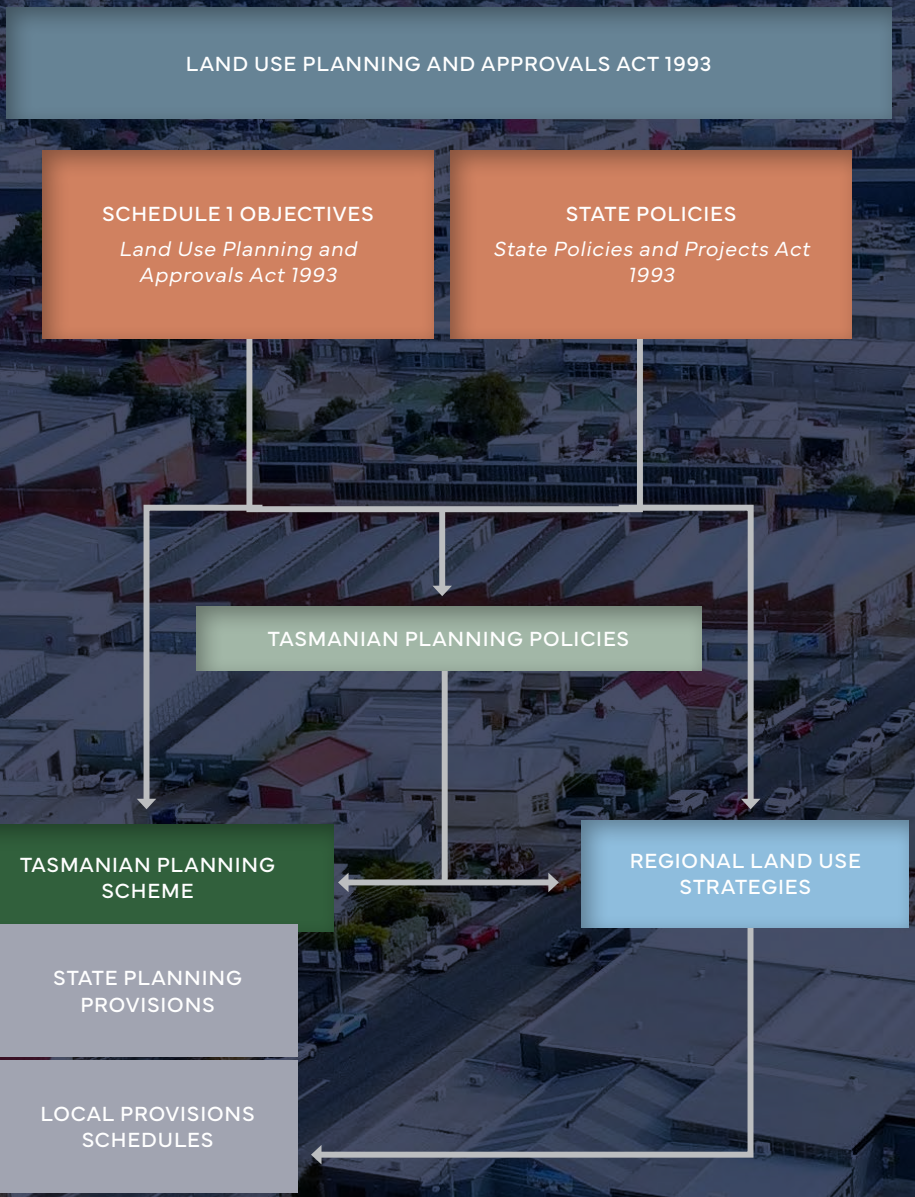
Themes	Topics
Culture, Climate, Landscape and Environmental Values	• Cultural Heritage and Values • Natural Environment, Landscape Character and Climate • Natural Hazards and Environmental Risks
Economic Activity and Infrastructure	• Economic Activity and Productivity • Movement and Connectivity • Utilities
People, Communities and Growth	• Population Growth and Change • Housing, Placemaking and Growth Management • Social Infrastructure

For each theme, the opportunities and challenges are summarised to show how the issues are linked and highlighting the importance of integrated planning for the Region.

The Tasmanian Planning Policies provide guidance and policy direction for land use planning across Tasmania, in particular for the Regional Land Use Strategies. The Tasmanian Planning Policies address:

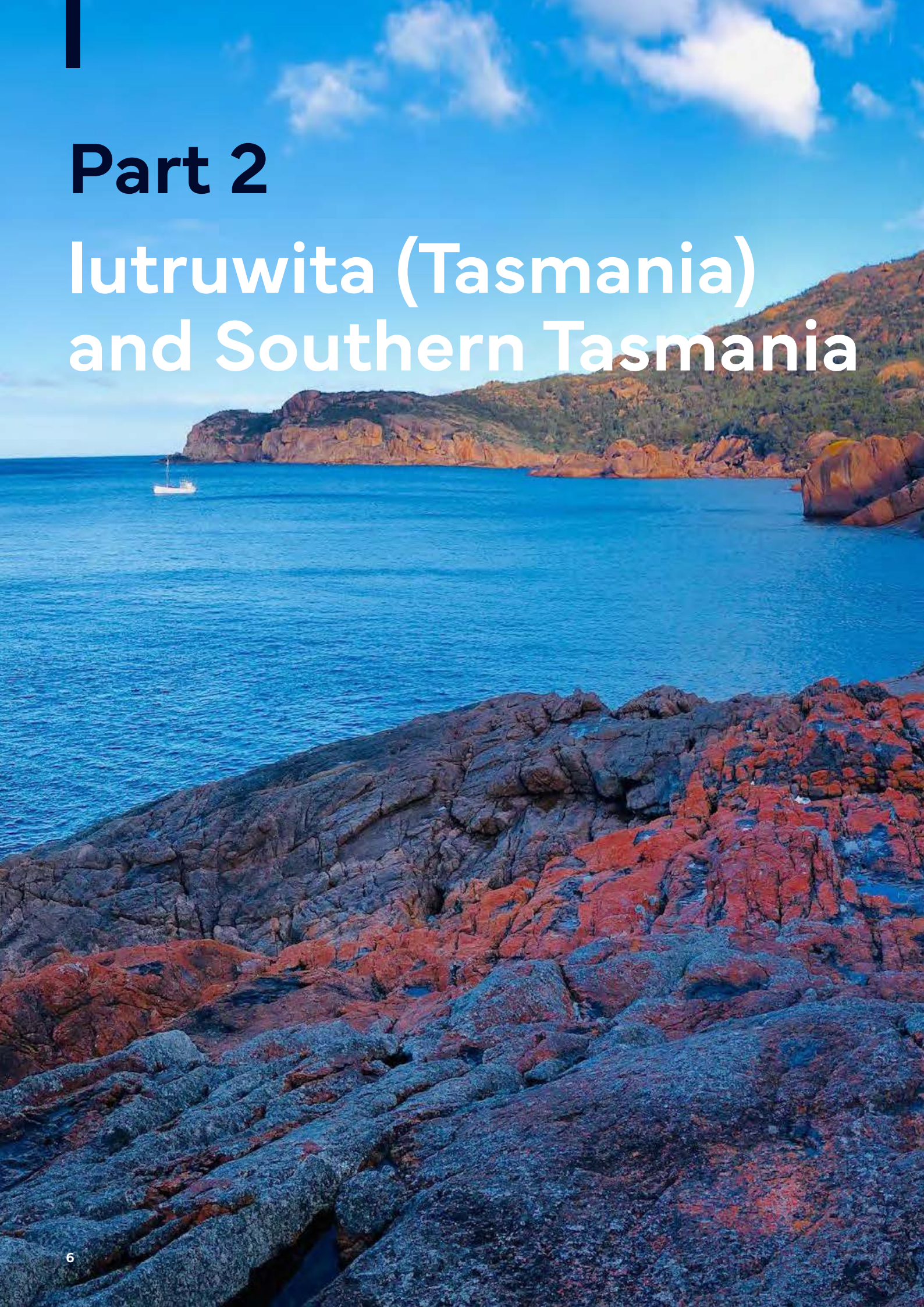
- Settlement, including liveability, and where and what types of housing and social infrastructure is required to support communities
- Environmental Values, like natural living systems, landscape values and the coasts and waterways
- Environmental Hazards such as bushfire, landslip, flooding, coastal hazards and contamination
- Sustainable Economic Development across sectors including agriculture, tourism, energy, natural resources, and business.
- Physical Infrastructure, to ensure that growth and existing communities are supported by essential services and are connected.
- Cultural Heritage, including both Aboriginal cultural significance and non-Aboriginal values
- Planning processes, guiding how land use planning should be done, including consultation with communities

FIGURE 1. THE PLANNING HIERARCHY



Part 2

lutruwita (Tasmania) and Southern Tasmania



For the local Aboriginal nations, Tasmania has been and continues to be known as “lutruwita”. The Southern Tasmanian Land Use Strategy (STRLUS) will seek to embed the values, context and aspirations of the palawa/Tasmanian Aboriginal people, into a strategic forward plan for the region.

2.1 Southern Tasmania

Southern Tasmania is geographically, socially and economically diverse. The Region:

- **Includes 12 of Tasmania's 29 local councils**
- **Covers more than a third of Tasmania (23,377 square km)**
- **Is home to more than half of all Tasmanians (298,589 people)**
- **Contributes more than half of Tasmania's economic productivity**

Nature shapes the Region. Mountains, waterways and the coast define where people live, how they move around and many of the things they love about their place. Nature also supports economic activities including tourism and primary production. Regional land use planning can support and protect the natural environment and mitigate the impacts on communities from natural hazards.

Cycles of change influence Southern Tasmania. Periods of population growth and a stronger economy contrast with down-turns as industries change and people seek opportunities elsewhere. The weather also shapes people's lives. A cold temperate climate that is influenced by the sea and terrain means southern Tasmania experiences seasons like nowhere else in Australia. Climate change is impacting on natural patterns and will change the region over time. A dynamic place that is influenced by internal and external changes creates both opportunities and challenges for land use planning.

Southern Tasmania spans diverse communities ranging from the highly urban Hobart CBD to remote wilderness and rural areas. Some areas experience growth while others are undergoing transitions as jobs and industries change. The complexity of planning for a varied region means that region-wide planning priorities need to acknowledge and respect local differences. Regional land use planning for Southern Tasmania needs to provide direction and a framework for application at the local level.

Predictions of growth and change for the region over the next 25 years are based on assumptions, knowledge that is available now, and learning from past experience.

The COVID pandemic, and its impacts on Southern Tasmania's people and economy, are a reminder that planning for the long-term future of a dynamic and diverse region requires clear direction and a framework that can respond to change. While the Region's population is likely to grow, the pace of population increase may be slower or faster than predicted and this will in turn affect land use planning responses like how many new homes are needed and where those homes should be built.

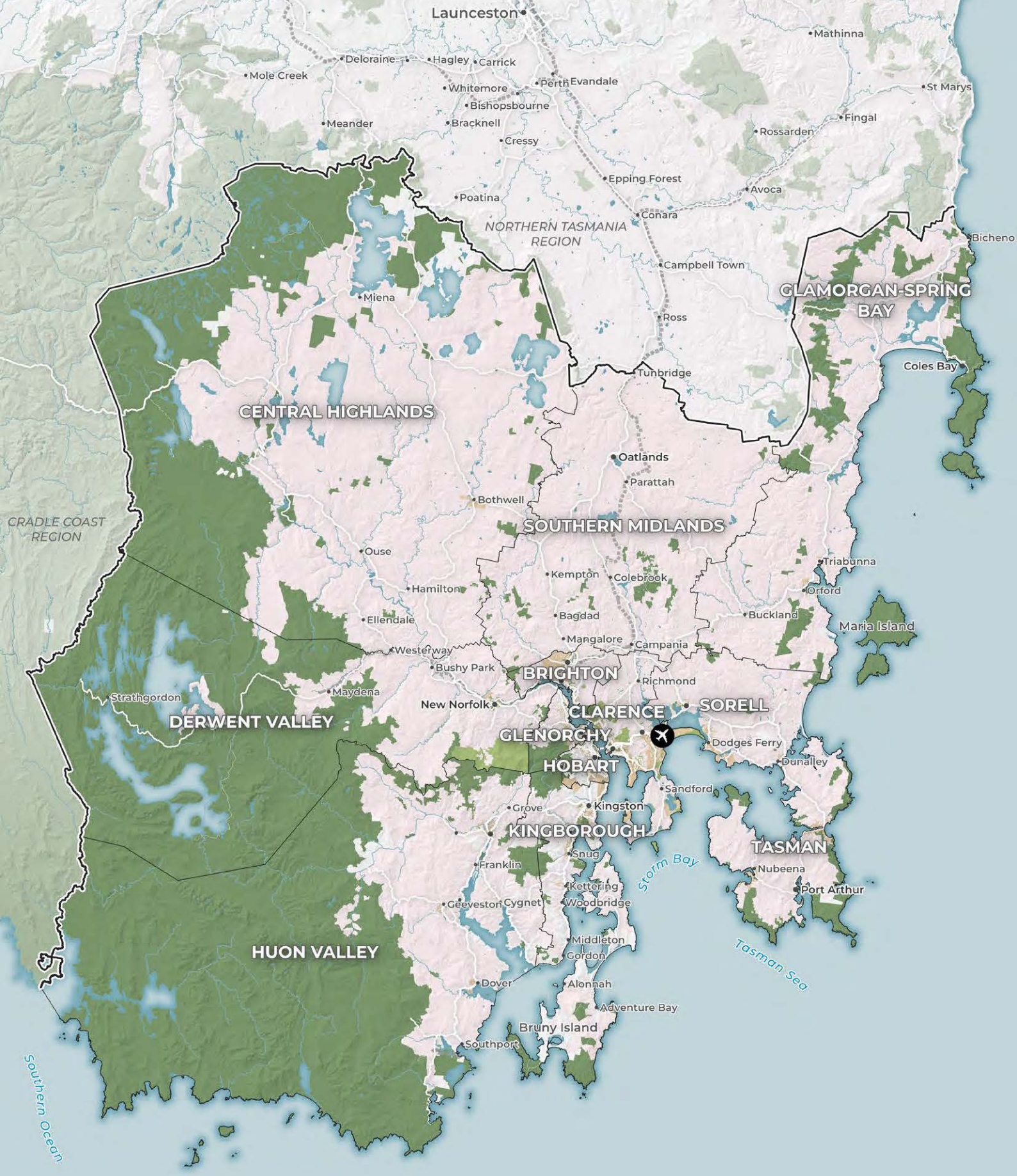


FIGURE 2. THE SOUTHERN TASMANIAN REGION

LEGEND

- LOCAL GOVERNMENT AREAS
- Regional Land Use Strategy Boundary
- Roads
- Railway
- Hobart International Airport
- Rural and Non-Urban Areas
- National Parks, Reserves and Conservation Areas
- Open Space & Recreation
- Urban Areas

Source Data: Land Information System Tasmania (LIST), Google Maps and Open Street Map

Southern Tasmania's People

Southern Tasmania

POPULATION

298,589

ABORIGINAL AND TORRES STRAIT ISLANDER RESIDENTS

DWELLINGS

MEDIAN AGE

WORKFORCE

Source Data: Remplan Community, Remplan Forecast 2023

Brighton

PRIMARY INDUSTRIES

Construction
Transport, Postal and Warehousing

20,025
POPULATION

11.7%
ABORIGINAL AND TORRES STRAIT ISLANDER RESIDENTS

8,056
DWELLINGS

35 years
MEDIAN AGE

3,823
WORKFORCE

Central Highlands

PRIMARY INDUSTRIES

Agriculture and Food Manufacturing

2,582
POPULATION

6.0%
ABORIGINAL AND TORRES STRAIT ISLANDER RESIDENTS

2,897
DWELLINGS

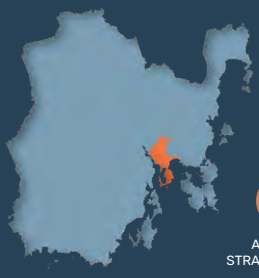
50 years
MEDIAN AGE

776
WORKFORCE

Clarence

PRIMARY INDUSTRIES

Construction



63,820
POPULATION

4.9%
ABORIGINAL AND TORRES STRAIT ISLANDER RESIDENTS

27,452
DWELLINGS

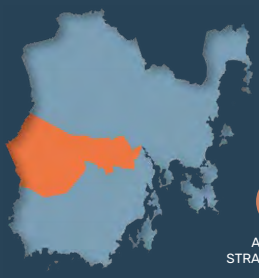
41 years
MEDIAN AGE

20,422
WORKFORCE

Derwent Valley

PRIMARY INDUSTRIES

Manufacturing
Agriculture and Food Manufacturing
Construction



11,320
POPULATION

6.7%
ABORIGINAL AND TORRES STRAIT ISLANDER RESIDENTS

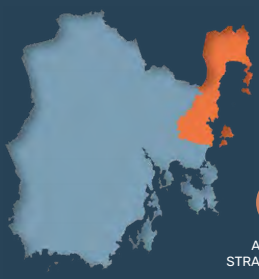
4,962
DWELLINGS

42 years
MEDIAN AGE

2,848
WORKFORCE

Source Data: Remplan Community, Remplan Forecast 2023

Glamorgan - Spring Bay



PRIMARY INDUSTRIES

Agriculture and Food Manufacturing
Construction

5,242
POPULATION

4.0%
ABORIGINAL AND TORRES STRAIT ISLANDER RESIDENTS

5,225
DWELLINGS

57 years
MEDIAN AGE

1,915
WORKFORCE

Glenorchy

PRIMARY INDUSTRIES

Manufacturing
Construction

51,187
POPULATION

5.5%
ABORIGINAL AND TORRES STRAIT ISLANDER RESIDENTS

22,202
DWELLINGS

37 years
MEDIAN AGE

23,420
WORKFORCE

Hobart

PRIMARY INDUSTRIES

Public Administration and Safety
Electricity, Gas, Waste and Water Services
Healthcare and Social Assistance

56,250
POPULATION

1.6%
ABORIGINAL AND TORRES STRAIT ISLANDER RESIDENTS

25,088
DWELLINGS

37 years
MEDIAN AGE

60,440
WORKFORCE

Huon Valley

PRIMARY INDUSTRIES

Agriculture and Food Manufacturing

19,513
POPULATION

10.2%
ABORIGINAL AND TORRES STRAIT ISLANDER RESIDENTS

9,535
DWELLINGS

46 years
MEDIAN AGE

5,503
WORKFORCE

Source Data: Remplan Community, Remplan Forecast 2023

Kingborough

PRIMARY INDUSTRIES

Construction
Agriculture and Food Manufacturing

41,274
POPULATION

4.1%
ABORIGINAL AND TORRES STRAIT ISLANDER RESIDENTS

18,282
DWELLINGS

41 years
MEDIAN AGE

10,980
WORKFORCE

Sorell

PRIMARY INDUSTRIES

Agriculture and Food Manufacturing
Construction
Rental, Hiring and Real Estate Services

17,725
POPULATION

4.8%
ABORIGINAL AND TORRES STRAIT ISLANDER RESIDENTS

8,847
DWELLINGS

42 years
MEDIAN AGE

3,485
WORKFORCE

Southern Midlands

PRIMARY INDUSTRIES

Agriculture and Food Manufacturing

6,949
POPULATION

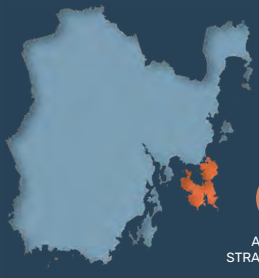
6.8%
ABORIGINAL AND TORRES STRAIT ISLANDER RESIDENTS

3,166
DWELLINGS

44 years
MEDIAN AGE

1,249
WORKFORCE

Tasman



PRIMARY INDUSTRIES

Agriculture and Food Manufacturing
Construction
Rental, Hiring and Real Estate Services

2,702
POPULATION

6.2%
ABORIGINAL AND TORRES STRAIT ISLANDER RESIDENTS

2,820
DWELLINGS

57 years
MEDIAN AGE

791
WORKFORCE

Source Data: Remplan Community, Remplan Forecast 2023

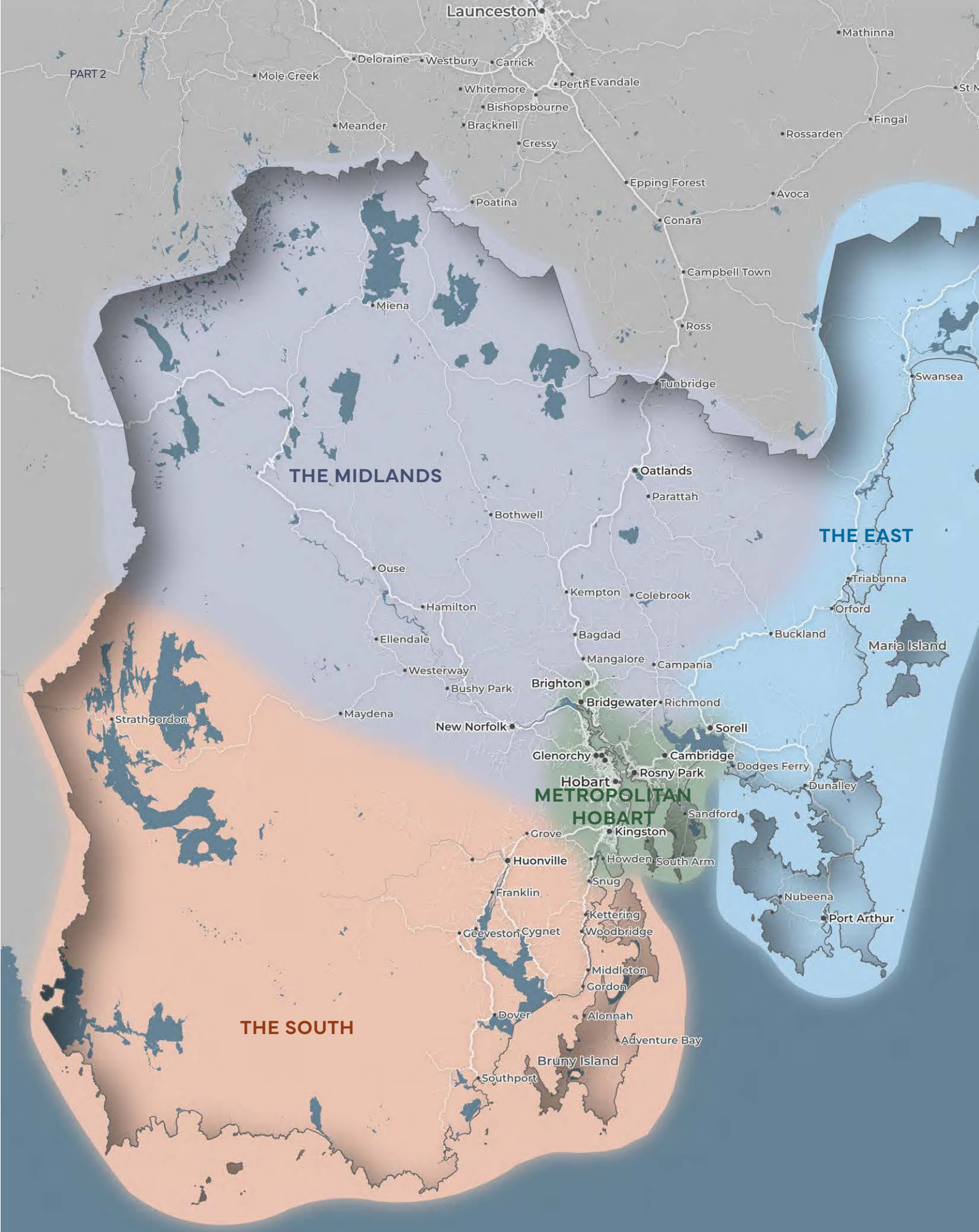


FIGURE 3. ZOOMING INTO A DIVERSE REGION

Source Data: Land Information System Tasmania (LIST), Google Maps and Open Street Map

2.2 Zooming in: A Diverse Region

The Southern Tasmania Region is large and very diverse. Zooming-in to different parts of the Region provides a more detailed look at the things that make the Region diverse and unique. The zoomed-in maps in this section of the State of Play Report have blurry boundaries not because they are intended to be clearly defined sub-regions or areas that will be used in the updated STRLUS. They are intended to show important features of different parts of the Region in more detail.

