



Coastal Plan

Break O'Day Council
Municipal Management Plan

October 2014



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Significant sections of this document incorporate (where referenced) the report prepared by Environmental Service and Design Pty Ltd, contracted by TCG Planning for Break O'Day Council, entitled '*Break O'Day Coastal Vegetation Management Constraints and Opportunities 2012*' (Final Version dated 29 September 2013), which forms the Vegetation Management Plan component of this Coastal Plan document.

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1 Executive Summary

This Coastal Plan contains a written, visual and mapped analysis of coastal areas within Break O'Day Council Area and identifies areas for protection and utilisation. From this analysis, an Action Plan has been devised which informs how the future use and management of the coastline should be prioritised.

The first section of this document 'Section 2: Introduction' outlines the objectives, scope and methodology of this Coastal Plan (as defined by the Project Brief) and describes how this Plan relates to and is a component of the Municipal Management Plan (MMP) being undertaken by Break O'Day Council for the future management of the Municipality.

Section 3 defines the Study Area for this Coastal Plan which is the area within 1 kilometre from the "coastline" of the Break O'Day Council Local Government Area. This plan however, takes into consideration potential significant factors outside of the 1km limit into account. The coastline has been separated into seven (7) survey areas which are manageable areas for both the Vegetation Management Plan and Coast Park Concept Plan, and therefore have been utilised and presented throughout this document. The survey areas are described as:

1. Ansons Bay: northern boundary of the Municipality to Policemans Point;
2. The Gardens: south of Policemans Point to the south of The Gardens point;
3. Binalong Bay from Big Lagoon entrance to the township of Binalong Bay and to about Grants Point;
4. St Helens: from Humbug Point Nature Recreation Area to Diana's Basin;
5. Scamander: from south of Diana's Basin to north of Hendersons Lagoon;
6. Ironhouse Point: from and including Hendersons Lagoon and Falmouth to Chain of Lagoons;
7. Douglas River: from Picaninny Point to the southern boundary of the Municipality south of Douglas River.

Section 4 outlines the consultation process of and associated outcomes for the MMP Project, for this Coastal Plan and other related studies that are relevant to the scope of this Plan. The consultation undertaken in the past few years regarding the coastline is extensive and is reflected in the commonality of the outcomes of the various studies undertaken to date.

Section 5 'Document Review' provides a summary/overview and review of the key issues and themes, outcomes and recommendations of existing local, regional and state-wide studies, strategies, documents and maps previously prepared, which are of relevance to the Coastal Plan. Appendix 1 of this document expands on the content of the numerous documents reviewed. Where considered appropriate, these documents have been incorporated in the recommendations of the Coastal Plan. The document review identified a number of common issues and themes which are consistent with the objectives and outcomes of this Coastal Plan.

Section 6 comprises the Vegetation Management Plan component of the Coastal Plan and was undertaken by ES&D. The key information provided in this Section follows from the on-ground vegetation survey work and desktop data analysis and is presented as follows:

- Reserves and Environmental Values Maps (interpreted by TCG Planning);

- Pictorial Commentary with location references provided on each the Reserves and Environmental Values Maps;
- Identification of issues for each of the Survey Areas;
- Provision of Vegetation Mapping sourced from TASVEG Version 2.0 (provided at Appendix 2);
- Identification of Significant Vegetation within the Coastal Zone (provided at Appendix 3);
- Identification of Vegetation Communities, Threatened Flora, and Environmental Weeds (provided at Appendix 4);
- Identification of Reserved Land (Appendix 5);
- Vegetation Management Issues.

Section 7 provides an inventory of major assets within the Break O'Day coastline of almost all accessible passive and active open space areas of the study area, including access and parking areas are located within Reserves, Conservation Areas, or parks owned and/or managed by Tasmania Parks and Wildlife Service, Department of Primary Industries Parks, Water and Environment, and Break O'Day Council. The assets inventory also identifies infrastructure needs and is presented in map and associated table format and photographs separated into seven survey areas of the Study Area.

Section 8 'Coastal Plan Issues Analysis and Project Outcomes' identifies the key issues and outcomes identified in this Coastal Plan relevant to the Break O'Day coastal zone, having regard to the Vegetation Management issues raised by ES&D, community consultation outcomes, field work, and following review of the various studies, plans and policies reviewed for this Plan. The broader issues relevant to the coastal zone and associated recommended management measures are identified in this section, and include: the need to protect the values of the coastline; land tenure and management issues; the need for consistent legislation; detailed assessment requirements for development proposals; amendments to existing Council Policy documents; key threats and impacts (vegetation destruction, over burning, weeds and waste); reserve and campsite management; and potential areas for redevelopment.

While Section 8 identified issues and broader management actions for the coastal zone, Section 9 'Coastal Plan: Actions for Our Coastal Future' identifies specific recommendations for each of the Survey Areas through further maps and tables. The recommended actions identify how the coastal zone should be planned and managed in the future, as informed by the site survey work, vegetation management plan, assets inventory, issues identification and the document review outcomes presented in earlier sections of this document. The Action Plan identifies:

- sensitive areas which are to be protected and managed;
- areas which have potential for greater level of use;
- areas where improved public access such be encouraged and those areas where public access should be minimised; and
- infrastructure improvements/needs for coastal reserves and parklands.

1.1 Summary Table of Recommended Actions

The following table summarises the key recommended actions for coastal management identified in this Study (referenced from Tables 9-15 within Section 8 and 9). The table includes general matters in addition to specific actions within each of the Study Area.

Table A: Coastal Study Action Plan Summary	
Coastal Management Measures - General (Ref: Table 9)	
Strategic Issue	Recommended Action (ongoing priority)
Importance of Coastal Zone	The ongoing protection, conservation, enhancement and management of the coastline is required to ensure that this important asset is enjoyed by existing and future generations.
Assessment of the Coastal Zone	"Values assessment" should be implemented into environmental resource management strategies and should assess the ecological, aesthetic and timber resource value. This value should also be assessed in terms of connectivity, type, and abundance, in addition to increasing the ecological health of the flora and fauna community that reside in habitats, and the local tourism and forestry industries.
	Recognise the importance of natural resources (vegetation, water quality) in the implementation of economic development strategies, to assist in ensuring the long term aesthetic and ecological quality of the coast which is essential to the region's economy, in particular tourism.
Land Tenure and Management	Integrated management of coastal vegetation and infrastructure, and planning and development needs to be undertaken with full cooperation of all stakeholders, principally Parks & Wildlife, but also such organisations as DIER and Ben Lomond Water. The recommended actions within this Coastal Study should be implemented through an 'integrated management' approach with the relevant agencies, led by Council, through existing and improved proactive consultation mechanisms, for example through streamlined communication channels with identified appropriate officers and stakeholders. Ongoing lobbying by Council for consistent State and Federal funding for the provision of facilitated management and associated supported legislation should also occur.
	Break O'Day Council consider the provision of some services in reserved land, including waste collection, on-site effluent disposal, and some road maintenance. State (P&WS) funds released by this arrangement could be utilised for park maintenance services (eg. weed control and walking track maintenance, to increase the amenity of the reserves).
Legislative consistency	Encourage Federal and State Governments to review legislation to ensure consistency and ensure that the provisions of Planning Schemes for Local Councils are consistent with the reviewed State and Federal Acts and policies.
Development Applications	Make the submission of a flora/fauna assessment (that takes local and regional considerations into account) mandatory for development applications on land.
Break O'Day Policy Amendments	Amendments to existing Break O'Day Policy/Planning Scheme provisions should be considered including increasing the <i>minimum lot size</i> ; ensure that <i>vegetation</i> is retained to ensure that suitable habitat is available for numerous species that require different habitat niches; and <i>fire management policy</i> .
Ongoing Management	Management measures must consider the impact on vegetation, including the negative impacts of weeds; waste disposal and vegetation destruction from various human activities.
Vegetation Management Considerations	Vegetation Management (policy preparation and development assessment) needs to address: <ul style="list-style-type: none"> ▪ Vulnerability of foreshore fringing vegetation and habitat ▪ Importance and vulnerability of coastal lagoons, river and stream estuaries ▪ Remnant natural vegetation ▪ Revegetation priorities (adjacent to narrow coastal fringe vegetation including lagoons wetlands and creeklines; and to improve coast-hinterland connectivity particularly through farmland).
Coastal Management Issues	Any works undertaken by coastal land managers such as P&WS reserves managers and local council works crews should be in accordance with <i>The Tasmanian Coastal Works Manual - A Best Practice Management Guide for Changing Coastlines</i> (Leah Page and Veronica Thorp, December 2010).
	Coastal management programs needs to address a range of identified works/issues.

Campsite Management	<p>The recommendations the <i>The North-east Tasmania Sustainable Coastal Camping Strategy</i> (2000) and <i>Bay of Fires Conservation Area and Humbug Point Nature Recreation Area Site Plan (Inspired Place, 2011)</i> should be implemented, including the following key management issues:</p> <ul style="list-style-type: none"> The expansion of camping sites; Damage to flora from firewood collection; Camper waste disposal; Proliferation of tracks; Damage to Aboriginal heritage values; Impacts on threatened species; Vehicles on beaches; Lack of pet control; Inappropriate or irresponsible campfire management; Active intervention by authorised personnel to stop antisocial activities; Limit spread of phytophthora fungus; Education and promotion; Zoning.
Shorebird Management	<p>P&WS and Council continue to undertake community engagement and management strategies (eg fencing of breeding areas) regarding shorebirds and their habitat, especially during events and peak holiday times regarding shorebirds. Ongoing (and increased) enforcement is also required to ensure success of habitat protection</p>
Coastal/Foreshore Parklands	<p>Implement the following three priority projects that are recommended for improvements to existing foreshore parklands to improve amenity for visitors and residents:</p> <ul style="list-style-type: none"> Development of the St Helens Waterfront Parklands, including activation, new playground equipment, improved access and parking, and marina/port improvements. Refer to concept plan at Appendix 7; Construction of a boardwalk/shared walking/bicycle track linking the St Helens Marina and Foreshore Park with Lions Park, with an extension to Akaroa (on the eastern side of Georges Bay). Refer to Plans at Appendix 8. Improvements to the Binalong Bay Foreshore lands as proposed by the key projects proposed by the Masterplan (refer Plan at Appendix 9).
Potential Areas for Future Development	<p>All stakeholders (including Council and State Government Agencies) to consider the following areas of land (as described further in this Plan and accompanying maps) that have degraded ecological value, and are potentially suited to development along the coast (<u>subject to detailed analysis/assessment on all issues of consideration, including environmental, social, economic impacts</u>) include:</p> <ul style="list-style-type: none"> West of Policemans Point, Ansons Bay The Gardens West of St Helens: Southern Scamander Most of the coastal land south of Falmouth east of Douglas Aspley National Park.
Specific Actions for Coastal Survey Areas (Ref: Tables 10-15 and Maps M-R)	
Survey Area	Recommended Action
Ansons Bay	<p>Deep Creek: Ongoing management of shack sites Eddystone Point: car park & amenities upgrade/installation Ansons Bay: replace fishing tables Ansons Bay: Management of shacks & shoreline Policeman's Point: Camping area improvements & management Policeman's Point: Manage impacts of sea level rise Beaches south of Policeman's Point: Investigate dune revegetation/management Intersection of South Ansons Bay Rd and Ansons Bay Rd south: Improve signage South Ansons Bay: Investigate potential for tourism development subject to impact assessment. Improve buffer to shoreline Mt William National Park: Track & weed management; Fire management</p>
The Gardens & Binalong Bay	<p>The Gardens:</p> <ul style="list-style-type: none"> Upgrade visitor facilities Investigate potential for further development, subject to impact assessment Coastline management from residential impacts Revegetate coastal fringe <p>Big Lagoon: Improve parking, future management causeway Taylors Beach: improvements to day use impacts area Sloops Lagoon: Address environmental damage-rehabilitate Sloop Rock Point: Remove camping & day use area improvements Seaton Cove: Camping area improvements Cozy Corner North & South: Camping area improvements Swimcart Beach: Camping area improvements North of Binalong Bay: Limit clearing & fire management Jeanneret Beach: Camping area improvements</p>

	<p>Grants Lagoon: Management measures</p> <p>Grants Lagoon: Day use area & boat ramp improvements</p> <p>Binalong Bay Township Foreshore: Foreshore vegetation management. Bay of Fires experience: Implement Recommendations of Binalong Bay Foreshore Masterplan</p>
St Helens	<p>Little Elephant: Upgrade carpark</p> <p>Dora Point Camping area: management improvements.</p> <p>Moulting Bay Camping area: management & day use facility improvements</p> <p>Humbug Nature Reserve South: Promote walking trails</p> <p>St Helens Region: Manage impacts on wetlands</p> <p>Throughout St Helens locality: protect Eucalyptus globulus species</p> <p>Aquaculture Drive: Address/manage impacts of weeds & nutrients river entrance</p> <p>St Helens Point Conservation Area: Promote walking trails</p> <p>Jocks Lagoon: Address/manage threats & impacts to Jacks Lagoon</p> <p>Perons Dunes: Manage & maintain coastal wetlands & dune system. Limit 4WD access</p> <p>St Helens: Redevelopment Foreshore Park</p> <p>Medeus Cove Esplanade, St Helens: Replace damaged picnic facilities</p> <p>St Helens to Lions Park: Develop Foreshore Multi-User Track</p> <p>Lions Park to Stieglitz: Develop Foreshore Multi-User Track</p> <p>Improvements to Stieglitz Boat ramp/jetty</p> <p>Stieglitz and Akaroa: Protect existing & revegetate foreshore vegetation</p> <p>East of Parnella: Protection threatened flora species</p> <p>Between Stieglitz and Diana's Basin: Increase width of coastal reserve</p> <p>East of Stieglitz: Investigate infill development potential</p> <p>Georges Bay Shoreline: Manage impacts of isolated foreshore residential areas</p> <p>Improve parking arrangements at Burns Bay Boat ramp</p> <p>Improvements to St Helens Wharf & parking</p> <p>Improve directional signage (various locations)</p>
Scamander	<p>North of Diana's Basin: High Conservation, any development to be Sensitive</p> <p>Diana's Basin: Review dog policy location; Campsite management, shoreline protection</p> <p>Beaumaris Beach and Wrinkler's Beach: Maintain beach access points</p> <p>Shelly Point: campsite management revegetation</p> <p>Wrinkler's Beach: Manage & improve day use areas</p> <p>Scamander River: Improve appearance and promote for increase visitation & use</p> <p>Winifred Curtis Reserve: Improve signage & promote as a visitor experience, subject to impact considerations</p> <p>Henderson Lagoon, Falmouth: Management Plan measures to be implemented</p> <p>Falmouth: Coastline revegetation</p> <p>Falmouth: Investigate development potential, subject to impact assessment</p>
Ironhouse Point	<p>Tasman Hwy, Four Mile Creek: Improve & formalise Viewpoint</p> <p>Four Mile Creek: Rehabilitate coastline vegetation</p> <p>Little Beach Conservation Area: Improve/seal parking areas</p> <p>Lagoons Beach Conservation Area: Campsite management; Limit access to beach to this area</p> <p>Chain of Ponds to Piccaniny Point: Retain as farmland & restrict vegetation clearing</p> <p>Ironhouse Point: Investigate additional boat ramp</p>
Douglas River	<p>General:</p> <ul style="list-style-type: none"> ▪ Retention of riparian vegetation to be maintained and improvements/rehabilitation encouraged ▪ Improve culvert and bridge design to improve ecological condition ▪ Coastline: re-vegetate foreshore vegetation between Picanniny Point and Douglas River ▪ Creeklines through Freehold land between Picanniny Point and Douglas River: fencing and re-vegetation of creeklines to improve connectivity between the coastal reserve and hinterland including DA National Park <p>Templestone Lagoon: Encourage southern side of Lagoon to impose conservation covenant</p> <p>Seymour: Maintain low density/low impact</p> <p>Douglas River: Investigate potential for increased development, subject to impact assessment</p> <p>Seymour Beach: Widen/improve coastal reserve/vegetation</p> <p>Deniston Beach: Limit access to these existing points</p>

2 Introduction

2.1 Strategic Context - The Municipal Management Plan

In September 2012 TCG Planning together with its specialist consultant team was engaged by Break O'Day Council to prepare Council's Municipal Management Plan (MMP), which includes the preparation and integration of a number of reports, plans and strategies (including this Coastal Plan).

The aim of the MMP is to ensure that future development in the Municipality is undertaken in a strategic and integrated manner. The Plan will establish priorities for works over a 10 year period in order to provide appropriate infrastructure for residents and visitors to the area; promote ongoing tourism while acknowledging and protecting the values of the natural environment; improve the physical appearance and functionality and livability of the towns; and encourage economic growth and future prosperity of the Municipality. The MMP will be a comprehensive strategic planning document that will provide an action plan identifying what needs to be undertaken to achieve the identified priorities.

The MMP will also consolidate a number of studies which have previously been prepared by Council or which are under preparation. Many of the specialist background documents that will inform the MMP will be prepared and/or coordinated by TCG Planning together with the specialist project team.

2.2 Plan Objectives and Scope of the Coastal Plan

This Coastal Plan has been developed in accordance with the Project Brief prepared by Break O'Day Council. The Aims and Scope of the project are set out below.

The **Objectives** of the Coastal Plan are to:

- (a) Maintain and enhance open space linkages ensuring free, safe and convenient access and facilities are available for all ages and abilities and future generations.*
- (b) Recognise value and reinforce the diversity for the coastline ensuring that development takes place in appropriate locations and that social, economic and environmental values are achieved.*
- (c) Provide appropriately for traffic and parking, ensuring convenient access for people wishing to use the coast, taking into account the need for safety for pedestrians and cyclists.*
- (d) Recognise value and protect where possible, enhance sandy beaches and dunes, foreshores, seagrass beds, wetlands and bushland, coastal reserves and buffers, and water quality along the coast.*
- (e) Identify existing native vegetation types, habitats, threatened species and weed infestations, where possible by desktop review of existing data.*
- (f) Identify and map areas for future re-vegetation projects.*
- (g) Identify and map areas requiring protection and/or restricted access.*
- (h) Identify through analysis of prior data and field investigations areas at most risk and identify areas those areas where opportunities exist for greater use of open space area.*

- (i) Provide a broader range of options for use of the coastal areas by residents and also the growing number of tourist visiting the area during the holiday season.
- (j) Identify infrastructure provision, including parking, cycleway and pedestrian pathways which facilitate an improved level of usage.
- (k) Identify management and educational measures which should be implemented to protect this valuable asset;
- (l) Utilise the outcome of the economic analysis to determine the level to which the coastline contributes to the regional economy and the ways in which this can be facilitated ; and
- (m) Formulate a plan for future infrastructure requirements.

Scope of Study/Plan

In order to inform the Coast Park Concept Plan a Vegetation Management Plan has been prepared utilising existing vegetation mapping. Methodology for this project was as follows:

- (a) Confirmation of sensitive or threatened ecosystem boundaries (utilising existing data), with projections of boundary changes from climate change.
- (b) Presentation of boundaries and the relative values for areas to limit or enhance the growth potential utilising available aerial photography and existing mapping.
- (c) Identification of major areas of ecosystem connectivity utilising existing data.
- (d) Interpretation of collated data into recognised standard formats for presentation.
- (e) Report compilation and recommendations for management of identified areas in the coastal zone following liaison with stakeholders.
- (f) Presentation allowing for appropriate compatible format.

