

Photo: Samuel Shelley

Acknowledgment of Country

Brighton Council acknowledges the palawa/ pakana (Tasmanian Aboriginal) community as the traditional and original owners of the skies, land and waters of lutruwita (Tasmania) and forwards our respect to their elders both past and present. Brighton Council acknowledges the continued connection the Tasmanian Aboriginal people still have to the skies, land and water of lutruwita that provides them with the food, medicine and craft celebrated through ceremony today.

Other **Acknowledgements**

Brighton Council wishes to acknowledge and thank all the community groups, individuals, stakeholders and council staff who have taken the time to provide input into this strategy.

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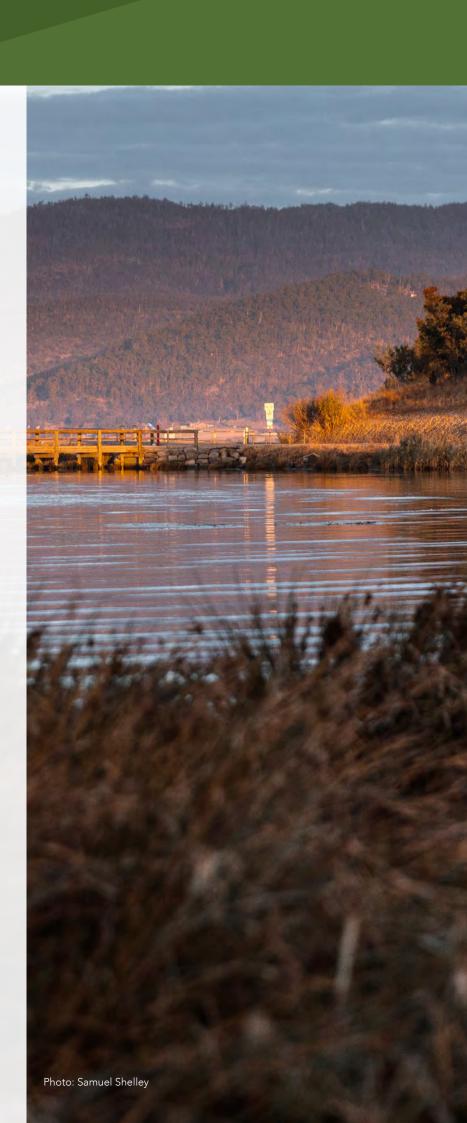
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Care for Country

"what it truly means to krakani, which means to sit with, to nurture, to be caretakers of country and all that abounds and surrounds each and every one of us...(and) be a gentle collective of caretakers of our fragile environment."

Alison Overeem, proud Palawa woman from South- East Tasmania



Message from the Mayor

I'm very pleased to present Brighton Council's Natural Resource Management (NRM) Strategy as part of our ongoing work towards a more sustainable environment for our communities.

Our municipality has a proud Tasmanian Aboriginal history of effective land management with the Mumirimina people's custodianship of country. The kutalayna/Jordan River area was a significant meeting place where hundreds of generations of palawa people hunted, gathered, corroboreed, camped and traded. Our native grasslands were places where the Mumirimina people would have hunted, managing the landscape with traditional fire management practices. Our waterways and wetland areas provided abundant water and food. It is important that these significant areas are recognised and cared for.

NRM is about people working together to manage the landscape. The cultural values, land, water, soil, plants and animals. NRM takes an integrated approach and needs strong partnerships to be effective. Brighton's NRM Strategy will help guide our actions as we work together to look after the natural assets that underpin Brighton's lifestyle and economy.

As our climate changes, it is important that we understand the condition of our natural resources and work together to manage our natural systems to build climate resilience and improve sustainability.

At Brighton Council we celebrate the knowledge, skill, passion and leadership of our local community. We are proud of our community volunteers for stepping forward to help manage our natural areas. Residents are volunteering their time and resources to work with the Derwent Catchment Project (DCP), Derwent Estuary Program and Landcare Tasmania to remove rubbish, eradicate weeds and restore the Bridgewater and Old Beach foreshores. We look forward to supporting these groups as they grow and flourish, inspiring others to get involved.

In the last year, we have come a long way. Part of this effort is working with natural resource management experts, such as our partners in this strategy, the Derwent Catchment Project, to develop clear future pathways.

Our community has told us of their commitment to true change and sustainability progress, through the 2050 Vision. This strategy will help us measure our success in this area.

Children, through the Brighton Council sustainability program, often express their concerns for the state of our environment. They say quite simply we must look after the environment... as we depend on it, and it is our future.

We truly value our wonderful environment, our wildlife, plants, and waterways. This NRM strategy is the beginning of a conversation with our community about how we can work together to not only care for our environment, but to improve the health and wellbeing of our communities by encouraging everyone to get involved to explore our incredible natural environment.

We look forward to working together for a sustainable future

Mayor Leigh Gray Brighton Council

What is Natural Resource Management?

Natural resource management (NRM) includes looking after our natural assets, caring for our land, soil and waterways, and our plants and animals, so they stay healthy and productive. It is about people working together to manage our precious resources, now and into the future.

Who helps manage our natural resources?

We all have a shared responsibility to look after our natural assets. We are all part of our environment and rely on our natural resources to survive. We need food, water, clean air, and places to live and play. Natural areas with high biodiversity help to regulate our environment. Trees and plants provide shade and shelter from sun, wind and rain. They help stabilise and filter waterways, and capture soil carbon and moisture. We rely on our natural resources to support our economy, for our health and wellbeing, and to support our lifestyles. Our natural areas provide important opportunities for recreation, to explore and understand nature, and for us to connect with our environment and with each other. Farmers and foresters, schools and government, land managers, businesses, tourists and visitors, community groups and individuals – we all have a role to play in looking after our natural resources.

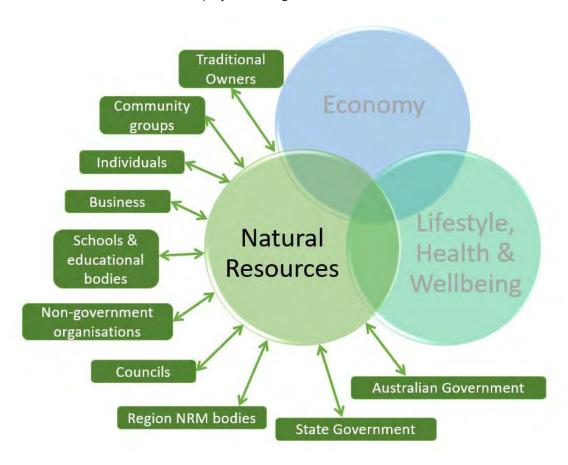


Figure 1 – Managing our natural resources is a shared responsibility. Our natural assets support our community and underpin our economy and our lifestyle.

Brighton's Natural Resource Management (NRM) Strategy

With so many people involved in managing our natural resources, it is important to have a document as a guide so we can all work together to achieve common goals. This strategy is the beginning of a conversation with community about natural resources in Brighton. It provides strategic direction to enable Brighton Council and other stakeholders to work collaboratively to improve NRM across Brighton. In developing this strategy we prepared a communications and engagement plan (See Appendix A) to guide stakeholders and community member input. We began talking to as many community members, groups and stakeholders as practicable to inform this strategy. We spoke to over 50 people and asked...

> What is special about our natural environment?

What ways are people using the land and water?

How do we manage our landscapes, preserve our special areas and make our productive lands more sustainable?



Is there information or assistance that could help people look after the water, land, bush and wetland areas?

What would help us work better together?

What are we doing well and what could we do better?

Through these conversations we sought to encourage people to get involved in understanding, and working with us to look after and enjoy Brighton's natural resources. We hope this is part of an ongoing conversation leading to better environmental outcomes across Brighton.

Background

Our Beautiful Brighton

Located approximately 20 kilometres north-east of Hobart on the eastern side of the Derwent River, the Brighton Local Government Area (LGA) extends over approximately 173 square kilometres.

The kutalayna levee in Brighton was a significant meeting place for the Mumirimina people, of the Oyster Bay tribe. In this area hundreds of generations of Aboriginal families hunted, gathered, corroboreed, camped and traded (Tasmanian Aboriginal Centre 2012).

We acknowledge the influence these traditional activities had on making the Brighton landscape what it is today.

Brighton has a population of almost 19,000 people and is growing rapidly. It is predicted to have the fastest population growth in Tasmania over the period to 2042. Brighton also has a young population with an average age of 34 years, making it one of the youngest populations in Tasmania. 11.6 % of the population identify as Aboriginal and/or Torres Strait Islander.

The municipality consists of nine suburbs: Dromedary, Honeywood and Tea Tree are predominantly rural; Bridgewater, Brighton, Gagebrook, Herdsmans Cove and Old Beach are predominantly urban and where most of the population live. Pontville is a significant colonialera village.

People are drawn to Brighton by its proximity to the centres of Hobart, Glenorchy and Clarence, its affordable housing, and its wonderful aspect and rural feel.

Brighton's more urban suburbs are located on the Derwent Estuary with stunning views up and down the river, over to kunyani/Mt Wellington, north to Mount Dromedary, and south to Mount Direction. Brighton also has several wellestablished paths and tracks that link different areas along the Jordan River and Derwent foreshore. The trails create spaces for recreation and exercise, link places to explore natural and cultural landscapes and help connect the community.

The municipality is traversed by the Midland Highway, East Derwent Highway, the main north-south railway line and the Jordan River. Brighton's location and its industrial and transport hub provide important opportunities for local businesses to connect with other markets. Whilst construction and transport industries are major employers in the region, agriculture still remains a steady contributor to the economy. Currently, Brighton faces the challenge of having lower socio-economic outcomes and lower household incomes than the Greater Hobart average.

The rural qualities of Brighton are various with the municipality hosting wineries, cherry growers, sheep graziers and a range of small farm businesses. Industry plays a vital role in the municipality, and Brighton is well placed to take advantage of future growth in industry. Many residents enjoy a rural residential lifestyle whilst being close to jobs and opportunities offered by being near to Greater Hobart.

With stunning views, wildlife parks, farms and vineyards, and servicing a growing interest in farm and cellar door sales, Brighton is well placed to take advantage of tourists looking for a day trip from Hobart. Likewise, some city dwellers are looking for locally sourced food options and experiences.