In some locations, the zoomed in maps overlap with each other. For example, some towns around the fringes of metropolitan Hobart are shown on both the metropolitan Hobart map and maps for other areas. This is because these towns are both part of metropolitan Hobart and important centres for communities in the more rural parts of the Region.

METROPOLITAN HOBART

2.2.1 Metropolitan Hobart

Hobart is Tasmania's capital city and the main gateway to Tasmania. Hobart's metropolitan area includes Hobart city, Glenorchy and parts of the Kingborough, Clarence, Brighton and Sorell council areas. It includes most of the Region's people, jobs and economic activity. The Derwent Estuary and kunanyi/Mt Wellington have shaped metropolitan Hobart's urban areas, transport networks and identity.

The palawa have lived around the Derwent Estuary for thousands of years. Palawa culture and connections to the land, water and sky of the Region remain strong.

The British colony of Hobart is the second oldest in Australia, dating back to 1804 and the city has a rich urban history with buildings and a street network that span more than two centuries.

Metropolitan Hobart hugs the Derwent Estuary and is framed by mountains. Natural features and systems influence how people live, particularly how they move around the city and their recreational activities. The interplay between the natural environment, urbanisation and community is both an asset to Hobart and a challenge, particularly if the city continues to grow outwards. Bushfires, flooding and steep terrain are all important when deciding how and where the city grows.

Metropolitan Hobart is a series of towns that are functionally and physically connected. Many towns started as rural villages but as transport improved and the population grew, urban areas have expanded and joined up to be part of Hobart. Each of the places that make up metropolitan Hobart are unique, have their own character and identity, and play different roles within the broader Hobart area. Some centres that are part of metropolitan Hobart, like Brighton, Sorell and Kingston remain important for surrounding rural and coastal communities.

Hobart's Central Business District is the largest employment area and is home to government offices, businesses and service providers. Many residents from across the Region travel daily to central Hobart for work, education, health care and entertainment. Hobart contains the Region's only hospital, and the University of Tasmania has a strong presence in and around the city centre. Macquarie Point and Sullivan's Cove contain working ports, marinas, and ferry wharves. Hobart is one of only five cities globally that provides access for scientific research and tourism to Antarctica. The Australian Antarctic Division has its head offices in Kingston and utilises port facilities in Hobart.

Movement of people and freight around metropolitan Hobart is mostly by private vehicles. Transport networks are confined to the less steep land between the mountains and the Derwent Estuary. Three bridges cross the Derwent Estuary and concentrate traffic on key routes through the city. Movement of people on the Derwent Estuary is limited to a public ferry service between Hobart and Bellerive/ Rosny Park, the private ferry from Hobart to MONA, and recreational boating. The port and a number of industrial uses rely on water access.

Many new residents have moved to new housing areas in the outer parts of metropolitan Hobart. Because jobs and services are concentrated in central Hobart and cross-regional connections pass through it, congestion is increasing on metropolitan Hobart's road network. Opportunities for through traffic (including trucks) to bypass urban areas are limited by topography and the Derwent Estuary. The need for new, expanded or upgraded transport infrastructure is closely linked to decisions about where population growth will occur across metropolitan Hobart, and the role of metropolitan Hobart's many centres and industrial precincts.

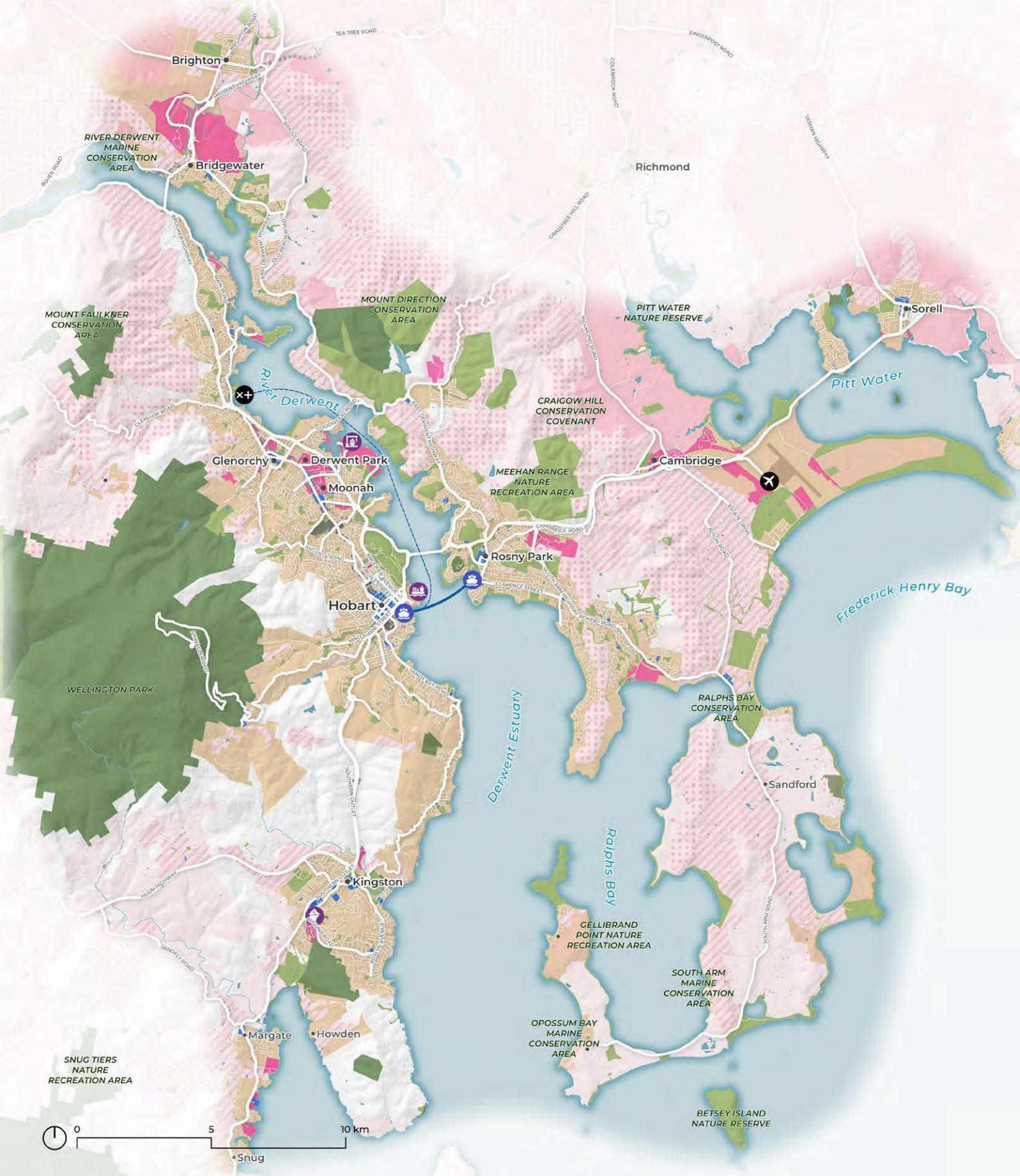
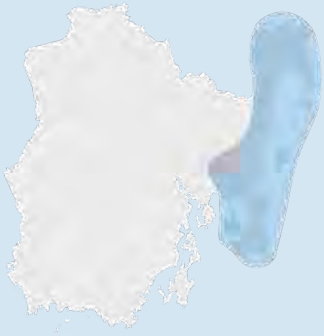


FIGURE 4. METROPOLITAN HOBART

LEGEND

- Roads
- Railway
- Ferry
- Ferry Route
- Ferry Route to MONA
- Working Port
- Shipyard
- Australian Antarctic Division
- Hobart International Airport
- MONA
- Rural Areas
- Rural Living Areas
- Agricultural Areas
- Landscape Conservation Areas
- National Parks, Reserves and Conservation Areas
- Open Space & Recreation
- Urban Mixed Use Land Zoning
- Commercial Centres
- Industrial Areas
- Urban Areas
- Airport

Source Data: Land Information System Tasmania (LIST), Google Maps and Open Street Map



2.2.2 The East

The most populous and primary economic centre in the east of the Region is Sorell. Sorell is both a part of metropolitan Hobart and a service centre for more outlying rural communities on the Tasman Peninsula and north to Bicheno. Outside of Sorell, the population in the east of the Region is scattered across several smaller townships of Bicheno, Triabunna, Orford, Swansea, Coles Bay, Dunalley, and Dodges Ferry along the coastline. The Tasman Peninsula includes several small towns including Eaglehawk Neck, Port Arthur, Nubeena, and White Beach. Inland areas are mainly rural with small villages like Buckland and rural localities.

Many of the larger towns particularly on the coast have older communities with a high portion of retirees. The population of many coastal towns and villages swells over holiday periods, placing increased demands on services and creating seasonal fluctuations in access to jobs. Larger towns are generally serviced by utilities such as sewerage and town water. However, some coastal towns and villages have experienced significant growth (both through holiday visitors and permanent residents) but do not have access to town water or sewage treatment systems.

Tourism is an important contributor to the economy in the east of the Region. The World Heritage listed Port Arthur Historic Site and the Freycinet National Park are some of Tasmania's best known tourist attractions and draw visitors from within Tasmania, interstate and overseas. The rugged coastline from the Tasman Peninsula north to Maria Island is a distinctive landscape and includes the Tasman National Park, Maria Island National Park, and Cape Bernier Nature Reserve. More elevated areas inland are characterised by forest reserves and nature reserves.

Other economic activity is largely related to the area's natural assets and resources, in particular agricultural production, aquaculture and fishing. Wineries are well established in parts of the east, and irrigation is expanding the productive capacity of farmland by allowing diversification into crops along with grazing and dairying. The coastal waterways are also highly productive. Marion Bay, Dunalley and Boomer Bay are known for oyster farming, and aquaculture zones are located around Triabunna and in the bays around the western side of the Tasman Peninsula.

The distinctive natural landscape and waterways in the east of the Region are attractions but also create risks. Bushfire hazards and emergency access are key challenges, particularly for the Tasman Peninsula. Access to some areas can also be periodically disrupted by landslip where roads pass through steep and unstable areas. The ability to improve access, provide services and ensure residents can move around this part of the Region is constrained by topography.

THE EAST

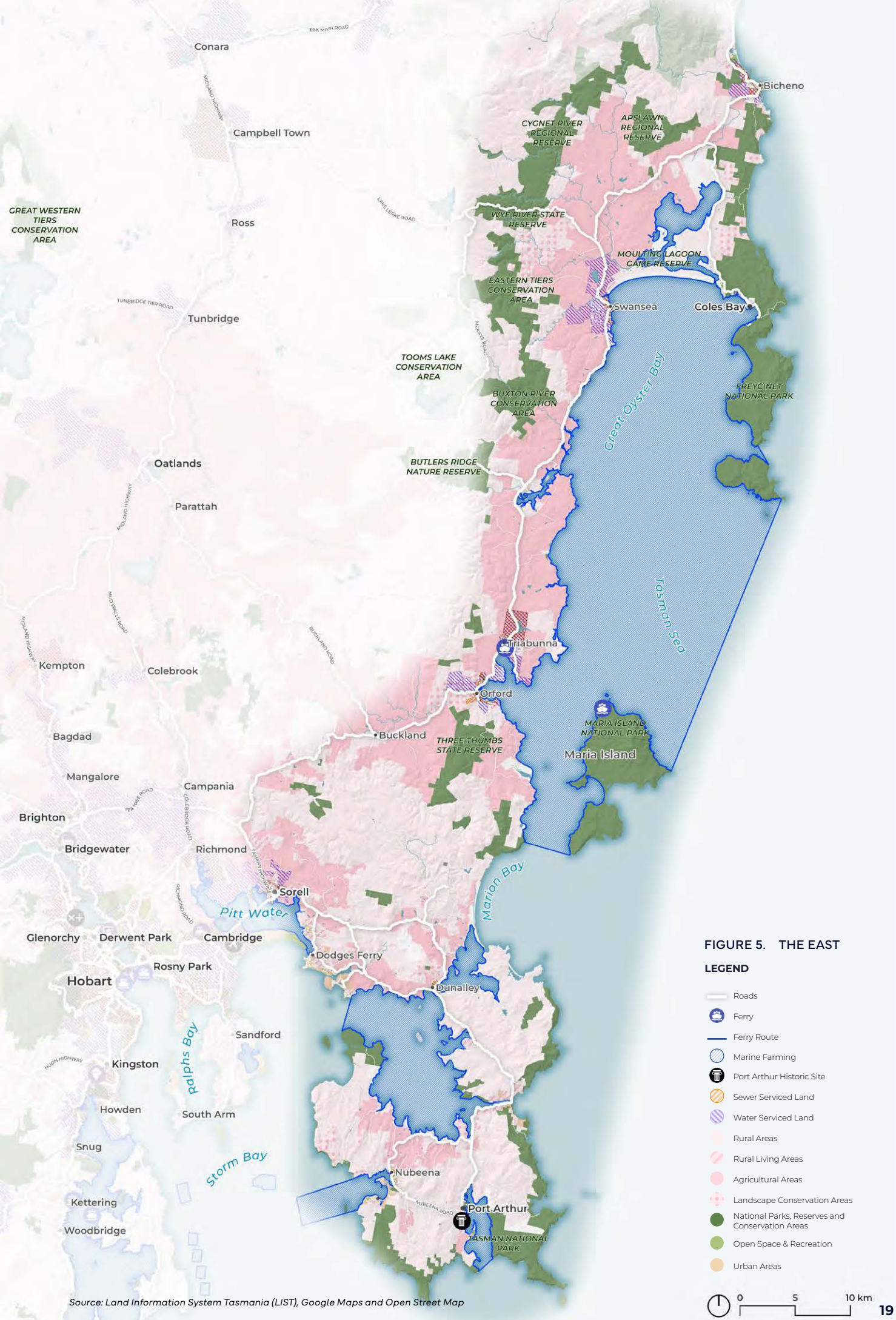


FIGURE 5. THE EAST

LEGEND

- Roads
- Ferry
- Ferry Route
- Marine Farming
- Port Arthur Historic Site
- Sewer Serviced Land
- Water Serviced Land
- Rural Areas
- Rural Living Areas
- Agricultural Areas
- Landscape Conservation Areas
- National Parks, Reserves and Conservation Areas
- Open Space & Recreation
- Urban Areas

0 5 10 km

Source: Land Information System Tasmania (LIST), Google Maps and Open Street Map

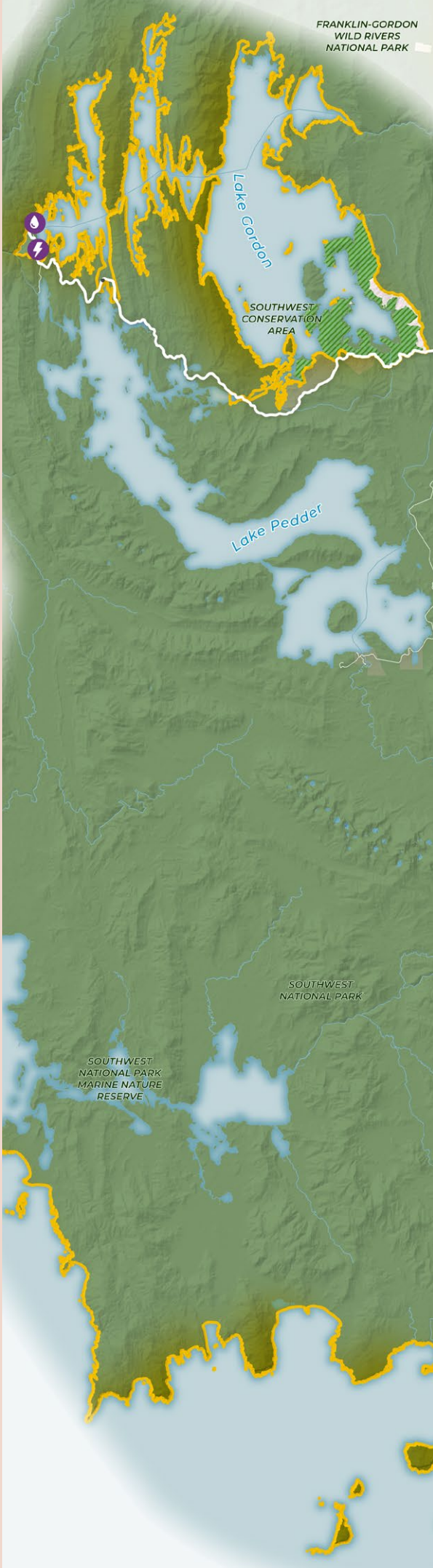
THE SOUTH

2.2.3 The South

The largest town in the south of the Region is Huonville. It is the main centre for residents of the Huon Valley, and surrounding rural communities access Huonville regularly for shopping, school and work. The combination of accessibility to central Hobart, a rural lifestyle and more affordable housing means Huonville and Kingston are important centres for surrounding communities, while also (along with communities like Margate and Snug) being 'commuter towns' for people who work in Hobart. The Channel and Huon River are also defining features of this part of the Region. Towns and villages are mostly located in the valleys or along the Channel and include Kettering, Cygnet, Southport, Dover, Geeveston and Franklin. Bruny Island is accessed by ferry from Kettering.

The south of the Region is undulating and mountainous, particularly the foothills around Mt Wellington and the "Sleeping Beauty". A large portion of this part of the Region is the Tasmanian Wilderness World Heritage Area (covering the South-West National Park and Hartz Mountains National Park) a rugged and remote landscape of high ecological value and exceptional natural and cultural values. Large areas of bushland create significant bushfire risks and communities within the area have experienced devastating bushfires in the past.

Tourism, agriculture, forestry and aquaculture are important to the economy in the south of the Region. The Huon Valley is highly productive agricultural land that supports orchards, cropping and grazing. Aquaculture and fishing are important contributors to the local economy as the area has a long coastline with several estuaries, and a reputation for clean waters. Bruny Island has built up a name for its artisanal food and wine producers, while Cygnet has become a hub for arts and culture. The Tasmanian Wilderness World Heritage Area contains popular visitor attractions, including the South East Cape, the Hasting Caves, and the Tahune Airwalk.



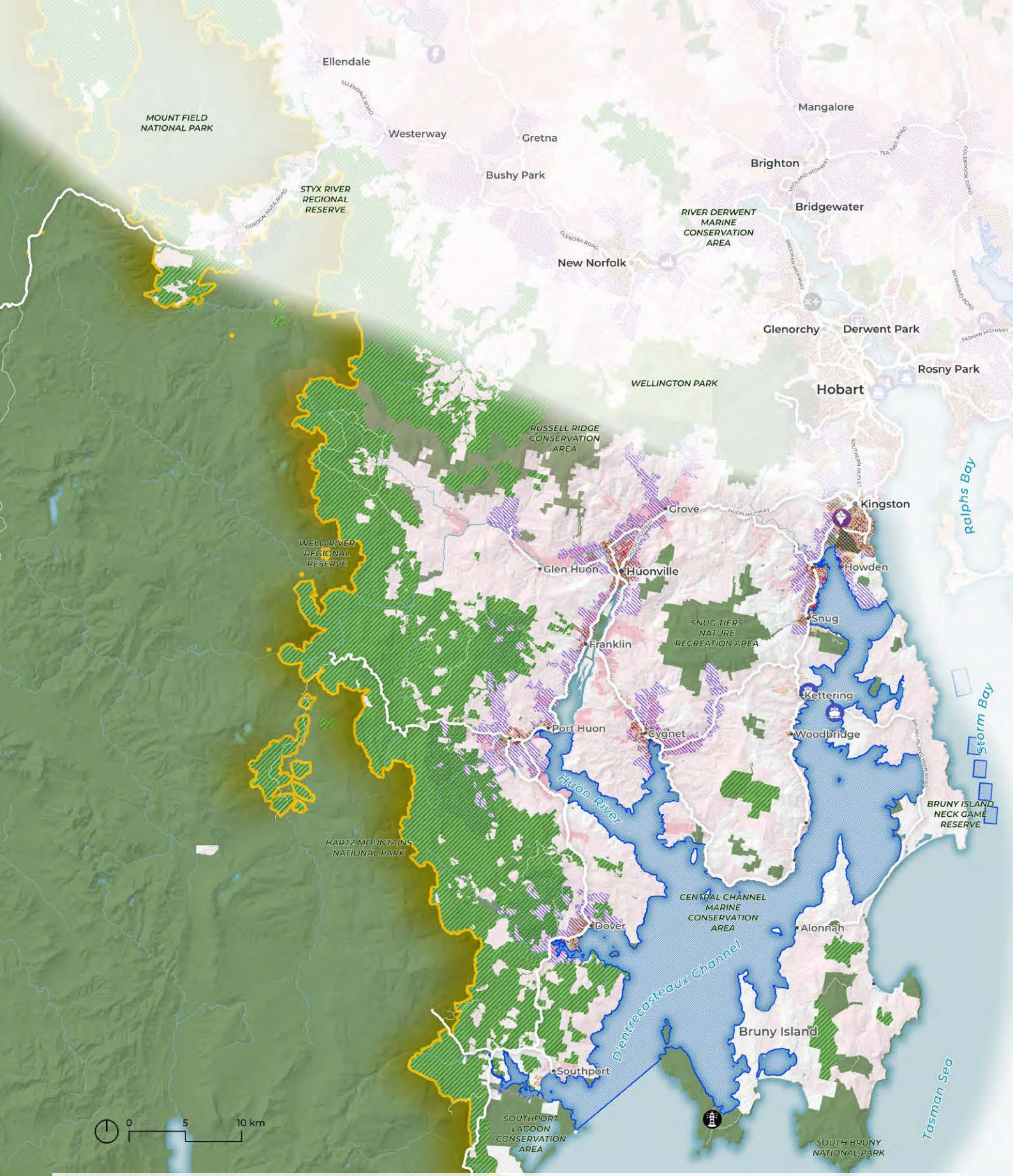


FIGURE 6. THE SOUTH

LEGEND

- Roads
- Ferry
- Ferry Route
- Marine Farming
- Australian Antarctic Division
- Gordon Dam
- Power Station
- Cape Bruny Lighthouse
- Forest Management
- World Heritage Area
- Sewer Serviced Land
- Water Serviced Land
- Rural Areas
- Rural Living Areas
- Agricultural Areas
- Landscape Conservation Areas
- National Parks, Reserves and Conservation Areas
- Open Space & Recreation
- Industrial Areas
- Urban Areas