The preparation of the Coast Park Concept Plan included the preparation of inventory of major assets within coastal areas, including passive and active open space areas, parking and access. The outcome of such investigation then informed the following:

- (a) Mapping and identification of sensitive areas which are to be protected and managed.
- (b) Mapping and identification of areas which have potential for greater level of use. The plan also identifies in writing and visually the preferred scenario for use of such areas, including the provision of parking, pedestrian linkages and cycleways.
- (c) Identification of areas where improved public access such be encouraged and those areas where public access should be minimised.

2.3 Methodology

This Coastal Plan document was developed utilising the following methods (refer also detailed description within Section 6: Vegetation Management Plan, and Section 7: Major Assets Inventory;

- Identification of existing data and information (refer to Section 5 'Document Review', and Appendix 1 of this document;

- Division of the Break O'Day Municipality into coastal bioregions and seven manageable study areas (refer Section 3);
- Identification of vegetation, landscape, recreation, access and open space features using aerial images with site photography;
- Field Survey (ES&D in November 2012 and TCG Planning in September 2012 and February 2014); and
- Consultation with community and government organisations.

3 The Study Area

This Study includes the length of coastline within the Break O'Day Municipality from the north near Cape Naturaliste to the south near the Douglas River settlement just north of Bicheno.

While the "coast" can be defined in a number of ways (depending on vegetation mapping methodology, legislative and policy frameworks), for this purposes of this work, "coast" is defined by Council and in accordance with planning legislation as the area within 1 kilometre from the "coastline".

ES&D and TCG Planning have taken into consideration potential significant factors outside of the 1km limit into account and also areas below high tide level. The rising trend of sea level also has been identified in some areas as the effects extend far beyond the 1km limit. In addition, it is recognised that the fieldwork undertaken (over two days in November 2012) is a "snapshot" of the survey of vegetation in the locality.

In Break O'Day the following Coastal bioregions were recognised by ES&D:

- Flinders: the coastal strips forming the eastern part of the Break O'Day Municipality (as well as Flinders Island to the north).
- Freycinet Marine Bioregion: This covers the marine coastal environment from Tasmania's North East tip to Maria Island.

For simplicity, ES&D identified high potential impact zones. These have been identified in the seven (7) survey areas listed below and indicated on Figure 1. These survey areas were ideal manageable areas for both the Vegetation Management Plan and Coast Park Concept Plan, and therefore have been utilised and presented throughout this document. More detailed maps for each of these areas have been prepared in the later sections of this Plan.

8. Ansons Bay: extending from the northern boundary of the Municipality near Boulder Point south of Cape Naturaliste within Mt William National Park to and including Policemans Point where Ansons Bay itself meets the sea.
9. The Gardens: extending from south of Policemans Point to the south of The Gardens point adjacent to where Big Lagoon enters the sea.
10. Binalong Bay from where Big Lagoon enters the sea to the township of Binalong Bay and to about Grants Point within the Humbug Point Nature Recreation Area.
11. St Helens: extending from Humbug Point Nature Recreation Area to Diana's Basin including Georges Bay, St Helens and Stieglitz urban area and St Helens Point.
12. Scamander: from south of Diana's Basin to north of Hendersons Lagoon including the townships of Scamander and Beaumaris.
13. Ironhouse Point: from and including Hendersons Lagoon and Falmouth to Chain of Lagoons, including Four Mile Creek, Ironhouse Point and Picaninny Point.
14. Douglas River: from Picaninny Point to the southern boundary of the Municipality south of Douglas River, including Seymour and Long Point.

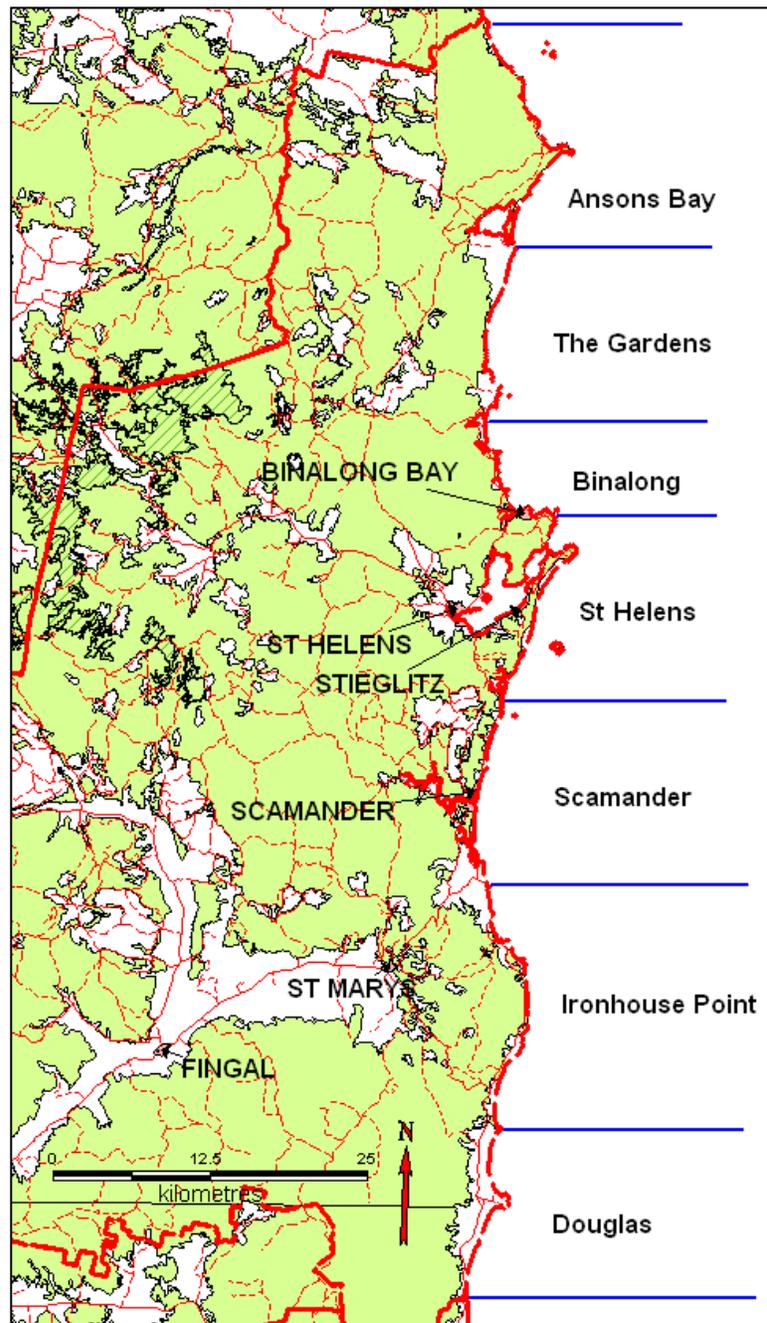


Figure 1: The 7 Survey Areas within the Break O'Day Coastline (Study Area).

Source: Figure 1 ES&D (2013)

4 Consultation

4.1 Overview of MMP Consultation Process

Engagement with key stakeholders (including focus groups, the community, business groups, government agencies) was a major component of the overall MMP project. Effective engagement will ensure that the MMP responds to community needs; involves various sectors at appropriate stages in the project; provides opportunity to participate in a variety of ways; and ensures that information on the project is readily accessible. TCG Planning prepared a Consultation Strategy (dated October 2012) to ensure that consultation is widely undertaken, is inclusive and is effective in its delivery and outcomes.

Consultation and engagement commenced in October 2012 and continued through preparation of the various strategies, as shown in Table 1 below. At the time of completion of this document, Stages 1 and 2 are complete and Stage 3 is underway.

Table 1: Consultation Process Summary, MMP Project

Consultation Stage	Consultation Methods
Stage 1: Scoping and Issues Stormwater/flooding, economic issues, climate change, airstrip operations, community infrastructure requirements, and traffic management concerns for St Helens and St Marys.	Staff Workshops Targeted Surveys Focus Group Meetings (Business Meeting, St Helens; Developer's Forum and St Marys Business owners)
Stage 2: Discussion of Guiding Principles Guiding principles, draft masterplans and draft strategies, particularly in relation to stormwater matters, economic outcomes and urban design/master-planning options for St Helens and St Marys. Prior to the holding of the consultation sessions Council's web page will be updated with a summary of the outcomes from the final Issues Paper,	Issues Paper Completion Staff Feedback on Issues Paper Internal Staff/Councillor Workshop Community Engagement and Drop-in Sessions Staff Workshop-Steering Committee
Stage 3: Consultation Land Use Issues: Prior to the preparation of the Land Use Strategy and MMP Priorities list and finalisation of the Recreation and Open Space Plan and Coast Park Concept Plan.	Staff Workshop – Land Use options Targeted Surveys with user groups
Stage 4: Workshopping Outcomes Masterplans and MMP	Staff Workshop/Steering Committee – Draft Reports Formal exhibition of the draft Land Use Strategy Staff Workshop-Steering Committee – Draft MMP focusing on costings and priority works Final MMP Presentation

4.2 Vegetation Management Plan Consultation

ES&D noted in the report entitled 'Break O'Day Coastal Vegetation Management Constraints and Opportunities 2012' (Final Version dated 29 September 2013, p10) that "consultation with members of the community and local council was undertaken throughout the duration of the report compilation period. Many of the comments and suggestions made by those consulted were taken on board and included in the report. Some of the personnel consulted included Todd Dudley; North East Bioregional Network and Polly Buchhorn; Break O'Day Council, NRM Facilitator. At the completion of the project the report was forwarded to Parks and Wildlife for review. A number of local officers commented and those comments were taken on board before issue of the final report."

4.3 Consultation Process for the Coastal Plan and Issues Identification

In addition to telephone and email correspondence with Tasmania Parks and Wildlife Service staff (Lionel Poole, St Helens and Lynne Sparrow, Hobart), the consultation process to date has focused on the community in the form of feedback from workshops held in November 2012 and "drop-in" sessions held in February 2013 and a review of the 50 written responses to the MMP community survey and individual written submissions. The issues which were identified in relation the Coast Plan are summarised below (adapted from the *Consultation Outcomes Stages 1 and 2* report (TCG Planning, 26 April 2013).

Of the community survey respondents, 86% of respondents utilised the coastline within the Break O' Day area. Table 2 identifies the responses relevant to use of the coastal areas. As indicated in the responses, there is a distinct overlap between the utilisation of the coastal areas and responses relating to recreational uses and facilities. This highlights the importance of the coastline to the recreation of the residents of Break O Day. Furthermore, many responses to the survey acknowledged the attractiveness of the coastline (and associated tourism potential) of Break O Day being one of the main positive features of the locality.

Table 2: Summary of MMP Community Survey Responses (Coastal Facilities Questions)

Coastal Facilities	
Which areas of the coastline are utilised?	<ul style="list-style-type: none"> ▪ Wrinklers to Falmouth Beach ▪ Georges Bay ▪ Diana Basin ▪ Binalong Bay ▪ Peron Dunes ▪ Stieglitz Bay and surf tracks ▪ Cosy Corner ▪ Bay of fires ▪ Scamander Beach, Shelley point ▪ Beaumaris ▪ Scamander foreshore ▪ St Helens Point ▪ Skeleton Bay

What purpose do you utilise the coastline for?	<ul style="list-style-type: none"> ▪ Walking/walking the dog ▪ Boating/ sailing /kayaking/ fishing ▪ Swimming/ surfing ▪ Picnics /barbeques ▪ Camping /caravanning
Are there any facilities that you would like to see provided or improved along the coastline?	<ul style="list-style-type: none"> ▪ Erosion control ▪ Rebuild access steps ▪ Better road access ▪ Improved toilet facilities ▪ Improved picnic areas /Better managed camping facilities ▪ Better viewing areas for tourists and locals. ▪ A break wall built in the Scamander River mouth ▪ Revegetation of dunes from fire destruction south of Scamander River

Other general issues that arose from the [Workshops and Submissions](#) are listed below. In general, the key issues related to maintenance and enhancement of public access to existing coastal areas, including disabled access. Specifically, improvements to facilities within coastal foreshore areas to encourage locals and tourists to access natural assets of Break O'Day (particularly Binalong Bay) were highlighted, such as picnic tables and seating; walkways and cycle paths; access to foreshore; toilets; boat ramps and parking.

General Issues raised:

- Gravel roads – major issue cannot take hire cars on these roads.
- The area needs better signage – including signs and trails in the reserves/forests.
- Break walls are needed to help with the issue of erosion reduction.
- There are currently no recycling facilities available. People are being charged to dispose of green waste at the tip so they are dumping it into the bush which is creating weeds.
- The foreshore should be utilized more (St Helens).
- Parks and Wildlife need to develop better walking tracks.
- Tidal pool could be provided rather than a swimming pool.
- The need for more toilets along the main highway and also coastal walking tracks.
- The community needs to take care of the intrinsic value and beauty of flora and fauna.
- Need a welcoming station at Bay of Fires. There is vacant land on corner of Reids Road and Garden Road. There should be a roofed gazebo for locals to talk to visitors.
- Issues with campers on the foreshore- used to take visitors for picnics but unable to use area due to campers.
- Need to keep camping well back from the foreshore.
- At Harbour Point there are only two (2) tables which is not sufficient especially for caravaners etc.
- Inadequate parking for trailers- people forced to walk on road- should have shared pedestrian roadway.
- The need for two (2) rock walls at opening at Scamander - will create fishing and surfing opportunities.
- Area to south of opening has been burnt out twice in one year (to the rear of the life surfing club) - needs to be re-vegetated.
- Walkway is needed between Falmouth and Scamander following Old Coast Road.
- Ownership issue with Parks and Wildlife Service.
- Beaches should be retained in current state.

- Need more maintenance of walking tracks (e.g. snakes)
- The issue of people throwing rubbish into bush.
- The need for maintenance and cleaning of beaches by the parks and wildlife sector of Council. Trouble walking dog along the beach due to high amounts of sea grass present on beach.
- Council could deposit a few truck loads of seagrass to inland towns such as St Mary's and Fingal so that residents can collect it for garden mulch.
- Provision of additional marine facilities at Sloop Rock and Taylors Beach associated with master planning for the Bay of Fires;
- Upgrading boat ramps at St Helens Wharf, Burns Bay, Binalong Bay, Stieglitz and Bicheno to enhance tourism and recreational boating opportunities as well as an additional boat ramp between Scamander and Bicheno.

Many comments were received in relation to Binalong Bay specifically as listed below.

- Binalong Bay area needs proper tasteful management.
- Car Park – not enough parking- can't drive through with trailers.
- Council not listening to people regarding the viewing platform at Binalong Bay.
- Lack of facilities- current facilities are over used.
- The track from main foreshore: there is a need for a walkway to beach that is easily accessible and safe.
- Park bench is needed at top of Main Beach at Binalong Bay. Only two picnic tables (1 under tree has been removed). It would be good for the elderly who enjoy views. More bench seats also needed at North east of foreshore.
- Gum trees are not appropriate between houses and foreshore -dangerous. Encourage low growing shrub.
- Council should be looking at fire reduction and a secondary fire access should be provided at the back of the Binalong Bay in King Street.
- Low shrubs at foreshore are needed instead of taller trees.
- There should be a sign at entrance of Binalong Bay saying no camping.
- There is no overall map of Binalong Bay for visitors.
- Need clear pathways through carpark to toilets at Binalong Bay.

4.4 Consultation Feedback for Other Relevant Studies

Appendix 1 summarises the outcomes of the multitude of existing studies, reports, strategies and plans undertaken within the Break O'Day Municipality and North-East Region that are relevant to the Coastal Strategy. Refer also to the next Section (5) of this document. Many of these documents detail the key issues and outcomes of the consultation processes undertaken and revealed direct parallels to the issues that arose from the consultation undertaken for this Strategy. A few examples from a some of the more recently prepared key documents are provided below:

Bay of Fires Conservation Area and Humbug Point Nature Recreation Area Site Plan (Inspiring Place, 2011 page 18-21)

Consultation revealed there are strong and opposing views within the local community about the use, protection and management of the Bay of Fires. Some users stated there is no need for further management

and controls and all areas should be accessed. Others: expressed concern with the unacceptable impacts on natural and cultural values threatening the Bay of Fires experience. The majority considered tourism beneficial to the area. A common view was that the Bay of Fires is a beautiful place and that the natural and cultural values need better management and maintenance.

Key findings from meetings:

- Lack of clarity and information about what the Bay of Fires experience is (eg. directional signage, on-site information, facilities and activities).
- General lack of signage.
- Existing and potential impact on cultural values of the area, particularly Aboriginal values (eg. disturbance).
- Increased visitation potential exacerbating existing environmental management issues (vegetation disturbance and removal, eg. from campsite expansion and firewood collection; disturbance of resident and migratory shore birds; waste disposal issues; potential spread of weeds and plant diseases; increase in road kill).
- Concern about lack of resources available to Parks and Wildlife Service to manage area including lack of ranger presence at campsites.
- Need to ensure visual character of the settlements are maintained.
- Need for public transport or commercial shuttle service from St Helens to access Binalong Bay and Bay of Fires sites.
- The need for improving the safety for cyclists and possible bike links between St Helens and Binalong Bay.
- Lack of management plan as a management frameworks for the Conservation Area.
- Concern from residents regarding potential for a catastrophic fire event.

Camper survey responses – themes:

- Importance of Bay of Fires experience: beauty of the environment (rocks, bush, water colour); peace and quiet; free, non-commercialised camping features; close proximity of camping to the beach; close to St Helens.
- Activities: beach walk, rest and relaxation, fishing, bushwalking, swimming and water/beach activities.
- Suggested improvements: more toilets, better rubbish disposal, more interpretive signage, road upgrades, improved boat launch facilities and the need to monitor camper behaviour especially at night.

East Coast Marine Infrastructure Strategy 2013 (GHD, for Dept Economic Development, Marine and Safety Tasmanian and Local Councils, 2013, pi-ii)

A range of activities and stakeholders and the community were undertaken (online survey, targeted stakeholder meetings/discussions, and technical steering committee workshops) to identify views and visions on infrastructure needs, including current usage, capacity and appropriateness of location, views on alternative locations. Broad themes arising from consultation:

- Trend towards demand for facilities for bigger trailer boats (exceeding 6 metres);
- Most important motivators for use of marine infrastructure was proximity to home or boating destination, and ease of access.
- Strongest preference for additional jetties, marinas and parking with the next level of support for additional toilets and boat maintenance services.

Binalong Bay Foreshore Masterplan Consultation Report (May 2013, WAX, Infracplan p1,17)

A 'Planning for Real' exercise undertaken in Binalong Bay in February 2013, online survey was undertaken and the carpark adjacent to the Binalong Bay Cafe was transformed into a design studio with a consultation caravan. Analysis of knowledge gained through this process has resulted in the following summary of key issues and opportunities, as identified by the community of Binalong Bay:

- The need for improved continuous pedestrian and cycling access
- Location and design of proposed viewing platform
- Concern about change and ill considered design responses
- Potential for Binalong Bay to be the custodian of the Bay of Fires
- Consideration for traffic calming measures along the foreshore
- Interpretative signage promoting Binalong Bays unique character and culture
- Improved disability access
- Safe pedestrian crossings required
- Rationalisation of car parking including tour buses and trailer movements
- Upgrade to boat ramp and improved safety around the break wall
- Retain community tennis courts
- Increase connections to the beach
- Evoke a sense of ownership and pride among local residents
- Improve facilities along the foreshore
- Provide a safe and secure environment
- Maintain natural character along the foreshore
- Promote environmental awareness
- Limited development along the foreshore
- Ensuring development includes low carbon processes and enables long-term change in economic, social and environmental behaviour
- Creating distinctive environments across the public realm
- Connection to sense of place with consideration for community expectations

St Helens and Surrounds Structure Plan Community Views Report (Urbis, 2012)

The draft Structure Plan was placed on public exhibition from 20 October until 16 November 2012 and public feedback was sought during this time. Some written responses included the following feedback relevant to the Coastal zone:

1. *Binalong Bay Ratepayer's & Tennis Association Inc submission:*
 - The edge of the road and foreshore should be kept cleaner.
 - Development on the edge of the foreshore should not be permitted.
 - A marina at Binalong Bay is not needed as it would prevent public access to prime public space and would give a false sense of safety regarding the dangers of the ocean.
 - Better access to the beaches. Council took away disabled access to the main beach over a year ago. Other beach access tracks have been neglected or closed.
 - The foreshore shacks are of no historic value and should be demolished.
 - The car park and approach to the boat ramp require urgent upgrading.