Population growth will continue to create economic opportunities. However, with this growth comes other challenges. We must work together to minimise the impacts of rapid urbanisation on biodiversity, land and water in order to sustainably manage our natural resources into the future. Ensuring we retain our culture, lifestyle and incredible natural values that make beautiful Brighton so special.

Brighton as part of the Greater Derwent Catchment

The Derwent River Catchment covers approximately 8,900 km2 of south-eastern and central Tasmania and is one of the largest river basins in the State (Hobart Water 2006). The river originates within the Tasmanian Wilderness World Heritage Area at Lake St Clair and flows in a south-easterly direction through a series of dams, power stations and reservoirs until it joins the Derwent Estuary at New Norfolk, 190 km downstream (DPIPWE 2003). Below New Norfolk the river becomes influenced by saltwater, marking the transition from river to estuary and then to open sea.

The Derwent Estuary is the largest estuary in south-eastern Tasmania extending from New Norfolk through Bridgewater to the mouth of the River Derwent between Tinderbox and Iron Pot. It is a valuable and productive ecological system (Visby, Prahalad 2020).

The Greater Derwent Catchment consists of 5 catchments: the Upper Derwent, the Ouse, the Clyde, the Lower Derwent and the Jordan. The Jordan catchment drains into the Derwent Estuary. The lower part of the Jordan Catchment, is located in the Brighton Municipality

The Derwent Catchment



Figure 2 Map of the Derwent Catchment. Below New Norfolk the Derwent River becomes an estuary and is influenced by tides and salt water.

A snapshot of our natural assets

Our natural assets underpin our community, economy and lifestyle



17,115
HECTARES
TOTAL LAND AREA



200

KNOWN ABORIGINAL SITES
Including shell middens, stone quarries
and artefact scatters*1



412 HECTARES WETLANDS²

332.5 KILOMETERS WATERWAYS³



42%

NATIVE VEGETATION COVER⁴



41 DIFFERENT VEGETATION COMMUNITIES

6 state listed threatened plant communities
2 federally listed threatened plant communities



10% OF BRIGHTON IS RESERVED

1688 Ha Public and private reserves ⁶ **855** Ha Protected Land Areas ¹⁵



40.3%

LAND IS USED FOR AGRICULTURE¹³



1572

DIFFERENT FUNGI, FLORA AND FAUNA SPECIES

456 Animals

1027 Plants

83 Fungi

have been recorded in Brighton. More still to be discovered.⁷



79

FUNGI, FLORA AND FAUNA SPECIES OF CONSERVATION SIGNIFICANCE

17 Animals

57 Plants

5 Fungi⁷

*These sites reflect the extent of heritage survey and investigation work that has been carried out within the municipality and do not present a complete and exhaustive picture of heritage sites or Aboriginal land use in the past

A snapshot of our community



18,995

POPULATION PREDICTED TO REACH 22,714 BY 20428

Brighton is expected to be the fastest growing LGA in Tasmania with an average growth rate of 1.18% per year⁸





IDENTIFY AS ABORIGINAL OR TORRES STRAIT ISLANDER

The median age of Aboriginal and/or Torres Strait Islander people is 21 years.



HOW OLD ARE WE

23% are aged 0-14

20 % are aged 15-29

20 % are aged 30-44

23 % are aged 45-64

14% are aged 65+

The median age is 35 years ¹²



HIGHEST LEVEL OF **EDUCATION**

6% have a university qualification

6% diploma or advanced diploma

24% certificate III or IV

29% completed year 12¹⁵



HOW DO WE LIVE?

39% are couples with children

33% couples without children

26% single parents

22% people live alone

3% live in group homes¹²



HOMES

25 % people own their home

40 % have a mortgage

33 % are renting¹²



A snapshot of our economy



\$540 MILLION[®]

GROSS REGIONAL PRODUCT 14



CONSTRUCTION
IS THE LARGEST INDUSTRY¹⁴



654

LOCAL BUSINESSES IN 2021¹⁷

173 Construction

81 Transport, postal and warehousing

45 Agriculture, fishing and forestry¹⁵



TOURISM & HOSPITALITY

In 2019/20, the total tourism and hospitality sales in Brighton Council area was \$11.6m, the total value added was \$4.6 million.



75%
TRAVEL TO WORK BY CAR¹⁸



3,757 LOCAL JOBS¹⁴



JOBS IN 2016

60% work full-time

38% work part-time²⁰

8% unemployed and looking for work

6% away from work

In the 2022 March Quarter unemployment was $8.3\%^{11}$



% OF PEOPLE EMPLOYED BY INDUSTRY 2020/21²¹

17 Construction

13 Transport, Postal and warehousing

11 Retail trade



BUSINESS PRODUCTIVITY¹⁶

In Brighton from 2015/16 to 2021/22 the following industries had the GREATEST INCREASE IN VALUE ADDED.

Value added indicates how productive the industry is at increasing the value of its inputs.

Construction increased by +\$31m from \$60m to \$91m

Wholesale trade increased by +\$13m from \$12m to \$25m

Retail trade increased by +\$8m from \$14.8m to \$22m

Agriculture increased by +\$7m from \$8m to \$15m

Climate

Climate has a big influence on our natural resources and how we manage them.

Brighton has a maritime climate with relatively mild temperatures. Although, like most parts of Tasmania there are microclimates in different areas. The average daily temperature is around 21°C in January and 11°C in July (ACECRC).

Since the 1950s long-term average temperatures have risen by up 0.1°C each decade and are predicted to increase by somewhere between 1.3°C to 3.3°C by the end of the century (ACECRC). Along with rising temperatures, there will be a change in the frequency, intensity and duration of hot and cold extremes. Summer days with temperatures greater than 25°C are expected to double, with a 3-4°C increase in temperatures on very hot days in some locations. Warm weather spells are also likely to last longer, increasing from 4 days to up to 12 days. There will also be fewer frost risk days (ACECRC).

The Brighton region is relatively dry. It receives around 500 mm of rainfall a year with a monthly average of 30-50 mm. There is no distinct seasonal rain cycle which can be a real challenge for farmers.

Since the mid-1970s, there has been a decline in average rainfall and a lack of very wet years. A slight increase in annual rainfall due to climate change is predicted for Brighton (ACECRC).

With climate change it is forecast there will also be an increase in extreme weather events that can result in flooding, inundation and bushfires. Sustainable NRM can help build climate change resilience.

Increases in the frequency and intensity of fire and flood events associated with climate change will increase the risk of erosion and land degradation, as well as facilitating the spread of weeds.

Effects of climate change

Climate change is already influencing the Tasmania landscape as witnessed by the increase in fires and the 2016 floods.

With the shift in climate, the southward movement of weeds, insect pests, and diseases is likely to increase the risk of new species entering into Tasmania.

According to threat assessments conducted during the development of the Derwent Catchment's Biosecurity Action Plan, changes in climate will also increase the impact of biosecurity risks in the Derwent Catchment including increasing risks of the establishment of fruit flies, fall armyworms, and bluetongue disease, the establishment of which is currently limited by the climatic conditions (Derwent Catchment Project, 2021).

Increased temperatures, fire events and associated changes in fire regimes will benefit some vegetation types and disadvantage others. The disturbance caused by fires also increases the risk of weed establishment and spread.

Rainfall is becoming less frequent but more intensive, leading to flood events that cause erosion and land degradation, as well as facilitating the spread of invasive seed and plant fragments into natural and productive areas. According to Reymenyi et al in Brighton Council's Catchment Management Plan (2020), "Climate change data from the University of Tasmania suggests a 16.1% increase in significant storm in average climatic subregions of the Brighton municipality".

With the increased risks associated with changes in climate, it is more important than ever that we understand the condition of our natural resources and work together to manage our natural systems to improve sustainability and build climate resilience. Addressing climate change involves maintaining and/or restoring ecosystems to ensure their long-term sustainability.



Our natural resources

In this section we describe our natural resources, grouping them into themes for undertaking action - cultural landscapes, water, land, biodiversity, and people. Natural resource management is however, integrated in its approach. It works across natural asset types, linking actions to how people use the landscape and resources. We have described each theme and provided goals (what we are trying to achieve), management actions (how we will achieve the goals) and targets to help us measure our progress and evaluate outcomes.

Some actions will, by their very nature go across the natural resource themes. These have been allocated to the theme we think is most strongly relevant.

Cultural Landscapes

Within the Brighton municipality there are over 200 known Aboriginal heritage sites, including shell middens, stone quarries, and artefact scatters. These sites reflect the extent of survey and investigation work that has been carried out to date and do not present a complete and exhaustive picture of the heritage site or Aboriginal Land use in the past (Aboriginal Heritage Tasmania 2022).

Known sites are concentrated around the Jordan River, Derwent Estuary and smaller waterways.

Kutalayna (Say ku tah lie nah) is the Aboriginal name of the Jordan River. Kutalayna runs through the territory of the Mumirimina (Say Mu mee ree han) people, one of the ten bands making up the Oyster Bay tribe (Tasmanian Aboriginal Centre 2012).

Numerous shelters and deserted fires were seen by both Bass (1798) and Peron (1802) in the Jordan River area, and both had friendly encounters with palawa people. The scattered archaeological sites of different sizes throughout the valley show the complex ways the land was used: seasonal hunting campsites along the river, places for stone collecting and working, swampy areas where reeds were collected and used. The large site at the contemporary levee was a major focus of occupation and activity with tool manufacture and day-to-day living as well as a hub for social and trading contacts where people brought stone in from other areas. Hundreds of people used this place. The Jordan Valley was a favoured hunting ground. (Officer 1980; Ling Roth 1899: 168; R Paton email 8 January 2010 cited in Tasmanian Aboriginal Centre 2012].

The richness of Brighton's natural resources no doubt supported the local Aboriginal communities in the area. In turn traditional land management practices have influenced and shaped the Brighton landscape we see today.

There is an opportunity to work with the local Aboriginal community to raise awareness of Brighton's rich Aboriginal culture, with activities and initiatives that activate Brighton's places and spaces, complement cultural landscapes and promote natural values. Building community connections with the environment that help create a sense of identity and place.