Source Data: Land Information System Tasmania (LIST), Google Maps,Open Street Map, Environment Australia and Sustainable Timber Tasmania


VALHALLA


TASMANIAN ICE CREAM
VALHALLA
OPEN

THE MIDLANDS

2.2.4 The Midlands

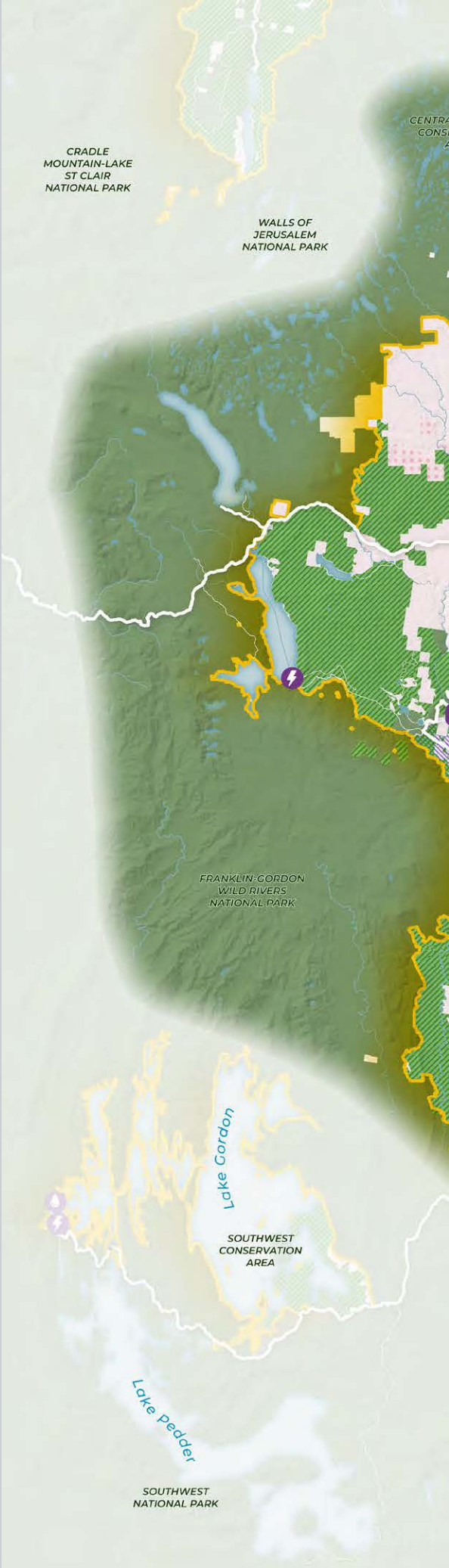
New Norfolk, Brighton and Oatlands are the three largest towns in this part of the Region. New Norfolk and Brighton are important centres for the surrounding rural communities, while also being linked to metropolitan Hobart. Many people live in and around these towns and commute to Hobart for work. Smaller rural towns include Richmond, Bothwell, Bushy Park, Westerway and Maydena, Miena, Mangalore and Bagdad.

Large swathes in the north and west of this area are national parks and part of the World Heritage Wilderness Area. Nature based tourism is focused on these areas including Mt Field National Park, Lake St Clair and the many highland lakes. Maydena is historically a forestry community but also now supports a world-renowned mountain bike park, and is a hub for access into the South West National Park.

The local economy is shaped by agriculture, forestry and aquaculture. There are extensive areas of farmland predominantly used for dryland cropping and grazing, while irrigation around the River Derwent supports large scale stone fruit orchards, hops and berry farms. The area is home to large volume whisky producers. A large paper mill at New Norfolk processes timber from the surrounding forestry areas.

Brighton provides an important intermodal hub for movement of freight from across Tasmania. Oatlands and Richmond play important roles in the local tourist economy with Georgian architecture, convict history and food and beverage offerings as drawcards for visitors.

Hydro-electricity generation takes advantage of the many waterways and steep topography of this part of the Region. Opportunities to expand renewable electricity generation are being explored including wind power in the highlands.



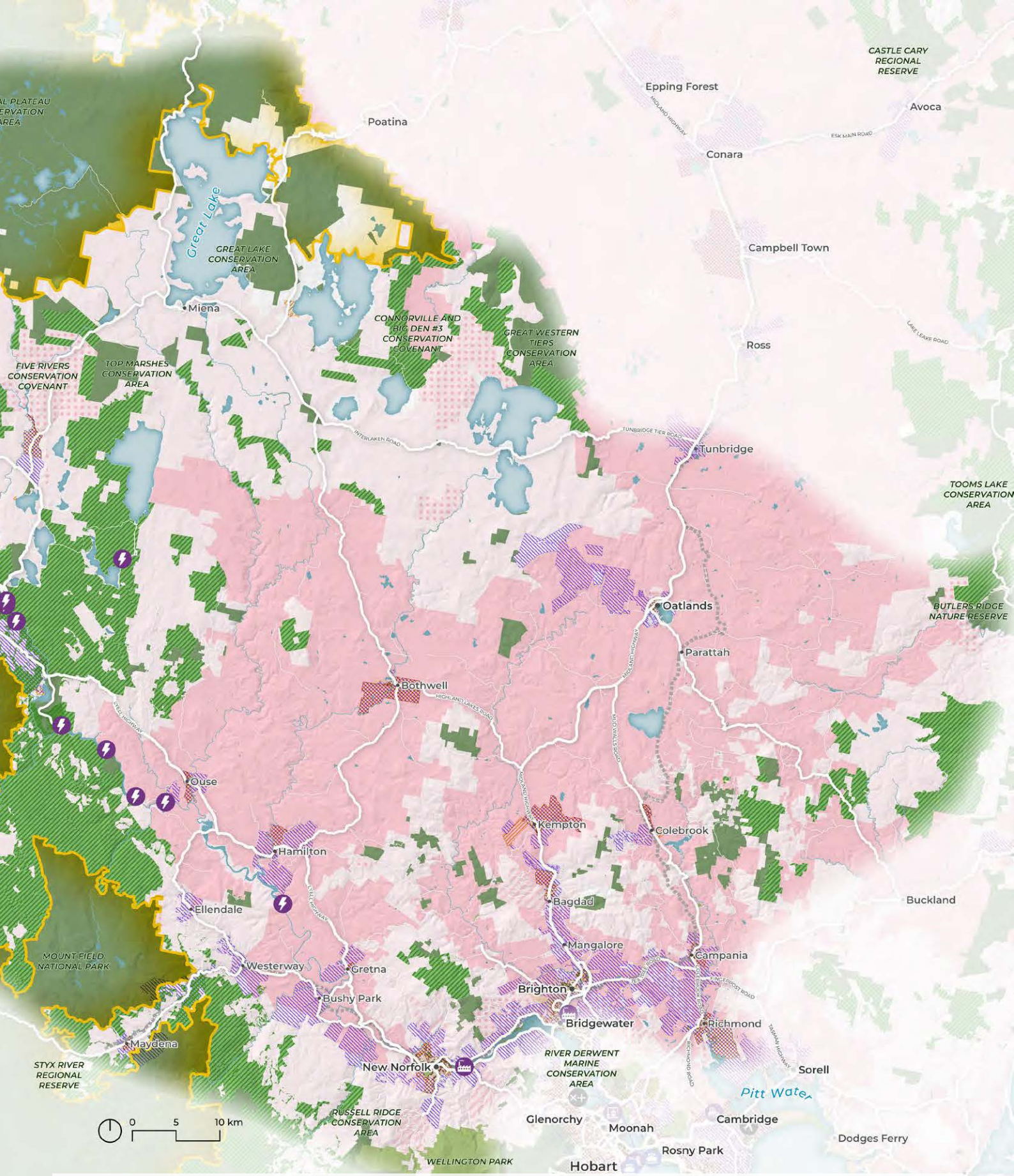


FIGURE 7. THE MIDLANDS

LEGEND

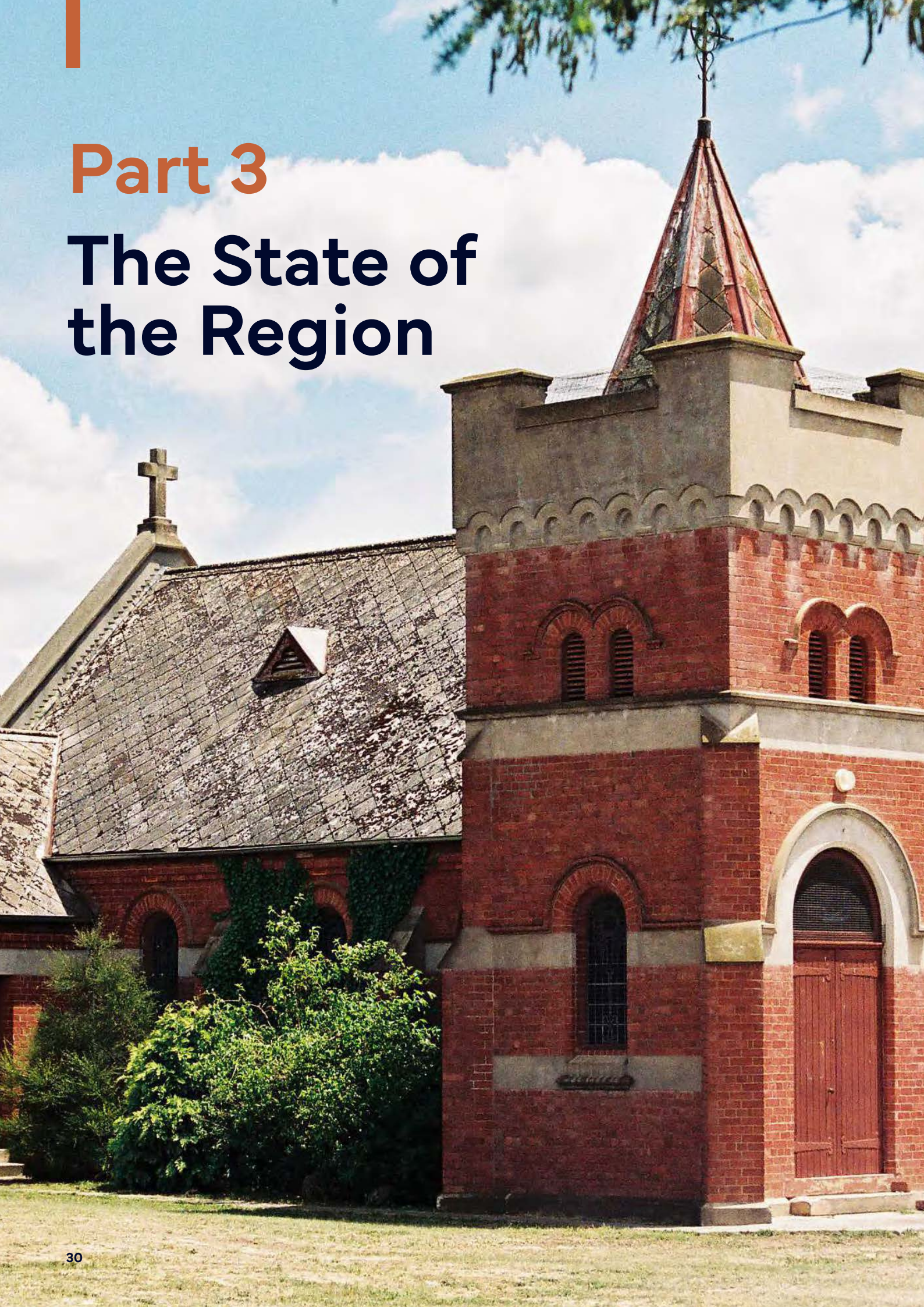
- Roads
- Railway
- Industries
- Power Station
- Forest Management
- World Heritage Area
- Sewer Serviced Land
- Water Serviced Land
- Rural Areas
- Rural Living Areas
- Agricultural Areas
- Landscape Conservation Areas
- National Parks, Reserves and Conservation Areas
- Open Space & Recreation
- Urban Areas

Source Data: Land Information System Tasmania (LIST), Google Maps,Open Street Map, Environment Australia and Sustinable Timber Tasmania

Image: Hop fields in the Derwent Valley
Credit: Tourism Tasmania and Rob Burnett

Part 3

The State of the Region



Part 3 includes three chapters that explore issues, opportunities and challenges across themes and topics that Regional Land Use Strategies are required to address. The themes, topics, opportunities and challenges have been informed by research and input from the Project Working Group that includes the 12 councils of the Southern Tasmania Region, and the State Planning Office.

Themes	Topics
Cultural Values, Climate, Landscape, Natural Hazards and Environmental Risks	• Cultural Heritage and Values • Natural Environment, Landscape Character And Climate • Natural Hazards and Environmental Risks
Economic Activity and Infrastructure	• Economic Activity and Productivity • Movement and Connectivity • Utilities
People, Communities and Growth	• Population Growth And Change • Housing, Placemaking and Growth Management • Social Infrastructure

THEME 1

Cultural Values, Climate, Landscape, Natural Hazards and Environmental Risks

3.1 Cultural Heritage and Values

Aboriginal cultural heritage

The palawa are part of the oldest continuous culture in the world. They are the traditional and original custodians of lutruwita and have cared for the land for thousands of years.

Southern Tasmania is a rich Aboriginal cultural landscape with thousands of Aboriginal heritage sites including stone artefact scatters, stone and ochre quarries, shell middens, culturally modified trees, rock markings, and occupied rockshelters. These records are evidence of Aboriginal occupation for over 30,000 years. There are also landscapes that bear witness to Aboriginal land management practices, including cultural burning. Aboriginal cultural connections to the land, water and sky are one of the reasons a large proportion of the Region is listed within the Tasmanian Wilderness World Heritage Area. There are other reserves and locations where Aboriginal heritage places and landscapes have survived modern developments. Key historic Aboriginal sites have also been returned to the Tasmanian Aboriginal community in recognition of their on-going connection to and struggle for Country, including piyura kitina (Risdon Cove) and putalina (Oyster Cove).

Planning for Country

Planning for Country explores how Southern Tasmania might start to embed palawa knowledge of Country and cultural practices into its planning system. Connecting with Country, or a Country-First approach to planning seeks to actively involve Aboriginal people by sharing knowledge of, and cultural connections, to land, water and sky and support Aboriginal Land Councils to achieve their aspirations for their land and strengthen self-determination.

Through ongoing engagement with palawa groups and individuals the STRLUS can look to support the interests and aspirations of the palawa to respond to and respect Country.

Historic cultural heritage

British colonists landed in Hobart in 1804, making it the second oldest British colony in Australia. The well-preserved historic places and heritage items of the Region help to tell important cultural stories, record the growth and change in the Region, and are significant drawcards for visitors.

Hobart is renowned for its pockets of intact colonial buildings such as Battery Point, Salamanca Place and Sullivans Cove. The Cascades Female Factory Historic Site is one of 11 Australian Convict Sites World Heritage properties. Established in 1823, the site is now a museum that tells an important story of forced migration and servitude.

The Port Aurthur Historic Site is one of the best-known historic sites in Australia. This penal settlement located on the Tasman Peninsula was established in 1830 as a timber station and grew to be a place of great economic and social significance throughout the 1800s.

Throughout Southern Tasmania nearly all towns and villages have buildings or infrastructure that demonstrate how communities have grown and changed since colonisation.

Land use planning for the Region should strike an appropriate balance between enabling growth and change, and preserving significant reminders of the area's past. History and built heritage are not static, and land use strategies can establish planning frameworks that allow for historic places to contribute to contemporary life while being conserved. Consideration of heritage values is part of planning for how metropolitan Hobart, and the Region's towns and villages, can grow and evolve in ways that respect the Region's past.

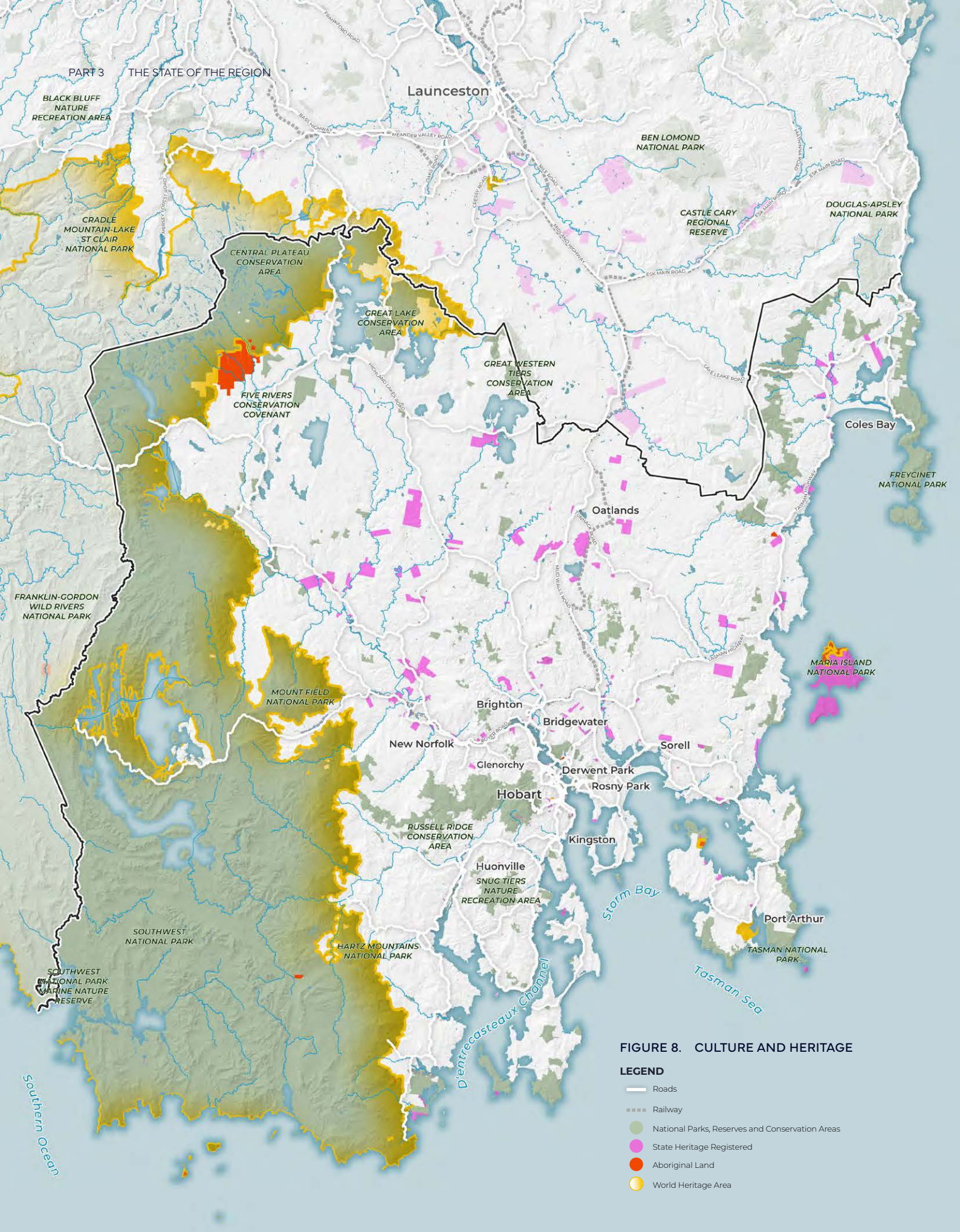


FIGURE 8. CULTURE AND HERITAGE

LEGEND

- Roads
- Railway
- National Parks, Reserves and Conservation Areas
- State Heritage Registered
- Aboriginal Land
- World Heritage Area

Source Data: Land Information System Tasmania (LIST), Google Maps and Open Street Map

THEME 1

3.2 Natural Environment, Landscape Character and Climate

3.2.1 Landscape Character

The Southern Tasmania Region is characterised by an expansive and unique natural environment. The UNESCO-heritage listed Tasmanian Wilderness covers almost a quarter of Tasmania (1.58 million hectares) and includes much of the western parts of the Southern Tasmania Region. Mountains frame the urban areas (particularly kunanyi/Mt Wellington) and are a prominent feature across much of the Region. Much of the coastline is rugged, and some areas are accessible only by boat or walking. National Parks and other conservation reserves are located throughout the Region.

The natural landscape of the Region shapes how people live and move around the Region, and is a drawcard for visitors and migrants. The Region's wilderness and wildlife are a significant driver for inter-state and international visitation. Nearly half of all tourists who visit Tasmania cite the natural environment as their primary reason for visiting the Region[1]. Freycinet National Park and Tasman National Park saw record increases in visitation post-Covid.

The natural environment also underpins other aspects of the Region's economy, with many agriculture and aquaculture producers relying on the areas reputation as a pristine natural environment.

3.2.2 Natural Heritage

National Parks and nature reserves

Figure 9 illustrates the National Parks and Reserves of Southern Tasmania. The western part of the Region is almost entirely National Parks including the World Heritage listed Tasmanian Wilderness. Other National Parks and reserves tend to follow the more mountainous areas, and parts of the coastline including Bruny Island, the Tasman Peninsula, Freycinet, and Maria Island.

The size and variety of protected natural areas contributes to the Region's economy through ecological services, its reputation for nature-based tourism and the outdoor lifestyle that many people live in Tasmania for.

Scenic and Landscape Protection Areas

In addition to formal conservation reserves, the Tasmanian Planning Scheme includes a number of mechanisms to protect landscape and scenic values across the Region.

Different councils apply these controls to their area to reflect local conditions. Figure 9 also maps Scenic Areas and Landscape Conservation Zones from planning schemes.

kunanyi/Mount Wellington

kunanyi/Mount Wellington towers 1,270 metres above Hobart and supports forests, woodlands and alpine ecosystems with a diverse range of native plants and animals endemic to the Region. 'The Mountain' is significant for its natural values and its strong cultural significance for the palawa. It also has strong connections for many residents of Hobart and other parts of the Region. The North-West Bay River catchment is located on the south-east face of the mountain and provides a quarter of Hobart's drinking water.

Wellington Park is one of the state's largest reserved areas outside of the Tasmanian Wilderness World Heritage Area. It is a key visitor destination and is used extensively by locals and tourists for recreational activities including sight-seeing, hiking and cycling. A transmission tower is located at the peak of the mountain providing radio, television, digital radio, and commercial radio services for national and statewide broadcasters.