- Extensions to the footpaths are necessary.
 - The only land which should be opened up for residential lots is that which would link the corner of Treloggen Drive and Felmingham Street with Coffey Court.
2. *North-East Bioregional Network submission:*
- Designation of locations for tourism development is supported.
 - There is no consideration of the impact of stormwater on the water quality in Georges Bay.
 - The environmental value of St Helens Point need to be explicitly stated and protected in the new Scheme.
 - The desired future character statement for the General Residential Zone should include protecting existing native vegetation.
 - In the local area objectives for the Environmental Living Zone, include a statement which values all native vegetation not just rare or threatened species or vegetation communities.
 - In the local area objectives for the Environmental Living Zone, include a statement that native vegetation will be retained and where possible restored to contribute to habitat corridors (as defined in Part B of the new scheme).
 - Do not support marina expansion.
 - There is little need for 'improvements' to the St Helens or Binalong Bay Foreshore, just the need for maintenance. It is important that open space on the St Helens Foreshore is not alienated by commercial development such as marinas/shops.
 - The native vegetation remnants around areas such as the Tasman Highway, Georges Bay and Medea Cove make an important contribution to the amenity of the area and should be maintained and where possible restored.
 - Do not support any more rezoning of urban land (such as proposed area west of Douglas Court) given current ample supply of urban land.
 - Current camping facilities in the Bay of Fires should be maintained but not expanded or developed.
 - St Helens is the primary visitor accommodation provider. The proposals for large scale tourist development at sites such as Onion Creek and off the Gardens Road are not supported. Both of these sites are subject of a number of constraints.
 - Maintain the prohibition of subdivision within 1km of the coast and prohibit subdivision in the Environmental Living Zone.
 - Zone CLAC block at Akaroa Environmental Management as it has aboriginal heritage value and a threatened vegetation community.
 - Support rezoning Jackman block at Stieglitz to Environmental Living as it is covered with threatened plant species and habitat for the State and Commonwealth listed New Holland Mouse.
 - Open Space block at Stieglitz should be zoned Environmental Management as it has threatened vegetation and plant species and New Holland Mouse habitat and it adjoining the covenanted Tasmanian Land Conservancy block.
 - Support Low Density zoning for Osprey Drive area as there are threatened plant species there.
 - Rezone Parkside Area Low Density to maintain amenity/local character.

- Rezone area near Boggy Creek to Environmental Living to protect the catchment of Boggy Creek and scenic corridor at the entrance to St Helens.
- Support Environmental Management for open space land near Jeanerette Court as it is an important part of the Grants Lagoon catchment and is highly bio diverse bushland.
- Support Low Density Zoning for Binalong Bay.
- Crown land in Binalong Bay should be zoned Environmental Management as it is Swift Parrot habitat and close to a Sea Eagle's nest.
- Investigate the establishment of a wetland interpretation site at the Boggy Creek wetland opposite the St Helens Point Road turnoff.

3. *Other written responses:*

- A new access road to Stieglitz via the airport.
- Many of the 5 acre lots above Swimcart Beach and those on the road to the Gardens offer great opportunity for tourism development.
- The state government should charge for camping in the Bay of Fires.

Two public drop-in sessions were held in early November 2012. A wide range of ideas were provided at the feedback sessions, with some of those relevant to the Coastal Plan provided below (noting some were new ideas and others already raised in the Draft plan for comment):

- Charge for the Bay of Fires beach camping
- Install footpaths in Stieglitz, including along St Helens Point Road
- Install a bird-watching hide at Medea Cove
- Support for "develop Bay of Fires interpretation material"
- Support for 1-3 storey tourism accommodation overlooking the waterfront
- Support for "protect the Bay of Fires Foreshore and continue to provide camping facilities"
- Create a foreshore precinct along Georges Bay Esplanade with cafes and shops
- Potential tourism development site identified at Binalong Bay
- Retain vegetated buffer between road and dwellings along Binalong bay Road
- Potential tourism development site identified at Diana's Basin single storey buildings only
- More wharves are needed-boats are sometimes doubled and tripled up
- Install more toilets on the St Helens foreshore near the playground
- Stop hiding the tourist information office-it needs o be on the wharf
- Get rid of noxious weeds including Boobiella and Spanish Heath
- Install more public showers
- Fence off part of Beauty Bay to provide a safe jellyfish-free swim area
- Install a viewing platform at Flagstaff
- Charge for the public showers on the foreshore
- Improve the skate park-include a half pipe like at Scamander
- Call the foreshore the waterfront
- Trees, rocks and gravel are falling into the river catchments upstream, and causing downstream impacts

- Develop another dog exercise area/dog park
- Put a nature-based playground at the St Helens foreshore
- Promote a well-advertised walking track network (e.g. Flagstaff walk) as at present visitors do not know where the walks are
- Water play features in playgrounds
- Develop a permanent outdoor events space on the foreshore, like the outdoor pavilion at MONA
- Install public toilets at Dark Hollow as this is a popular spot with surfers
- Install better lighting at the wharf
- Renourish the St Helens foreshore with sand dredged from the bar
- Improve the Bay of Fires boat ramp and canal, demolish the old Crown shacks on the foreshore and restore the area to parkland with grass and plants (not car parking)
- Fix the water quality issues in Grants Lagoon by fixing the septic systems.

5 Document Review

Appendix 1 provides an overview and review of the content, outcomes and recommendations of existing local, regional and state-wide studies, strategies, documents and maps previously prepared, which are of relevance to the Coastal Plan. Where considered appropriate, these documents have been incorporated in the recommendations of the Coastal Plan.

The document review identified a number of common issues and themes which are consistent with the objectives and outcomes of this Coastal Plan. The key issues and themes identified in the document review are listed below:

The coastline of Break O'Day Council area (like many other areas of Tasmania) is a spectacular and iconic landscape and features a diverse range of natural and cultural values.

The coastline comprises important habitat areas, and while the majority of it is publicly owned reserved land, zoned Environmental Management, many of these natural areas are under threat by human use.

The coastline is a major economic asset and contributes to the local and regional economy through tourism, recreational activities, and provides for a range of commercial and industrial uses such as fishing and aquaculture, ports and marine activity, and more.

The natural environment is a drawcard for tourists (and flow on economic impacts) and development of Break O'Day as a destination should be pursued as a key economic development strategy for the future. Enhancement of natural assets (eg. St Helens to Arakoa walkway, review of trails and walks) and "green credentials" should be a priority to improve the visitor experience.

The majority of existing urban settlements and areas visited by tourists within the Municipality are located within the coastal zone, with St Helens (and adjoining Stieglitz, Arakoa and nearby Binalong Bay) being the more populated areas. This will continue into the future, however the existing urban areas should generally be maintained within existing urban areas.

The sustainable management of natural (biodiversity, coastal and marine environment, soil, and water) and built environments and sustainable economic development is an overarching goal of Council.

The management, maintenance, enhancement and development of open space and associated public realm areas for the benefit of residents and visitors is also a key Strategy of Council.

Marine infrastructure should be maintained and improved to support the existing and future needs of the commercial fishing industry as well as for recreational fishers (locals and tourists).

As mentioned above, the vast majority of the Break O'Day immediate coastline is zoned Environmental Management (which includes all National Parks and Reserves) under the Break O'Day Interim Planning

Scheme 2013, with the remaining areas within the 1 kilometre of the coastline being predominantly Environmental Living or Rural Resources, except for the townships which are zoned General Residential or Low Density (and General Business in the case of St Helens only). Some pockets around Georges Bay are zoned Port and Marine. Existing waterfront shack sites on small freehold titles (~530sqm down to 250sqm) at Ansons Bay are zoned Particular Purpose. Each zone is provided with mandatory objectives under the Template, with Councils able to include additional local objectives. Specific objectives are provided for various uses, including settlements and environmental protection. The Scheme provides for the inclusion of Local Area Objectives under each land use zone, some of which were largely based on the existing Objectives for the Urban Zone under the current planning scheme and are aimed at providing guidance for achieving the Zone Purpose. The Objectives include direction to avoid creating ribbon development along the coast, protect residential amenity in terms of visual and acoustic impacts, overlooking and overshadowing, protect coastal environmental values and historic resources and promote innovative urban design.

The coastline is at risk from the impacts of climate change, in particular parts of the township of St Helens, the Binalong Bay Road, and some lower lying coastal settlements. Consideration of the impacts of climate change (in addition to erosion and flooding) on all land along the coastline is required.

There are a number of special and pristine environments along the coastline within reserves and/or conservation areas that support special ecological values (many threatened) that require ongoing management. The popularity of the coastline areas for day use and camping (particularly in the peak summer and Easter periods, and in particular the Bay of Fires Conservation Area) exacerbate these issues at that time. While effective management of these areas (predominantly by Parks and Wildlife Service) is the aim, and is achieved as best as possible within the available resources, the resources required are lacking to achieve optimal management of these areas.

Within the reserves and conservation areas, the main management problems/issues (including for coastal "freedom camping" areas) are recurring and can be generally grouped into the following:

- Potential acid sulphate soils.
- Pets, weeds and disease in the area including marine pests, environmental weeds, and phytophthora rootrot.
- Loss and degradation of native vegetation (from urban development, garden expansion, fire hazard control, and plantation development), and fire management - particularly on foreshore areas.
- Sediment, stormwater, nutrient and chemical impacts on waterways from various land-uses in the catchment.
- Wildlife may be affected by dogs and people (especially shorebird nests), and loss of habitat and habitat connectivity.
- Climate change impacts, including changes to rainfall, temperature and sea level, an increased risk of erosion.
- Changing hydrology and water quality.
- Fire management (complexities in achieving protection of life and property along with protection of natural values).

- Potential pressure of population, development and works on landscape character, access issues, and heritage values.

Management actions/solutions include monitoring, community education and on-ground works, as well as discussions with relevant authorities over planning and legislation changes. Some of the key on-ground actions include;

- Fencing to restrict access and vegetation, and waterway destruction.
- Revegetation and continued weed control of the coastal vegetation.
- Track improvement and erosion controls.
- Clean up of litter.
- Installation of improved directional and interpretive signage.
- improved facilities (toilets, picnic tables etc).
- Landscaping of public areas with local native species.
- Access restriction (including vehicle access on dunes/beaches and within reserves generally).

Focusing the development and management effort on selected key sites within Reserves and Conservation Areas, and closure of some access points are key recommendations that would allow for more strategic use of available funding, and are also reflected in this Plan.

There are a number of projects already identified in various plans and strategies which should be implemented. These are focussed on the most popular/used/visited areas of the coastline (which are therefore experiencing greatest pressure). It is noted that concept plans for these projects have been prepared (although not yet adopted by Council/P&WS at the time of writing):

- St Helens Foreshore MasterPlan
- St Helens Foreshore - Georges Bay Multi-user Track
- Binalong Bay Foreshore Master Plan (adopted in principle by Break O'Day Council)
- Bay of Fires Conservation Area and Humbug Point Nature Recreation Area Site Plan (Inspired Place, 2011): Northern Point of The Gardens Road; Taylors Beach Site; Sloop Rock Point site.

Existing Management Plans and Action Plans of various other reports should also continue to be implemented, including/in particular;

- Bay of Fires Conservation Area and Humbug Point Nature Recreation Area Site Plan (Inspired Place, 2011); and
- St Helens and Surrounds Structure Plan.

Notably, the majority of these issues were identified in the outcomes of the Vegetation Management Plan work undertaken by ES& D and are further addressed later in this report. A key issue in itself is the management of the coastline by the numerous authorities and agencies as identified in the 1995 'Marine and Coastal Management Strategy for the Dorset, Break O'Day and Glamorgan/Spring Bay Council Areas' and follow-up document 'Action Plan for Marine and Coastal Management in East and North-East Tasmania' (Coastlink, 2000).

6 Vegetation Management Plan



6.1 Introduction

Environmental Service & Design (ES&D) was commissioned by TCG Planning for Break O'Day Council in November 2012 to prepare the Vegetation Management Plan (VMP) component of this Coastal Plan document. The completed report was prepared by Ian Ferris of ES&D, and Philip Milner of Philip Milner Landscape Consultant Pty Ltd and is entitled '*Break O'Day Coastal Vegetation Management Constraints and Opportunities 2012*' (Final Version dated 29 September 2013). Unless otherwise indicated, the entire content of this Section is derived from the report prepared by ES&D and is re-formatted in this Section within this report and presented to be more consistent with this overall Coast Plan document.

The **objectives of the VMP** is provided earlier in this document (Section 2.2). ES&D also identified the following three main principles of Tasmania's State Coastal Policy to apply to this work (p6):

- Natural and cultural values of the coast shall be protected.
- The coast shall be used and developed in a sustainable manner.
- Integrated management and protection of the coastal zone is a shared responsibility

In addition, ES&D acknowledged the following objectives of the Break O'Day Council's *Natural Resource Management Strategy* of September 2012:

- Identification of our natural values and threats to them, and the strategy of objectives and steps we should take to improve their condition and our stewardship over the medium to long term.
- Support identification of short term work programs that are practical, achievable and prioritised.
- Integration and support for existing and future NRM needs for the Break O'Day area.
- Ensuring future Northern Region NRM developments reflect and support local needs and issues.
- To support review and adapt management with monitoring of the condition of natural resources and achievement of objectives.

6.1.1 Methodology

The VMP was developed by:

- Identification of existing data and information (refer to References at the end of this document);

- Division of the Break O'Day Municipality into coastal bioregions and seven manageable study areas (refer Section 3);
- Identification of vegetation and landscape features using aerial images with site photography and a concise description, and includes degrading and degraded areas under council control, identification of existing and potential values, and identification of the results of past practices and policies. This is presented later in this Section within the 'Pictorial Commentary' for each Survey Area.
- Review of existing mapping: ESD noted that "whilst there has been some excellent work done on the Municipality's vegetation, including some very detailed mapping of the coastline, little uniformity was noted and only moderate attempts made to correlate the information into a single uniform dataset. An example of this is the correlation between the detail mapping by consultants North Barker of the 100m wide coastal strip, and the lower scale TasVeg mapping. These are frequently at variance. TasVeg mapping is (understandably) less specific and detailed, and is often in disagreement with ground observations."
- Field Survey of the coastline from Ansons Bay to the Douglas River taken over two days from 22 November 2012.
- Consultation with community and government organisations (refer Section 4.2).

6.1.2 Limitations

ES&D noted the following limitations in the preparation of the vegetation management work (p10):

"This report was limited by restrictions on ground truthing due to access constraints, limited access to data (only public data was available), and, naturally, a limited budget. Vegetation surveys are always a "snapshot" as plants do not all flower or appear simultaneously, and ecosystems are continuously changing with age, weather, season and numerous other factors.

"Coast" was defined by Council and by Planning Legislation as the area within 1 kilometre from the "coastline". This is at variance with other definitions, including detailed coastal vegetation mapping (which mapped vegetation in a 100m wide strip along the coastline), and State Coastal Policy, which uses a geographical definition which identifies factors that occur on upstream catchments has a major effect on coastal conditions.

The State Coastal Policy defines the coastal area as :

"extending to a distance two kilometres inland from high water mark but the determination of the particular parts of the planning area requiring review should be based on the identification and inclusion of the following coastal elements, including:

- (a) Areas subject to coastal geomorphic processes;
- (b) Economic development that is dependent on coastal assets;
- (c) Coastal landscapes;
- (d) Natural and Aboriginal and historic heritage values of a coastal and maritime nature;"

ES&D has taken strong effects outside of the 1km limit into account and also areas below high tide level. The rising trend of sea level also has been identified in some areas as the effects extend far beyond the 1km limit.

6.2 Vegetation Conditions and Features for Each Survey Area - Data

The Vegetation data prepared by ES&D is presented in the following formats for each of the seven Survey Areas:

- Reserves and Environmental Values Maps (interpreted by TCG Planning and presented at Section 6.3 below).
- Pictorial Commentary (presented within this Section with location references provided on each the Reserves and Environmental Values Maps);
- Vegetation Mapping sourced from TASVEG Version 2.0 (provided at **Appendix 2**);
- A Table of Significant Vegetation within the Coastal Zone (provided at **Appendix 3**);
- A Table for each Survey Area of Vegetation Communities, Threatened Flora, and Environmental Weeds (**Appendix 4**).
- A Table for each Survey Area of Reserved Land (**Appendix 5**): details the reserved land present within each survey area including National Parks, State Reserves and Conservation Areas as well as freehold land conserved by conservation covenants.

The available vegetation mapping data (TasVeg, Appendix 2), in conjunction with the field survey undertaken from the 22 November 2012, has provided the data base for developing the mapping associated with this report.

Issues identified during the survey and relative to each survey area are presented in point form and are presented in Sections 6.4 to 6.10 below. Data is also presented in a Pictorial Commentary included within this section relevant to each of the Survey Areas. Locational references for each of the figures within the Pictorial Commentary are provided on the Reserves and Environmental Values Maps for each Survey Area.

6.3 Reserves and Environmental Values Maps

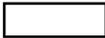
Maps highlighting the conservation and ecological values of each of the communities are located within this Section (Maps A – F) which also indicate reserved land within the Break O'Day Municipality. These maps combine mapping features (with conservation and ecological values assessed broadly, (p48 ES&D) and presented by ES&D in their 2013 report (Appendix 4 of that report) and were interpreted by TCG Planning for presentation in this report. Each Map references photograph locations from the Pictorial Commentary presented within this Section.

There are nine (9) degrees of "Conservation Value" and "Ecological Value" by which the maps are coded. The values are;

- High conservation value, under threat (restrict access), very high priority.
- High ecological value, under threat (restrict access), very high priority.
- Opportunity for protection (restrict access), high priority.
- Conservation value, area for rehabilitation, (restrict access), medium priority.
- Ecological value, area for rehabilitation, (restrict access), medium priority.
- Linkage area, (restrict access), low-medium priority.
- Conservation value, worth protecting (restrict access), lower priority.
- Conservation value, worth protecting (restrict access), lower priority.
- Opportunity for development (allow access). ie. not worth preserving.

The colour codes by which these values are shown on the maps, are shown on the map key. The determination of a high ecological value or a high conservation value depends on the values attributed to an area. For instance; an area of high ecological value will naturally be classed as an area of high conservation value, due to its need to be conserved in order to maintain proper ecosystem function. However, an area of high conservation value may have a lower ecological value, yet still be classed as an area of high conservation. This is because an area deemed to be of high conservation value, yet, with lower ecological value is classified as such due to the personal perspectives attached to that region by tourist and locals, along with the potential values for tourism and future conservation in that area.