Managing our cultural landscapes

1. CULTURAL LANDSCAPES		
Goal	Action	Target
1.1 Understand and maintain Brighton's cultural landscape	1.1.1 Work with the Aboriginal community and kutalayna Collective to implement the NRM strategy	1.1.1.1 Aboriginal community members are participating in delivery of the NRM strategy by 2024
	1.1.2 Improve understanding of the cultural landscape in Brighton	1.1.2.1 Priorities for local Aboriginal community are documented and incorporated in existing plans and strategies
	1.1.3 Incorporate Aboriginal names for significant places/ areas as part of Brighton Council's draft Reconciliation Action Plan	1.1.3.1 Aboriginal names in place at a minimum of two locations by 2025
	1.1.4 Promote Aboriginal history through cultural activities, storytelling and interpretive signage as appropriate	1.1.4.1 Cultural activities incorporated into two (2) community NRM events
	1.1.5 Promote Aboriginal participation in land management	1.1.5.1 At least one (1) Aboriginal identified trainee position on land management teams by 2025
	1.1.6 Advocate for an Aboriginal Ranger program	1.1.6.1 Potential funding sources have been identified and the community have been supported to access funding
	1.1.7 Investigate training and pathways for Aboriginal participation in land management and conservation with potential to work in with the Tasmanian Aboriginal Centre's Land Management Program	1.1.7.1 Discussions with employment agencies and training providers - two (2) Aboriginal people have gained work experience with the DCP crew or similar organisation by 2024

1. CULTURAL LANDSCAPES (Continued)		
Goal	Action	Target
	1.1.8 Facilitate Aboriginal Cultural and Heritage Awareness training for council staff and community volunteers	1.1.8.1 At least 80% of relevant council and DCP staff have undertaken training by 2025
	1.1.9 Seek funding to undertake Aboriginal Heritage assessments in priority areas such as the Derwent Foreshore and Jordan River. Initially undertake assessments in areas identified in the foreshore management plan and prior to undertaking any on-ground works that would require surface disturbance	1.1.9.1 Aboriginal Heritage assessments completed for priority areas identified in the foreshore management plan by 2026
	1.1.10 Investigate the concept of a sensitivity zoning system for Aboriginal Heritage to provide a practical guide the management of Aboriginal Heritage – capturing know sites, unknown and likely, and unknown and possible, as opposed to presence and absence.	1.1.10.1 Discussions with Aboriginal Heritage Tasmania, Aboriginal Heritage Officer/s, Archaeologist/s initiated by end of 2024
	1.1.11 Work with TAC Land Management Program to undertake cultural burning programs to manage natural values and the cultural landscape	1.1.11.1 Support the development of a cultural burning plan for the Municipality – undertake at least two (2) cultural burns by 2025
	1.1.12 Work with TAC Land Management Program to build local Aboriginal capacity to participate in cultural fire management programs to manage natural values	1.1.12.1 Support the involvement of at least five (5) people in cultural burning practices



Water

Water is fundamental to all life. We drink it, we wash with it. It keeps our communities and ecosystems healthy and supports our towns and our economy. It is a critical natural resource.

The water cycle is key to a healthy environment and economy, which rely on both surface and groundwater. When rain falls it soaks the land. The water that flows across the surface as surface water collects in wetlands, dams, streams and rivers. Water that seeps down into the soil can be stored in the soil and rock crevices as groundwater.

Healthy soil and vegetation can help capture water. The plants take up water and then transpire, giving off moisture. This combines with moisture evaporating from the ground, rivers, streams, and dams. The tiny droplets condense and form clouds. The clouds release rain, and the water cycle starts again.

In low rainfall areas such as Brighton, additional water is needed for agriculture – to water livestock and to grow grapes and fruit. Surface water is collected in dams and groundwater is extracted through bores. Increasing demand and a trend towards a drier climate can lead to additional pressure on some groundwater resources.

Water quality will be affected if too much water is taken out of the water system. It is also affected by run-off from urban, industrial and agricultural activities. Weed infestations can also influence water quality.

Rehabilitating riparian areas, maintaining ground cover, and planting trees and shelterbelts can help retain moisture and improve water quality.

For healthy ecosystems and a sustainable farming industry, it is important to monitor and manage our water systems to ensure critical flows and good water quality.

The Derwent River is the dominant water body in Brighton. At this point, the river is influenced by freshwater and sediments from upstream, and tidal influxes and saltwater from downstream. The mixing of these waters in this estuarine environment creates water that is rich in nutrients. The sheltered waters of the Derwent Estuary support unique habitat and species specifically adapted to life in this environment. They support important native vegetation remnants, including wetlands (Visby & Prahalad 2020). Wetlands act as a filter system and are important for maintaining water quality and providing habitat.

The Jordan River, kutalayna, is the largest freshwater feature in Brighton and forms part of the northern boundary of the Local Government Area. It emerges from Lake Tiberias 15 km south of Oatlands and flows through the driest region in Tasmania before draining into the Derwent near Bridgewater. Foley et al. (2003) describe few sections of the river as having native riparian vegetation, some sections of the river as cleared and others as infested by weeds such as willows. Willows trap sediment and debris, deplete oxygen levels in the water, disrupt water flows, causing bank erosion and flooding.

For over 10 years Brighton Council works crews have been undertaking weeding and replanting in some areas of the river near walking tracks. A number of residents have expressed an interest in working to remove weeds and rehabilitate an area of the river. An anecdotal account refers to regular swimming in one section of the river. A river health goal is to make our rivers swimmable.

A number of rivulets flow into the Jordan before it reaches the Derwent. There are also several creeks and rivulets flowing directly into the Derwent such as Dromedary, Dean and Millvale Creeks in the northwest and Gage Brook, Cove, Bobs and Clarries Creek in the southeast.

Some properties store and use water from dams located along or near these watercourses. Other properties utilise groundwater boreholes. Several properties in Tea Tree are part of larger irrigation schemes. The South East 3 Irrigation District includes some properties on Tea Tree Road. The South East 2 Irrigation District includes some properties on the Middle Tea Tree Road.

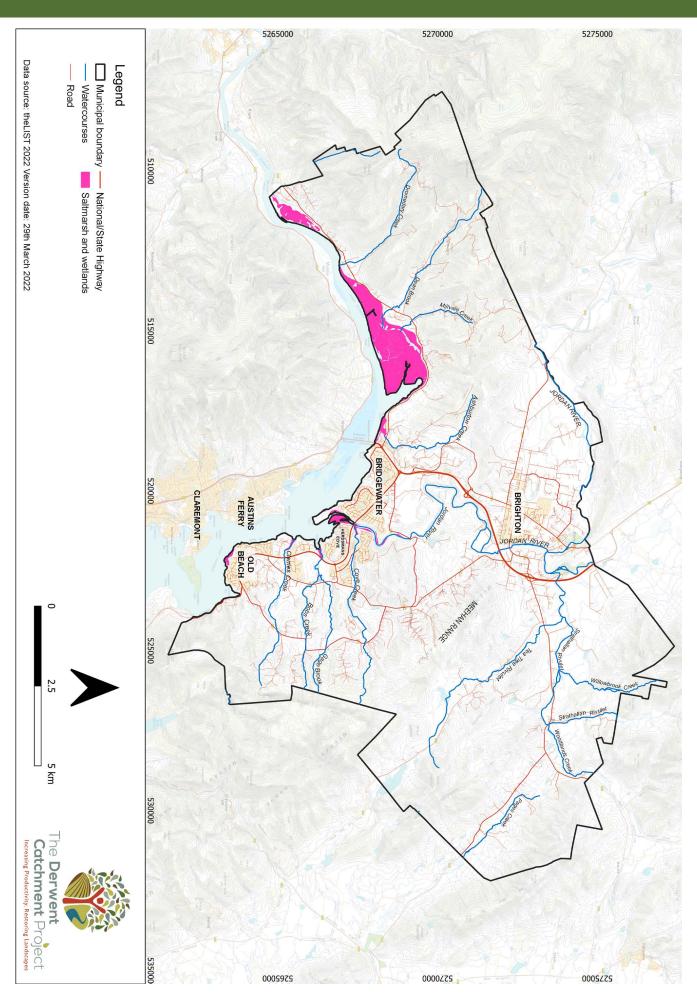


Photo Old Beach foreshore showing saltmarshes and Derwent River. The housing development in the picture has used watersensitive urban design to create an artificial wetland. Photo: Samuel Shelley

Figure 3 shows the main waterways and wetland areas of Brighton. The wetland areas highlighted in pink, are listed as threatened vegetation communities. Figure 6 shows the wetland areas that are reserved.

As part of its Bay Watch program the Derwent Estuary Program currently monitors water quality at Old Beach Jetty. During the 2010-2011 Stormwater and Rivulet Monitoring project water quality was also tested at Cove Creek (2 sites) Green Point WWTP and Compton Fields. The Derwent Estuary Program DEP also currently monitors and reports on nearby Ambient Water Quality (estuary) and seagrass conditions in the Jordan River and Dromedary marshes. It is important to understand the condition of natural resources in order to ensuring they are managed sustainably.

With the increased inundation risks associated with climate change, the maintenance of refuge areas to allow for the landward migration of saltmarshes and wetland communities will help these communities continue to perform critical ecosystem services. These services include improving water quality, supporting biodiversity, production of organic material that increases coastal food production, and sequestering carbon (Visby, Prahalad, 2020).



Threats to sustainable water resources:

- **Runoff** pollutants and suspended matter entering the waterways can reduce water quality. Retaining vegetation cover can minimize run-off. Management and restoration of wetlands and saltmarshes which act as filtration systems are also key to improving water quality. Management of stormwater, installation of gross pollutant traps and litter baskets and use of water sensitive urban design can also help reduce impacts on water quality. Impacts can also be reduced by implementing erosion and sediment controls for developments, and minimizing disturbance in areas with dispersive soils.
- **Erosion** Removal of vegetation near foreshores and watercourses can result in erosion and increase risks of flood and inundation. It is important to retain riparian and wetland vegetation to stabilise rivers, streams and estuarine environments.
- Over extraction Balancing the needs of the environment and water users is critical. To sustain healthy ecosystems in Brighton's waterways, environmental flows need to be maintained, particularly in times of low water flow. Reduced flows lead to reduced water quality as pollutants become more concentrated and wetland and riparian functionality is impeded. Water flows and extraction are managed by State Government and beyond the scope of this strategy other than to advocate for sustainable use.
- Weeds Willows can disrupt flows and reduce the oxygen levels available for other plants and animals. Other weeds displace native vegetation, reducing the effectiveness of ecosystem function and resilience.