3.2.3 Waterways and Wetlands

The Southern Tasmania Region covers 17 river catchments[2] (out of 48 across the State). The Derwent Estuary - Bruny, Gordon-Franklin, and Huon catchments are the major river and estuarine systems across these catchments. The Derwent is the largest river system in the Region, with a catchment spanning more than 8,000 square kilometres.

The River Derwent starts at Lake St Clair and continues south-east over 200 km to Hobart, joining the Derwent Estuary and then into Storm Bay and the Tasman Sea[3]. The Derwent catchment is an important source of water for farming, drinking water and hydro-electricity generation. It is also an important influence on Hobart, shaping the city and contributing significantly to its character as a harbour city, providing transport and recreation.

Smaller watercourses pass through metropolitan Hobart and connect to the Derwent Estuary. These rivulets often create green spines through the urban area, but in some locations have been heavily modified or built over.

The South-East and Southern Ranges wetland bioregions sit within the Southern Tasmania Region. Within the bioregions, there are several wetlands and waterways protected under the Reserve Estate or listed under the Ramsar Convention on Wetlands.

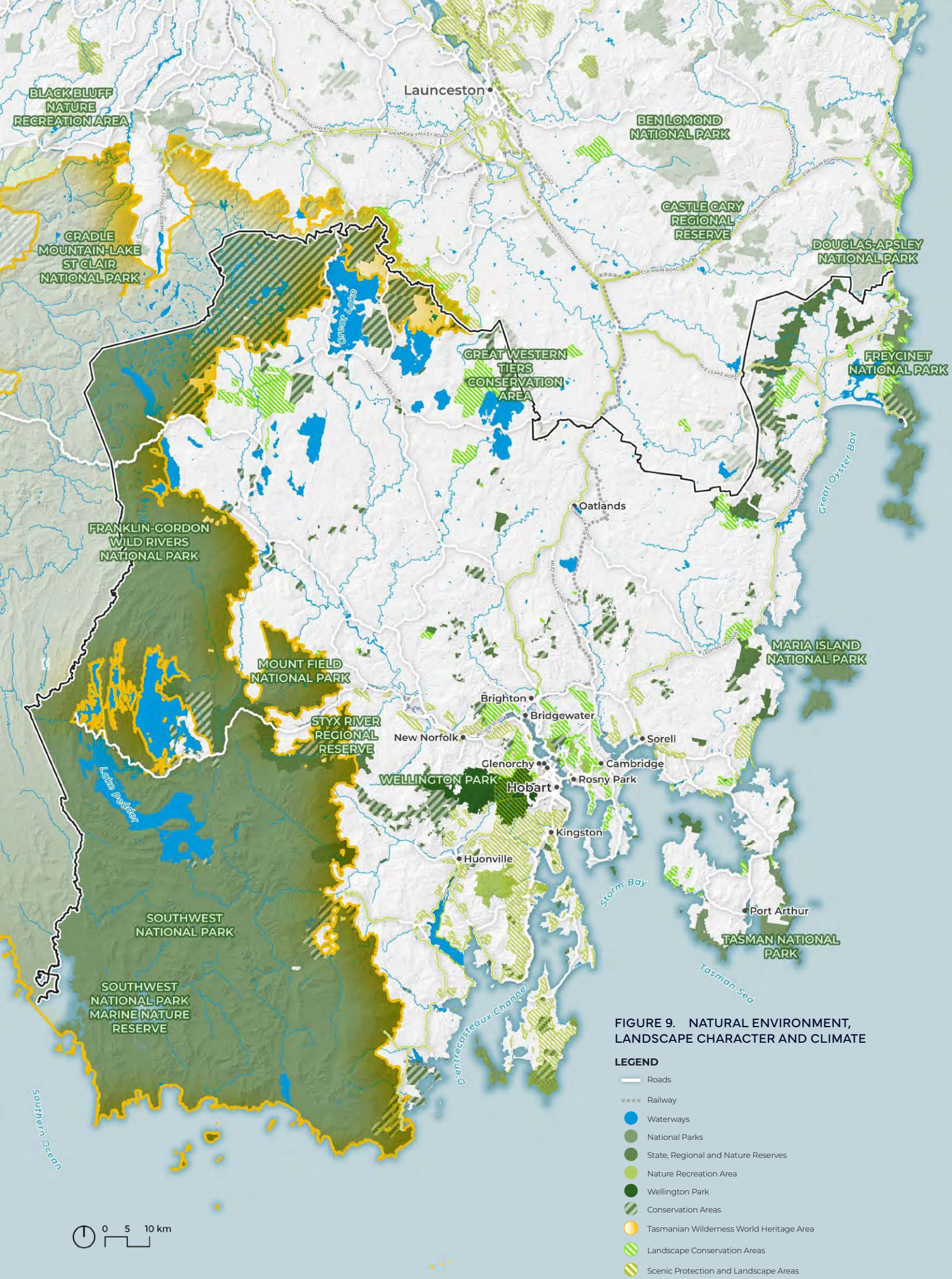


FIGURE 9. NATURAL ENVIRONMENT, LANDSCAPE CHARACTER AND CLIMATE

Source Data: Land Information System Tasmania (LIST), Google Maps and Open Street Map

THEME 1

3.3 Natural Hazards and Environmental Risks

Natural hazards and environmental risks have implications for land use planning in Southern Tasmania, particularly given the Region's dispersed pattern of towns and urban areas, interfaces between natural and urban areas, and extensive coastline. The Region's strong agriculture and aquaculture sectors, nature based tourism, and history of mining and forestry benefit from the Region's natural environment, but can also present threats to natural systems and environmental quality. Some natural hazards and environmental risks can be addressed at least partly through land use planning, including:

- Identifying and mapping natural hazards and avoid locating incompatible development in risk areas.
- Consolidating settlements, making use of existing infrastructure, promoting energy efficient urban and building design.
- Improving access to public and active transport networks.
- Avoiding native habitat loss through development and promoting ecosystem connectivity.
- Building climate resilience by protecting water quality, aquatic ecosystems and flow regimes to benefit natural systems and maintain agriculture and aquaculture productivity.
- Protecting wetlands, riparian and foreshore areas from the impacts of development.

3.3.1 Natural hazards

Southern Tasmania has historically experienced the impacts of natural hazards. The Region is relatively dry, and droughts and bushfires are common. Flooding and landslip are also risks, particularly as infrequent periods of heavy rainfall can occur.

In recent years, Southern Tasmania has experienced an increase in extreme climate and weather activity. There have been two significant bushfire seasons (2015-16 and 2018-19), an unprecedented marine heatwave off the East Coast (2015-16) and prolonged droughts.

Below-average rainfall has been observed throughout the State, with Tasmania experiencing a 25% decrease in the area-averaged rainfall total for April (2024) compared to the 1961-1990 average.

By 2100 Tasmanians could experience the following environmental changes that may translate into increased risk of natural disasters[4].

- Changes to bushfire frequency and intensity and risks to the natural environment and people.
- Increased inundation and erosion of vulnerable coastal shorelines from more severe storm surges and sea-level rises and effects on coastal settlement patterns.
- Increased sea surface temperature and ocean acidification off the East Coast could affect the productivity of Tasmania's aquaculture industries.
- Periods of prolonged low rainfall reducing the storage levels for hydro-electricity generation and potential energy security issues, along with increasing water demand from population growth and irrigation.
- Runoff is projected to increase in agricultural regions of the Derwent Valley and Midlands due to changes in rainfall and evapotranspiration.
- Increased risk of landslides as a result of extreme rainfall periods, and exacerbated by land-clearing.
- Increased extreme weather events including more frequent, intense storm and flood events, increased coastal erosion, longer fire seasons, drought, and river flooding in some catchments.
- 'Urban heat island' effects will continue to make developed areas of the Region warmer unless managed, increasing reliance on artificial cooling.

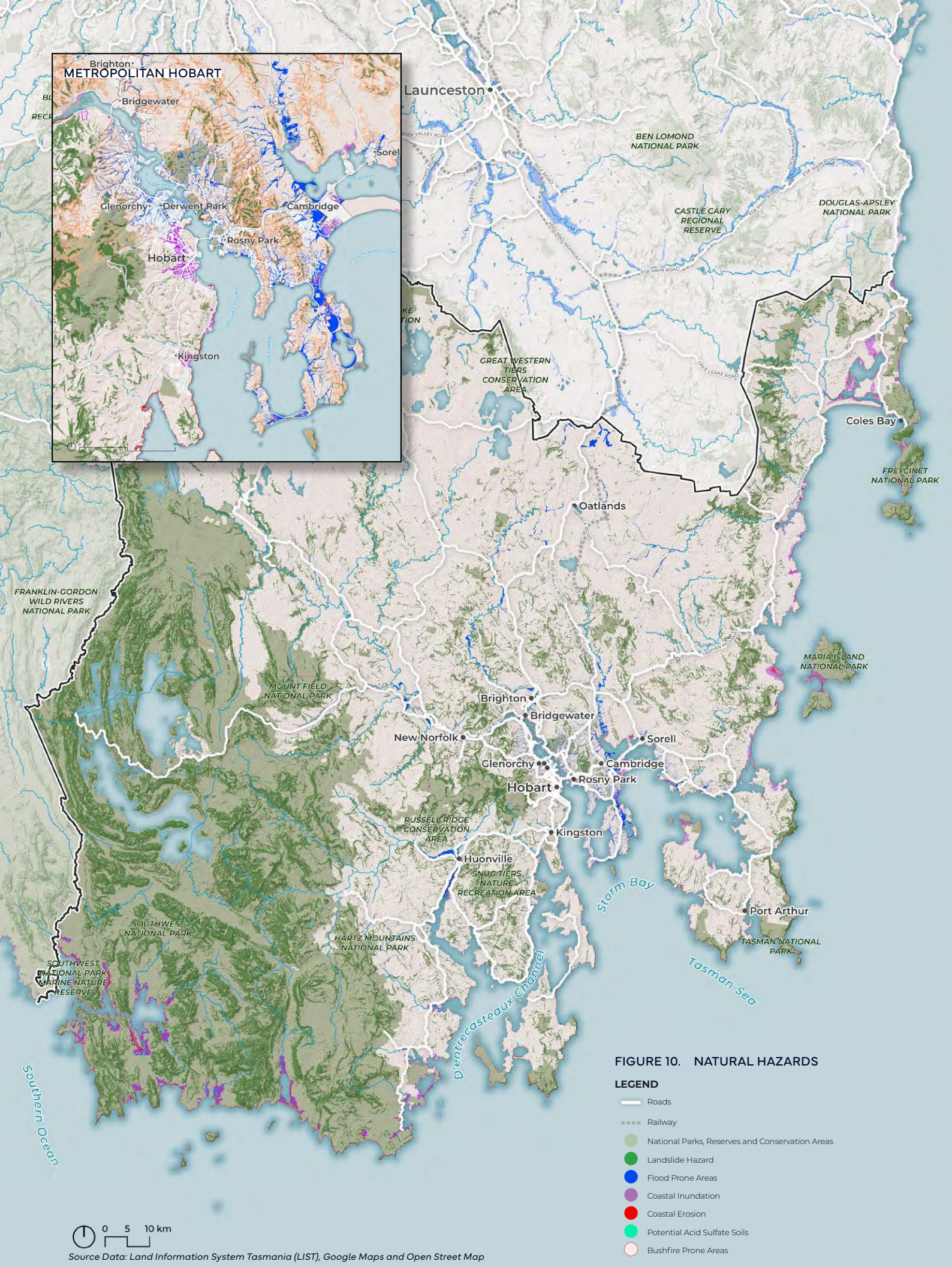


FIGURE 10. NATURAL HAZARDS

LEGEND

- Roads
- Railway
- National Parks, Reserves and Conservation Areas
- Landslide Hazard
- Flood Prone Areas
- Coastal Inundation
- Coastal Erosion
- Potential Acid Sulfate Soils
- Bushfire Prone Areas

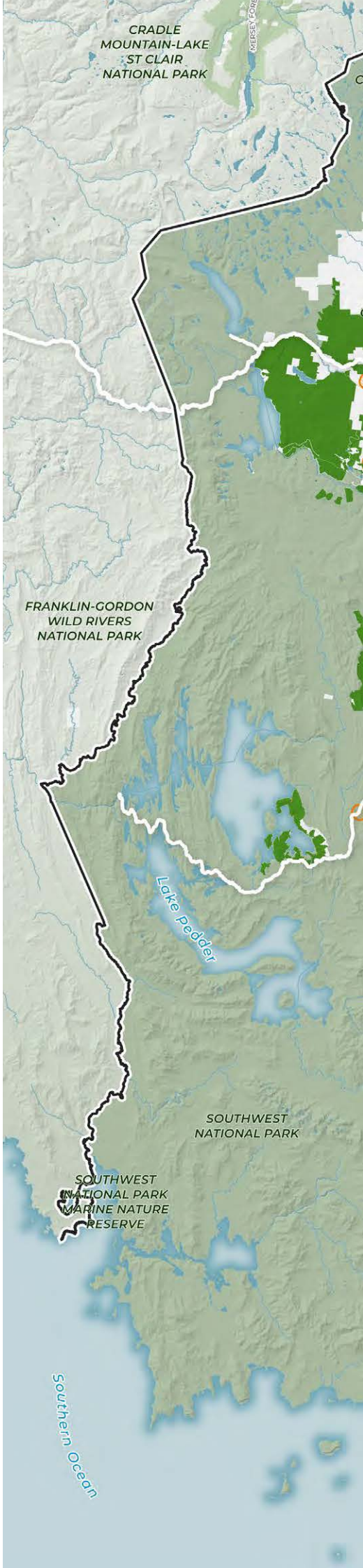
Source Data: Land Information System Tasmania (LIST), Google Maps and Open Street Map

THEME 1

3.3.2 Environmental risks

The following challenges arising from human impacts and interventions are likely to increase pressure on the natural systems of Southern Tasmania:

- Increased environmental pressure from the growing population, particularly expanding urban areas and increasing car use.
- Pressures from agriculture on the natural environment including changes to water balance and water quality, degradation of native vegetation and decline in biodiversity and soil structure.
- Legacy impacts of contamination from heavy industry including land and water pollution and ongoing air quality impacts.
- Land, water and air pollution from mining and heavy industry.
- Impacts on native forests, ecological diversity and connectivity from forestry operations.
- Impacts linked to the introduction and spread of invasive species.
- Impacts from intensive aquaculture on marine ecosystems and water quality.
- Changing sea-water temperatures creating conditions for invasive marine species and changing the growth and distribution of marine vegetation, with associated impacts on recreational and commercial fishing, and aquaculture.
- Marine heatwaves, threats to temperate montane rainforest, loss of alpine biodiversity.
- Loss of wildlife through vehicle strike, with potential increases due to population growth and more car use, and expansion of urban areas into natural areas.



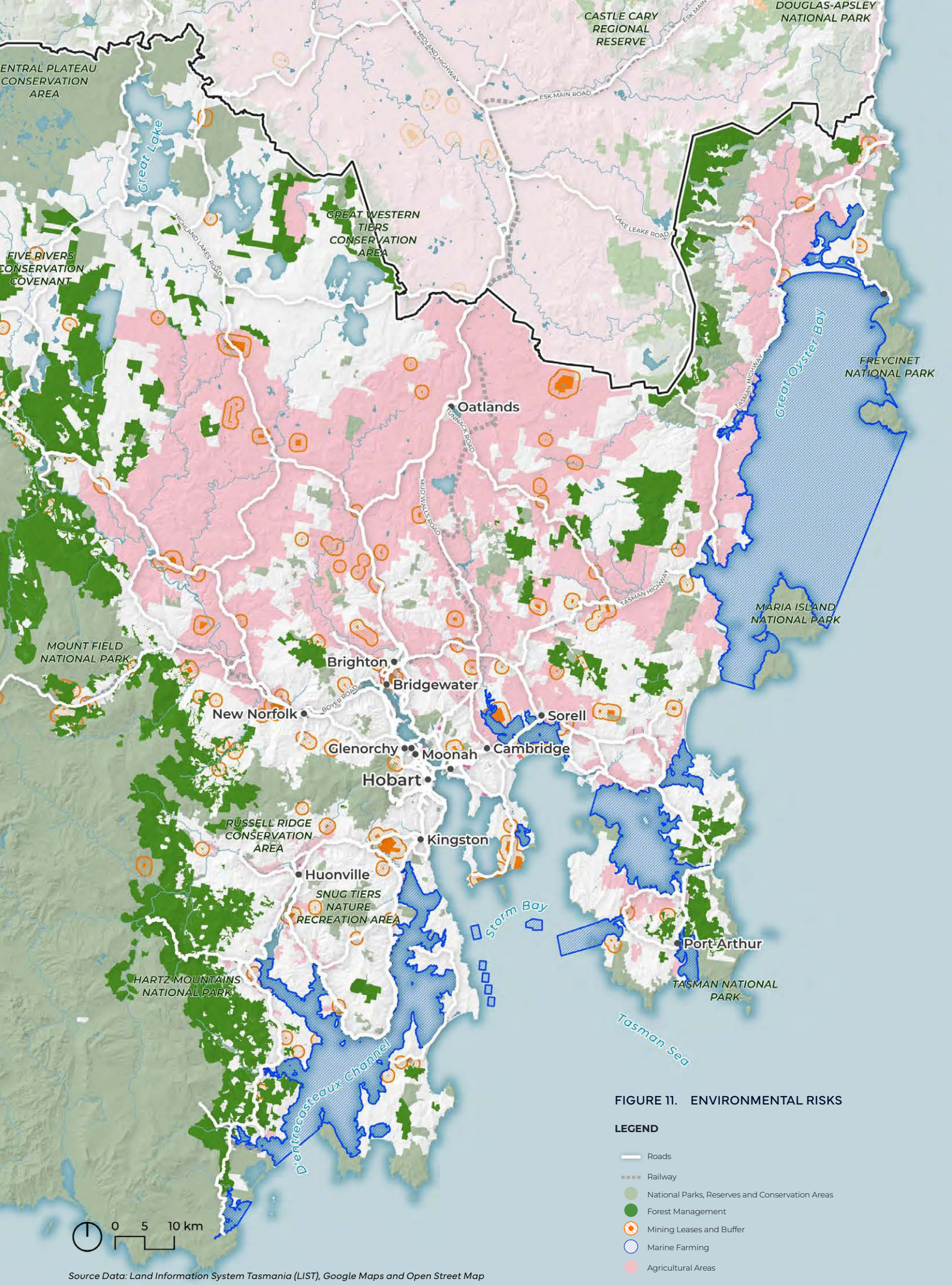


FIGURE 11. ENVIRONMENTAL RISKS

LEGEND

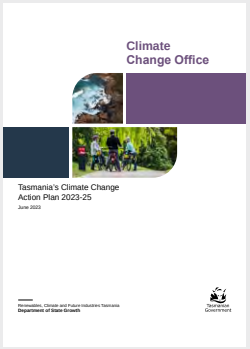
- Roads
- Railway
- National Parks, Reserves and Conservation Areas
- Forest Management
- Mining Leases and Buffer
- Marine Farming
- Agricultural Areas

Source Data: Land Information System Tasmania (LIST), Google Maps and Open Street Map

THEME 1

3.3.3 State government strategies

The Tasmanian Government has prepared the following plans related to environmental sustainability outcomes that include relevant actions and directions for regional land use planning. The State of Environment Report provides an overview of how the State is performing in terms of resource management and the impacts of climate and human pressures on the environment. The Tasmanian Planning Commission is currently preparing a new State of the Environment Report.



Climate Change Action Plan 2023-25

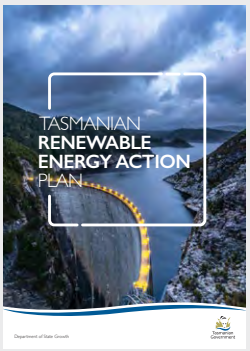
Aims to help maintain net zero greenhouse gas emissions or lower from 2030.

The Action Plan seeks to:

- Significantly reduce food waste specifically the diversion of organic waste.
- Increase Tasmania's renewable electricity production and maintain low regulated electricity market prices.
- Become a major producer of renewable hydrogen energy.
- Retention of high valued conservation natural, cultural, and historic values in the Tasmanian Wilderness World Heritage Area.

Part of the Plan focuses on Adaption and Resilience and outlines targeted actions to explore opportunities to build community, environmental, industry and infrastructure resilience to climate change.

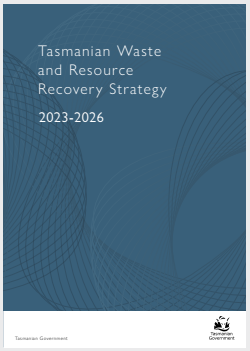
'Embedding climate change in planning' [5] is a key action and outlines a two-pronged approach that considers climate change in the State's planning regulations whilst integrating scientific climate modelling into state and local land use strategies. It emphasises that climate modelling should inform all land release and the location of future housing with the aim to mitigate the impacts on future residents and housing developments.



Tasmanian Renewable Energy Action Plan 2022

Tasmania is one of the first jurisdictions in the world to achieve a 100% self-sufficiency in renwable energy. This plan promotes growth of State's renewable energy sector over the next 20 years and sets an ambitious target to increase the State's renewable energy output to 200% by 2040, doubling the current output. A key priority is to transform Tasmania into a global renewable energy powerhouse, with a commitment to develop the framework for coordinated large-scale renewable energy projects[6].

The Action Plan proposes Renewable Energy Zones as one mechanism to coordinate future investment in the generation, transmission and storage of renewable energy in suitable locations. Preliminary options analysis[7] for the state has identified one potential zone in the Central Highlands which has potential to support the Southern Tasmania Region.



Tasmanian Waste and Resource Recovery Strategy

The Region's waste management is governed by the Tasmanian Regional Waste Authority (TRWA)[8]. Made up of 12 councils, the TRWA was established in response to the need for more effective and efficient coordination of waste to achieve the State's target of net zero greenhouse gas emissions or lower. Key issues related to the management of waste and resource recovery across the Southern Tasmania Region include:

- Susceptibility of waste collection sites to the impact of climate change such as coastal erosion and wastewater treatment plants.
- Expansion of resource recovery to include recycling of renewable technologies (solar panels, wind turbine blades and lithium-ion batteries).
- Lack of resource recovery infrastructure within communities to facilitate community driven repair, reuse, and recycling of materials.
- Smaller economies of scale for maintaining the viability of commercial resource recovery operations.
- The recent introduction of regulatory mechanisms to disincentivise businesses and industry sending food and general waste to landfill.