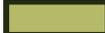
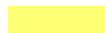
Environmental Values and Reserve Mapping: Key

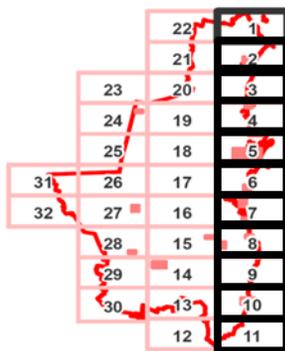
-  Cadastre
-  Scheme Boundary/Local Government Area
-  Creeks and Rivers
-  Scenic Corridor
-  National Parks and Conservation Areas

Threatened Vegetation (Protect for Ecological and Conservation Value)

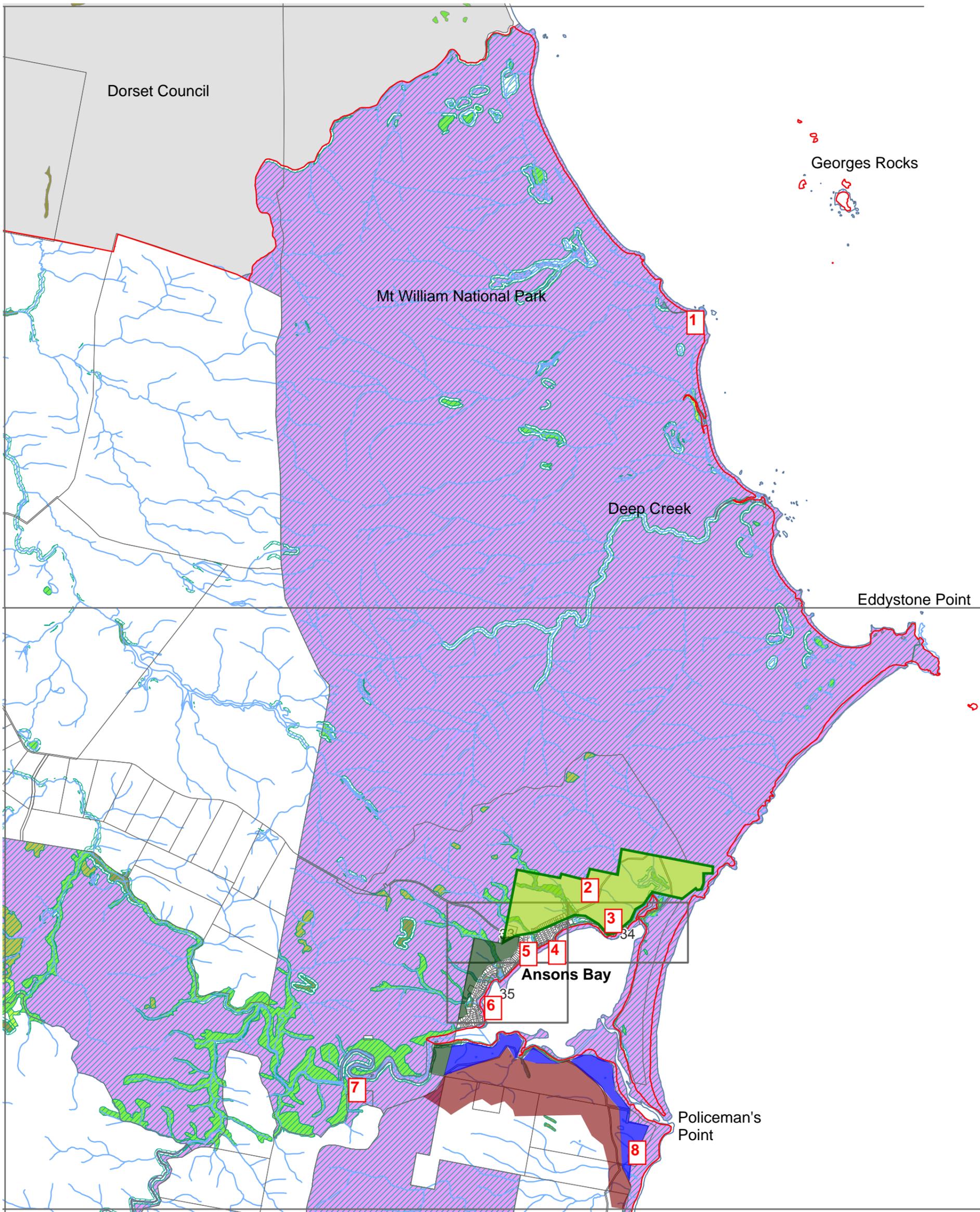
-  Endangered
-  Vulnerable
-  Rare & Endangered
-  Priority Habitat

Values:

-  High Conservation value, under threat. (Restricted Access) Very High Priority
-  High ecological value, under threat. (Restrict Access) Very High Priority
-  Opportunity for protection (Restrict Access) High Priority
-  Conservation value. Area for rehabilitation (Restrict Access) Medium Priority
-  Ecological value area for rehabilitation. (Restrict Access) Medium Priority
-  Linkage area. (Restrict Access) Low Medium Priority
-  Conservation value, worth protecting (Restrict Access) Lower Priority
-  Ecological value, worth protecting. (Restrict Access) Lower Priority
-  Opportunity for development. (Allow access, subject to detailed impact assessment)



Map References: Break O' Day Council Map Set Map 1-11
 Data Source: Break O' Day Council, LIST, Niche Environment & Heritage and ES&D

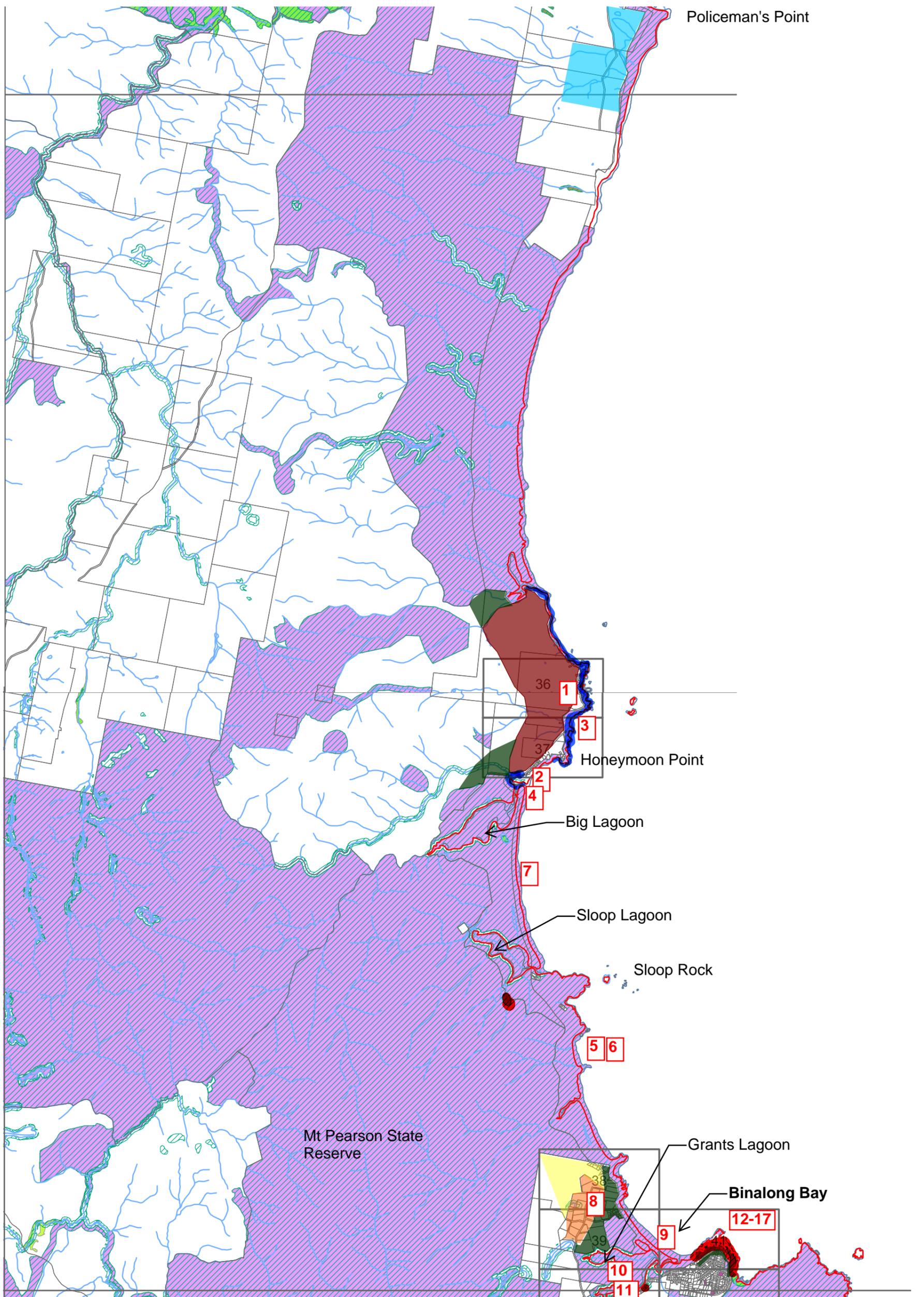


Break O' Day Council Coastal Plan
 Map A: Environmental Values & Reserves Mapping- Ansons Bay Survey Area

Refer Section 6.4.2 Pictorial
 Commentary

Break O' Day Council Map Reference: 1 & 2
 Data Source: Break O' Day Council, LIST, Environmental Services & Design,
 Niche Environment and Heritage





Break O' Day Council Coastal Plan

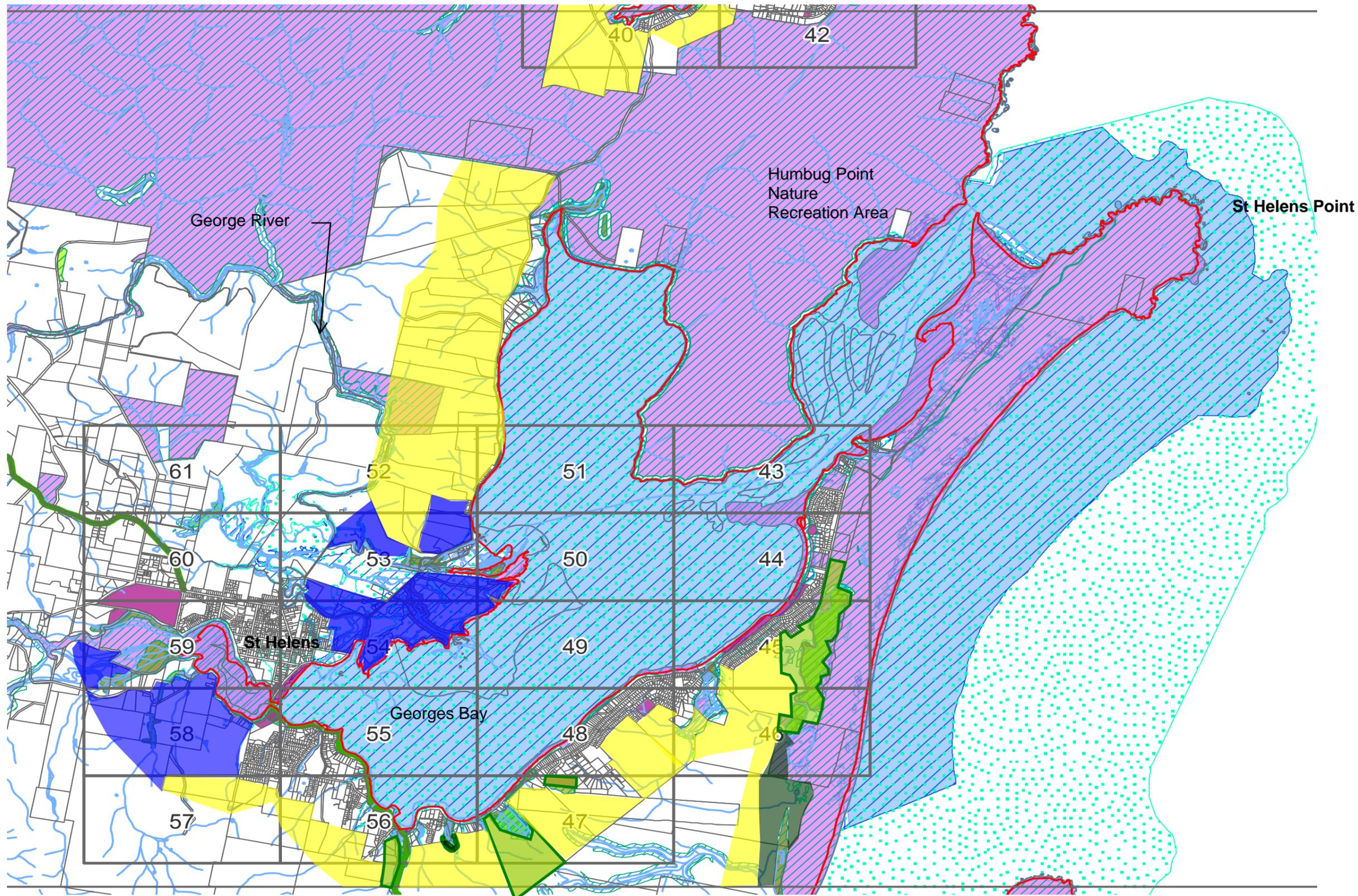
Map B: Environmental Values & Reserves Mapping- The Gardens & Binalong Bay Survey Area

Refer Section 6.5.2 and 6.6.2 Pictorial Commentary

Break O' Day Council Map Reference: 3 & 4

Data Source: Break O' Day Council, LIST, Environmental Services & Design, Niche Environment and Heritage

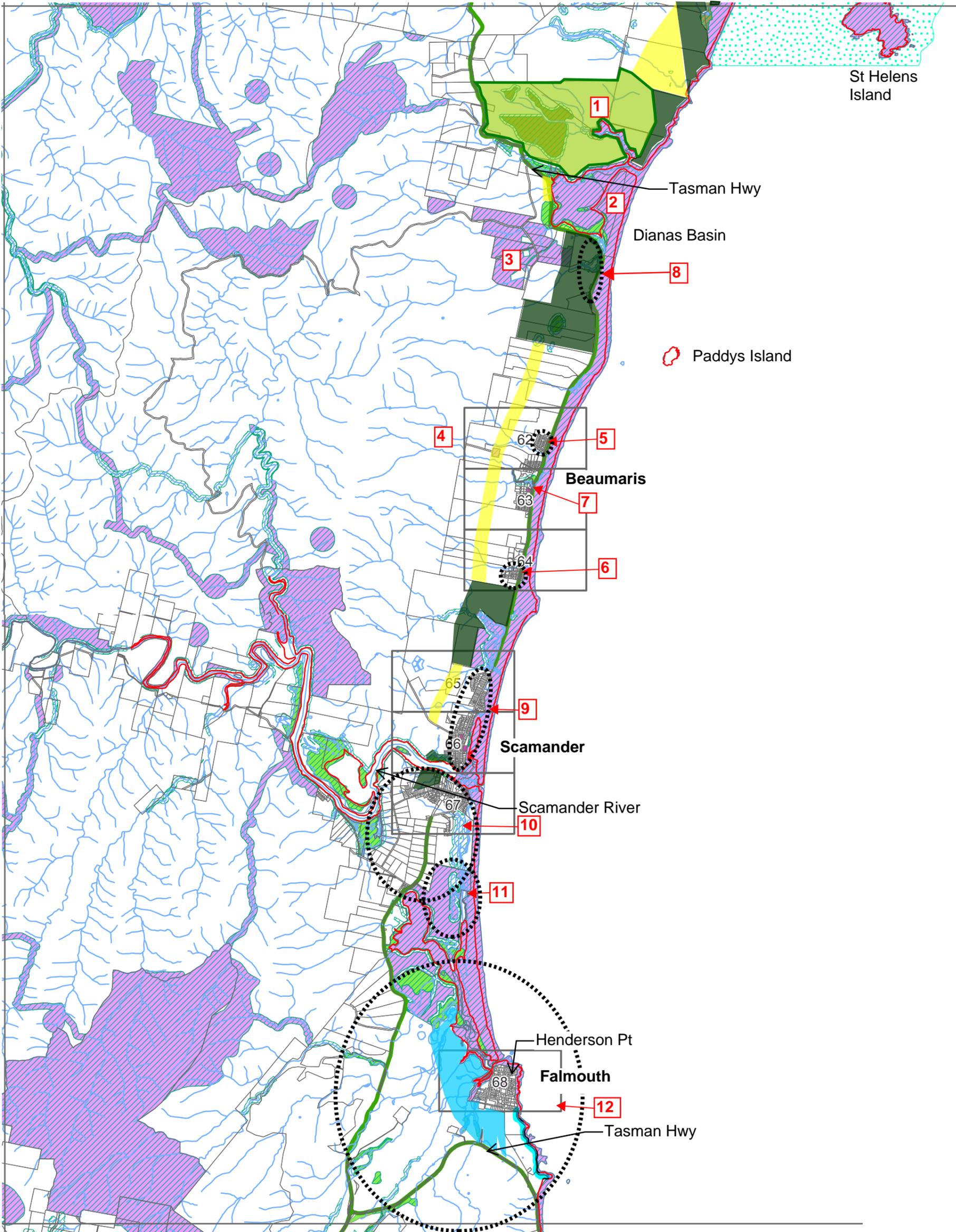




Break O' Day Council Coastal Plan
 Map C: Environmental Values & Reserves Mapping- St Helens Survey Area

Break O' Day Council Map Reference: 5
 Data Source: Break O' Day Council, LIST, Environmental Services & Design,
 Niche Environment and Heritage