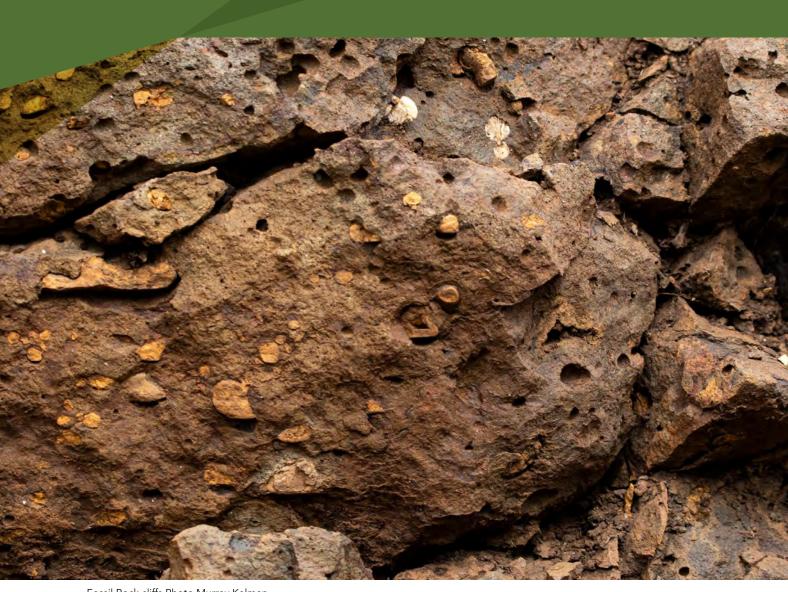




Managing our water

2. WATER		
Goal	Action	Target
2.1 Improve or maintain the condition of freshwater, estuarine and coastal ecosystems	2.1.1 Advocate for a reliable and equitable water supply for all - drinking water, irrigation, recreation and environmental flows	2.1.1.1 A written advocacy position piece has been prepared and is submitted to relevant government initiatives
	2.1.2 Advocate for environmental flows that sustain healthy ecosystems in all waterways	2.1.2.1 Maintain partnership with DEP.
	2.1.3 Identify, assess and prioritise waterways	2.1.3.1 Prioritisation plan within 2 years
	2.1.4 Maintain and form partnerships with relevant bodies, including the Derwent Estuary Program	2.1.4.1 Existing partnership agreements that support the implementation of the NRM Strategy are reviewed and renewed as required
	Estuary Program	2.1.4.2 New partnership agreements in place to support the NRM strategy by end of 2024
	2.1.5 Develop a Jordan River Management Plan	2.1.5.1 Develop a scope for a Jordan River Plan including a values and opportunity report by 2024
		2.1.5.2 Develop a plan by 2025
	2.1.6 Monitor and maintain water quality and aquatic health.	2.1.6.1 Monitoring program in place 2024 (developed as a collaborative initiative with NRE and DEP)
		2.1.6.2 Monitoring program is implemented
		2.1.6.3 Long-term grade for Recreational Water Quality at Old Beach Jetty remains 'Good'.
		2.1.6.4 Water quality is tested annually at Cove Creek (2 sites) Green Point WWTP and Compton Fields. Sites show positive improvement.
	2.1.7 Encourage practices that reduce erosion and pollution of watercourses	2.1.7.1 Active participation in the DEP Stormwater Taskforce
		2.1.7.2 Erosion and sediment control compliance is maintained
		2.1.7.3 Outfall assessment to prioritise litter reduction from stormwater

2. WATER (Continued)		
Goal	Action	Target
	2.1.8 Undertake condition assessments of riparian and wetland habitats within Brighton	2.1.8.1 Baseline data is collected and collated
	2.1.9 Manage the spread of riparian and wetland weeds by implementing strategic cooperative weed removal	2.1.9.1 Brighton weed management program in wetland and foreshore areas is implemented
		2.1.9.2 Priority weeds managed at Green Point and Gagebrook as per Saltmarsh report
		2.1.9.3 Ongoing support for a weed management officer is maintained
		2.1.9.4 Ongoing participation in the estuary- wide weed collaboration
		2.1.9.5 Annual training of works staff and contractors in weed and disease hygiene is undertaken
	2.1.10 Facilitate community participation in work bees to tackle priority weeds along watercourses and wetland areas	2.1.10.1 Community action supports priority weed program implementation
		2.1.10.2 Encourage and support community groups and non-government organisations to participate in weed management
	2.1.11 Remove rubbish from riparian and wetland areas	2.1.11.1 60% reduction in rubbish observed at foreshore Clean up Australia Day activities (measured against the amount collected as part of the clean-up)
		2.1.11.2 Four (4) community clean-ups a year
		2.1.11.3 As per recommendations in the Brighton Stormwater Management plan 2020 litter traps on remaining Jordan River outfalls are installed and a WSUD treatment train option for 85 Andrew St investigated by 2027
		2.1.11.4 Two (2) demountable littler traps installed each year
		2.1.11.5 Existing and new litter traps are maintained regularly
	2.1.12 Identify and prioritise riparian and wetland areas for restoration	2.1.12.1 Foreshore Management Plan identifies priority sites for restoration
		2.1.12.2 Jordan River Management Plan identifies priority sites
	2.1.13 Restore and improve priority riparian and wetland areas.	2.1.13.1 Local actions from Derwent Estuary Saltmarsh Report are implemented
aleas.	2.1.13.2 Restoration works at priority areas as identified in the foreshore management plan are initiated in the first year	
	2.1.13.3 Funding is secured to implement the Cheswick Crescent Creek Water Sensitive Urban Design plan 2025	
	D.'.	hton Natural Posourco Management (NPM) Strategy 25



Fossil Rock cliffs Photo Murray Kelman

Land

The land formations and topography are a result of the underlying geology of an area. Brighton is made up of rounded steep-sided hills usually composed of dolerite above broad open valleys of relatively soft sediments. The slow erosion of these rock types over time results in the formation of different soil types.

Soils vary in chemical and physical properties. In Brighton soils include brown, black and imperfectly drained soils on dolerite; soils on sandstone, and some undifferentiated alluvial soils. There are also small pockets of black soils on basalt, and imperfectly drained soils on mudstone. Some soils in Brighton are dispersive posing an increased risk of tunnel erosion. Minimising disturbance and maintaining a vegetation cover can reduce the risk of erosion in areas with dispersive subsoils (Hardie 2009).

Our soils host important soil-based bacteria and fungi, store carbon in the form of organic matter and are critical for the health of natural ecosystems and agricultural and horticultural industries.

Soil based lifeforms such as fungi play a key role in supporting plant functions and soil health (Mohammed et al 2017). Fungi help break down logs, leaves and other organic matter making these nutrients available for other animals and plants to use. Other fungi have close symbiotic relationships with plants, allowing both the host plant and the fungus to benefit by exchanging nutrients. Plants such as our endangered native orchids rely on Mycorrhizal fungus for germination and survival.

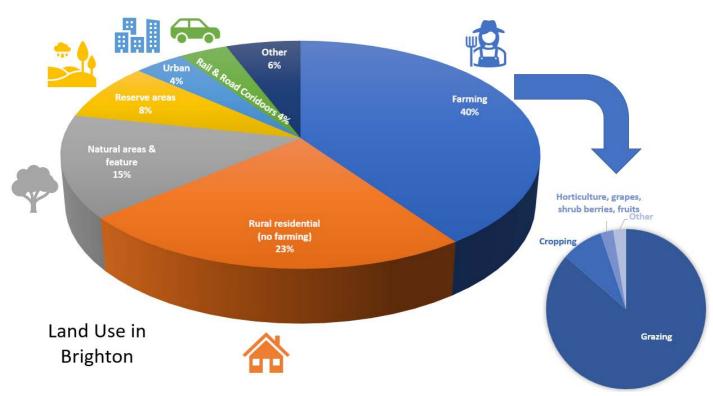


Figure 4 shows the different land uses as a percentage of the total Brighton Council area.(Source: The LIST land Use 2019)

While some characteristics of soil can be changed by good management it is important that these practices are sustainable and do not contribute to the decline of the soil or land.

Agriculture is the predominant land use in Brighton making up about 40% of use. However, the highly variable nature of the soil and diversity of microclimates in the region, play a big role in what will easily grow in the Brighton LGA.

Land capability is an internationally accepted method of ranking the ability of land to support a range of broadacre agricultural activities on a sustainable basis. In Tasmania 1 is the best and 7 the worst. Most land in Brighton is ranked between 4 and 6. Areas ranked 4 are suitable for some cropping, while rough country grazing is the most suitable option for areas ranked 6, rough country grazing is the most suitable option.

Grazing makes up over 85% of agricultural use in the Brighton area.

A pasture versatility index indicating the land's suitability to support more pasture species than other areas rated Brighton as moderate to moderate-low.

Cropping and Horticulture makes up about 11% of land use (cropping 8.5% and horticulture - including grapes and shrub berries and fruits 2.6 %).

A different versatility index used to identify areas that are better suited to more agricultural and horticultural enterprises than other areas, rated Brighton as moderate to very low.

Crops such as sparkling wine grapes, table wine grapes and lucerne are the most suitable for the area. Even so, most crops will require some form of soil management. Other crops such as cherries may also require frost/heat management.

80% of Brighton's cropping and horticultural enterprises use irrigation. Irrigation is also used for a small percentage of modified grazing pastures. Water security was raised as an issue for growers.

While there are opportunities for more intensive agriculture with more valuable crops, soil and water availability are limiting factors. Research and advice are needed to identify the most suitable agricultural enterprises that will be sustainable in the long term.



Pivot irrigation is used by farmers in Brighton to supplement rainfall. Photo: Samuel Shelley

Brighton's Socio-Economic Profile and Opportunity Assessment 2019, proposes the intensification of primary resource production and value-adding supply chains as an opportunity for the municipality. This assessment highlights the need to ensure appropriately zoned land is available to enable the intensification of agricultural activities. However, while the Transport hub offers growers easier access to market, as mentioned above intensification would be dependent on water supply security, soil improvement and long-term soil management.

The economic snapshot on P 12 shows the important role that Agriculture plays in Brighton's economy. Whilst it is not a big employer it supports a large number of businesses and has a positive value added contribution to the economy.