THEME 1

3.4 Opportunities and Challenges for Cultural Values, Climate, Landscape, Natural Hazards and Risks

Opportunities	Challenges
• Embedding a Caring for Country approach to planning for the Region. • Implementing the Climate Action Plan through land use planning approaches that reduce the impacts of urbanisation and growth on climate change and embed resilience to climate change impacts in land use planning. • Celebrating the natural assets of the Region through innovative nature-based industries and tourism opportunities. • Continuing to promote and support healthy, outdoors lifestyles that attract and retain young people to the Region. • Exploring the use of the Derwent Estuary for tourism opportunities. • Continuing to build on Tasmania's reputation for being a leader in Australia's green energy sector by adopting land use strategies that prioritise emissions and waste reduction and reduce land and water contamination. • Maintaining the Region's reputation for high quality natural environment that supports agriculture and aquaculture, and a strong nature-focused tourism industry. • Conserving the Region's rich history where it contributes to character, identity and the Region's visitor economy.	• Ensuring the appropriate voices are invited to speak for Country and that Australian Indigenous Cultural Intellectual Property (ICIP) is recognised through land use planning. • Responding to increased risks from climate change related natural hazards including bushfire, flooding and sea-level rise through regional land use planning. • Ensuring growth of urban areas, towns and villages does not impact negatively on the Region's highly valued natural environment and extensive historic heritage. • Ensuring a balance between conservation of the Region's natural assets and the viability and sustainability of industry, agriculture, aquaculture, and tourism. • Considering the impacts of natural hazards and environmental risk on residential, industrial and agricultural land, and the Region's natural reserves and wilderness areas. • Preserving the significant historic heritage and character of towns and villages, and their natural settings. • Preserving recognised historic heritage places that draw visitors to the Region from interstate and overseas.

THEME 2

Economic Activity and Infrastructure

4.1 Economic Activity and Productivity

4.1.1 The Region's Economy

Southern Tasmania's blend of metropolitan, semi-rural and rural areas make it a regionally diverse economy, with strong variance in economic activities and employment. This ranges from the high concentration of administrative and population-serving activities in Hobart, employment lands in Glenorchy, Clarence and Brighton, and the dominance of rich agricultural industries in the more rural areas.

Southern Tasmania's economic performance is strongly influenced by its population. Periods of economic growth match periods of population growth and growth in spending capacity. Tourism is also growing and diversifying, with visitors attracted to the Region's unique nature, adventure sports, gastronomy, marine activities, arts and culture.

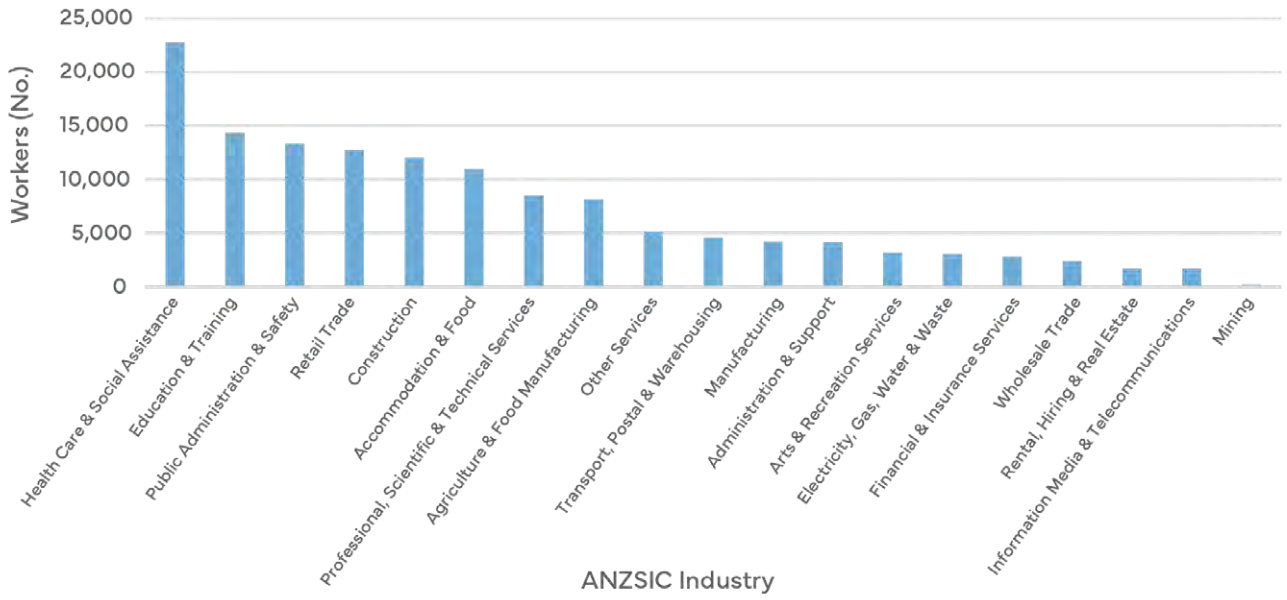
In recent years, Tasmania's economy has performed well, underpinned by a major population and tourism 'boom'. However, economic performance has begun to decline, reflecting the cyclical and volatile nature of Southern Tasmania's economy overall. This recent decline has in part been driven by a number of factors including slowing population growth and a decline in economic productivity as young workers move to the Mainland for more employment and education opportunities.

The loss of a productive and skilled workforce is a key economic challenge for Southern Tasmania in maintaining long term economic sustainability and supporting high value and innovative industries in the future.

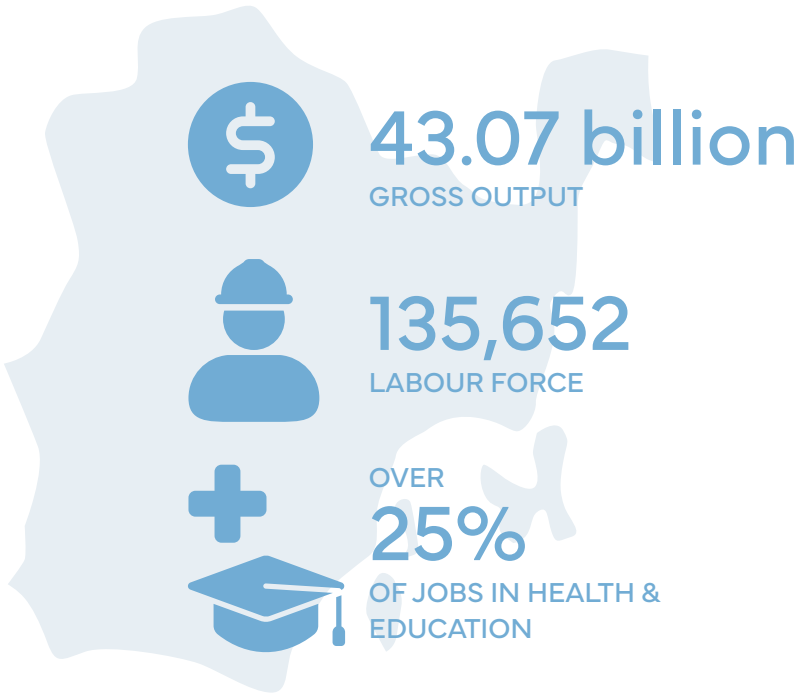
Southern Tasmania's main employment opportunities are related to the Region's population:

- Health care, education, public administration and retail are all directly linked to serving the needs of the Region's community.
- As the Region's population continues to get older, demand for workers in these sectors is likely to continue to grow.
- Construction is also a major employer and reflects strong continued activity particularly in housing construction over the last 10 years.
- Tourist related jobs in accommodation and food services also employ a lot of people and are spread across different parts of the Region.
- Agriculture and food processing also demonstrate the continued importance of primary production and the potential to add value to agricultural produce, and the strength and diversity of aquaculture across coastal parts of the Region.
- There are synergies with agritourism, and this relates to agricultural value add through industries such as wineries, distilleries, fishing, and oyster farming.

FIGURE 12. SOUTHERN TASMANIA INDUSTRY OF EMPLOYMENT (PLACE OF WORK) 2021



Source Data: Remplan Economy, based on ABS 2021 Census Place of Work Employment, ABS 2020/21 National Input Output Tables, ABS June 2023 Gross State Product)



Source Data: Remplan Economy, based on ABS 2021 Census Place of Work Employment, ABS 2020/21 National Input Output Tables, ABS June 2023 Gross State Product)

THEME 2

4.1.2 Commercial Centres

Commercial centres across the Region range in size and function. Larger towns around the Region support local populations with a range of commercial, retail, social services, education and entertainment. Centres like Sorell, Brighton, and Kingston are part of metropolitan Hobart but also provide employment opportunities and local businesses that support people from the more rural parts of the Region. Within metropolitan Hobart, the key commercial centres are generally the historic centres of towns that have over time become part of the metropolitan area. These centres provide a mix of local commercial uses, retail, entertainment, restaurants and cafes. Some, like Kingston and Rosny Park, have also emerged as key locations for government offices and services. Commercial and larger format retail uses are also establishing around Cambridge Park.

Hobart CBD is the key commercial centre in Southern Tasmania, supporting the Region's highest concentration of professional services and administrative jobs across nearly 360,000 square metres of commercial office floorspace. Office vacancy rates in Hobart are relatively low at 2.8% compared to other major commercial office CBDs which are mostly at more than 10% vacancy. Hobart has maintained the lowest CBD office vacancy rate in Australia for the past 4 years. A trend not seen in many CBD markets across Australia due to the slow return to the office post COVID-19. This reflects the strong demand for commercial floorspace in Hobart.

However, demand for commercial office floorspace is not translating into an increase in supply. In recent years, there has been limited supply additions to Hobart CBD, and with no new supply under construction currently, there is a premium for commercial floorspace in a tightening market. Hobarts market is dominated by government agencies and is aligned with the strong composition of public administration and health and education jobs in the Region.

The limited availability and lack of new supply in the market will have implications for business and jobs growth potential in Hobart and Southern Tasmania overall, where new or expanding entrants into the market are unable to acquire appropriate floorspace. Without new space, both private and public sector growth in Southern Tasmania will be challenged.

4.1.3 Industrial land

Key locations of industrial and employment focused activity are located throughout the Region. There are strong concentrations of employment land historically around the Derwent Estuary, with major manufacturing industries in Glenorchy and port operations concentrated around Macquarie Point.

The Brighton Hub is a purpose-built road-rail hub located on the Burnie to Hobart freight corridor. It has played a key role in opening up large areas of industrial land, close to Hobart, with direct access to high-standard road and rail networks. Cambridge Park and the Hobart Airport Precinct also provide a significant supply of employment and industrial land.

Other smaller or specialised employment and industry clusters such as Mornington are scattered throughout the Region, some with links to specific industries like forestry and paper production (in Derwent Valley), aquaculture (Huon Valley and Triabunna), and agricultural production (Richmond, Oatlands and in the Derwent Valley).

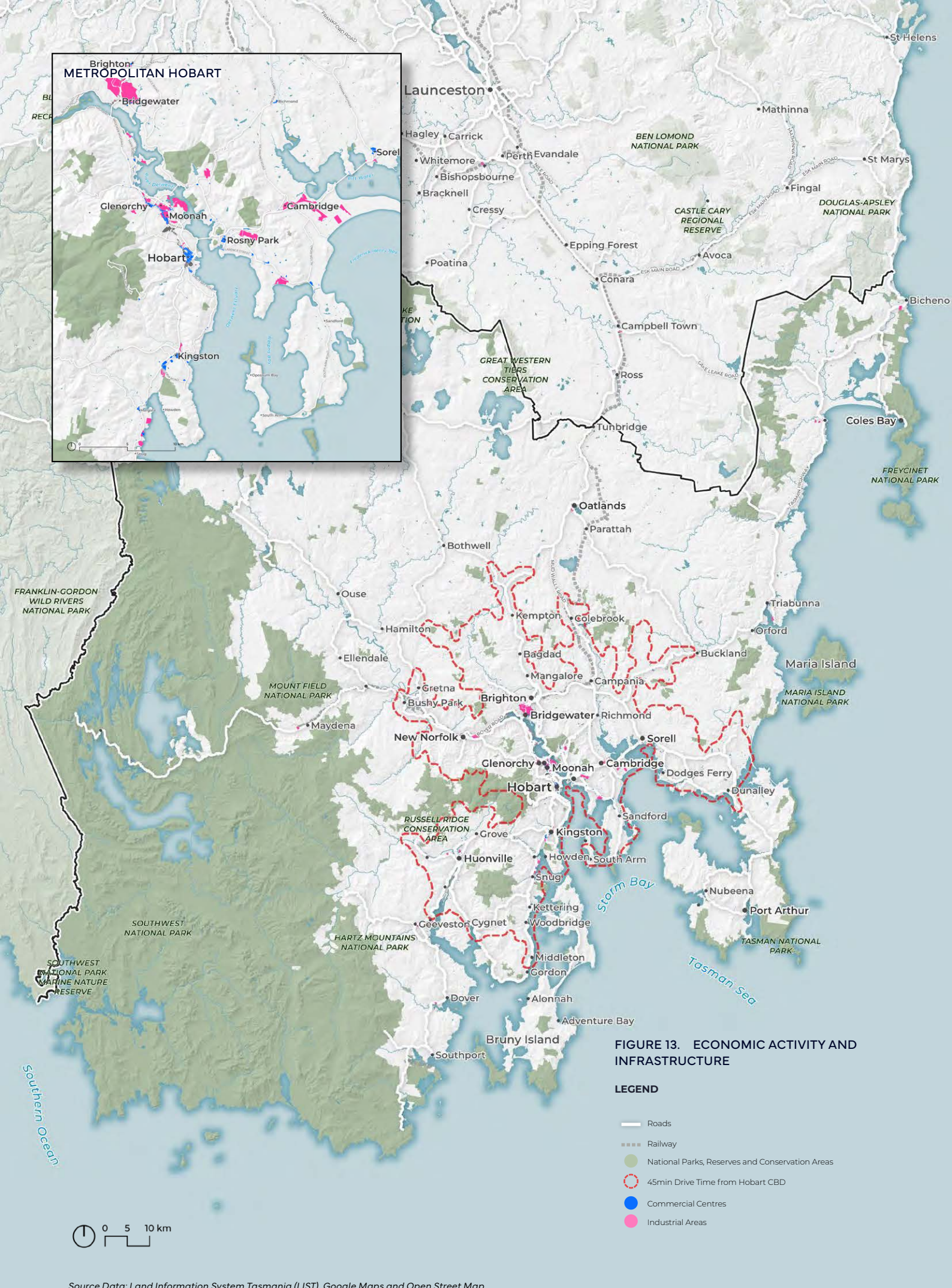


FIGURE 13. ECONOMIC ACTIVITY AND INFRASTRUCTURE

Source Data: Land Information System Tasmania (LIST), Google Maps and Open Street Map

THEME 2

4.1.4 Agriculture, Mining, Forestry and Aquaculture

Primary production has historically been important to the Region's economy and has provided employment opportunities across the rural and coastal areas of the Southern Tasmania Region. Some of these historically important industries are declining or transitioning to different methods of production, for example plantation forestry and aquaculture. Irrigation is a strong driver of agricultural production and the growth of fruit crops like cherries in the Derwent Valley and Coal River Valley which is dependent on irrigation and large scale production for efficiency. Wineries and vegetable production have expanded into more eastern parts of the Region again linked to expansion of irrigation zones. Agricultural value-add, and links to tourism, are diversifying rural economies in some locations and combining traditionally separate industry sectors.

Aquaculture is also a growing and diversifying sector. Oyster leases, fish farming, and kelp farming all operate across different parts of the Region, in some cases in inland areas (for example salmon hatcheries in the Derwent Valley).

4.1.5 Tourism

Tourism is a significant contributor to the Region's economy. Tourism activity is diverse, and linked to the Region's natural environment, history and culture. Tourism activity in Southern Tasmania has increased significantly in the past decade, with major attractors like Salamanca, the Museum of Old and New Art (MONA), the UNESCO World Heritage listed Port Arthur Historic Site, Freycinet National Park and Bruny and Maria Islands drawing visitors to the Region from interstate and overseas. A growing cruise ship market is resulting in increased visitation to Hobart.

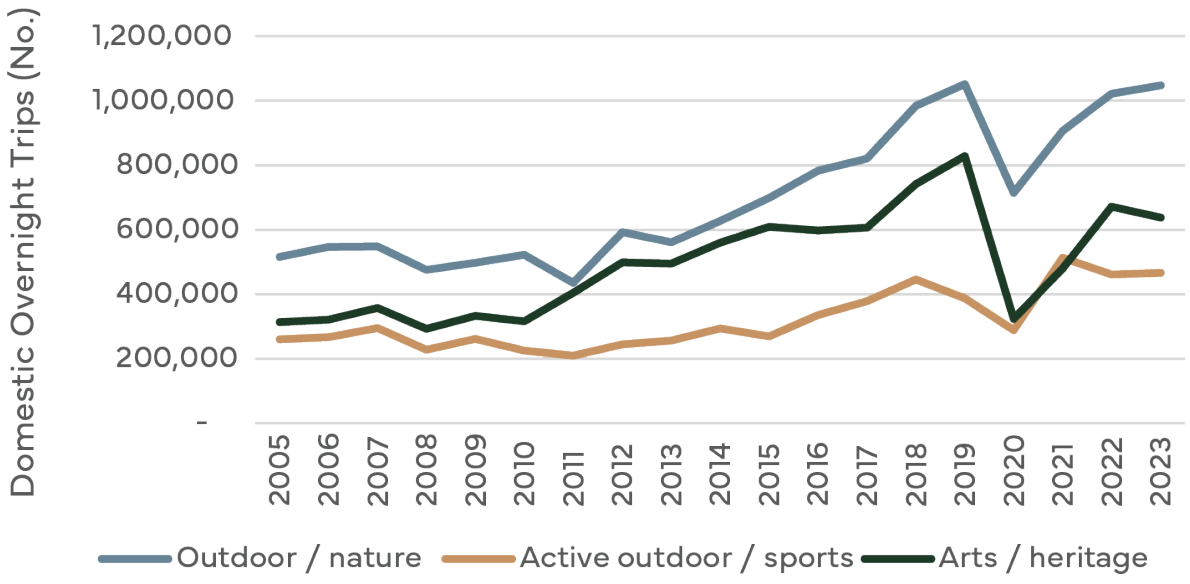
The Region has seen growth in nature-based tourism, for example, activities like mountain-biking, trout fishing and wilderness tourism.

Some parts of the Region are also important holiday destinations for Tasmania's residents. Coastal locations like Bicheno, the Tasman Peninsula, Southern Beaches and Coles Bay all experience significant short term growth in visitation particularly over summer holiday periods.

The growth of short stay accommodation is a response to strong domestic and international tourism demand, but is also impacting significantly on housing availability and affordability in some parts of the Region. While these accommodation options increase the capacity of local areas to meet tourist demand and provide more accommodation choice, the availability of housing for key workers (including those in the tourist industry) needs to be balanced with catering for tourist demand.

FIGURE 14. SOUTHERN TASMANIA DOMESTIC OVERNIGHT TRIPS BY ACTIVITIES UNDERTAKEN

Source Data: Tourism Research Australia Online



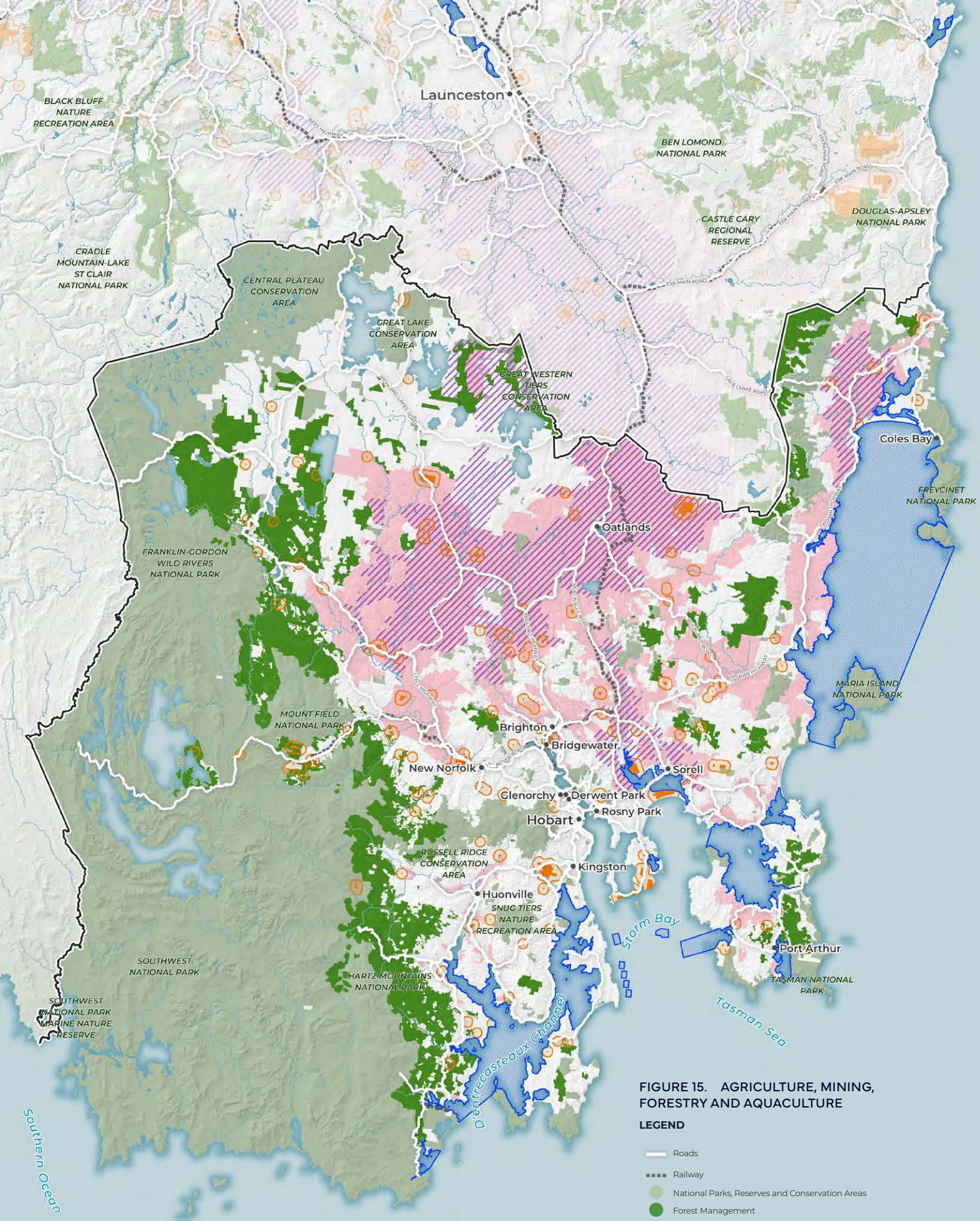


FIGURE 15. AGRICULTURE, MINING, FORESTRY AND AQUACULTURE

LEGEND

- Roads
- Railway
- National Parks, Reserves and Conservation Areas
- Forest Management
- Mining Leases and Buffer
- Marine Farming
- Agricultural Areas
- Irrigation District
- Port Arthur Historic Site

Data sourced from Land Information System Tasmania (LIST), Google Maps, Open Street Map and Sustainable Timber Tasmania

THEME 2

4.2 Movement and Connectivity

The Region's transport system includes the National network, State roads, major arterial roads and associated infrastructure which move people around the Region, to and from metropolitan Hobart to other parts of Tasmania.