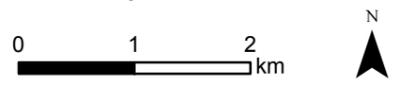


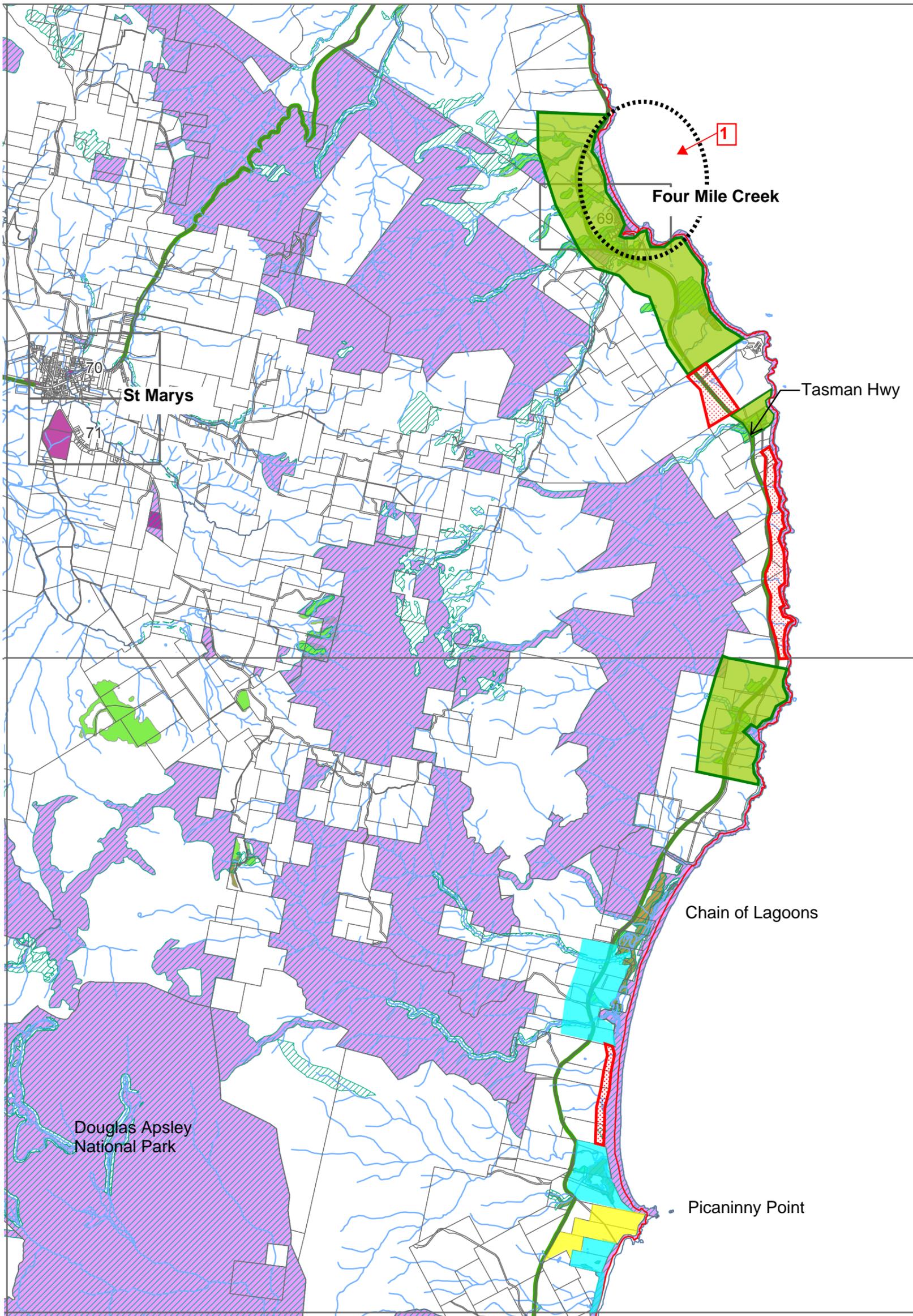


Break O' Day Council Coastal Plan
 Map D: Environmental Values & Reserves Mapping- Scamander Survey Area

Refer Section 6.8.2 Pictorial Commentary

Break O' Day Council Map Reference: 6 & 7
 Data Source: Break O' Day Council, LIST, Environmental Services & Design, Niche Environment and Heritage



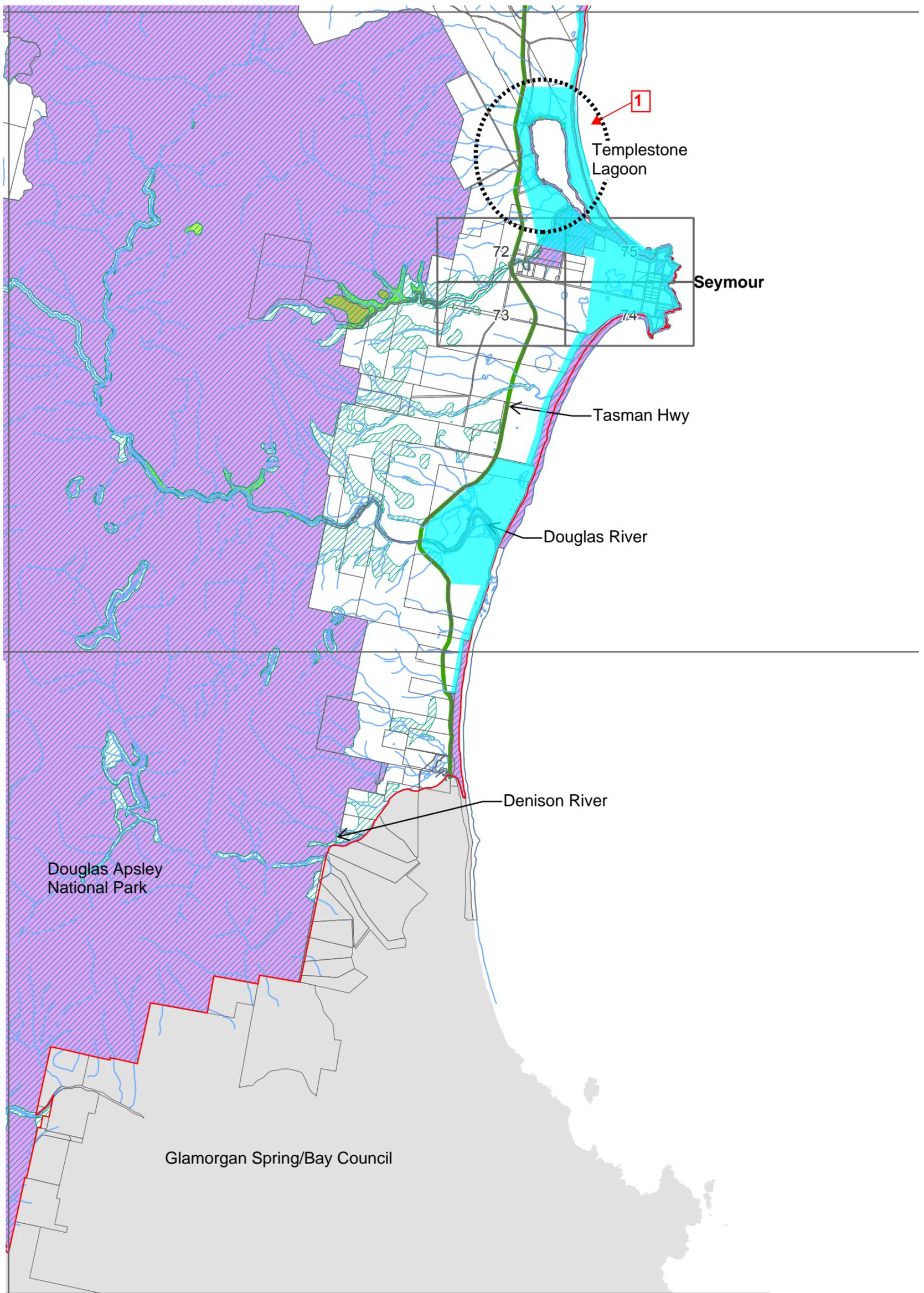


Break O' Day Council Coastal Plan
 Map E: Environmental Values & Reserves Mapping- Ironhouse Point Survey Area

Refer Section 6.9.2 Pictorial Commentary

Break O' Day Council Map Reference: 8 & 9
 Data Source: Break O' Day Council, LIST, Environmental Services & Design, Niche Environment and Heritage

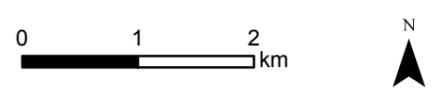




Break O' Day Council Coastal Plan
 Map F: Environmental Values & Reserves Mapping- Douglas River Survey Area

Break O' Day Council Map Reference: 10 & 11
 Data Source: Break O' Day Council, LIST, Environmental Services & Design,
 Niche Environment and Heritage

Refer Section 6.10.2 Pictorial
 Commentary



6.4 Ansons Bay Survey Area

Description: Inclusive of Boulder Point (south of Cape Naturaliste), Eddystone Point, Ansons Bay and Ansons Bay settlement, Policemans Point and the coastal zone of the Mt William National Park.

This area extends from the northern boundary of the Break O'Day Municipality which is located near Cape Naturaliste within the Mt William National Park and southwards including Eddystone Point and the historic site which includes the lighthouse to Ansons Bay and the settlement of the same name. This area includes Policemans Point where Ansons Bay flows out into the sea.

The Mt William National Park almost surrounds the settlement of Ansons Bay and the bay itself, except on the southern side where the area is freehold land previously cleared for farming. A narrow foreshore reserve along the southern shoreline of the bay is part of the Ansons Bay Conservation Area. The Ansons Bay Conservation Area also extends around the shoreline of the Bay through the area of the settlement.

6.4.1 Issues Relative to the Ansons Bay Survey Area:

- Most of this survey area is within the Mt William National Park.
- Eddystone Point, settlement and Historic Site now managed by the Aboriginal community.
- Ansons Bay township is almost surrounded by Mt William National Park.
- *Ansons Bay settlement: Lack of public access to the Bay shoreline within the settlement area due to water frontage shack sites.*
- *Erosion and incremental loss of shoreline of Ansons Bay within the settlement area.*
- *Impact on this threatened vegetation community around shoreline. Melaleuca ericifolia Forest within the area of the Ansons Bay settlement. Also reduced to a narrow fringe along southern shoreline of the bay parallel with South Ansons Bay Road.*
- Fire Management and protection issues with proximity of settlement to the National Park.
- Management of vehicular tracks in National Park and spread of Phytophthora. Parks & Wildlife responsibility.
- Impact on the riparian (stream side) vegetation along the lower reaches of Ansons River from adjacent shack development.
- Area to the south of the bay is cleared farmland with only a narrow fringe of retained vegetation along the shoreline. Possible future development area (residential/tourism) between South Ansons Bay Road and the bay shoreline with scope to widen the foreshore reserve and revegetate. This cleared area of farmland extends southwards to the northern boundary of the Bay of Fires Conservation Area.
- Policemans Point has potential and capacity for increased use as a camping and day use area but would need improved infrastructure and facilities. Impacts present from camping activities and weed infestation and need to be managed.

6.4.2 Pictorial Commentary: Ansons Bay Survey Area



Map A Ref 1: Shack sites, north of Eddystone Lighthouse

This form of development, which occurred in historic times, requires special attention. Within the National Park, isolated communities can have significant environmental effects.

Influences can include introduced animals, firewood sourcing, effluent disposal effects, solid waste disposal, encroachment by clearing outside cadastral boundaries, and access



Sowerbaea juncea, the Purple Rushlily: a rare species, located just north of Ansons Bay

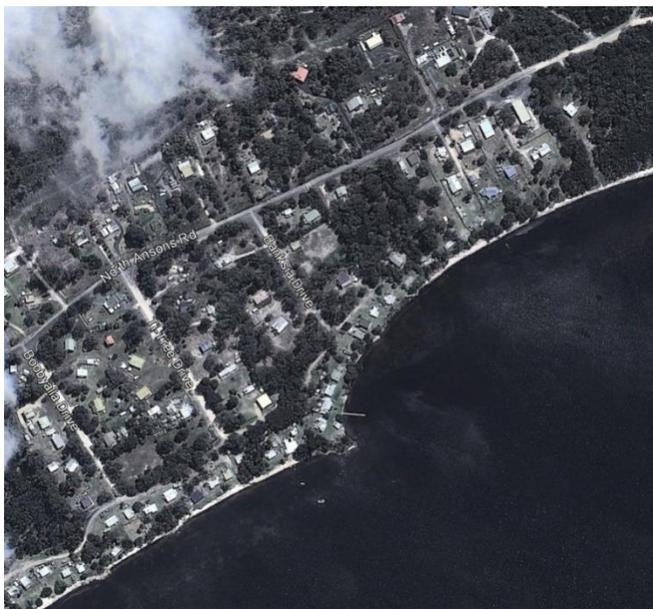
Map A Ref 2: Freehold land, North of Ansons Bay

With a boundary to the National Park, an area of high potential for future development, but also an area of high conservation value, with lakes, wetlands, and diverse coastal vegetation with minimal previous impact.

Development of these areas requires a high degree of responsible and environmentally sensitive design, and consideration of regional effects



Map A Ref 3: Ansons Bay-North East
 Unplanned strip development with minimal shore access. Visible degradation of vegetation from firewood collection, fire clearance, and introduced weeds/garden escapes. Some areas will be strongly impacted by sea level rise, but vegetation will recede. Surrounded by reserved land, which has strong impacts



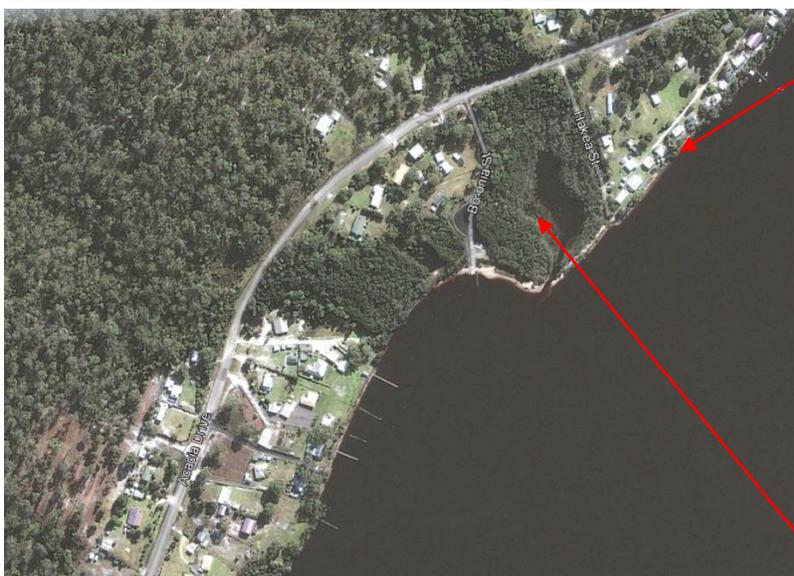
Map A Ref 4: Ansons Bay-Central north
 Unplanned in-filled strip development with minimal shore access. Some areas will be strongly impacted by sea level rise, and the shoreline will become rocky.

Mixture of native and imported plant species, with pet animal impacts on native species.

Litter and bay contamination impacts from stormwater runoff, accompanied by shoreline recession.



Map A Ref 5: Ansons Bay-Central
 Unplanned in-filled strip development with limited shore access. Some areas will be strongly impacted by sea level rise, and some the shoreline will become rocky, and the low-lying areas will flood. Shoreline impacts from numerous jetties. Common impacts on Crown



Camping impacts have degraded wetlands surrounding this lagoon. Acid Sulphate soil will be encountered in surrounding wetlands. Much of this vegetation will be affected by sea level rise.





Map A Ref 6: Ansons Bay-South

In-filled strip development with some shore access. Some areas will be impacted by sea level rise, and the shoreline will become rocky. Mixture of native and imported plant species, with pet animal impacts on native species.



Map A Ref 7: Quarry south of Ansons Bay:

Visible from road, vegetation heavily impacted. Typical of ad hoc extraction for road construction. Rehabilitations feasible.



*Marram Grass *Ammophila arenaria*, is an introduced grass used for dune stabilisation. It has spread extensively. The above picture shows the difference between natural spinifex in front, and steep dense marram behind. Although it does stabilise dunes in certain conditions, its dense formation results in steep-sided, collapsing dunes where recession is occurring. These dunes are unable to be colonised by shorebirds especially penguins, and great lengths of the coastline beaches have been subsequently made unsuitable. The steep sided dunes recede more quickly, resulting in beach loss.



Map A Ref 8: Policeman's Point, SE of Ansons Bay

Coastal reserve with camping areas. Minimal formed access to beach. Entry to bay will be impacted by sea level rise with configuration changes (possibly of closure of bay from sedimentation).

Coastal vegetation heavily impacted from camping (firewood collection, site clearing, tracks). Managed by Parks & Wildlife. Beaches to the south are impacted badly by marram grass*, and are in recession.

Surrounding agricultural area seriously over cleared with minor riparian strips retained-without connectivity. Area has several swamp/wetlands, but these will be impacted by cattle etc.

6.5 The Gardens Survey Area

Description: Inclusive of the coastline from south of Policemans Point to and including the headland and settlement of The Gardens. The Gardens headland is largely cleared freehold farmland and a large area to the south of Policemans Point is also cleared freehold farmland. The Bay of Fires Conservation area extends along the coast and hinterland between these two cleared areas.

6.5.1 Issues Relative to The Gardens Survey Area:

- The headland and hinterland of The Gardens consists of previously cleared farmland. This area has potential for future residential and tourism development without impacting on natural and remnant vegetation. Creek and drainage lines should be retained and revegetated as vegetation corridors in conjunction with any future developments to link with existing reserves. Additional development impacts should be avoided on the southern slopes of The Gardens headland where it adjoins the outflow point of Big Lagoon.
- The coastal vegetation has been reduced to a narrow shoreline fringe around the headland. There is scope for widening the coastal reserve and undertaking some revegetation in conjunction with future development proposals.
- The area to the north of The Gardens headland consists of the Bay of Fires Conservation Area, an area of significant vegetation and high natural and conservation values managed by P&W, but with limited access at present. Possible scope for improved access to the reserve in the future to take pressure off the high use camping and day use areas on the foreshore between The Gardens and Binalong Bay, providing suitable locations for such low impact developments can be identified.
- The area to the north of the Bay of Fires Conservation Area to Policemans Point is cleared farmland with limited access to the coastline. The coastal reserve is limited to a foreshore fringe of vegetation.

6.5.2 Pictorial Commentary: The Gardens Survey Area



Map B Ref 2: Strip Development on the coastal side of roadways is rarely satisfactory, and the example above illustrates many of these negative effects, with limits to public beach access, multiple tracks to the beach, and visual impact on the coastline, Effluent disposal issues may also be present.

Map B Ref 1: The Gardens: Unplanned strip development with minimal shore access. Minimal impact by sea level rise, and the shoreline generally rocky. Vegetation is limited to traces and remnants of native vegetation, and the remainder seriously over-cleared to imported grass pasture. This area is suited for low impact development. Whilst there may be some aboriginal heritage, most other environmental considerations are heavily impacted. Being highly scenic, revegetation would significantly enhance this area.



Map B Ref 3: Coast Storksbill *Pelargonium littorale* at Policemans Point





Map B Ref 4: Gardens Rd, Nth of Binalong Bay-Big Lagoon

Bridgeworks constructed with little environmental consideration on Big Lagoon.

Causeway and low culverts impede flows in and out, and also impedes migration of some species which refuse tunnel access. Causeway culvert combinations can result in scouring and channel development.

Site also shows impact of uncontrolled vehicle access to the beach (NOTE works are underway to restrict/control access). Beaches impacted badly by marram grass, and are in recession

This bridge may be affected by sea level rise, within 25 years.



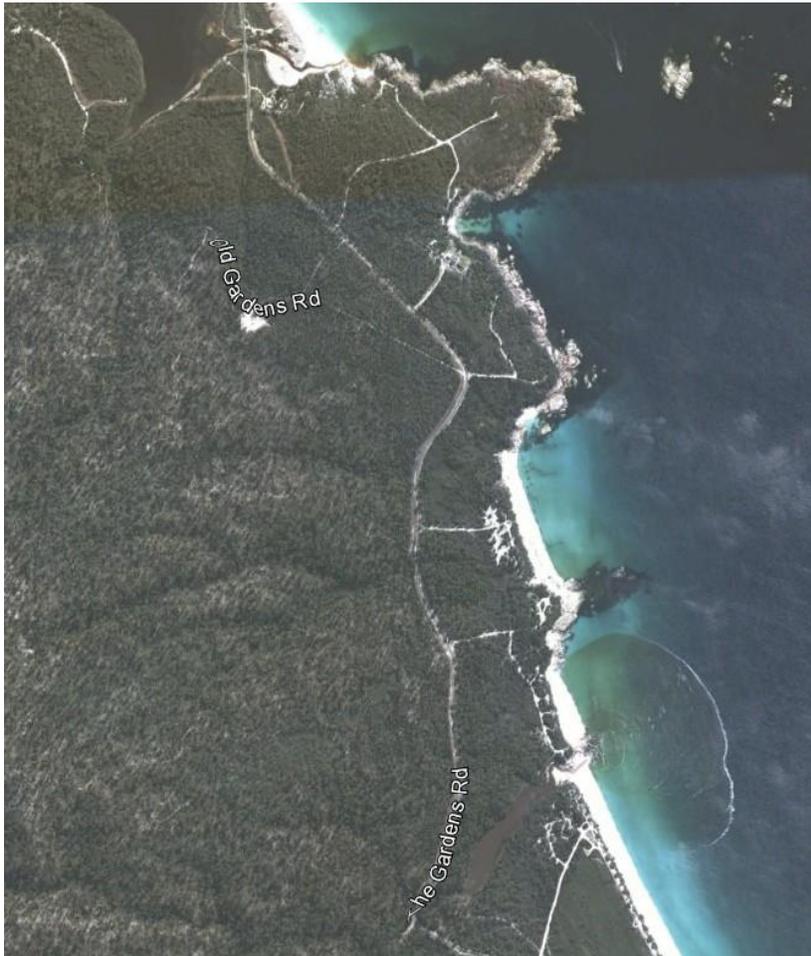
6.6 Binalong Bay Survey Area

Description: Inclusive of Big Lagoon, Sloop Lagoon and Grants Lagoon and adjacent coastline, Binalong Bay and Binalong Bay settlement to Grants Point.