In 2019, rural residential areas without agriculture made up the second-largest land use in Brighton (23%). The expansion of rural residential and urban areas adjacent to agricultural areas creates challenges for managing the spread of weeds, pests and diseases. Domestic pets such as dogs that stray from residential properties also have the potential to impact on farming practices.

It is important for different sectors of the community to work together to manage threats to agriculture and the environment.

> Changes in climate will promote the southward movement of weeds, pests and diseases into Tasmania and also increase the impact of biosecurity risks that can affect primary production and natural asset condition (Derwent Catchment Project 2021). Increasing awareness of weeds, pests and diseases can help to identify and manage new incursions early.

Threats to sustainable land use

- Water water supply and security is essential - encourage practices to conserve water useretain ground cover and plant shelterbelts to provide shade and reduce evaporation.
- Weeds, pests and diseases good hygiene practices are critical to reduce the spread of threats already in the Brighton area such as Chilean needle grass, and to prevent new threats entering the catchment. Grasses such as serrated tussock and Chilean needlegrass have huge impacts on livestock productivity. Raising community awareness of different weeds, pest and diseases is important for prevention and management. The movement of soil, feed and livestock needs to be carefully considered and many smaller landowners and hobby farmers may not be aware of these risks. For instance, purchase of cheap feed that may contain weed seeds can easily introduce and/ or spread seeds through the municipality. Machinery moving between farms and areas of construction, and road and drainage works needs to be washed down before and after changing locations.
- **Encroachment** land planning residents living in urban developments close to farming areas may not appreciate the importance of controlling domestic animals, or the long hours and noise associated with farming activities, there is also a risk of spray drift if adequate buffers are not put in place. This can place a strain on neighbour relationships.
- Climate change temperatures, rainfall and extreme weather events that cause wildfires and flooding will impact agriculture and horticulture.
- **Erosion** flood and wind erosion can result in loss of soil and damage to natural areas and built infrastructure. Vegetation removal and soil disturbance can increase the risk of erosion, particularly in areas with dispersive soils.

Brighton Weed Management Strategy

Recognising the serious threat weeds pose to Brighton's natural resources, Brighton Council has been working with the Derwent Catchment Project to develop a Weed Management Strategy for Brighton.

The strategy provides a guiding framework for public land managers to work together to manage weeds and promote weed awareness across Brighton. It will guide priority weed management and investment into the region and is designed as a working document that can be adapted and updated as new information becomes available.

This weed strategy considers climate change as a management issue as the increasing intensity of events such as fire and floods are creating reactive weed management issues. These events and associated management issues can absorb resources, funding and time that is unanticipated.

This plan also supports the implementation of individual Statutory Weed Management Plans and relies on the Southern Tasmanian Weed Management Strategy for the broader direction. It provides a strategy for managing weed threats on-ground by identifying priority weeds and the regionally specific causes of weed spread.

Five eradication zones are proposed

- Estuary
- Dromedary
- Industrial hub
- Foreshore and walking trails
- Agriculture and horticulture

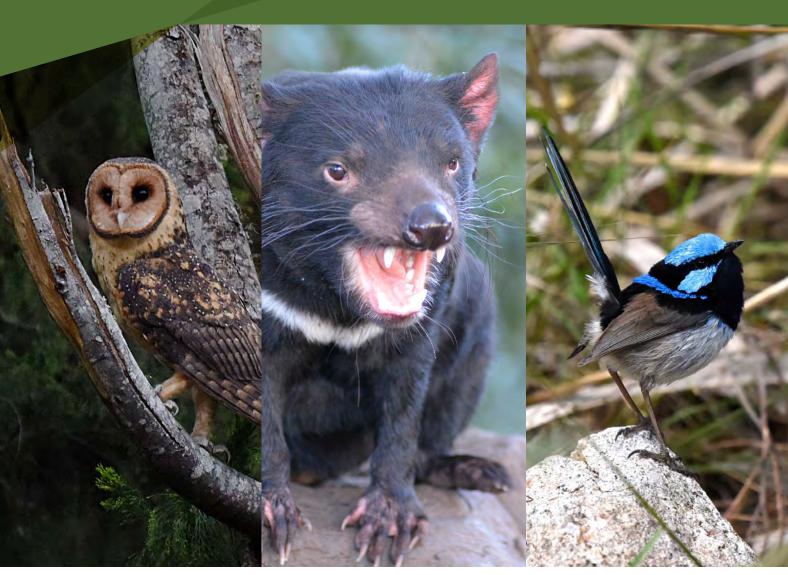
A copy of the strategy is available on council's website:

Strategies & Plans - Brighton Council

Figure 5 – Brighton LGA showing land use in 2019

Managing our land

3. LAND		
Goal	Action	Target
3.1 Improve agricultural land condition and management outcomes to facilitate longterm sustainability	3.1.1 Secure funding for onground NRM and sustainable agriculture activities	3.1.1.1 Additional funding is secured and agribest practice projects are underway
	3.1.2 Understand level of awareness amongst private landholders and farmers of sustainable land management practices	3.1.2.1 Baseline understanding of awareness established
		3.1.2.2 20 % Increase in awareness of sustainable land practices is achieved by 2025
	3.1.3 Encourage land uses and practices that reduce soil erosion	3.1.3.1 Two (2) sustainable land use workshops to different target audiences -small farms and large farm enterprises
	3.1.4 Increase awareness of weed, pests and diseases	3.1.4.1 10% increase in area of weeds controlled across land tenure
	3.1.5 Review the Draft Derwent Catchment Biosecurity Action Plan to incorporate Brighton	3.1.5.1 Brighton is included in the Derwent Catchment Biosecurity Action Plan and Network
	3.1.6 Implement Brighton Weed Management Plan	3.1.6.1 80% implementation of weed management plan actions for each year
	3.1.7 Support involvement in priority weed control programs such as the Serrated tussock and Chilean needlegrass control programs	3.1.7.1 Priority weed control programs implement annual works in the Brighton Municipality
	3.1.8 Build understanding of appropriate land use for soil types and local conditions	3.1.8.1 Information is made more accessible to producers and land managers
	3.1.9 Continue to advocate for adequate separation between productive areas, residential development, industry and environmental uses to prevent land use conflict.	3.1.9.1 Council continues to consider land use conflict in its strategic planning and development control
	3.1.10 Encourage activities at quarry and extraction sites that	3.1.10.1 Audit of local quarries for weed risk is undertaken
use good hygiene practices	3.1.10.2 Good hygiene guidelines distributed to contractors	



Photos © Eric Woehler

Biodiversity

Biodiversity is important for our health and wellbeing and for climate resilience. Healthy vegetation and plant communities provide a buffer from erosion and inundation. Morton & Hill 2014 described some of the important values biodiversity provides.

- For our economy biodiversity provides raw material for food and fibre production. The livelihoods of farmers, fishers and timber workers are dependent on it.
- Supporting ecological life biodiversity provides what we call ecosystem services which include supplying oxygen, regulating climate, cleaning air and water, pollinating plants, controlling pests and diseases, processing nutrients, and treating wastewater.
- For recreation many of our favourite recreational activities such as hiking, fishing, birdwatching and camping rely on our unique biodiversity. Tourists come to Tasmania to experience the wide range of environments that our rich biodiversity offers.
- Cultural significance Biodiversity is strongly linked to our Australian culture. For some it contributes to our identity, for others an appreciation of its beauty is inspiring. For many it provides a spiritual connection. Indigenous Australians have strong spiritual connections to the land, the animals and plants it supports, and to caring for country.
- For science biodiversity provides insights that improve our understanding of the natural world, its origins and how it functions.

Brighton is home to significant plants, animals and plant communities. Appendix C has a list of plant communities and threatened species found in Brighton.

Animals, plants and fungi that are threatened can be listed as rare, vulnerable, endangered, or extinct under the Tasmanian Threatened Species Protection Act (TTSP) 1995, and/or as vulnerable, endangered, critically endangered, under the Commonwealth Environment Protection and Biodiversity Conservation Act (EPBC) 1999. These species are considered to be of conservation significance.

57 species of plants found in Brighton are listed threatened under the TTSP Act. A full list of threatened species found in Brighton can be viewed in Appendix C.

17 species of threatened fauna have been recorded in Brighton including the Tasmanian wedge-tailed eagle, spotted-tailed quoll, white bellied sea eagle, swift parrot, eastern barred bandicoot, tussock skink, Tasmanian devil and the masked owl. Five types of fungi found in Brighton are considered threatened.

The endangered Australasian bittern breeds in the upper estuary and is one of 20 priority bird species listed with commitments to improve their status (Department of Agriculture, Water and the Environment).

The listed great crested grebe has been recorded around the Bridgewater bridge and the estuary is also an important site for black swans.

In Tasmania, we are fortunate to have many birds and mammals absent from the mainland because we do not currently have foxes and wild dogs.

Feral and domestic animals can have impacts on our local fauna, native plant communities, and on farm stock and crops.

Cats and dogs impact native animals. Lambs and calves are also vulnerable to attack. Cats are hunters by nature and can have huge impacts on nesting birds and small mammals. Rabbits impact on farmlands and saltmarshes.

Locals in the Old Beach area recall times when Tasmanian devils were often sighted. Impacts of devils include loss of habitat, an increase in traffic and associated road kills, and the facial tumour disease.