Freight rail connects the Region to ports in Northern Tasmania (Bell Bay, Burnie and Devonport), which process 86% of imports to the Region. Within the Region freight rail services operate to the paper mill at New Norfolk and the intermodal terminal at Brighton. The Brooker Highway is the Region's most significant freight route, with the Midland Highway a significant inter-regional freight route.

There are four key points in which commuters cross the River Derwent or significant bodies of water interlinking surrounding communities and providing access to the north and eastern parts of the Region. This includes:

- The Tasman Bridge linking Hobart to Rosny Hill, the eastern shore and airport
- Bowen Bridge linking Glenorchy to Risdon Vale and Richmond
- The new Bridgewater Bridge replacing the Midlands Highway Bridge linking Granton and New Norfolk to Bridgewater and Brighton. The new bridge is currently being constructed downstream of the existing causeway making travel safer and more efficient, improving connectivity to surrounding local communities.
- Tasman Highway causeway between Cambridge Park, Midway Point and Sorell.

Most people are reliant on cars for most of their travel within the Region. Only 6% of trips to work across the Region are by public transport[9]. Maintaining a functional commuter zone within metropolitan Hobart, connections to surrounding towns and villages , and ensuring freight transport can move efficiently around the Region and connect to other parts of Tasmania are important considerations. Potential conflicts between freight vehicles, tourists and local resident and business travel are an issue on some of the main roads in the Region, some of which pass through challenging terrain meaning alignments and road conditions are difficult and expensive to improve.

Planning for a sustainable cost-effective transport network for the Region requires integration of land use, transport and utilities planning.

Moving towards a higher proportion of travel by public transport, walking and cycling will require investment in new and improved transport infrastructure, including roads, public transport and active transport aligned with planning for where and what types of growth in housing and jobs occurs across the Region.

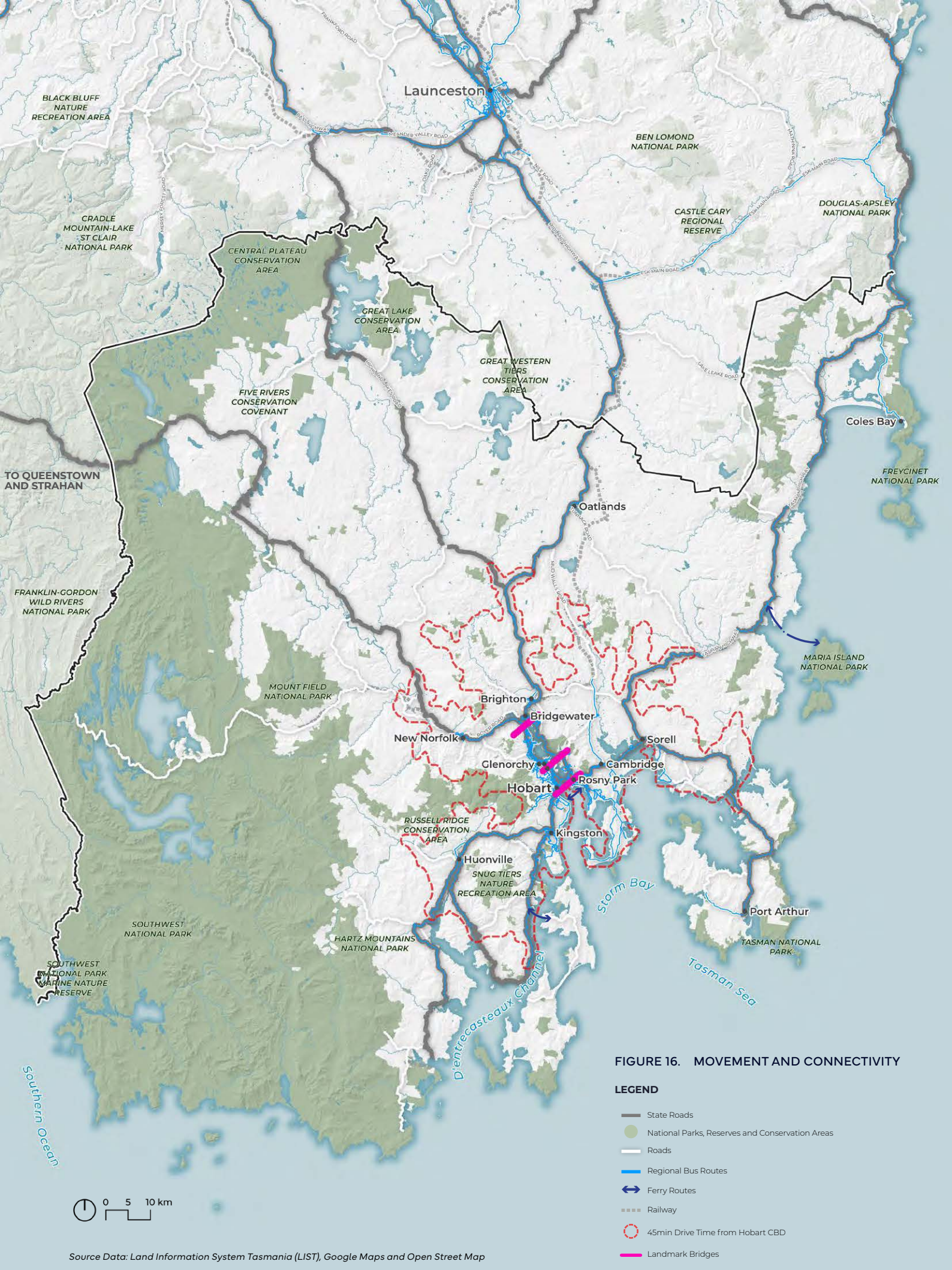


FIGURE 16. MOVEMENT AND CONNECTIVITY

LEGEND

- State Roads
- National Parks, Reserves and Conservation Areas
- Roads
- Regional Bus Routes
- Ferry Routes
- Railway
- 45min Drive Time from Hobart CBD
- Landmark Bridges

Source Data: Land Information System Tasmania (LIST), Google Maps and Open Street Map

THEME 2

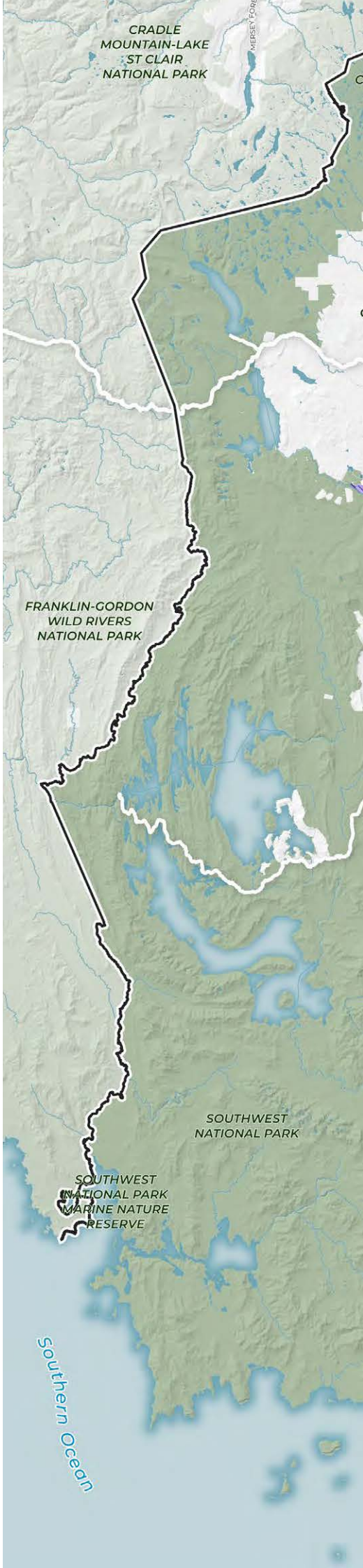
4.3 Utilities

Growth of residential areas through expansion of Greater Hobart's urban area, and more people moving to or holidaying in towns and villages across the Region, places pressure on existing infrastructure and creates demand to expand or upgrade networks.

The provision of essential utility services including water, sewer, telecommunications and electricity is largely dictated by these patterns of growth and change in factors like how many people live in each dwelling, where major industries and employment areas are located. Some industries like large scale manufacturing often use large volumes of water or power. Access to these can be important determinants of where these businesses can locate, and their ability to relocate or expand operations.

Key issues related to the provision of utilities infrastructure and services across the Southern Tasmania Region include:

- New or expanded utilities infrastructure tends to follow growth within Greater Hobart, and decisions about where growth can and should occur need to be informed by the costs and benefits of providing the necessary utilities, particularly when these costs are often borne by government.
- Fringe areas (environmental living, coastal towns and villages) are experiencing growth pressure but don't have access to trunk utilities. The south-eastern coastline (Dodges Ferry, Primrose Sands, Carlton) and some towns on the east coast are examples of growth that does not have access to all trunk utilities.
- Older infrastructure in established areas needs upgrading, but investment in new infrastructure has been largely focused on expanding the urban area. Essential infrastructure in established areas may have capacity to accommodate growth but, in many cases, needs maintenance or upgrading, or may not meet contemporary standards in relation to environmental impacts.
- Infrastructure contributions are too fragmented and outdated to support effective infrastructure delivery.



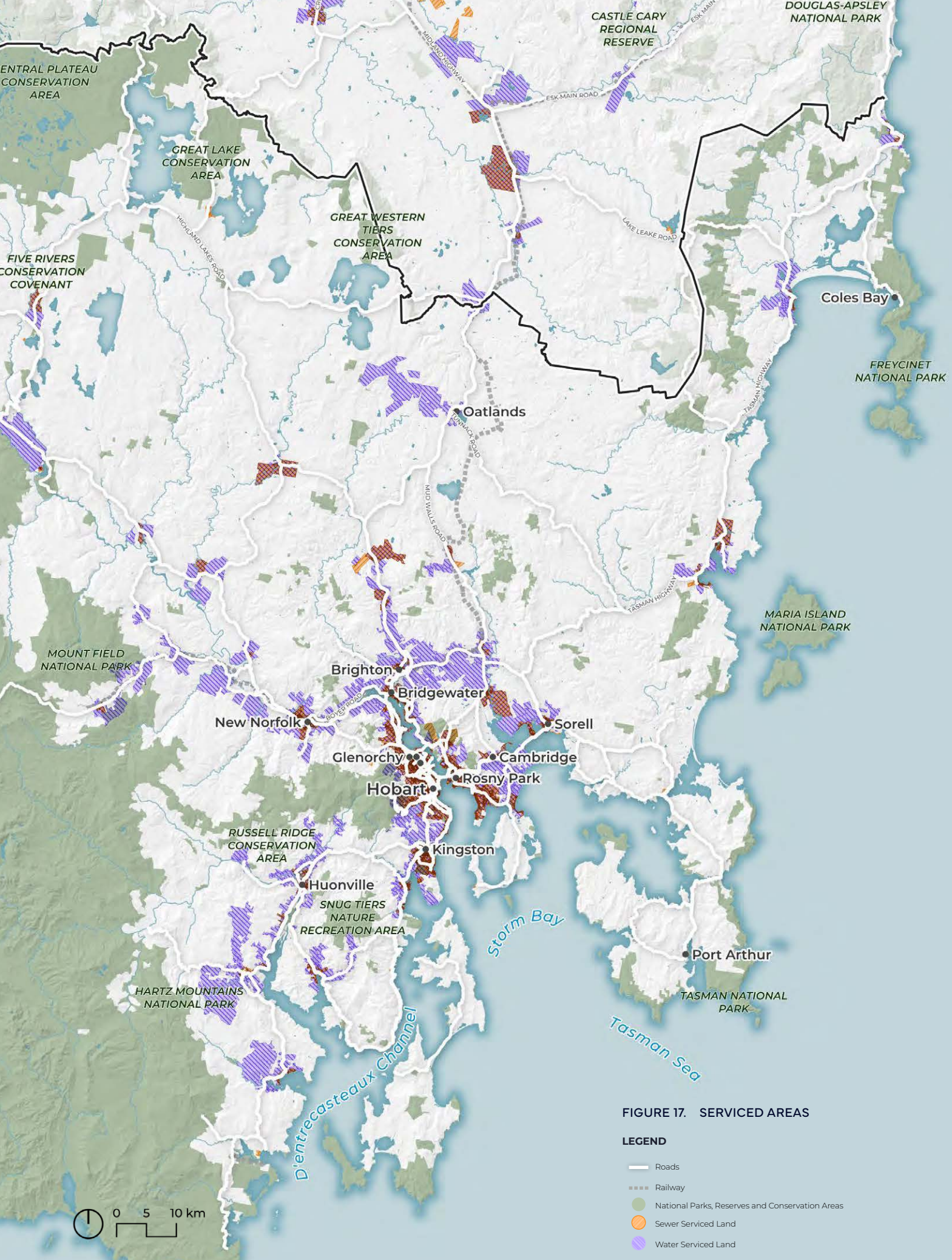


FIGURE 17. SERVICED AREAS

LEGEND

- Roads
- Railway
- National Parks, Reserves and Conservation Areas
- Sewer Serviced Land
- Water Serviced Land

Source Data: Land Information System Tasmania (LIST), Google Maps and Open Street Map

THEME 2

4.4 Opportunities and Challenges for Economic Activity and Infrastructure

Opportunities	Challenges
• Continuing to grow the diverse range of employment opportunities in smaller towns and villages to provide more local locations for employment and create a more diversified and less cyclical economy that is resilient to global trends and stable throughout the year. • Continuing to strengthen and expand Hobart's national and international role as a gateway to the Antarctic, by both sea and air. • Strengthening the north-south spine in metropolitan Hobart through active transport and public transport corridors. • Investigating the provision of new or expanded transport modes like ferries and rapid bus to provide attractive alternatives to private car and free-up road space for essential services and freight. • Protecting the Region's irrigation systems which enhance rich agricultural soils, increase production and provide rural employment opportunities. • Leveraging the Region's reputation for environmental quality as a foundation for economic activity including tourism and primary production, ensuring land use planning facilitates partnerships and innovation by enabling appropriate land use mixes and co-location. • Exploring infrastructure funding options to support strategically funded provision of utilities, transport infrastructure, parks and community facilities for new, growing or changing communities. • Collaborating with utility providers and stakeholders (energy, gas, and water) to coordinate land use and infrastructure planning to support growing and changing community needs.	• Prioritising and protecting high-value, productive agricultural land as farmers and landowners look to diversify into alternative sectors such as tourism and non-agricultural industries. • The current lack of revenue streams to fund utilities infrastructure when services need upgrading and expanding for new developments. • The environmental constraints of topography on improved east-west transport connections. • Balancing growth in greenfield areas, towns and villages with the capacity of transport networks to maintain travel times and make cost-effective infrastructure investment decisions. • Introducing public transport alternatives to private cars to that are financially viable and attractive to users. • Addressing the tensions between different economic sectors that rely on the same resources such as forestry and tourism. • The competing use of major roads for freight transport, tourism traffic, and residential travel creates safety issues and pressure to upgrade infrastructure often through challenging terrain.

THEME 3

People, Communities and Growth

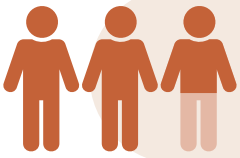
5.1 Population Growth and Change

5.1.1 The Region's Population Now

There were 298,589 people living in Southern Tasmania in 2023. Southern Tasmania has experienced one of its largest population 'booms', growing by more than 51,000 people between 2011 and 2023 - a more than 20% increase over 12 years[10].

In summary Southern Tasmania's population has:

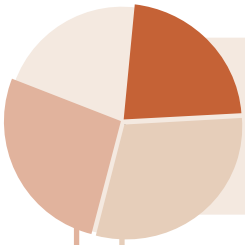
298,589
PEOPLE
More than half of Tasmania's population.



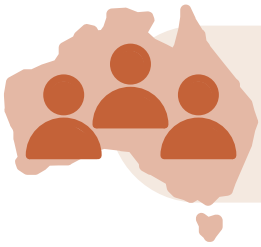
2.5
PEOPLE PER HOUSEHOLD
Which has slightly reduced since 2011.

Kingborough, Clarence and Brighton have larger households.

40 YEARS OLD
MEDIAN AGE
Slightly higher than the nation's median of 38.



20%
OF HOUSEHOLDS ARE PEOPLE LIVING ALONE



5%
ABORIGINAL RESIDENTS
Compared to the nation's overall 3.2%.

31.5%
Are couples with no children, compared to the national average of 26.6%.

Just over a quarter
of households are families with children

Source: Remplan/ABS Census of Population and Housing 2021

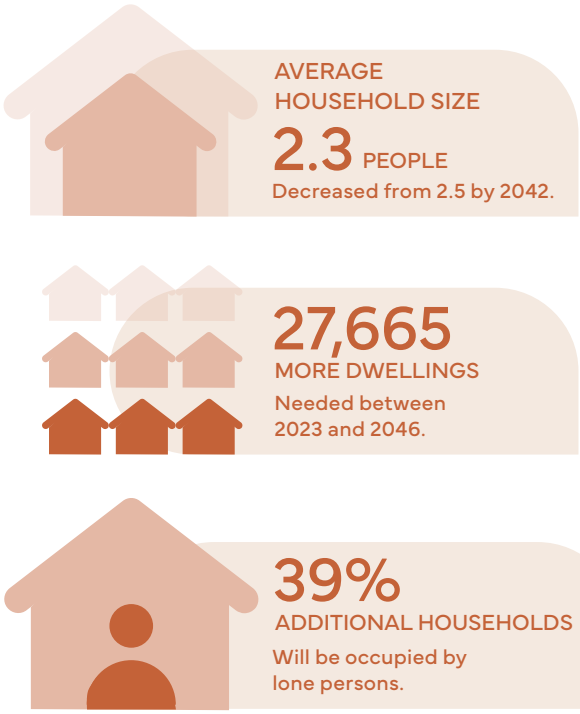
5.1.2 Forecast Population Growth and Change

Population forecasts for Southern Tasmania estimate a total increase of 43,447 people in the 23 years from 2023 to 2046, a slower rate than the growth over the past 12 years[12]. The forecasts also estimate the population will get significantly older. Around 58% of all population growth is forecast to be people aged 65 and older.

Southern Tasmania's ageing population is largely related to a combination of low and declining birth rates and young adults leaving to other Australian states[12]. Reasons for younger people leaving Southern Tasmania include a lack of secure, full-time and well paid jobs, a real and perceived lack of education, competition for housing and declining affordability, access to health services, and lifestyle choices[13]. Implications of an ageing population for Southern Tasmania include shifts in the type and location of housing, demand for social services like health care, and lower economic productivity (per person) due to lower workforce participation and less productive industry sectors.

Southern Tasmania's changing population will have implications for housing requirements throughout the Region, particularly reducing household sizes which are partly caused by the population getting older.

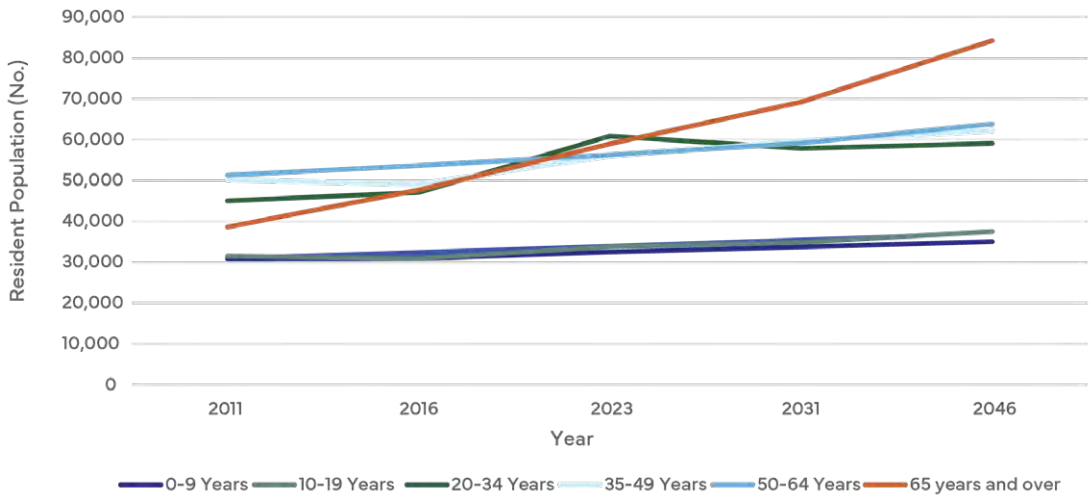
Housing forecasts[15] for Southern Tasmaina indicate that:



Source: Remplan/ABS Census of Population and Housing 2021

FIGURE 18. SOUTHERN TASMANIA POPULATION PROJECTIONS 2011 – 2046

Source Data: Remplan Forecast



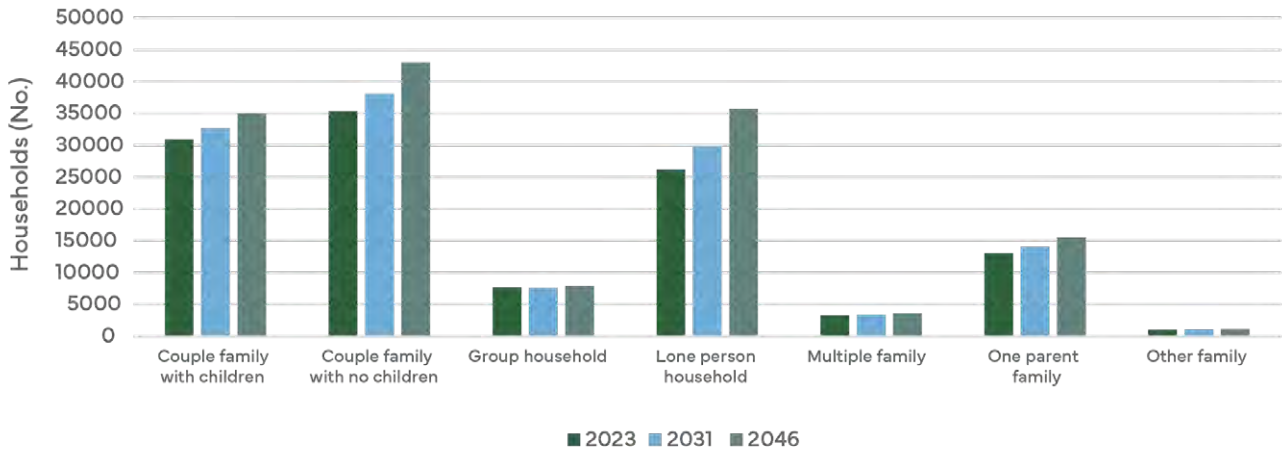
THEME 3

The Department of Treasury and Finance released new population projections for Tasmania in May 2024. Anticipated birth rates, life expectancy and migration to and from Tasmania inform a range of projection scenarios. There are large differences in the total population and the rate of population growth between the projection scenarios. The differences are mainly because of different assumptions about how many people will move to or from Tasmania from overseas or interstate.