6.6.1 Issues Relative to the Binalong Bay Survey Area:

- Camping areas along the coast at Sloop Reef, Cosy Corner North, Cosy Corner South Swimcart Beach and Jeanneret Beach are all high use areas which are well managed by Parks and Wildlife. However they do impact on the coastal vegetation. No camping fees are applied at present but this should be reviewed.
- Additional camping areas are located in from the coast at Big Lagoon, Sloop Lagoon and Grants Lagoon which are also managed by P&W but do not appear to be as heavily used except possibly in peak season.
- Significant areas of coastal heathland and other vegetation is present along the coast between Big Lagoon and Sloop Lagoon and reserved within the Mt Pearson State Reserve.
- Significant saline wetland vegetation is present around Big Lagoon and Sloop Lagoon.
- Binalong Bay township and settlement is enclosed by reserved land, Mt Pearson State Reserve to the north and west, and Humbug Point Nature Recreation Area to the south which will limit future expansion of the settlement.
- Binalong Bay township and settlement is subject to vegetation clearance particularly remnant trees, and encroachment by residents where freehold land adjoins reserves.
- Loss of reserved land from the Humbug Point Nature Recreation Area by the subdivision of land around the periphery of Binalong Bay township.
- Binalong Bay settlement: Impact of lot sizes in new subdivisions on retained vegetation should be considered. Clearing for dwellings and associated infrastructure and fire protection measures can severely limit the area of vegetation which can be retained.
- Grants Lagoon is vulnerable to vegetation clearance except for the covenant and reserve areas. The reserve located between the lagoon and the beach is well managed.
- The dune vegetation north of the township is important Little Penguin habitat.
- Humbug Point Nature Recreation Area extends from the township of Binalong Bay and around the coastline into St Georges Bay with a camping area at Dora Point and near the Binalong Bay township.

6.6.2 Pictorial Commentary: Binalong Bay Survey Area



Map B Ref 5 :North of Binalong Bay

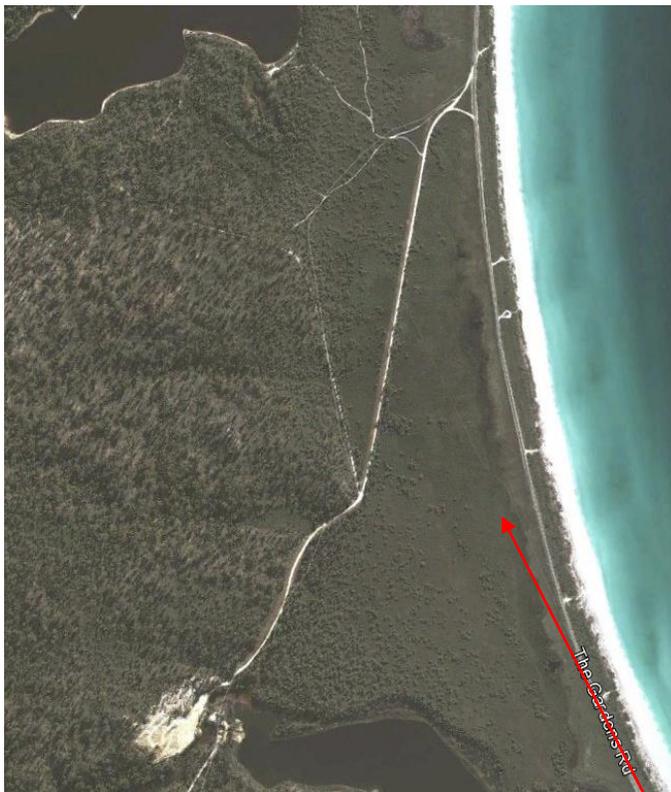
An area of well preserved coastal vegetation. Appears to be burnt off very frequently, resulting in thick ground storey. Beaches impacted badly by marram grass, and are in recession.

Concentrated camping and beach/shoreline access. Excellently managed by Parks & Wildlife, providing toilet and other facilities, controlled narrow shore access points and tracks.

Highly scenic, subject to overcrowding (partly due to fee-free camping). Impacts include pets, waste, clearing and firewood collection.



Map B Ref 6: North of Binalong Bay
Footprints in the sand: four sets were dog prints.



Map B Ref 7: Beachline north of Binalong Bay

Excellent control of beach access, using short parking bays and narrow dune tracks, all gravelled to limit erosion.

West of roadway is a back swamp, in excellent condition, except for a power line and quarry access road. The quarry significantly detracts from the natural scenic values of this area and the whole area would benefit from its rehabilitation

Area appears to be too frequently burnt. Inland lakes e.g. Sloop Lagoon, are a haven for numerous birds, mammals and reptiles.

Beaches are impacted badly by marram grass, and are in recession in the north, accretion in the south.



Map B Ref 8: Residential Development north of Binalong Bay

Many of these residences have had surrounding vegetation variably cleared for fire protection. However the lots are generally large enough so that the overall vegetation impact is moderate. Over cleared land is obvious. The average size of these lots is approx. 2 hectares, which could be considered an absolute minimum for low density rural residential, but certainly not ideal.

Development on the eastern portion is close to the beach, and impacting on coastal vegetation-and wild-life (eg dogs and cats vs penguins and dotterels). However these residences may become threatened by sea level rise in future.

Development of this area is limited due to surrounding reserves, and low-lying land to the north. Increasing the population density would result in serious loss of most native vegetation due to fire control clearing.



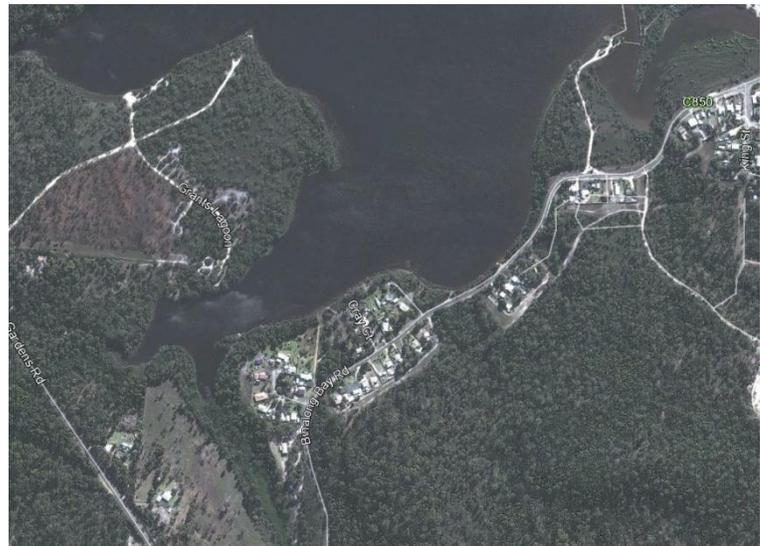
Map B Ref 9: Binalong Bay overview:

The main township is surrounded by reserves (south, and east), and lake and wetlands to the north west.

Development on the lake shores detracts from its current value; a haven for wide a variety of wildlife and coastal vegetation in good condition, with excellent recreational use potential. The wetlands appear to be well managed, with well formed and maintained tracks.

Whilst rural residential development areas are available to the south west, the available area may not be sufficient (at the required density minimum lot size 2ha) that enables satisfying fire control clearance without degrading the available habitat) to cope with significant population density increases.

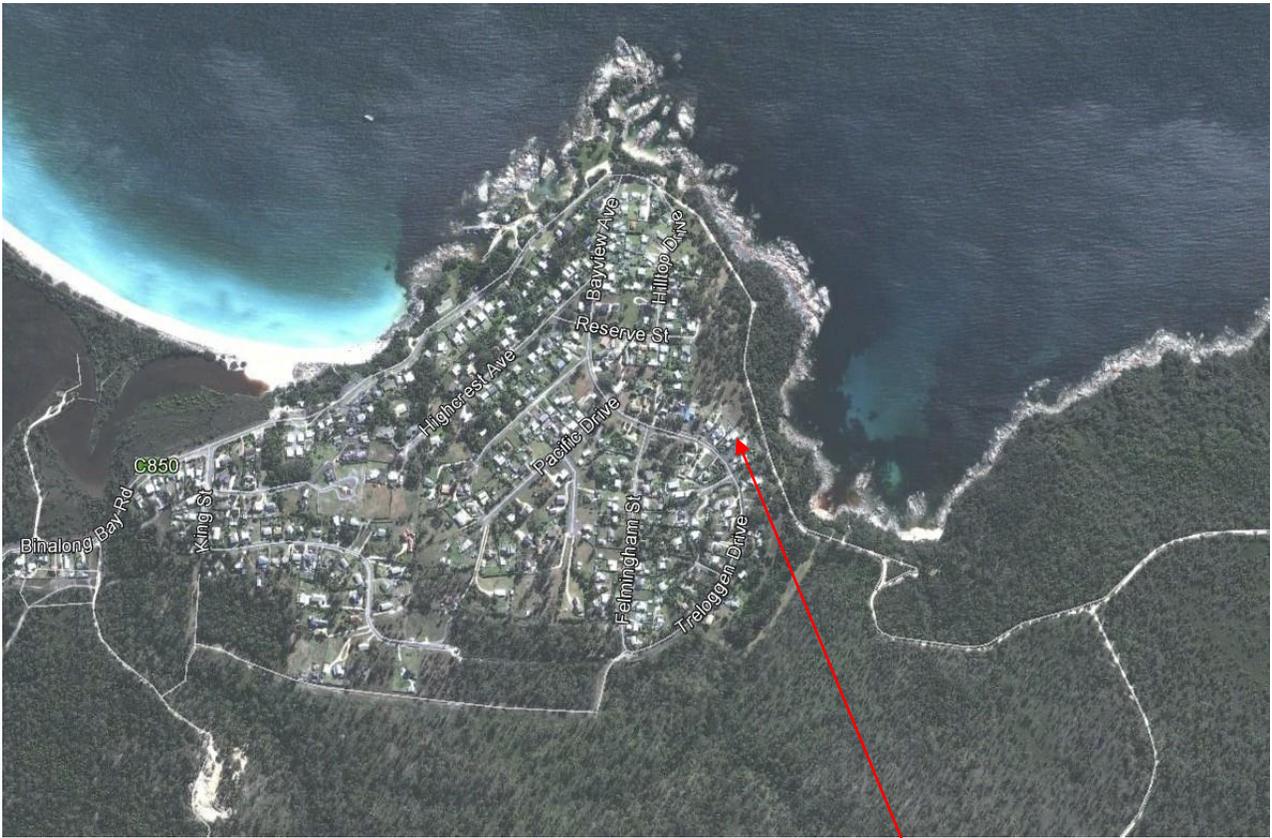
Map B Ref 10: Detail of the western (entry) to Binalong Bay: Some evidence of residential and agricultural development impacts are visible. The impacts on Grants Lagoon should be assessed when considering development in this area—from over-clearing, runoff contamination, habitat loss, visual amenity and sea level rise. Camping site clearing is visible.



Map B Ref 10: Vegetation loss from a single residence construction, Binalong Bay Road.

Trees are often removed to “improve the view”, but a “skin” of trees makes the trees liable to topple in a strong wind; tree lines should be at least “3 trees wide”, to enable self support and limit limb fall.

Subdivisional clearing often leaves isolated trees for visual effect, but these are often removed later, as a being “dangerous”.



Map B Ref 12: Binalong Bay Township

Note the degradation of vegetation on the east side of the township.



Map B Ref 13: Binalong Bay: Humbug Point Nature Recreation Area.

Under pressure on the town boundaries from urban development.

A well managed, scenic and diverse reserve, coastal vegetation in this area is under some pressure from campers and day visitors. Fire control is a dominating management issue.

This area has high aesthetic, diversity and tourism potential values.

Encroachments onto the reserve boundaries are evident.



Map B Ref14: Binalong Bay township-older section, looking South from Skeleton Point. The larger trees to the left are shoreline remnants, and are a significant food source for several bird species including Swift Parrot.



Map B Ref 15: Binalong Bay township-newer eastern section, looking South from Skeleton Point. Most of the larger trees have been removed, where residential development has taken Place.



Map B Ref 16 : Garden encroachment, following removal of most native species.

Commonly, gardens can invade Crown Land, especially on coastal



Map B Ref 17: Larger eucalypts, which provide habitat and food source for many species.



Map B Ref 17: Along the walk to Skeleton Point, almost all of the large Eucalypts are dead, and only the trunks remain.

6.7 St Helens Survey Area

Description: Inclusive of St Helens and Georges Bay and their surroundings including part of Humbug Point Nature Recreation Area, Stieglitz, Akaroa, and St Helens Point.

6.7.1 Issues Relative to the St Helens Survey Area

- Georges Bay contains significant wading bird habitat on the tidal flats and important wetlands around the bay and along the lower reaches of the Georges River.
- St Helens urban area will be subject to future sea level rise.
- Significant trees of Blue Gum *Eucalyptus globulus* are present around the town including within Kings Park, which is important habitat for the threatened Swift Parrot.
- Medea Cove is an important semi enclosed tidal wetland and saltmarsh with *Melaleuca ericifolia* Forest but has been subject to siltation from erosion on hills of the hinterland. It is reserved as a conservation area.
- Stieglitz and Akaroa are significant suburbs of St Helens around the shoreline of Georges Bay. Impacts evident on the vegetation within the narrow foreshore reserve along Georges Bay and on the larger St Helens Conservation Area between the main road and the coastline where dwellings adjoin the reserve.
- Area of Freehold land between Stieglitz and Diana's Basin. Increase width of coastal reserve and incorporate lagoon area north of Diana's Basin which is surrounded by freehold land.
- St Helens Point and St Helens Conservation Area are important areas for the conservation of coastal dune vegetation and includes some important wetlands. Localised impacts on the dune vegetation near the point and in the off-road vehicle recreation area. There is no camping in the St Helens Point area.
- Jocks Lagoon is a Ramsar listed wetland of international significance located to the immediate north of Diana's Basin. Although it is a dedicated conservation area it is surrounded by freehold land and so is vulnerable.
- A significant area of the threatened vegetation community *Melaleuca ericifolia* Forest is present within freehold land to the north of Diana's Basin.
- A concentration of threatened species of flora occurs on a block of crown land ID:FAO80 located between the aerodrome and Chimney Lagoon. Conservation status unknown.

6.7.2 Pictorial Commentary St Helens Survey Area



Photo 1: Wetlands north of St Helens: Moulting Bay

Camping area on the east bank-hardly used, minimal facilities.

Vegetation in good to moderate condition rich in orchids. Area appears to be less frequently burnt. .



Caleana minor
Little Duck orchid, observed in this area. Size related to a 5c piece



North of St Helens: Wetlands, impacted by adjacent agricultural and residential activity. The wetland boundary has minimal shielding and habitat-providing bushland, limiting small birdlife.

Wetlands are all under threat from rising sea levels. In the short term (>100 years) there will be restricted opportunity for re-development of new wetlands, but these will eventually develop from siltation from increased runoff and erosion.

Photo 2: Aquaculture: North of St Helens: Georges River

This area has impacts from heavy weed infestation and nutrient release. However, the island in the river mouth are havens for birdlife and ecologically valuable.



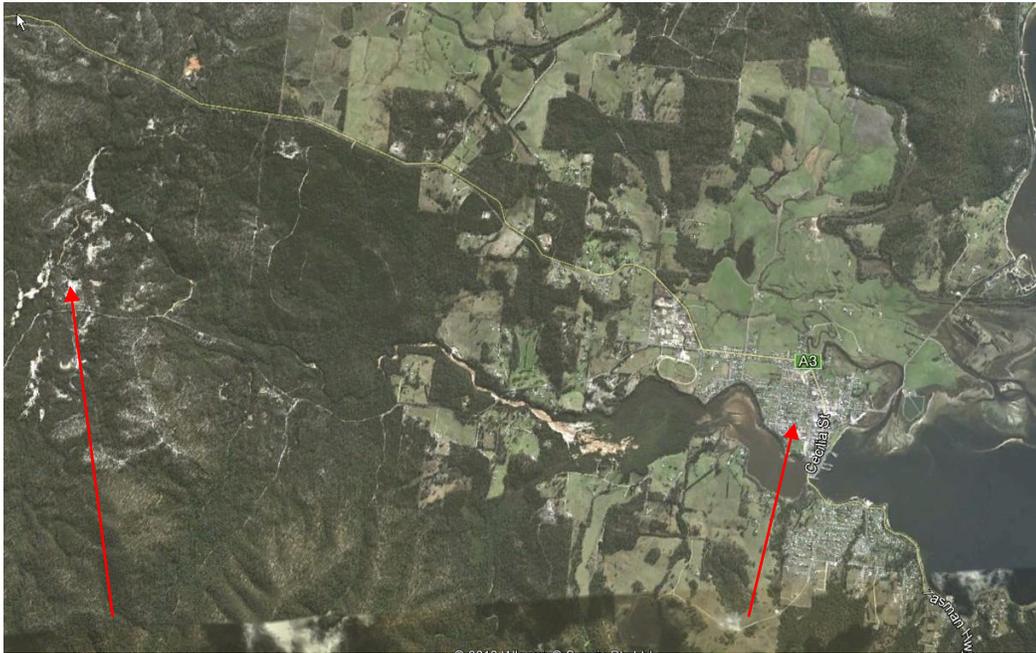


Photo 3: St Helens region: The wetlands west of the township are under threat from siltation, possibly resulting from erosion of sediment from the areas of un-rehabilitated gravel pits visible in the picture. The choke point in the estuary (the bridge) is clearly visible. These wetlands are impacted by adjacent agricultural and residential activity. Management of this area is required in a regional context.



Photo 4: St Helens region - detail: These wetlands have high conservation values, and the likely development direction for St Helens is along the banks of this wetland. Impacts from stormwater runoff, litter, domestic animals, over clearing and garden escapes must be managed. Impacts from residential developments can be very extensive. Impacts from industry and waste disposal must also be considered.

Note the impact of siltation both coarse, and fine. These are generally natural processes, but are impacted by upstream conditions. Increases in silt deposition can result in reduced waterway capacity, leading to increased flooding. Wetlands are excellent flood buffer storages.