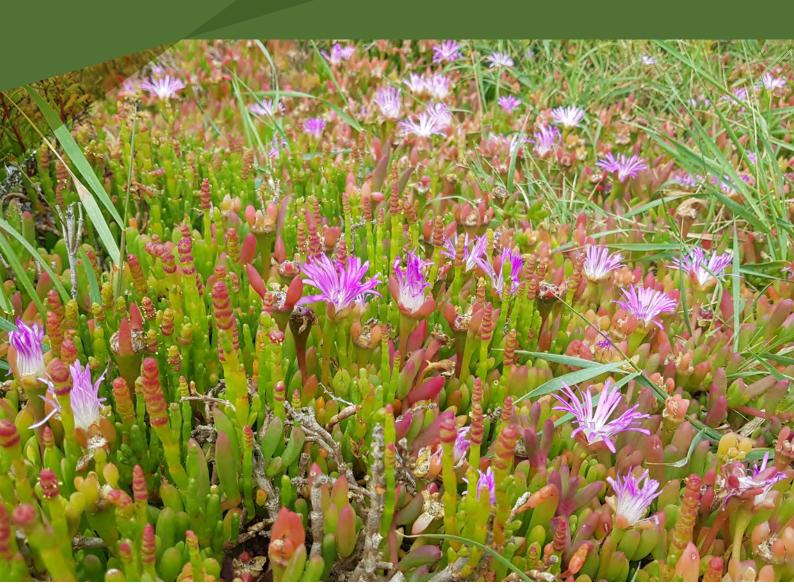
In Tasmania, native vegetation communities considered to be threatened are listed under Schedule 3A of the Nature Conservation Act 2002. The following threatened plant communities are found in Brighton. Eucalyptus amygdalina forest and woodland on sandstone, Eucalyptus globulus dry forest and woodland, Eucalyptus ovata forest and woodland, Eucalyptus risdonii forest and woodland, Eucalyptus tenuiramis forest and woodland on sediments, riparian scrub, wetlands communities including saline aquatic herbland, freshwater aquatic sedgeland and rushland, and saltmarsh and wetland.

The Lowland Themeda trianda native grassland community found in Brighton is listed under the Commonwealth EPBC Act, as "Threatened Lowland Native grasses of Tasmania". As indicated in Figure 6 showing significant plant communities in Brighton, these grassland areas contain a large number of threatened species and are biodiversity hot spots.

Grassland areas are important for ecosystem function in lowland agricultural regions. (Department of Primary Industries, Parks, Water and Environment, Resource Management and Conservation Division 2010). Threats to remaining native grassland areas are fragmentation, weed invasion and land-use change.



Photo - Close up of kangaroo grass Themeda triandra. Photo Murray Kelman



Saltmarsh community. Photo Inger Visby

Saltmarshes are critically important habitats that support biodiversity, sequester carbon and attenuate global warming, increase coastal food production, and provide feeding, resting and nursery habitat for fish. By filtering nutrients and settling sediments, saltmarshes are also important for maintaining and improving the coastal water quality that also supports recreational activities (Prahalad & Pearson, 2013 in Visby, Prahalad 2020). Baseline monitoring of Brighton saltmarsh sites at Green Point and Gagebrook and Old Beach, was undertaken by the Derwent Estuary Program in 2020, and recommendations were made for the management of saltmarshes.

Threats to the saltmarsh areas include significant weed infestations in some areas, dumping of rubbish including tyres, and off-lead dogs impacting bird values. Recommended actions include: management of weeds, removal of

rubbish, revegetation works to provide buffers around the edges of the saltmarshes and installation of interpretative signage promoting responsible behaviour. The exclusion of vehicles and rabbits from the foreshore area has resulted in saltmarsh regeneration.

Grassland and wetland communities form part of the cultural landscape reflecting thousands of years of Aboriginal use and land management in the Brighton area.

Not only is it important to maintain and improve threatened plant communities, it is also important to retain and enhance connectivity between bushland areas to provide corridors for wildlife, and buffers for plant communities. Many species cannot or will not travel across cleared open ground between suitable areas of habitat. Wildlife corridors that link areas of native vegetation are important for preserving biodiversity in the landscape. Figure 7 shows

two potential wildlife corridors. These have been based on areas where there are existing reserves and vegetation. Encouraging landholders and land mangers in these areas to retain, enhance and/or link natural areas would increase connectivity and address fragmentation.

Priority should be given to bushland areas that are still in good condition.

The Friends of Old Beach Foreshore Landcare group has undertaken clean-ups along the Old Beach foreshore. With the Derwent Catchment Project the group has removed boneseed, replacing the weed with native plants. Members of the Bridgewater/Gagebrook Social Page have historically undertaken clean-ups in that area and are likely to be supportive. Landcare Tasmania has established a Bridgewater Landcare Group who have been doing regular clean-ups, weeding and restoration works on the foreshore. Residents have also expressed interest in caring for the Jordan River - kutalayna.

Tourist attractions such as Bonorong Wildlife Sanctuary and Zoodoo Zoo, offer opportunities to promote the important natural values of the Brighton region and to encourage visitors to explore and appreciate our natural areas.

The maintenance of healthy and diverse natural areas and linkages between them will enable species to migrate as climatic conditions change. This will provide the greatest opportunity for species to survive the challenges of climate change and continue to provide essential ecosystem services.

Threats to biodiversity:

- Clearance of native vegetation
- Impacts of pests, weeds and diseases
- Degradation of water systems
- Inappropriate use of fire and slashing
- Inappropriate and illegal harvesting
- Impacts of stock
- Inappropriate vehicle access and trampling
- Impacts from feral and unmanaged domestic animals



Photo © Eric Woehler

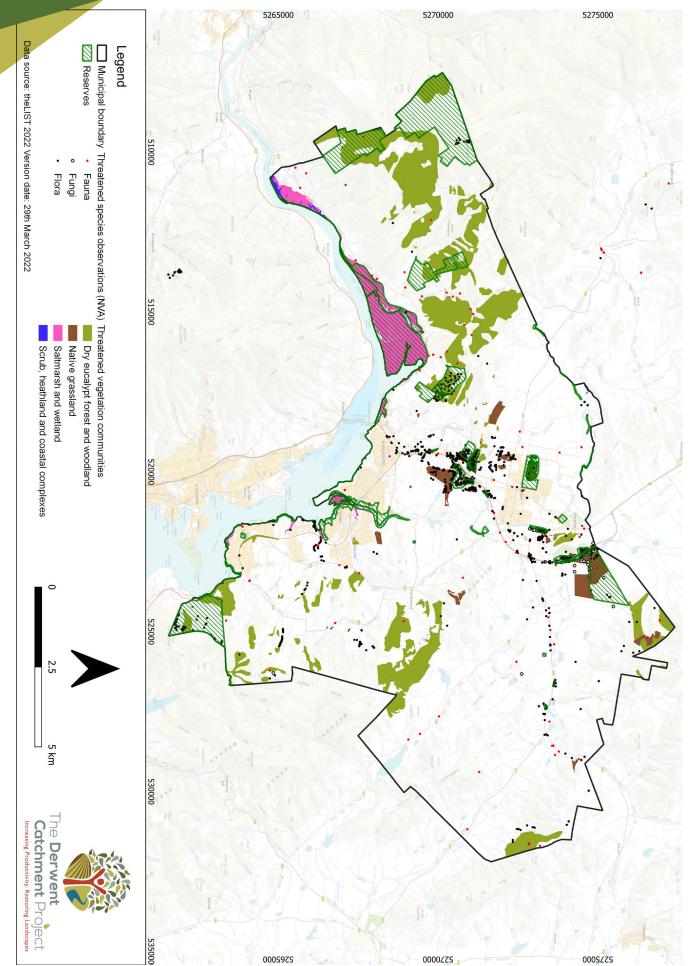
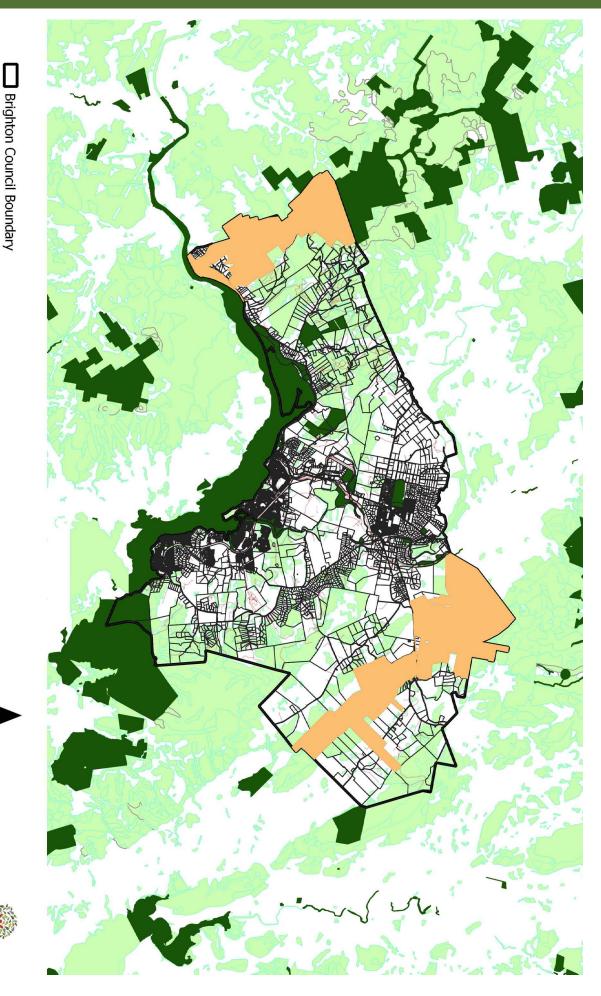


Figure 6 – Reserves and significant plant communities in Brighton - showing records of threatened plants, animals and fungi

BrightonWildlifeCorridor2 BrightonWildlifeCorridor1 Tasmanian Parks and Reserves



Managing our biodiversity

4. BIODIVERSITY			
Goal	Action	Target	
4.1 Maintain and/or improve the condition of native habitats for flora and fauna	4.1.1 Develop closer cooperation and collaboration between key land managers such as Brighton Council and Properties Services and Tasmania Parks & Wildlife	4.1.1.1 Management agreements in place to enable community participation on public land	
	4.1.2 Continue to improve our knowledge of Brighton's biodiversity	4.1.2.1 Increase in records on the Natural Values Atlas (NREs database for flora and fauna)	
		4.1.2.2 Vegetation mapping is verified and updated by 2025	
		4.1.2.3 Increase in community participation in natural values apps such as RedMap (marine species database), inaturalist etc	
	4.1.3 Reduce fire risk on	4.1.3.1 List of properties compiled by 2023	
	unoccupied/abandoned/rental blocks/crown land	4.1.3.2 Property owners notified and provided information on how to manage vegetation control weeds and improve natural values by 2024	
		4.1.3.3 Notices served for non-compliance	
		4.1.3.4 Reduction in areas of high fire risk by 2025	
	4.1.4 Control weeds on	4.1.4.1 List of properties compiled by 2023	
	unoccupied/abandoned/rental blocks	4.1.4.2 Property owners notified and provided information on how to control and dispose of weeds, what to replant by 2024	
		4.1.4.3 Notices served for non-compliance	
		4.1.4.4 Increase in control of weeds on unoccupied/abandoned/rental blocks by 2025	
	4.1.5 Support carbon and biodiversity outcomes	4.1.5.1 At least two (2) carbon and biodiversity projects initiated by 2025	
	4.1.6 Support biodiversity conservation programs	4.1.6.1 A program with the primary focus of improving biodiversity conservation is initiated	
	4.1.7 Explore options for wetland bird watching and interpretation in the estuary within the Bridgewater area	4.1.7.1 Business case developed as part of bridge development to highlight the natural values of the wetland area and opportunities to attract resident and visitors to spend time in the area watching wildlife.	