Population projections are one input to Regional Land Use Strategies. The different forecast scenarios illustrate the uncertainty around how much the population will grow, particularly over the longer-term planning timeframe for the Southern Tasmania Regional Land Use Strategies. The influence of both interstate and overseas migration has been significant for the Southern Tasmania Region particularly over the last 10 years. Changes to migration patterns will probably occur over the next 25 years. The high variability and unpredictability of population growth highlights the challenges of planning for growth in the Region, and the need for the STRLUS to be adaptable to changing circumstances. The population projections are a starting point for considering how much growth needs to be accommodated, and where population growth and change will occur across the Region.

FIGURE 19. SOUTHERN TASMANIA HOUSEHOLD COMPOSITION PROJECTIONS 2023-2046

Source Data: Remplan Forecast



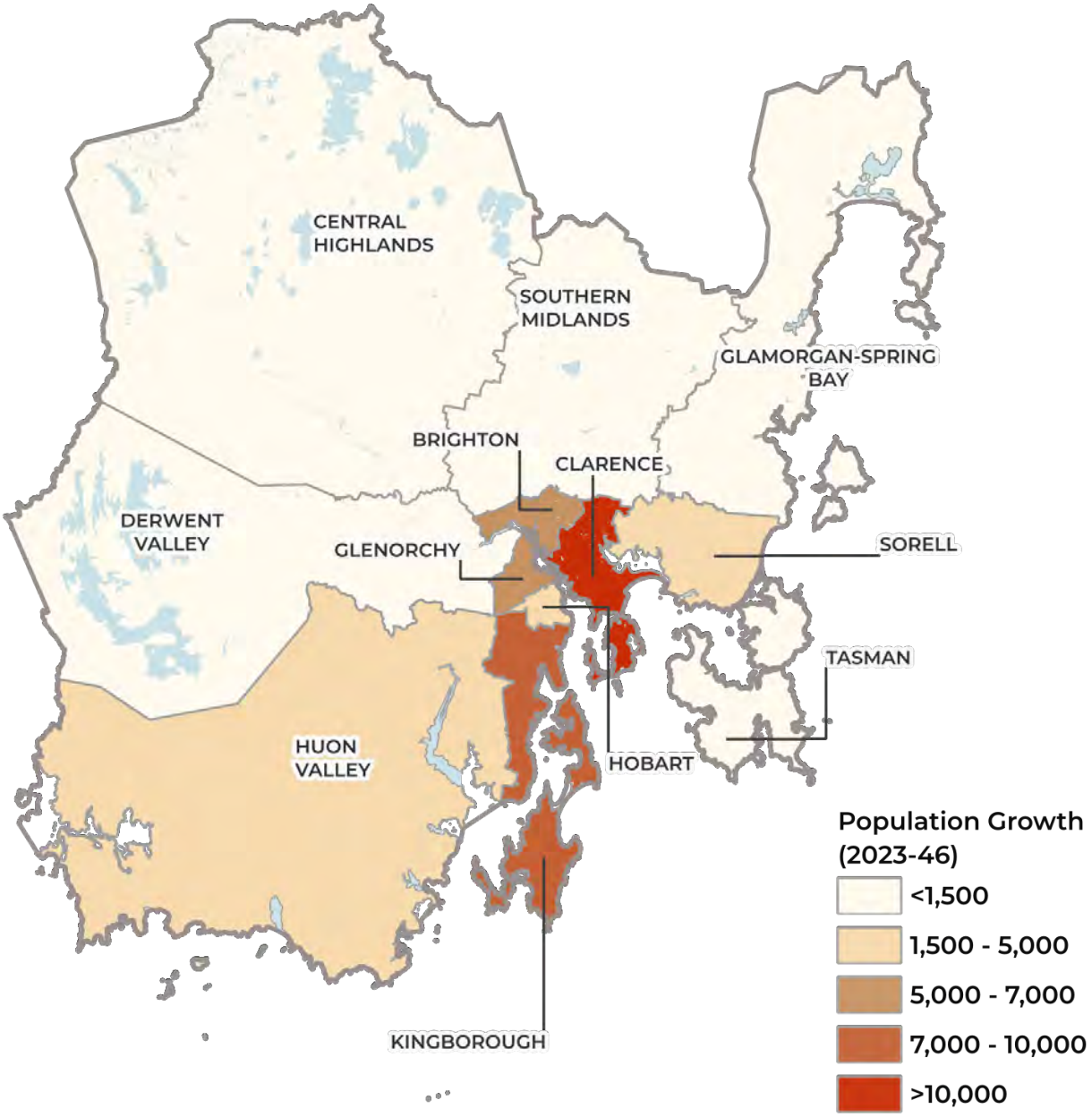
5.1.3 Forecast Population Growth and Distribution

The largest growth in Southern Tasmania is forecast in council areas on the fringes of metropolitan Hobart, including Clarence, Sorell, Brighton and Kingborough. These are the fastest growing councils historically, and forecasts are based on continuation of these past trends.

The population is anticipated to change, and housing needs will also change over the next 25 years. Implementation of housing policies and strategies through the STRLUS has the potential to change how population growth is distributed across the Region compared to the current forecast distribution shown on the map below.

FIGURE 20. SOUTHERN TASMANIA LGAS - POPULATION PROJECTIONS (2023-2046)

Source Data: Remplan Forecast



THEME 3

5.1.4 Social Wellbeing

There are differences across Southern Tasmania in levels of wellbeing, income and access to opportunities. The Socio-Economic Index of Advantage and Disadvantage is produced by the ABS and uses a range of social indicators to show areas across Australia that are more or less disadvantaged.

Figure 21 shows the SEIFA index for the Southern Tasmania Region based on the 2021 census. Disadvantage generally increases with distance from Hobart and the coast because of lower incomes, less access to services and facilities, lower educational attainment, and lower skills base. Some inner parts of metropolitan Hobart are relatively advantaged, with higher levels of education and income. There are also pockets of disadvantage within urban areas and these are often closely linked to high unemployment rates and lower education and health outcomes.

Educational attainment and participation are key social challenges in Southern Tasmania. Communities with higher levels of skills and qualifications that are suited to local jobs and industries is a critical part of sustaining economic activity and ensuring services like education and health care meet community needs.

The impacts of education standards on employment and industry growth is complex. In Southern Tasmania, many younger people move interstate for further education or to find work in sectors they are qualified in. The resultant lack of appropriately qualified workers is a constraint to new or growing businesses, which in turn means there are limited opportunities to attract or retain workers.

Rates of high school completion in Southern Tasmania are lower than for the rest of Australia. This means that many residents do not have the qualifications required to enter into high value industries and jobs that generate wage growth and economic activity. Low school completion rates hinder or directly contribute to lower quality of life, particularly in relation to social factors such as income, unemployment, and health.

Rates of post-school qualifications (TAFE or University) in the Region have increased significantly since 2016, and are similar to the rate for all of Australia. This may be due to high rates of migration during this period, with new residents coming to the Region having already obtained a qualification.

While unemployment rates in the Region are only slightly higher than the national rate, more people in Southern Tasmania are in lower paying jobs and productivity per person is also lower.

Some of the indicators of wellbeing in Southern Tasmania include:

INCOME:

$39,119
PER ANNUM
is the median individual income for Southern Tasmania.

$41,940
PER ANNUM
is the median individual income for Australia.

UNEMPLOYMENT:

3.66%
UNEMPLOYMENT
across Southern Tasmania.

3.11%
UNEMPLOYMENT
across Australia.

EDUCATION:

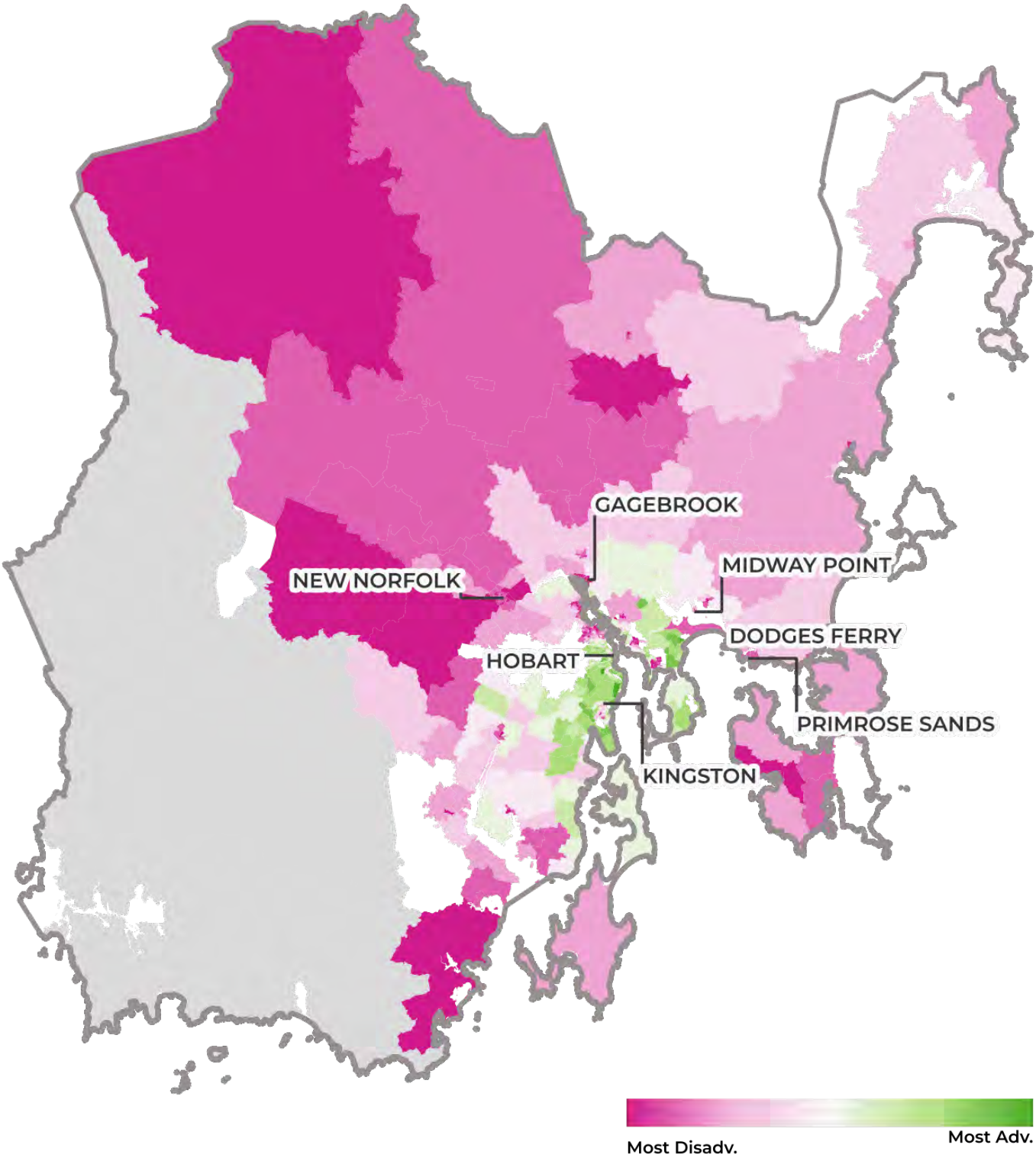
OF SOUTHERN TASMANIAN RESIDENTS
have completed Year 12, compared to 57% across the nation.

OF SOUTHERN TASMANIAN RESIDENTS 15 AND OVER
have post-school qualifications, compared to 52% throughout Australia. This includes vocational training and higher education.

Source: Remplan based on ABS Census of Population and Housing 2021

FIGURE 21. SOUTHERN TASMANIA SOCIO-ECONOMIC INDEX OF ADVANTAGE AND DISADVANTAGE 2021

Source Data: ABS Census of Population and Housing 2021



THEME 3

5.2 Housing, Placemaking, and Growth Management

The number, type, and location of new homes is linked to placemaking and the 'liveability' of urban areas. Higher concentrations of people, more diverse communities and a mix of land uses mean residents have better access to jobs, entertainment, recreation and social services and better quality of life. When communities are able to access these amenities, businesses are more viable and government services and infrastructure are more cost effective. The costs to households are also often lower as people spend less time travelling, transport costs less, and the costs of delivering new development (and therefore the costs of housing) benefit from more efficient infrastructure delivery. Decisions about how many houses, what types of houses and where new housing is located are an important part of managing growth in metropolitan areas like Hobart.

5.2.1 Housing

Housing is a basic requirement and access to housing is a fundamental right for all people. There needs to be enough housing to meet need, and housing should be suitable, affordable and in the right locations. Both the Tasmanian Housing Strategy and the Tasmanian Planning Policies emphasise the need to deliver homes that are close to social and physical infrastructure, local services and employment opportunities.

The Tasmanian Housing Strategy 2023 – 2043 prioritises:

- Delivering more quality homes, faster.
- Supporting people in need.
- Improving private market affordability and stability.
- Enabling local prosperity.

For Southern Tasmania these priorities translate into ensuring enough homes are built to meet need, that housing is built where it is needed, housing types are more diverse to meet changing needs, and housing contributes to sustainable populations that have access to employment, education and services.

Housing location

The majority of new housing in the Region has historically been delivered in greenfield areas. This means the urban footprint of metropolitan Hobart is expanding, particularly to the north (in Brighton), but also south (in Kingborough) and east (in parts of Clarence and Sorell).

Over the last 10 years[15]:

- A quarter of new dwelling approvals in the Region were in Clarence.
- Kingborough, Brighton and Sorell together made up more than a third of new dwelling approvals.
- The inner city areas (Hobart City and Glenorchy) accommodated only one in five new homes built in the Region.

Newer suburbs are attractive to younger couples and families because that is where most homes are being built and housing is more affordable or perceived as better value.

The more established parts of Hobart are often attractive for migrants to Tasmania, but large numbers of people also move out of inner-city areas, potentially to new homes in outer suburbs. The different needs of these communities for social infrastructure and employment opportunities have significant implications for managing growth and ensuring communities have access to the services and facilities they need.

The mix of greenfield and infill housing in councils covered by the Greater Hobart Plan has been approximately two-thirds infill and one-third greenfield over the last 10 years[16]. These councils (Hobart City, Glenorchy, Clarence and Kingborough) have a higher proportion of established urban areas and less capacity for greenfield growth than other councils in metropolitan Hobart.

TABLE 22. NEW DWELLING APPROVALS IN SOUTHERN TASMANIA FROM 2012 TO 2023

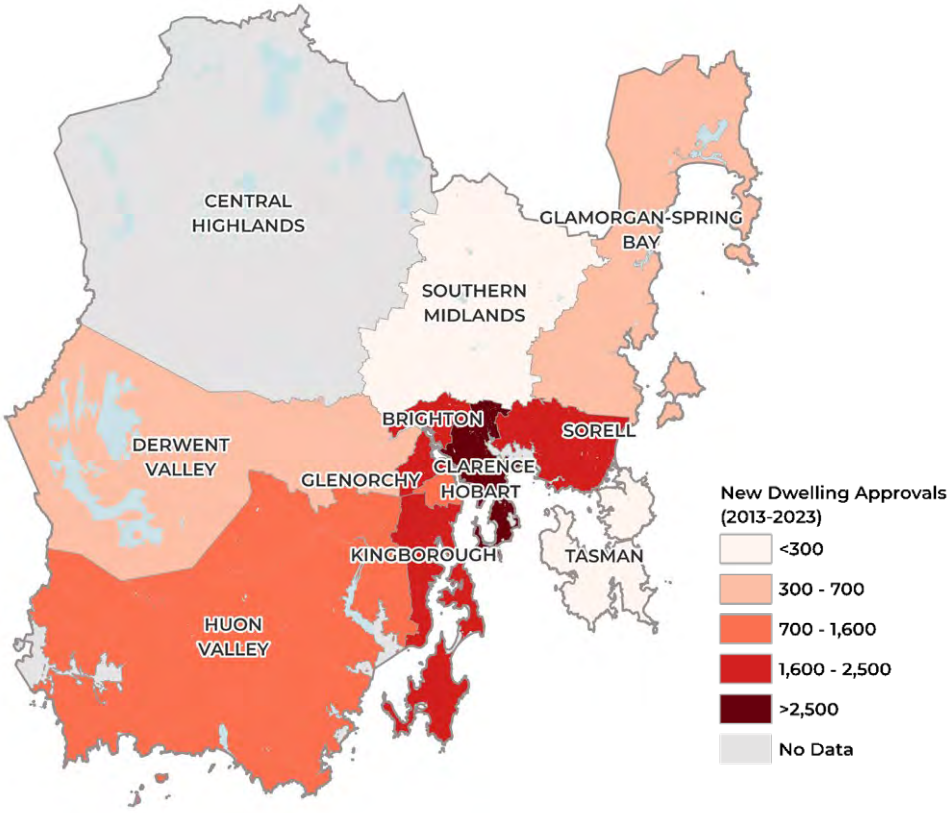
Region	LGA share of approvals in Southern Tasmania (%)
Clarence	24.5%
Kingborough	14.2%
Brighton	11.2%
Glenorchy	11.1%
Sorell	10.6%
Hobart	9.0%
Huon Valley	8.1%
Glamorgan/Spring Bay	4.3%
Derwent Valley	3.0%
Southern Midlands	1.8%
Tasman	1.6%
Central Highlands	0.6%
Southern Tasmania total	**100.0%**

Source: Remplan/ABS Census of Population and Housing 2021

The challenge of coordinating infrastructure and service delivery with population growth and change is common to many metropolitan regions, and is particularly acute where patterns of growth disperse the population over a larger area. While the proportion of infill housing is higher in established parts of metropolitan Hobart, overall the majority of new housing continues to be in greenfield areas.

This pattern of suburbanisation has led to increased demand to extend or upgrade roads, increasing congestion on Hobart's main roads, the need to continue to expand reticulated water, sewer and other utility networks, and made the operation and expansion of public transport services less efficient, reinforcing car dependence to access jobs, schools and services.

FIGURE 23. SOUTHERN TASMANIA COUNCILS – NEW DWELLING APPROVALS (2013-2023)



Region	Houses	Other Types of Residential	Total Dwellings
Clarence	3,682	327	**4,009**
Kingborough	2,017	324	**2,341**
Brighton	1,651	219	**1,870**
Glenorchy	1,458	395	**1,853**
Sorell	1,675	73	**1,748**
Hobart	944	555	**1,499**
Huon Valley	1,287	30	**1,317**
Glamorgan/Spring Bay	663	34	**697**
Derwent Valley	469	32	**501**
Southern Midlands	286	4	**290**
Tasman	251	5	**256**
Central Highlands	No data	No data	No data

Source Data: Remplan Property, ABS New Dwelling Approvals

THEME 3

Types and sizes of housing

Nearly 9 out of 10 homes in Southern Tasmania are separate houses. Less than 1 in 50 homes are apartments. The other homes are medium density housing like multi-dwelling housing.

Overall in Southern Tasmania there has been little change in the mix of housing types built in recent years and there is limited variety of dwelling types and sizes suitable to a range of housing needs. Around 87% of all new homes approved in the last 10 years were single dwellings[17]. There are differences in the types of housing that are built across different parts of the Region:

- In Hobart City and Glenorchy, around 30% of new dwellings approved between 2012 and 2022 were other dwelling types such as apartments, townhouses, or terrace housing[18].
- In areas with the highest growth on the fringes of Hobart's urban area, around 10% of new dwellings approved were apartments and townhouses.

Houses in Southern Tasmania are generally larger than required for the number of occupants. Around half of all households have only one or two people living in them. The average size of houses varies across the Region but is generally around 3 bedrooms per dwelling. Average household sizes are around 2.3 people per dwelling. This means there is 'spare' capacity in many dwellings for more people. New housing construction is predominantly in urban fringe areas and is typically larger dwellings, meaning that the supply of new homes doesn't match the types and sizes of housing that many residents need.

Combined with forecasted aging of the population, anticipated changes in household composition are likely to increase demand for smaller and more diverse housing, close to employment, services, and amenities.

Regional Planning Policy SRD2 in the 2011 STRLUS aims to match the supply of new homes with the needs of residents:

Manage residential growth for Greater Hobart on a whole of settlement basis and in a manner that balances the needs for greater sustainability, housing choice and affordability.

FIGURE 24. HOUSING TYPOLOGY

Housing affordability

Housing supply and affordability is a major social and economic challenge in Southern Tasmania. Strong population growth over the last 10-12 years through migration has contributed to increased demand, direct price increases through increased financial capacity of new residents, and increased competition for housing.

Because incomes are comparatively low in Southern Tasmania, housing affordability is a significant challenge for many households. This is particularly true in the face of strong dwelling price growth in the past 10 years, with price growth of over +95% in Greater Hobart for both houses and units[19]. Much of this growth was attributed to high demand following Southern Tasmania's population boom in 2017 and during COVID-19.

Accordingly, Tasmanians are increasingly having to compete for affordable housing, and rates of home ownership are declining. Southern Tasmania's housing challenges are being exacerbated by the cost-of-living crisis, driven by inflationary pressures, slow wage growth and recent interest rate rises. The result is declining borrowing capacity for first home buyers and rising rates of both rental and mortgage stress. In the current economic climate, rising inflation and interest rates will add further pressure on household finances.

Housing stress is defined as more than 30% of household income spent on mortgage or rental payments. In Southern Tasmania 44% of renter households and over 12% of households with a mortgage are in housing stress[20].

FIGURE 25. SOUTHERN TASMANIA – RATES OF HOUSING STRESS

Source Data: Remplan Property, Corelogic RP Data

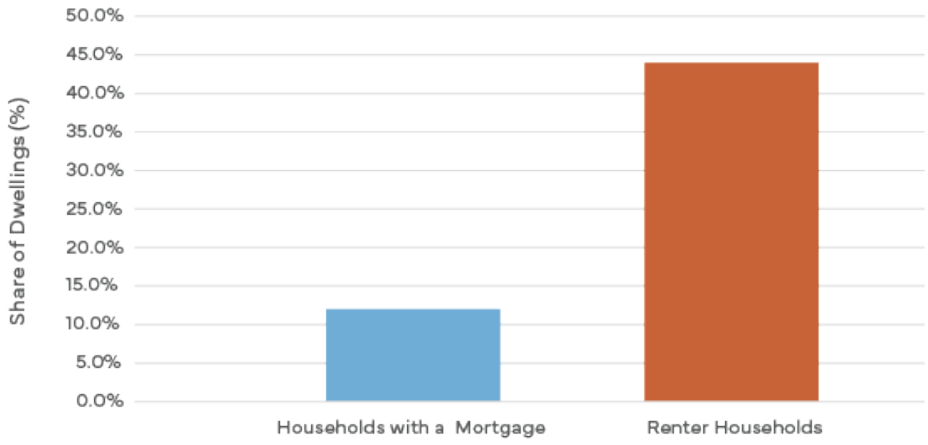


FIGURE 26. SOUTHERN TASMANIA - HOUSING TENURE CHANGE FROM 2011 TO 2021

Source Data: Remplan Community based on ABS 2021 Census of Population and Housing

THEME 3

5.2.2 Placemaking and Approaches to Growth Management

Placemaking for Southern Tasmania

'Placemaking' is a collaborative process that strengthens the connection between people and the places they share. It shapes the public realm in order to promote community identity and maximise shared values and aspirations. Placemaking is related to decisions about how growth will be managed across Southern Tasmania. Different approaches to how metropolitan Hobart grows, and how towns and villages might contribute to accommodating growth, will impact on the potential to create and sustain places that are vibrant, attractive and prosperous.