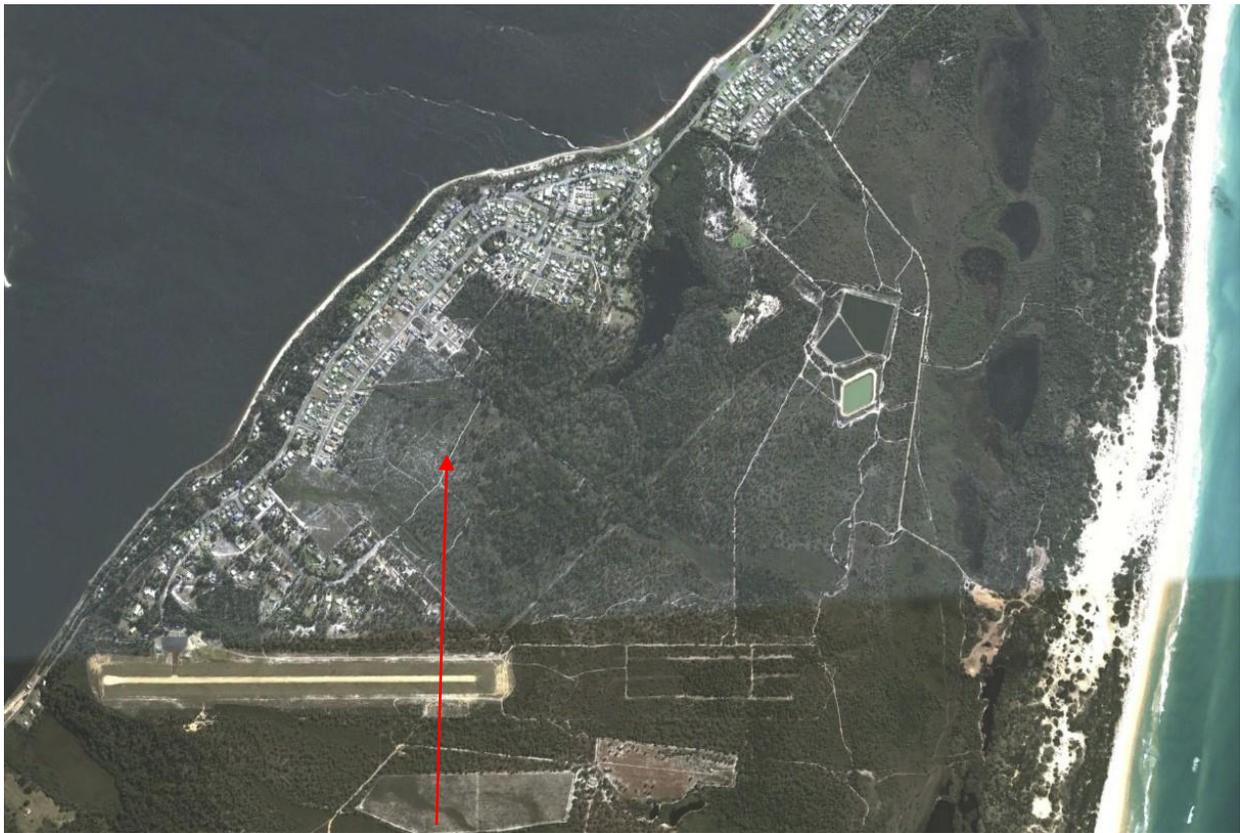


Photo 5: Stieglitz region: A strip development along the estuary, this development has had high impacts on natural vegetation along the shoreline, but is limited by reserves to the east. Infill development potential exists to the east of the strip, north of the airport runway.

The wetlands and dune systems in the reserves have high conservation values, and there is potential for impacts from stormwater runoff, unrestricted track and beach usage by vehicles, litter, weeds, domestic animals, over clearing and garden escapes which must be managed. The shooting of ducks is still permitted in season in this area.

Photo 6: Akaroa, North Stieglitz: the dune and estuary systems in the reserves have high conservation values, and there is potential for impacts from unrestricted track and beach usage by vehicles, litter, weeds, and feral animals which are managed by Parks and Wildlife.



An opinion expressed by some locals involved a connecting bridge across the estuary outlet. The environmental impacts of such a proposal could be highly deleterious, despite the potential convenience. This area could be altered rapidly by changing coastal conditions, including sea level rise.

The impact of isolated residential developments in these remote parts of the coastline have effects that are considerably greater than their immediate footprint.



Photo 7: Stieglitz south: The wetlands and dune systems in the reserves have high conservation values, including the RAMSAR Jocks Lagoon. Impacts from airport developments can include noise disturbance as well as loss of habitat, and the proximity of clearing and potential airstrip extensions can be easily observed. Much of the land to the west of this fragile RAMSAR area is freehold.

Potential impacts on such highly valued areas from nearby residential development are such that strong barriers and buffer zones should be in place. However, it should be noted that numerous lagoons with similar ecological values are present along the coastline, and some exist with reduced development pressure and much greater buffer distances compared to Jocks Lagoon. The others do not, however, enjoy the level of protection.

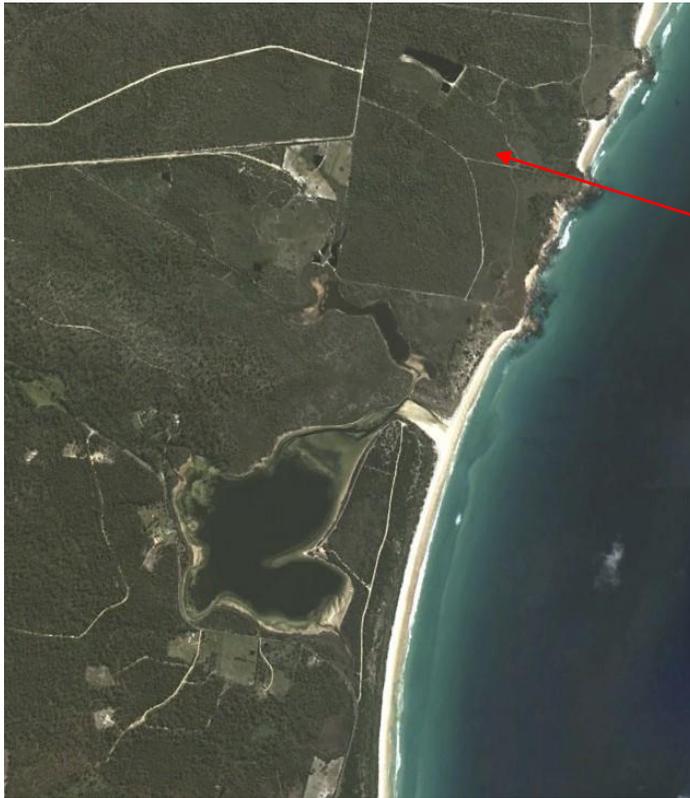
6.8 Scamander Survey Area

Description: Inclusive of Dianas Basin and surrounds, Beaumaris, Wrinklers Lagoon and Scamander.

6.8.1 Issues Relative to the Scamander Survey Area

- Scamander/Beaumaris strip development. Urban area extends along the coastline and highway towards St Helens. Lots on eastern side of highway tend to encroach into the coastal reserve and impact on the vegetation.
- Coastal Conservation Area has access points at Shelly Point and Paddys Island for camping and day use which result in localized impacts on the vegetation.
- Scamander River has riparian wetland vegetation of high conservation value.
- Scamander River estuary and lagoon and adjacent beach is within the Coastal Reserve. Critical habitat for threatened species of seabirds which is well managed by P&W.
- Wrinklers Lagoon north of Scamander is sensitive habitat and included within the Coastal Conservation Area. There is some encroachment by dwelling from the south.
- Winifred Curtis Reserve located on the northern side of Hendersons Lagoon is a significant flora and fauna reserve, managed by a Trust.
- Diana's Basin, some camping and day use impacts particularly in the area between the lagoon and the sea beach. The highway passes close to the southern and western shorelines of the lagoon. The threatened vegetation communities *Eucalyptus globulus* Dry Forest and *Eucalyptus ovata* Forest occur around the shoreline of Diana's Basin.
- The Skyline Tier Restoration Project (commenced in 2007 through funding through the Biodiversity Fund) is restoring 350ha of Radiata pine plantation land above Scamander back to native forest (refer Map D Ref 4). A process of removal of pine wildlings, weeding and planting has allowed biodiverse native trees and scrub species to rehabilitate the plantation area, and provide habitat for animals, plants and birds. The project is one of the most significant plantation restoration programs in Australia. The ecological benefits of the project are considerable and include reconnecting coastal and hinterland wildlife corridors, protection and recovery of threatened flora/fauna and vegetation communities and re-establishing the coastal catchments as native ecosystems. In addition, a highly visible coastal skyline will be protected from ongoing clearfelling (Source: http://www.et.org.au/skylinesite_learnmore).

6.8.2 Pictorial Commentary: Scamander Survey Area



Map D Ref 1: Private land north of Diana's Lagoon has high conservation values, and close coastal proximity, and is adjacent to a RAMSAR wetland but is freehold land.

Map D Ref 2: Diana's Lagoon: high conservation values exist in this area, which is impacted by both potential developments and recreational usage. The shoreline of the lagoon is a signed dog-on-lead permitted area, but the beach is a dog prohibited area.



Any development proposed for this site should be restricted to low density, low impact residential, with sensitive ecological design requirements.



Map D Ref 3: South west of Diana's Lagoon-residential development.

Vegetation clearing in high fire risk areas is illustrated. Generally, an area surrounding the residence, including driveway, shed(s) etc are included, but if the lot is of sufficient size, both habitat and connectivity are maintained along with privacy, minimal visual impact, and capacity for fire defence.

Roads are used for firebreaks, (but also result in roadkill and barriers to wildlife mobility).

Generally this area is a reasonable habitat for mammals, but excellent for birds and vegetation species.

This form of development provides low population density but high ecological values, in often poor agricultural potential land.

Map D Ref 4: The Tasman Highway follows the coastline, and this picture illustrates that majority of residential development has been restricted to the western side of the road, leaving the beach and dune system in natural condition.

Access ways are provided at regular intervals.

This form of coastal development, despite the negatives of servicing strip advancement, results in preservation of the coastline ecology whilst permitting reasonable population density.

Provided that corridors to the highlands are retained, this form of development supports maintenance of coastal ecological values.

Clearfell logging west of Beaumaris and Scamander

This activity results in both positive and negative effects:

- Economic benefits for the community (employment, retail, etc)
- Loss of habitat (all species)
- High erosion rates leading to creek degradation and high siltation rates
- Adverse visual impact
- High traffic impacts on local roadways
- Severance of corridors at the base of the hills

The Skyline Tier restoration project restored 350 ha of Radiata Pine plantation back to native forest with considerable ecological benefit.





Map D Ref 5: Village development, north of Scamander: (Beaumaris)

This form of development suits this coastal environment:

- Restricted ecological footprint
- Minimal coastal impact
- Concentration of services
- No effects from sea level rise
- Fire threat can be limited by sound building practices

Care must be taken to avoid impacts on back lagoons and swamps- and adequate buffer must be retained to prevent disturbances.



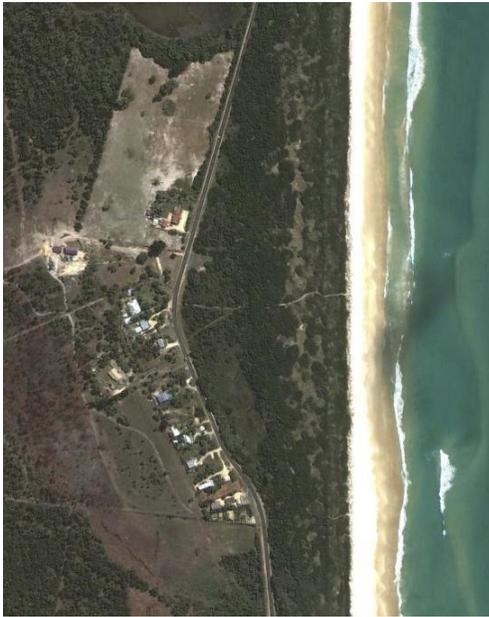
Map D Ref 6: Village development gone awry:

The village exists on the coastal side of the roadway, and the site has been pre-cleared of almost all of the vegetation.

This encourages weed growth, and also encourages imported species to be planted. Habitat is lost, for that period prior to village infill. Erosion and rainfall runoff rates are significantly increased, further degrading the site.



Map D Ref 7: Dune system, showing back swamp and creek entry. These systems are vital for numerous and animal species.



Map D Ref 8: Strip development, north Scamander:

This site illustrates over clearing, over burning, and loss of concentration of residences.

However it obeys the principle of keeping development off the coastal strip. The high quality of the coastal strip can be contrasted with the condition of the vegetation to the west of the roadway.



Map D Ref 9: Scamander, North Side

Limited by Wrinkler's lagoon to the north, low hills to the west and dunes to the east, Scamander has developed in an elongated formation.

This has resulted in pressure on the coastal lagoon east of the township, which shows impacts from weeds, litter and other degradation.

Impacts from waste disposal, and normal human activity, are evident to the west.

Despite these impacts, high conservation values remain in the lagoon to the north and the east, as well as well known (but poorly advertised) beach rookery for Terns

Great opportunities exist for taking advantage of existing beach and dunes, by providing access ways. Ecologically sensitive management of coastal vegetation and parks is required.

An example of over-clearing for residential subdivision is evident to the north. New residences will have to replace soil after erosion has removed much of it prior to sale. Solution is to limit vegetation clearing to that necessary for road construction, then builder and purchaser clear as required for residence construction when necessary. Soil and mulch is then retained.





Map D Ref 10: Scamander, South side

An example of significant habitat loss through over clearing, resulting from small lot size.

The clearing required for fire prevention is such that despite the purchasers want a “bush-block”, little vegetation remains, certainly not enough for connectivity or reasonable mammal habitat.

Significant losses of larger “habitat” trees, and most of the invaluable shrubby undergrowth necessary for smaller birds and reptiles, has occurred. The pressure on this area from domestic impact is immense.

Planning Scheme minimum lot sizes of more than 2 ha could reduce the environmental impact. Fire impact on this current form of development is still a high risk despite the extent of clearing.



Map D Ref 11: Winifred Curtis Reserve.

This is large area of coastal vegetation in excellent condition despite burning in recent times, with high ecological, recreational and tourism values.

A diverse area of coastal heath, backswamp, lagoon, dune systems and beaches, interspersed with well maintained and well signposted walkways, this area has excellent values.

Very little publicity was observed regarding this site. It is well known to local population, but should be tourist drawcard.



Black-eyed Susan
(*Tetralochea labillardierei*)



Blue Dampiera
(*Dampiera stricta*)

Map D Ref 12: South of Scamander

Falmouth: Coastal village, surrounded landwards by agricultural clearing. This has high impacts both physically and visually on the coastline, and on nearby lagoons and beach.

Agricultural runoff is often high in both chemical and animal fertilizer. Weed spread is inevitable, considering that pasture grasses are quite invasive. Native vegetation is often intolerant of high nutrient levels

Coastal beaches are generally in recession, ie eroding. This will result in either a rocky coastline and/or in loss of beaches.

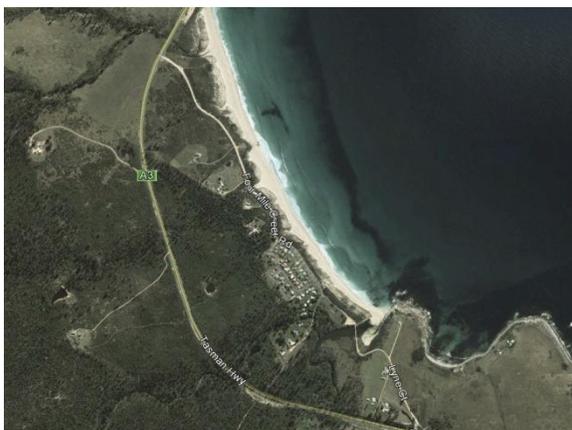
6.9 Ironhouse Point Survey Area

Description: Inclusive of Falmouth, Hendersons Lagoon and surrounds, Four Mile Creek settlement, Ironhouse Point, Chain of Lagoons and Picaninny Point.

6.9.1 Issues Relative to the Ironhouse Point Survey Area

- Falmouth, enclosed by cleared farmland with lagoon and wetlands to the north and north-west. Shoreline vegetation reduced to a very narrow coastal fringe.
- Hendersons Lagoon, significant wetland and surrounding vegetation protected by a conservation covenant on the southern side and the Winifred Curtis Reserve on the northern side.
- Excellent management plan exists for the Falmouth/ Henderson Lagoon area.
- Falmouth, potential for future development towards the south and Mariposa Point. Coastal Reserve requires revegetation between the township and Mariposa Point.
- Mariposa Point to headland north of Four Mile Creek Beach, the highway follows close to the shoreline with cleared elevated land to the immediate west.
- Four Mile Creek. Good existing connectivity of vegetation between coastal reserve, settlement, and Four Mile Creek itself to the wooded hilly hinterland. Bisected by the highway however.
- Four Mile Creek to Ironhouse Point. Partly cleared and wooded with rural residential developments.
- Ironhouse Point to Wardlaws Point. Much of the area between the highway and the coast is privately owned and cleared farmland with limited access to the coastline. The coastal vegetation is now limited to a narrow foreshore fringe. Important reserves to the west of the highway.
- Chain of Lagoons. Significant area of wetlands and fringing vegetation. Camping area at northern end. Partly cleared freehold farmland at southern end with scope for some revegetation to enclose that area of lagoon and to link remnant vegetation. The area between Chain of Lagoons and Piccaninny Point parallel with Lagoon Beach should be retained as farming and/or low density residential with restrictions on the clearing of further vegetation.
There is limited public access to the Lagoon Beach except at the northern end, and should remain so.
- Piccaninny Point should be retained as farming or low density residential with restrictions on the clearing of further vegetation.

6.9.2 Pictorial Commentary: IronHouse Point Survey Area



Map E Ref 1: South of Scamander. Ironstone Point

4 Mile Creek; Coastal village/development, with high impacts both physically and visually on the coastline, and on nearby creek and beach.

Clearing of native vegetation close to the coastline negatively impacts the available habitat for a wide range of species. There is reasonable connectivity with the wooded hinterland.

6.10 Douglas River Survey Area

Description: Inclusive of Long Point and Templestoe Lagoon, Seymour, Douglas River and the settlement of Douglas River and Denison Beach.

6.10.1 Issues Relative to the Douglas River Survey Area

- Templestoe Lagoon is located within freehold land. Existing covenant on southern side between the lagoon and the Seymour settlement. Encouragement to reserve balance of lagoon surrounds with a covenant, and undertake fencing and revegetation around the lagoon and along the creeks, particularly Doctors Creek, which flow into the lagoon. Important to re-establish linkages of vegetation from the coastal reserve to the Douglas Apsley National Park to the west.
- Long Point / Seymour should be retained as low density residential and farming in order to limit impact on remnant vegetation. There may also be potential for low impact tourism without impacting on remnant vegetation.
- Douglas River settlement has potential for future development, both residential and tourism with its proximity to Bicheno, without significant impact on remnant vegetation. However any future developments should incorporate increased width of the coastal reserve with revegetation and with the fencing and revegetation of a riparian corridor along the Douglas River itself as well as any associated minor streams. The river is an important link to the national park to the west.
- Denison Beach has potential for increased day use with improved facilities however there is limited access through freehold land from the highway.
- Opportunities needed to revegetate the foreshore vegetation which has been reduced to a narrow fringe between Piccaninny Point and Douglas River.
- Opportunities needed for the fencing and revegetation of creek-lines through freehold land between Piccaninny Point and Douglas River settlement to improve connectivity between the coastal reserve and areas of remnant vegetation with the wooded hinterland and the Douglas Apsley National Park to the west.