4. BIODIVERSITY (Continued)			
Goal	Action	Target	
4.1 Maintain and/or improve the condition of	4.1.8 Encourage community participation in citizen science and awareness raising activities	4.1.8.1 Two (2) citizen science events held such as a water bug blitz event	
native habitats for flora and fauna		4.1.8.1 Increase awareness of the opportunities for participation in citizen science	
4.2 Maintain and/ or improve the conservation	4.2.1 Work collaboratively to implement actions to conserve local threatened species and communities	4.2.1.1 Develop management plan(s) to include conservation actions for the full extent of threatened communities within the municipality	
status of threatened species and communities		4.2.1.2 60% of actions are implemented in the management plans by 2026	
	4.2.2 Work with the Aboriginal community and firesticks initiative to implement cultural burning activities that contribute to the management of threated communities such as the lowland native grasslands	4.2.2.1 Include threatened species/communities targeted burns in the cultural burning plan for the municipality (see Cultural section 1.1.11)	
	4.2.3 Advocate for threatened species, biodiversity and climate change resilience i.e. for iconic species such as the Australasian bittern	4.2.3.1 Increased funding and associated resources in the municipality for threatened species/communities programs 4.2.4.1 At least 2 targeted surveys for threatened species at municipal wide level by 2025 4.2.5.1 A communications plan developed to support increased awareness of the significance of the wetlands as bird sanctuary	
	4.2.4 Increase knowledge of threatened species distributions within the municipality		
	4.2.5 Promote the upper estuary as the important bird sanctuary it is		
	4.2.6 Promote responsible pet ownership	4.2.6.1 Increase in number of desexed and microchipped cats and dogs.	
		4.2.6.2 Decrease in reports of stray dogs and feral cats.	
	4.2.7 Facilitate the implementation of the Tasmanian Cat Management Plan to manage stray and feral cats	 4.2.7.1 Support dissemination of Tassie Cat information in Brighton 4.2.8.1 Produce and disseminate education and media materials around the potential impacts of dogs on sensitive areas. 	
	4.2.8 Promote the importance of dogs on leads in sensitive areas such as the foreshore saltmarshes, and dog exclusion areas as needed to protect sensitive wildlife areas		

4. BIODIVERSITY (Continued)			
Goal	Action	Target	
4.2 Maintain and/ or improve the conservation status of threatened species and communities	4.2.9 Control feral animals such as rabbits where they impact on significant vegetation such as saltmarsh communities	4.2.9.1 No increase in impacts on saltmarsh communities at key sites where monitoring for baseline data exists	
	4.2.10 Continue to exclude vehicles from sensitive foreshore areas and monitor compliance	4.2.10.1 Decrease in reports of vehicles illegally accessing foreshore areas	
		4.2.10.2 Establish a baseline assessment of illegal access and develop strategies to reduce illegal activity	
		4.2.10.3 A reduction in illegal activities is observed in response to strategies implemented	
4.3 Improve and maintain connectivity of habitat for flora and fauna species	4.3.1 Support the development of wildlife corridors	4.3.1.1 At least 3 media items are produced to communicate with the community on important areas for wildlife corridors in the Municipality	
	4.3.2 Work with landholders and land managers to retain high-value bushland areas and to maintain and/or restore connectivity between remnant vegetation communities through replanting	4.3.2.1 10 % Increase in native vegetation cover connectivity by 2027	
		4.3.2.2 Support the adoption of the land for wildife program	
	4.3.3 Extend and connect native riparian and wetland habitat through removal of weeds and	4.3.3.1 10 % improvement in the condition of riparian and wetland habitat at priority sites by 2027	
	revegetation and stabilisation	4.3.3.2 10% decrease in weed coverage on waterways by 2027	
	4.3.4 Work with landholders to promote an understanding of threatened communities and best practice management for native vegetation	4.3.4.1 One (1) annual community awareness activity promoting natural values including	
pra		4.3.4.2 One (1) activity in the Ethan Court area promoting values of Jordan River Nature Reserve and surrounding areas by 2024	
4.4 Increase the condition of high value vegetation	4.4.1 Work with private landholders and the community to build understanding around the values of healthy vegetation and biodiversity	4.4.1.1 At least three (3) media items are produced annually to communicate with the community and landholders about the values of healthy vegetation and biodiversity	
	4.4.2 Develop a baseline understanding of vegetation condition	4.4.2.1 A baseline developed for the municipality using existing and new data by 2025	





Learning how to cut and paint boneseed Photo. Phil Owen

People

People have a key role to play in the management of Brighton's natural assets.

The following mechanisms to facilitate natural resource management have been adapted from recommendations made in the Tasmanian Threatened Species Strategy

- Community participation
- Working with landowners, land managers and industry
- Consideration of social and economic factors

- Establishing an adequate knowledge base to understand our natural assets, their condition, threats and how to improve the way we manage them
- A recognition of natural values including threatened ecological communities
- An understanding of sustainable land management practices.

How you can get involved

- ✓ Get involved in the implementation of this plan – provide feedback on issues that affect you
- ✓ Adopt practices that help sustain our natural resources
- ✓ Volunteer to be part of a community group
- ✓ Work with your neighbours to improve your neighbourhood
- ✓ Find out about weeds and how you can manage them on your property and/or prevent plants escaping from your back yard
- ✓ Apply for a grant to undertake works that enhance our natural assets
- ✓ Provide a letter of support for funding applications
- ✓ Join programs such as the Land for Wildlife or Gardens for Wildlife or join a Landcare group and contribute to the conservation of local plants and animals

A communication and engagement plan and a comprehensive list of stakeholders was developed to guide community consultation and participation in development of the draft NRM strategy. It will also guide the review and finalisation of the strategy.

A list of key stakeholder groups is included below.

below.
Stakeholder group
kutalayna Collective
Aboriginal Heritage Tasmania
Tasmanian Aboriginal Centre
Brighton Council
Tasmania Parks & Wildlife Service
Property Services
Taswater
Department of State Growth
Tasrail
Tea Tree Irrigation Group
Coal River Products Association
Bridgewater Landcare
Old Beach Neighbourhood Watch/ Friends of Old Beach Foreshore
Community and landcare groups

Community and landcare groups

Community Houses

Interested individuals

Schools and Educational Institutes (UTAS)

Brighton Alive

Landcare Tasmania

Mona

24 Carrot Gardens - Botanica

Derwent Catchment Project

Derwent Estuary Program

Eco works

North Barker

Working together to manage our natural resources

	5. PEOPLE		
Goal	Action	Target	
5.1 Incorporate regional community wellbeing into agricultural and natural area management programs to improve resilience	5.1.1 Implement the actions of the NRM strategy in collaboration with other key stakeholders	5.1.1.1 Continue to resource NRM activities in Brighton	
	5.1.2 Work with key stakeholders to secure funding to implement the NRM strategy	5.1.2.1 Increase in funding available for NRM activities and supporting key stakeholders to achieve NRM objectives. This includes leveraging funds outside of Council to deliver NRM activities and exploring programs that directly link nature and wellbeing.	
	5.1.3 Utilise existing and new NRM data to develop priorities for climate adaptation	5.1.3.1 Water, land and biodiversity information informs climate adaptation actions	
	5.1.4 Integrate NRM activities across council	5.1.4.1 Ensure regular communication between NRM staff, works crews and relevant council staff	
	5.1.5 Develop a foreshore management plan with priority areas that can be implemented with the assistance of community and school groups	5.1.5.1 Foreshore plan priority actions implemented	
	5.1.6 Investigate training and pathways for participation in land management and conservation	5.1.6.1 A program in place that links employment agencies and training providers to onground NRM action	
		5.1.6.2 At least 2 people have gained work experience with the DCP/ or similar organisation by 2025	
	5.1.7 Support initiatives that create and/or support jobs in the NRM sector in Brighton	5.1.7.1 Job creation initiatives secure funding for jobs to support NRM in Brighton	
	5.1.8 Continue to connect natural areas with paths and walkways that facilitate community participation and engagement with the natural environment	5.1.8.1 Review of Brighton's Open Space Strategy reflects natural values and community connections	
	5.1.9 Work with community and stakeholders to develop interpretive and wayfinding signage to promote NRM themes such as biodiversity.	5.1.9.1 Key sites and themes identified	
	5.1.10 Work with community and stakeholders to develop a map of Brighton's tracks and trails	5.1.10.1 Draft tracks and trails map developed	

5. PEOPLE (Continued)			
Goal	Action	Target	
5.2 Facilitate increased community participation in and awareness of NRM	5.2.1 Continue to support the community engagement plan for NRM to ensure community ownership of the NRM strategy	5.2.1.1 Actions in the community engagement plan implemented	
	5.2.2 Facilitate schools to adopt a patch of foreshore (of other) area as an outdoor classroom where students can learn and care for the natural environment	5.2.2.1 Two schools have adopted a patch	
	5.2.3 Facilitate educational and awareness raising activities for schools	5.2.3.1 Two (2) activities each year	
	5.2.4 Work with key organisations such as Landcare Tasmania, NRM South, Derwent Estuary Program, Derwent Catchment Project, BirdLife Tasmania and Clean Up Australia to support community groups undertaking NRM activities	5.2.4.1 An annual collaborative event with key organisations	
	5.2.5 Facilitate community involvement in NRM (land, bush, coast and water, care) activities.	5.2.5.1 Increase in community interest and participation	
	5.1.6 Raise awareness of the link between Aboriginal Heritage and Brighton's natural resources	5.2.6.1 Activities run at kutalayna Collective's Summer and Winter Fest	
	5.2.7 Work with Bonorong Wildlife Sanctuary and Zoodoo to promote awareness of biodiversity and our native wildlife	5.2.7.1 Community aware of native wildlife and where to go to see them	
	5.2.8 Work with Mona and the 24 Carrot program to foster an interest in growing fruit and vegetables and healthy eating. Linking the importance of food production systems to lifestyles	5.2.8.1 Increased participation in programs	
	5.2.9 Work with different stakeholders groups to promote outdoor activities that connect the community with each other and the natural environment, and promote health and well being	5.2.9.1 Increase in number of different groups utilising natural areas for activities and events	

Context for delivering NRM in Brighton

The following section describes how the strategy aligns with Brighton Council's objectives, the role of the Derwent Catchment Project in Catchment and how NRM is delivered regionally and nationally.