Southern Tasmania has numerous vibrant hubs throughout the Region, with certain areas (particularly in Hobart) being the centre for a year-round calendar of events, activations and civic activity. Different places around the Region have unique attractors related to economic or employment opportunities, the natural environment, history and heritage, or cultural and entertainment attractions. For residents, decisions about where to live are often driven first by housing affordability and availability, and this can lead to trade-offs against the need to travel for work, education or to access social services and entertainment.

Growth in Greater Hobart

The 2011 STRLUS adopts an urban growth boundary for metropolitan Hobart that was intended to have capacity for 20 years of growth. The STRLUS also sets a target of 50% infill housing and 50% greenfield for Greater Hobart (within the Urban Growth Boundary), along with density targets for infill areas with good transport access (25 dwellings per hectare) and for greenfield areas (15 dwellings per hectare). The STRLUS also includes criteria for consideration of extensions to the urban growth boundary, and over time various amendments have been made to bring new areas into the boundary. The Greater Hobart Plan (which applies to the metropolitan areas of Hobart City, Glenorchy, Clarence and Kingborough government areas) sets a 70% infill housing target, reflecting the more established urban character of much of these council areas.

While more new homes in Greater Hobart have been in established areas than greenfield, overall residential growth across the Urban Growth Boundary since 2012 has predominantly been single dwellings.

The intended outcomes of the STRLUS and Greater Hobart Plan to increase the proportion of housing in infill areas remain relevant. Focusing on implementation of policies aimed at increasing the proportion of infill housing, providing more diverse housing types and sizes, and locating new homes close to services and infrastructure will assist with progress towards achieving the targets.

Analysis undertaken for the State of Play Report indicates there is sufficient capacity within the Urban Growth Boundary to accommodate the new homes that will be required over the next 25 years. Increasing the supply of infill residential development will reduce pressure for continued outward growth, and may assist with prioritising and coordinating use of existing infrastructure capacity and investment in new or upgraded infrastructure.

Growth in Towns and Villages

The STRLUS includes settlement strategies for towns, villages and hamlets in the Region. There are 110 towns, villages and hamlets across the Southern Tasmania Region[21]. Many of these towns and villages have historic value and ties to early and ongoing agriculture and other resources like fishing and forestry, and in some parts hydro-electricity. Some towns and villages play an important role now in the tourism economy, providing a base for economic activity, accommodation for visitors and workers, and in some cases contain attractions in themselves. Recent shifts in the tourism industry have seen many dwellings in some towns and villages transition from long term housing to short stay tourist accommodation.

Some towns and villages, particularly in tourist destinations like along the southern coast, around Coles Bay and the Tasman Peninsula, have grown from small scale villages with small permanent populations to having a larger resident population and more intense tourist visitation through short stay holiday rentals. Some growth, particularly in coastal locations, has been largely driven by retirees moving to Tasmania or out of the main centres and relocating in areas with high natural amenity. However, an influx of older people into communities that may not have the range and level of services to support them (like aged care and health services) is creating inequity and challenges for government and other providers in meeting the needs of communities across the Region. Many of these towns and villages also lack essential services like reticulated water supply and sewer.

While on-site wastewater systems are provided for individual properties, continued growth in some communities may start to put pressure on environmental values like water quality and the water table, unless other infrastructure solutions are provided.

Many rural towns and villages are dependent on changing economic activity for their ongoing sustainability. As the nature of economic activity has changed in different parts of the Region, some towns are growing or changing. In these areas, changes in economic activity (for example, a transition from forestry to tourism, or changing agricultural production due to irrigation schemes), have resulted in changes to the make-up of the community as people move in to take up different jobs.

Other rural towns and villages are experiencing aging populations and declines in productivity as global influences change the viability of farming and a younger workforce seeks opportunities in the larger cities or interstate. Some rural communities are facing static or declining populations. Maintaining populations that are sufficient to support the delivery of services that all residents rely on is a challenge in these areas

Some towns are important locations for services, facilities and meeting the basic needs of residents in surrounding areas. New Norfolk, Sorell, Brighton, Kingston and Huonville are examples of centres that have functional connections with more remote parts of the Region. Many of these locations are connected to Hobart through employment opportunities, with residents moving in for lifestyle and amenity reasons while commuting into Hobart for work.

THEME 3

5.3 Social Infrastructure

Social infrastructure includes places and spaces that allow people to come together, support community life and celebrate and experience culture. Social infrastructure is a term that can cover many aspects of social life that support social connection. This includes access to schools, TAFE and universities, hospitals, community health centres and medical centres, outdoor and indoor sport and recreation facilities like aquatic centres, sports courts and sports fields, parks and playgrounds, community centres, libraries, community arts and creative centres, museums, galleries and performing arts centres.

Population growth in different parts of the Region may require planning and delivery of new social infrastructure and services, where growth occurs through expansion of urban areas. There are also opportunities to make better use of existing social infrastructure (particularly schools) in some established areas that are experiencing population changes. More cost-efficient growth management outcomes will be achieved if there is capacity for new housing in locations that have good access to under-utilised social infrastructure and services. In comparison, continuing to expand urban areas outwards with minimal infill development is likely to create demand for governments to deliver new social infrastructure while existing facilities operate below capacity or can not be sustained.

The following summaries highlight access to social infrastructure across the different parts of the Region. Figure 27 maps the distribution of different types of social infrastructure, with larger circles indicating more social services.

Metropolitan Hobart

- Good provision of regional social infrastructure like universities and hospitals in Hobart CBD and inner city suburbs.
- There is a higher concentration of cultural, sport and recreation facilities in Hobart and Glenorchy. This includes regional cultural facilities that attract cultural tourism like the MONA, Tasmanian Museum and Art Gallery (TMAG), Playhouse Theatre and Maritime Museum. Bellerive also has the Blundstone Arena in the east.
- Metropolitan Hobart has a range of community facility space for hire, mostly in the form of large town halls (such as the City Hall and Hobart Town Hall) and smaller scout halls, meeting spaces and citizens centres.
- Some councils have identified the need for more youth spaces, creative infrastructure and local cultural spaces, and more general practitioners.

The South

- Sport and recreation facilities, health and community facilities mostly provided in Kingston, Huonville, Cygnet, Port Huon and Dover.
- Significant portion of open space at the west of the Region is the Hartz Mountains National Park.

The Midlands

- Social infrastructure mostly located in New Norfolk and Oatlands.
- Schools located in towns along the main highways (like Ouse, Hamilton, Bagdad, Kempton, Bothwell).
- Lower provision of sport and recreation facilities compared with other parts of the Region.
- Cultural facilities located in rural communities including four museums and one gallery. Cultural facilities are distributed across the Region, rather than clustered around population centres.

The East

- Sorell is a key centre for smaller communities on the East Coast for access to social services, retail and education.
- Some health and community facilities also located in Sorell.
- Nubeena, Triabunna and Swansea have clusters of social infrastructure including schools, emergency services and community centres.

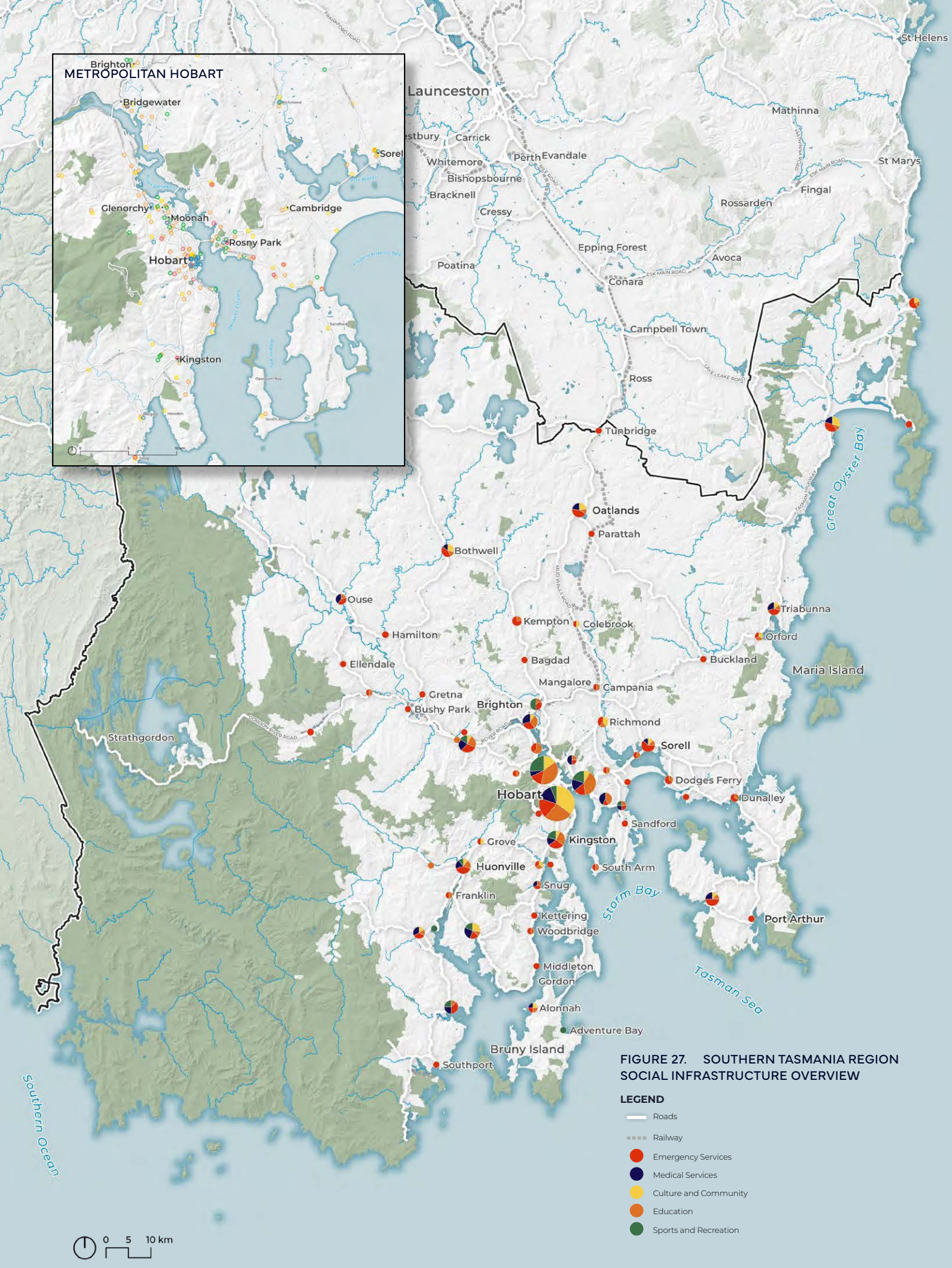


FIGURE 27. SOUTHERN TASMANIA REGION SOCIAL INFRASTRUCTURE OVERVIEW

LEGEND

- Roads
- Railway
- Emergency Services
- Medical Services
- Culture and Community
- Education
- Sports and Recreation

Source Data: Land Information System Tasmania (LIST), Google Maps and Open Street Map

5.4 Opportunities and Challenges for People, Communities and Growth

Opportunities	Challenges
• Monitoring population growth and change to inform adaptable and responsive growth strategies for the Region. • Implementing policies and actions that attract and retain a younger working population. • Investigating diverse housing typologies such as townhouses, apartments and multiple dwellings to cater to the needs of a more diverse community and people at different life stages. • A more compact, efficient and sustainable urban area for metropolitan Hobart with more suitable housing options and improved access to employment, amenities and services. • Encouraging compact, efficient and more diverse housing development within Southern Tasmania's existing towns and villages to contribute to more vibrant centres, improved amenity and less dependence on cars. • Using existing cultural and community buildings and spaces to stimulate creative, knowledge and innovative economies and create hubs for urban renewal and placemaking.	• External broader political and economic factors outside of the State and local government control such as federal policy levers, the cost of finance and construction materials which could hinder progress in housing delivery and therefore good growth in Southern Tasmania. • Appropriately responding to the demographic trends of an ageing population due to the departure of working age professionals. • Ongoing sustainability of some towns and villages due to highly variable and uncertain rates of population growth and ensuring the capacity for housing across the Region keeps pace with anticipated demand. • Balancing the housing, social service, and infrastructure requirements of an older population with opportunities to attract and retain a younger and working population. • Balancing the supply of new housing in established urban areas that are close to jobs, services, and where there is capacity in schools and utilities infrastructure, with outward expansion of Hobart's urban area that requires new or expanded transport, utilities and social infrastructure. • The planning system enabling and incentivising more diverse and compact housing so that new housing is appropriate to the needs of an older population and smaller households.

PART 4

OPPORTUNITIES AND CHALLENGES FOR THE SOUTHERN TASMANIA REGIONAL LAND USE STRATEGY

The opportunities and challenges identified in this report have been reviewed to understand where there are overlaps and inter-relationships. These are presented as possible 'Region Shapers' to provide preliminary direction for the STRLUS and implementation of the Tasmanian Planning Policies in the Southern Tasmania Region.

The Region Shapers capture and respond to the diversity of the Region, particularly the unique challenges and opportunities across different geographic areas.

6.1 Key Findings

REGION SHAPER #1

Planning for the Region is grounded in an understanding of, respect for, and connections to culture, history and Country

- Involve the palawa, Southern Tasmania's Aboriginal people in devising the approach to embedding Country-first practices in regional planning for Southern Tasmania.
- The significance of landscape in the identity and character of Southern Tasmania, its influence on growth and economic activity, and value to Southern Tasmania's people are reflected in regional planning.
- Pre- and post-colonisation history and cultural values of both Aboriginal and non-Aboriginal people are acknowledged.

REGION SHAPER #2

Land use and economic activity respect, protect and respond sustainably to the Region's unique natural environment

- New housing is well located and responsive to topography, natural systems and hazards.
- Housing for a growing and changing population is compatible with the landscape and natural assets of the Region.
- Growth and diversification of the Region's economy, including creating more jobs, emergence of different industries, technologies and products, supports the long term health of the natural environment while capitalising on the opportunities it creates.
- Patterns of land use growth and change consider climate change impacts on the environment and implement sustainability outcomes that reduce the impacts of land use.

REGION SHAPER #3

Communities across Southern Tasmania are safe and resilient to natural hazards and climate change

- The boundaries of Greater Hobart's urban area and growth in towns and villages considers and mitigates risks from natural hazards including bushfire, flooding and landslip.
- Potential changes in the Region's climate including temperatures, rainfall patterns and sea level rise inform decisions on where and what types of growth occur, and risks to existing communities.
- Growth in urban areas, towns and villages considers impacts of natural hazards on infrastructure and access to services and facilities, and the movement of goods and people around the Region are addressed.

REGION SHAPER #4

Communities in the Region are sustainable, connected and diverse

- Housing is accessible, affordable and suitable for diverse and changing needs.
- Housing is the right type and size to suit the needs of an aging community as well as the growing number of one and two people households.
- There is capacity for housing in the towns and villages across the Region to meet demand, and decisions on where new housing is located consider the costs of and ability to deliver infrastructure and services that residents need.
- New housing is located to prioritise access to employment and services and to take advantage of active transport, green links and public transport.
- Active and public transport improvements are prioritised in locations where new housing is planned.
- Land use planning incorporates measures to promote community health and healthy living.

REGION SHAPER #5

Social services and infrastructure are planned and delivered to support a growing and changing community

- Planning for new or expanded social infrastructure and services is aligned with where population growth is strategically planned across the Region.
- Social services and infrastructure meet the changing needs of the community in particular different age profiles in different parts of the Region.
- Housing is suitable and affordable to key workers particularly in health care, education, emergency services, and in some parts of the Region tourism, hospitality, and agriculture.

REGION SHAPER #6

Employment and economic clusters are accessible and transport networks support how, where and why people and goods move within, to and from the Region

- Transport networks are integrated with where people live and work, and with the services and facilities that support their daily lives.
- Centres, towns and villages across the Region provide equitable and viable access to employment, shopping, entertainment, and social services.
- Freight movement networks provide access to key industry clusters, ports and distribution hubs.

REGION SHAPER #7

The Region's economy leverages its unique strengths and provides a stable base for employment growth and diversification

Economic growth and diversification are tied to and build upon:

- Hobart's role as Tasmania's capital city.
- Sustainable use of natural assets through tourism, agriculture, aquaculture.
- Capitalising on education, research, innovation and collaboration in fields that are unique to or particular strengths of the Region.
- Embracing new ways of production and combinations of activities that add value.

Next Steps for the STRLUS

7.1 Preparing the updated STRLUS

The following diagram summarises the STRLUS drafting process. Community engagement will play an important role in building on and refining the findings of this report to inform the updated STRLUS.

FIGURE 28. STRLUS UPDATE: PROCESS AND TIMING

Bibliography

1. Tourism Tasmania - Tassie Trade, 2022, *Visitor Statistics*
2. Department of Natural Resources and Environment Tasmania, 2024, *Tasmania's Water Catchments*
3. Hydro Tasmania Consulting, 2008, DPIW – *Surface Water Models, Derwent River Catchment*
4. Department of Renewables, Climate and Future Industries Tasmania, 2024, *What Are the Projected Climate Change Impacts for Tasmania?*
5. Renewables, Climate and Future Industries Tasmania, 2024, *Climate Change Action Plan*
6. Department of State Growth, 2022, *Tasmanian Renewable Energy Action Plan*
7. Department of State Growth, 2023, *Renewables, Climate and Future Industries Tasmania*
8. Department of Natural Resources and Environment Tasmania - Tasmanian Waste and Resource Recovery Board, 2023, *Tasmanian Waste and Resource Recovery Strategy 2023-2026*
9. ABS 2021 Census Journey to Work
10. Remplan Forecast, 2024
11. Remplan Forecast, 2024
12. Remplan Forecast, ABS Regional Internal Migration Estimates, 2021
13. Dr Lisa Denny, 2024, *Leaving Tasmania*
14. Remplan Forecast, 2024
15. Remplan/ABS Census of Population and Housing, 2021
16. Remplan Property based on ABS New Dwelling Approvals Data, 2023
17. Remplan Property based on ABS New Dwelling Approvals Data, 2023
18. Remplan Property based on ABS New Dwelling Approvals Data, 2023
19. Pricefinder, 2024
20. Remplan Property, Corelogic RP Data, 2024
21. Southern Tasmanian Councils Authority, 2010, *Southern Tasmanian Regional Land Use Strategy 2010–2035*
22. Department of Natural Resources and Environment Tasmania, Land Information System Tasmania (LIST)

Southern Tasmania
REGIONAL PLANNING PROJECT

STRLUS

Brighton Council

POLICY NAME: PRIVATE WORKS POLICY **POLICY No: AP24**

PURPOSE OF POLICY:

The purpose of this Policy is to:

- create a framework for the undertaking of private works on behalf of individuals, organisations and businesses (including State Government departments and service authorities) that is transparent, objective and consistent;
- ensure a clear understanding of the roles and responsibilities of each party entering into private works activities; and
- ensure that all private works undertaken by Council are undertaken at market prices, ensuring an acceptable profit margin and full cost recovery to Brighton Council that is consistent with the no advantage requirements of the *Local Government Act 1993* and comply with the National Competition Policy and competitive neutrality principles.

SCOPE:

This policy applies to:

- Private works undertaken by Council on behalf of individuals, private organisations and businesses, State Government departments and service authorities.
- Works may include the supply of plant, equipment, labour and other resources.

POLICY:

- Priority for use of Council's plant, equipment, labour and other resources is to be given to Council's own work program at all times, before entering into any private works arrangement.
- It is Council's preference that all private works be undertaken by private contractors in the first instance.
- Council reserves the right to refuse a request for private works, specifically if it is deemed to be outside of Council's capabilities or resource availability or for any other reason deeming the works unachievable by Council.

Guidelines

Private Works

Minor private works (valued at or below $10,000) will require the consent of the General Manager or Director, Asset Services.

Major private works (valued above $10,000) will require the consent of the General Manager.

Private works will be considered in the following circumstances:-

- Council staff have the capacity to engage in the project; or
- The works are complementary to council works being undertaken; or
- There is no private contractor available to undertake the works; or
- The works provide a valuable training opportunity for staff; or
- The project would be of strategic economic, social or environmental benefit to the community.

Plant hire

- Council will not hire out plant without an approved Council operator and in accordance with this Policy.
- Fees for plant hire are contained in Council's Fees and Charges schedule.
- Council is responsible for the payment of Council operators engaged on private works. No other payment arrangements are permitted.

Scope of works

- A scope of works is to be included with estimates and quotes for all minor and major private works.
- The scope of works must be clearly outlined, including the works to be undertaken, any permits required, estimated quantities of materials to be used and a timeframe in which the work is to be carried out.
- Major Private Works may include design drawings and specifications where appropriate and all permits required to be provided to Council prior to commencement of works.

Costings

- Labour, material, plant hire, third party costs and overhead rates for undertaking any private works will be applied at normal rates + 25%.
- A firm quotation must be provided for Major private works.
- An estimate of costs must be provided for Minor private works.
- All quotations must be in writing and must be accepted by the applicant in writing prior to commencement of the works.
- Variations to scope may incur additional charges to the original quote/estimate and must be agreed to in writing by both parties before commencing additional Major or Minor private works.
- Estimates and quotes provided are to be GST inclusive. GST will apply to all charges.

Payment

- Upon completion of private works the Director, Asset Services will arrange for the private works to be invoiced.
- Payment terms are 30 days.
- The applicant is responsible for paying the invoiced amount in full by the due date.
- A deposit or milestone payment may be required for Major private works.

Dispute Resolution

- Any disputes shall be addressed as per Council's Customer Service Charter.

Conflicts of Interest

- Council employees, elected members, volunteers, consultants and contractors must not gain any advantage when any private works are undertaken by Council and all provisions contained in this policy and Council's Code of Conduct apply.

REFERENCES:

Local Government Act 1993
Competition and Consumer Act 2010
Brighton Council Customer Service Charter
Brighton Council Code of Conduct

ADMINISTRATIVE DETAILS:

Policy compiled:	February 2024
Adopted:	xxxx
To be reviewed:	February 2026
Responsibility:	Director, Asset Services

GENERAL MANAGER