Delivering on Brighton Council's Strategic Plan

This NRM Strategy supports Brighton's 2050 Vision statement.

- Our place is thriving: a destination for business, learning and creation.
- Our home is comfortable: safe, clean and peaceful with services and facilities for all.
- Our community is proud: we embrace who we are now, while celebrating our ancient past.
- Our council cares: progressive and consultative, it combines fair rates with great
- Our opportunities are for all: from the young to the elderly.
- Our environment is cherished: we act sustainably and mindful of climate change.
- Brighton: We love it.

The Strategy also supports many of the themes and subthemes outlined in Brighton's Vision 2050 (See Appendix B). The key focus for this strategy is Brighton's vision for "a sustainable environment" and the subthemes:

- embracing best-practice environmentally sustainable initiatives (subtheme 1)
- nurturing natural places for people and wildlife (subtheme 3)
- supporting locally grown fresh and healthy food (subtheme 5).

This NRM Strategy contributes to Brighton Council's Strategic Plan Goal 1: Strengthen our Communities Strategy S1.5 Build a resilient community and environmentally sustainable future. The Strategy also contributes to key actions outlined in Brighton's Climate Change and Resilience Strategy, Strategic Objective 3.11 Improve ecological resilience to climate change by outlining key natural assets in the Brighton municipality and outlining strategic actions

- to manage and improve biodiversity and natural values
- work collaboratively with regional landscape management agencies
- improve our understanding of flora and fauna and threatened ecological communities and species; and
- to develop collaborative weed management and biodiversity projects and activities

The Bridgewater Urban Strategy noted that during the community consultation there was a lack of connection between residents and the natural beauty of the foreshore landscape. This NRM Strategy includes strategies to foster this connection.

This document provides direction and sets strategic actions for the NRM in Brighton for the following 10 years with review and revision at 2 and 5 years as more information becomes available. It is a working document that will be refined and adapted as interest and participation in NRM in Brighton grows.

The document considers Federal and State directions and legislation as well as regional and local reports, plans and strategies, including NRM South's regional NRM strategy for southern Tasmania. It provides some long-term strategies and priority actions for working collaboratively to improve NRM in Brighton. If there is anything you don't understand in this document, please let us know - we've made it flexible and easy to update. More detailed information can be found in the appendices and supporting documents.

Council's Roles

Brighton's 2050 Vision outlines the things that Brighton Council has the power to shape and influence. These are broken down into the following roles. We have added examples of NRM activities.

Council's Role	Definition	Example activities	Example NRM activities
Provider	The services and facilities council is directly responsible for delivering to community.	Waste management, parks and open space, recreation facilities, infrastructure, transport (roads), active transport	Management of natural areas, open space and paths, tracks and trails.
Regulator	The process and rules council administers to ensure compliance to legislation, regulations and bylaws that keep the community safe and liveable	Regulation and approval, animal management, planning and zoning, building and plumbing permits and environmental health	Planning requirements around land use, natural values, bush-fire risk, weed management
Facilitator	Council encouraging or making easy action or engagement	Encouraging investment and employment in the areas, access and inclusion, community participation, climate action (including sustainable energy use and renewables) arts and culture, collaborations, relationships and partnerships.	Facilitating participation by stakeholders, community groups and individuals in understanding and caring for our natural resources. Facilitating partnerships between landholders and land managers to enable cooperation and collaboration across tenure. E.g. cross tenure weed control, restoration of natural areas
Advocate	Council promoting or recommending actions to others on behalf of the Municipality.	Political representation, affordable housing, education opportunities and outcomes, transport (roads, walking cycling) health and wellbeing services, lobbying on behalf of community on State and Federal matters	Advocate for resourcing and collaboration to further the management of natural resources. Includes weed management and other biosecurity issues, water quality and use, protection of natural values and biodiversity, land use and sustainable agriculture

Table 1 – Council's roles and influence

The Derwent Catchment Project

This document has been prepared for Brighton Council by the Derwent Catchment Project.

The Derwent Catchment Project (DCP) is a grassroots community organisation. We work with community, landholders and key stakeholders to look after our natural and farming landscapes.

Fences don't stop water or weeds!

We start conversations and help people work together to tackle issues such as weeds and erosion, looking after our native plants and animals, sustainable farming, and how we can be better prepared for climate change.

Our work focuses on weed management, conservation projects, river restoration, farming practices, and strategic planning.

We have helped with a range of projects in the Derwent Valley and Central Highlands Councils. We work with landholders, farmers, councils, government agencies and service providers to tackle issues shared by everyone.

Brighton Council engaged the Derwent Catchment Project to develop this NRM Strategy for Brighton.

NRM in Tasmania

Across Australia there are 54 regional natural resource management organisations whose role is to bring stakeholders together to work toward protecting and sustainably managing natural resources in each region. In Tasmania we have three NRM regions governed by the Tasmanian Natural Resource Management Act 2002 (NRM Act) and the Tasmanian Government's NRM Framework. Brighton falls within the southern NRM region with NRM South as our peak NRM organisation. NRM South leverage investment from both the Tasmanian and Australian Governments to implement the NRM South Strategy toward 2030. A document that assists NRM South plan, develop and deliver on-ground actions across southern Tasmania, NRM South

is the Australian Government's service provider for the southern Tasmanian NRM Management Unit and is responsible for implementing the Australian Government's Regional Land Partnerships Program and ensuring projects contribute to the following long-term outcomes.

- 1. The ecological character of Ramsar sites is maintained or improved.
- 2. The trajectory of species targeted under the Threatened Species Strategy, and other EPBC Act priority species, is improved.
- 3. The natural heritage Outstanding Universal Value of World Heritage properties is maintained or improved.
- 4. The condition of EPBC Act listed Threatened Ecological Communities is improved.
- 5. The condition of soil, biodiversity and vegetation are improved.
- 6. Agriculture systems have adapted to significant changes in climate and market demands

Brighton's NRM Strategy aligns the NRM South Strategy toward 2030 by developing targeted actions that work to conserve threatened species, biodiversity and support agricultural best practice. It operationalises the management of key assets and guides how to best work with the local community to deliver NRM outcomes.

Gaps

As this is Brighton Council's first NRM Strategy, effort has been made to collect and collate existing data from a number of sources. However, during the development of the document new information and data has continued to emerge which will help develop a deeper understanding of natural resources and their management in the Brighton area.

In order to set targets so we can measure the impacts of our management actions, there is a need to consolidate existing data, identify gaps and collect additional baseline data.

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NRM South, 2022, 2030 NRM Strategy Southern Tasmania Version 3.0

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Snapshot – data sources

The Australia Bureau of Statistics is in the process of releasing information from the 2020 Census. Where available this data has been used and the references updated.

- Aboriginal Heritage Tasmania 2021
- 2 Tasveg summed area of saltmarsh/wetland classifications
- The LIST GIS measured combined length of watercourses 3
- 4 TasVeg 4.0 calculated total area of TasVeg excluding "F" codes
- Tasveg4.0 vegetation communities & State and Federally listed threatened communities
- The LIST Tasmanian Reserve Estate, Council Reserves
- Natural Values Atlas threatened species observations
- Denny, Lisa & Nyree Pisanu (2019) Insight Nine: Regional population trends in Tasmania: Issues and options. Institute for the Study of Social Change, University of Tasmania ISC-UTAS-Insight-Nine-Regional-Population-Trends-in-Tasmania.pdf
- ABS Census community profile 2016
- 10 ABS Census 2016
- 11 https://economy.id.com.au/tasmania/unemployment?WebID=110
- 12 2021 Brighton, Census All persons QuickStats | Australian Bureau of Statistics (abs.gov.au)
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Background documents

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Abbreviations and Acronyms

ABS- Australian Bureau of Statistics

BC - Brighton City Council

DCP - Derwent Catchment Project

DEP - Derwent Estuary Program

DPIPWE - formerly Tasmanian Department of Primary Industry, Parks, Water and the Environment (now Department of Natural Resources and Environment)

EPBC -Commonwealth Environment Protection and Biodiversity Conservation Act 1999

LGA - Local Government Area

NRE- Department Natural Resources & Environment

NRM – Natural Resource Management

NVA – Natural Values Atlas

TAC - Tasmanian Aboriginal Centre

TASVEG – The Digital Vegetation Map of Tasmania

TTPS -Tasmanian Threatened Species Protection Act 1995

WSUD - Water Sensitive Urban Design

Glossary

Biodiversity - the variety and variability of life on Earth. The greater the number of different species of plants, animals and fungi, the greater the biodiversity.

Riparian - an area located on the bank of a river or stream

Rehabilitation - restoring degraded areas so that they are healthy and functioning

Maritime - coastal or seaside - influenced by being close to the sea

Groundwater - water located below the ground in underground water pockets, or reservoirs called aquifers. Groundwater is one of our most valuable resources. About 30% of all the readily available freshwater in the world is ground water.

Surface water - water that collects on the surface of the ground in a pond, stream, lake or river. Surface water usually collects from rainfall.

Dispersive soils - a dispersive soil is a structurally unstable soil- when wet, clay particles separate out and disperse in the water causing the soil structure to collapse. Under certain conditions they can be rapidly eroded and carried away by waterflow.

Appendices and supporting documents

Appendix A - Communication & Engagement Plan

Appendix B - Themes and subthemes outlined in Brighton's Vision 2050.

Appendix C - Natural Values - plant communities and threatened species found in Brighton

For more information visit our websites

Brighton Council

The Derwent Catchment Project - Derwent Catchment Project



The Derwent Catchment Project works with farmers and community Photo DCP