6.10.2 Pictorial Commentary: Douglas River Survey Area



Map F Ref 1: Typical Coastline- South of Scamander

Templestowe Lagoon, surrounded by extensively cleared agricultural areas. Seymore village is just south. A thin coastal vegetated strip remains. Retention of riparian (streamside) vegetation is evident, albeit limited. Connections between the hill slopes and the coastline is essential for movement between these habitats. (e.g. devil tracks and scats were observed within penguin rookeries in this area indicating that devils may predate on penguins, and certainly scavenge on beaches. Devils would be travelled mostly along the riparian routes.) Riparian rehabilitation, associated with attention to environmentally sensitive bridge and culvert design, would improve the ecological condition of these areas. This also illustrates the relationship between the ranges and the coast. The coast is "fed" by erosion from the ranges.

6.11 Key Issues and Outcomes of Vegetation Management Plan

In addition to the issues identified for each of the Survey Areas, ES&D identified further issues relating to coastal ecosystems, including matters relating to the management of the coastal zone (listed below). As these relate to the wider objectives of this Coastal Plan, these are presented in more detail later in this report at Section 8: 'Coast Park Plan - Issues Analysis and Project Outcomes'.

- An extensive range of existing **reserved land** exists along the coastline, particularly to the north of St Helens. However to the south only isolated narrow strips have ecological value.
- A number of ecologically significant areas are on **private land** (mostly riparian lands, remnant forests and coastal lagoons).
- There are some areas along the coast that have **degraded ecological value** and are suited to development along the coast.
- **Over-burning** is an issue for vegetation on the coastal areas and vegetation management needs to take into account the conflicting but overlapping requirements of protection of life and property from fire and protection of natural ecology from fire. Subsequently a fire management policy is recommended to be completed.
- The main detractors to coastal areas (from edge effects of urban development and from tourism) include **weeds, waste disposal (litter and septic waste), and destruction of vegetation** (from over use, firewood collection and developments).
- **Vegetation retention and enhancement** to maintain and improve aesthetic values (to attract tourists) are seen as significant issues for development. The "value" of vegetation should take into account the ecological value as well as the aesthetic and timber resource value. The value should be considered in terms of its connectivity, type, and abundance.
- **Vulnerability of foreshore fringing vegetation and habitat** (from overuse, camping and day use, from previous clearing, strip development, sea level rise and dune erosion, dog management) is a key issue;
- **Importance and vulnerability of coastal lagoons, river and stream estuaries** is also a key issue in the Municipality;
- Protection and control of **remnant natural vegetation** (from overuse, camping and day use, encroachment of urban development, fish farming and sea level rise) is required to be addressed;
- **Revegetation priorities** include increasing width of narrow coastal fringe; along creeks and other linking corridors.

7 Major Assets Inventory

An inventory of major assets within the Break O'Day coastline and coastal zone was undertaken by TCG Planning between September 2012 and February 2014. As indicated in the inventory maps within this section, almost all accessible passive and active open space areas of the coastal zone and access and parking areas are located within Reserves, Conservation Areas, or parks owned and/or managed by Tasmania Parks and Wildlife Service, Department of Primary Industries Parks, Water and Environment, and Break O'Day Council.

The assets inventory is presented in map and associated table format separated into seven survey areas of the Study Area identified earlier in this report. Each locality containing assets is referenced with a number that corresponds with the asset inventory map for that survey area. Some photographs are also included as examples of the assets. While the assets inventory is extensive, it is not exhaustive and may inadvertently exclude some facilities within some of the coastal areas, particularly within the more remote and/or inaccessible areas.

As indicated on the maps, there is a concentration of coastal reserve assets near the higher populated and visited areas of Binalong Bay/Bay of Fires Conservation Area; the Georges Bay Foreshore areas near the township of St Helens and Stieglitz; and beachside villages of Scamander-Beaumaris. Facilities become more sparse (but no less scenic and usable) toward the more northern and southern parts of the coastline of the Municipality.



Break O' Day Council Coastal Plan
 Map G: Assets Inventory- Ansons Bay Survey Area

Break O' Day Council Map Reference: 1 & 2
 Data Source: Break O' Day Council, LIST, Environmental Services & Design,
 Niche Environment and Heritage



Table 3: Major Assets Inventory Ansons Bay Survey Area (Map G)		
Map Ref No.	Area/Locality	Asset/Facility & Comment
1.	Mt William National Park	Walking Trails (36km of coastline within National Park)
2.	Mt William National Park Deep Creek	Camping Area (Small to medium sized caravans and motorhomes only) Pit toilets Bore water is available for washing only Fireplaces provided No drinking water No rubbish collection facilities
3	Mt William National Park Deep Creek/Picnic Rocks	Picnic table Pit toilet
4	Eddystone Point End of Deep Creek Road (on the point)	Car park - needs grading Boat ramp - Concrete blocks, reasonable condition Parking - boat parking impacts on grassed area, good manoeuvring GPS marker for boat coordination Picnic tables Toilet - very poor condition, needs door Small timber building adjacent to car park
5 & 6	Eddystone Point End of Deep Creek Road (on the point)	Walking Trails to beach/coastline Lighthouse and heritage buildings Informal parallel parking Well maintained Leased to Aboriginal community (Larapuna)
7	Ansons Bay Boronia Street (via Acacia St)	Jetty - new Boat ramp - Ramp concrete blocks - good condition Beach for mooring Car Park - 8 spaces, limited 2 Picnic Tables - good condition Public Toilet - new, good condition Fishing table - poor condition
8	Bay of Fires Conservation Area Policeman's Point Policeman's Point Road	Camping Area: Internal Access road from Policemans Point Road extremely poor. Sites among trees and many sites have direct beach access Information board - could be better used. No toilets, rubbish collection, water or firewood
	General Comments	Relatively isolated area no signage at main road intersection (Sth Ansons Road) to indicate where Policemans Point camping area is Signage heading south from north (Policemans Point) junction is confusing. Limited visibility departing road 859 Fishing tables at Policemans Point and Eddystone Point warranted



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**Table 4: Major Assets Inventory
The Gardens and Binalong Bay Survey Areas
(Map H)**

Map Ref No.	Area/Locality	Asset/Facility & Comment
1	Bay of Fires Conservation Area Accessed from The Gardens	Coastal Walking Trail - Policemans Point/Pebbly Beach/Break Yoke Beach/The Gardens
2	Bay of Fires Conservation Area Northern end of The Gardens Road, The Gardens	Day facilities only Parking - sealed approx 7 Signage Boat Ramp
3	Big Lagoon entrance/Northern Taylors Beach	Parking Areas - On northern side of The Gardens Road (eastern and western sides).
4	Bay of Fires Conservation Area Big Lagoon	Camping - Access roads off the Old Gardens Road offer sheltered secluded sites. No toilets (bring own), no firewood, no water, no rubbish collection
4	Bay of Fires Conservation Area Sloop Lagoons	Camping - As above. Environmental damage from 4WDs; old quarry No signage directions
5	Bay of Fires Conservation Area Taylors Beach	Day use only - no facilities Several (7) access points and informal parking areas from The Gardens Road. One Info signage
6	Bay of Fires Conservation Area Seatons Cove/Sloop Reef	Camping (on north and south of access road). Car and tents only. No toilets (bring own), no firewood, no water, no rubbish collection
7	Bay of Fires Conservation Area CosyCorner North & South	Camping Pit toilets (3 at South; 2 at North) Parking Information board (south) No water, firewood, or rubbish collection
8	Bay of Fires Conservation Area Swimcart Beach	Camping and Day Area - takes small vans/campers Pit toilets (2) (2 toilets 1 building) Day shelter Informal Parking area No water or firewood No rubbish collection
9	Bay of Fires Conservation Area Jeanneret Beach	Day Use Area Informal camping area Pit toilet (2 toilets in 1 block) Information board No water or firewood No rubbish collection Gravel turning area and path to beach
10	Bay of Fires Conservation Area Grants Lagoon	Camping Area - Takes caravans/motorhomes Pit toilet (1) No water or firewood No rubbish collection
11	Grants lagoon Accessed from Binalong Bay Road Binalong Bay	Day use area (accessed from Binalong Bay Road) - access to the beach Gravel turn around area
12	Bay of Fires Conservation Area Grants Lagoon	Boat Ramp - Informal, concrete formed, but poor standard
13	Humbug Point Nature Rec Area	11 picnic tables 1 toilet and showers



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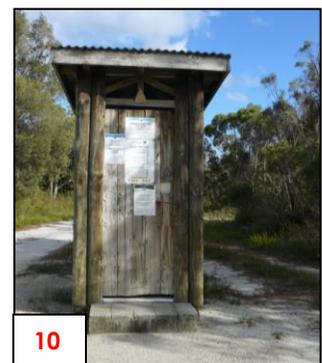
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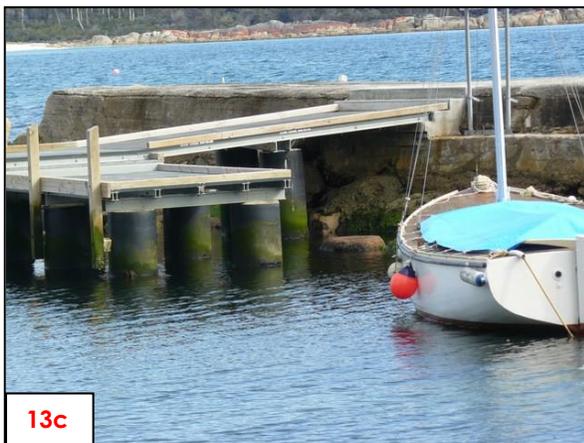
	Binalong Bay Foreshore Area Northern side of Main Road	1 toilet block Boat Ramp Cleaning station Playground
14	Humbug Point Nature Recreation Area (North)	Walking tracks (Skeleton Bay, Skeleton Point, Dora Point and Grants Point)
15	Humbug Point Nature Recreation Area (North)	Picnic table (Skeleton Point only)



13a



13b



13c



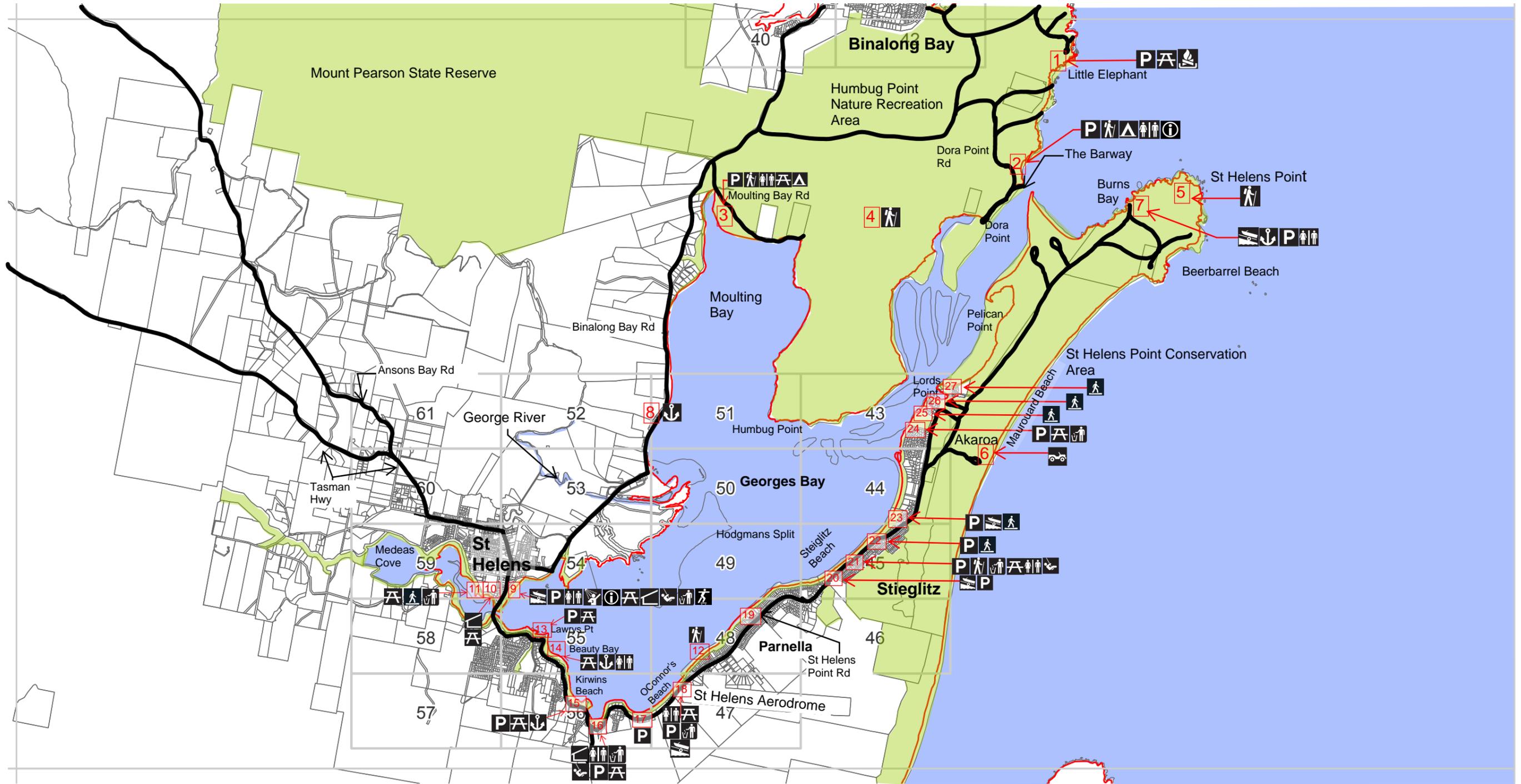
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13f



Break O' Day Council Coastal Plan
 Map I: Assets Inventory- St Helens Survey Area

Break O' Day Council Map Reference: 5
 Data Source: Break O' Day Council, LIST, Environmental Services & Design,
 Niche Environment and Heritage

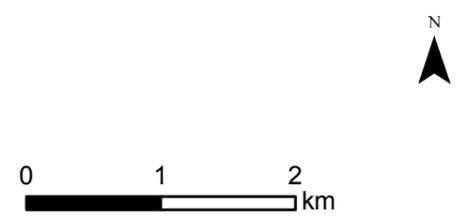


Table 5: Major Assets Inventory St Helens Survey Area (Map 1)		
Ref No.	Area/Locality	Asset/Facility
1.	Humbug Point Nature Reserve Little Elephant	Car park/turnaround area - poor condition Picnic table Stone fireplace
2	Humbug Point Nature Reserve Dora Point	Large car park/turning area Commencement of walking tracks Camping area M/F toilet block Information Board
3	Humbug Point Nature Reserve South Moulting Bay	Car park/turning area - poor condition Links to walking tracks 1 picnic table - poorly located Camping area - informal 1 toilet
4	Humbug Point Nature Reserve South	Coastal and reserve walking trails
5	St Helens Point Conservation Area North of Jocks Lagoon	Walking trails (various) Accessed from Diana's Basin and from St Helens Point Road
6	St Helens Point Conservation Area Perons Dunes, accessed via St Helens Point Road	4WD access to Maurouard Beach
7	St Helens Point Conservation Area Burns Bay	Boat Ramp - good condition Jetty Sandy beach launching area Boat parking area Stone toilet block
8	Binalong Bay Road North of Georges River	Timber fishing jetty Narrow coastal reserve Small fishing boats stored on reserve No parking, limited space
9	St Helens Waterfront East of Georges Bay Esplanade and Cecelia Street (Percy Steel Reserve)	Boat ramp and pontoon Trailer parking Toilets/showers Signage/Tourist info board Children's Playground Seating Picnic tables BBQ shelter Skate park Bins
10	St Helens Medeas Cove Esplanade Fishermans Memorial Park	Picnic table Gazebo/shelter On-street parking
11	St Helens Medeas Cove Esplanade	Picnic Table (broken) BBQ (broken) Bin Access to water
12	St Helens to Lions Park and St Helens Point	Coastal walk - Interrupted by driveways to industry etc
13	Lawrys Point	Circular driveway and parking area - Unsafe sight entry/egress 2 picnic tables
14	Beauty Bay	Concrete picnic tables (2) Jetty Blue single toilet
15	Kirwin's Beach	Parking 2 jettys Picnic tables (3) and park bench Brick BBQ



		Bridge over creek
16	Lions Park	Bridge over creek Playground Toilets Bins Picnic tables (3) Heritage structure/vehicle Large picnic shelter Parking Bridge over creek
17	O'Connors Beach Off St helens Pt road	Parking area
18	O'Connors Beach	Toilet (M/F) BBQ hut with 2 tables and seating Gravel parking alongside road Brick BBQ 1 bin 5 seats along foreshore Boat ramp
19	Parnella Conservation Area	Treloggans Track coastal walk and reserve
20	Stieglitz Beach	Boat ramp, jetty Parking - large turning area
21	Stieglitz Beach	Play Area and Foreshore Park Parking areas Playground 2 Picnic tables 1 bin Toilets (M/F) - new, good design Coastal Walk
22	Stieglitz Beach	Car Park Beach Access
23	Stieglitz Beach (Northern end)	Beach Access and Parking Informal boat launch-beach
24	Akaroa Beach	Parking area Picnic table - poor condition Bin
25	Akaroa Beach Accessed via Richard Ct	Beach access
26	Lords Point (2) Via Barrack Street	Beach/foreshore access via cul de sac
27	Lords Point (1) Via Simeon Pl	Beach/foreshore access via cul de sac



**Table 6: Major Assets Inventory
Scamander Survey Areas (Map J)**

Ref No.	Area/Locality	Asset/Facility
1	St Helens Point Conservation Area Accessed from Tasman Highway	Camping - numerous sites mostly at northern end Information Board/signage (sensitive birds; no dogs) Picnic Table Toilets; one at northern end and one at southern end - older style Circular access road, good condition No water, no rubbish collection
2	Scamander Conservation Area Access from Tasman Hwy south of Dianas Basin	Vehicular parking (approx max 8 cars) and access to beach (pedestrian and 4WD) Toilet Information signage
3	Scamander Conservation Area Dark Hollow Creek	Parking Area, Beach Access, Lookout
4	Scamander Conservation Area Beaumaris Beach	Access driveway and parking (limited (turning area only) Beach access
5	Beaumaris Beach Tasman Hwy on eastern side of road	Pedestrian Pathway, signage On-street parking
6	Beaumaris Beach Tasman Hwy opposite Skyline Drive.	Day Use Area, accessed via bridge over Reedy Creek
7	Beaumaris Beach Tasman Hwy (south of Ocean Drive)	Parking - Grassed Parking on lay-by of Tasman Hwy access to beach
8	Freshwater Creek Beaumaris Beach Tasman Hwy (south of Freshwater St)	Off road Parking pedestrian access to beach signage
9	Scamander Conservation Area Shelly Point	Camping Parking informal, from loop road Toilets (fairly new) Viewing Platform Access to beach on N & S side
10	Wrinklers Lagoon Western side of Hwy	Vehicle access to Lagoon (northern bank)
11	Scamander Conservation Area Eastern side of Hwy Northern side of lagoon entrance	Vehicle parking and beach access/lagoon entrance
12	Scamander Conservation Area Wrinklers Beach Eastern side of Hwy Southern side of lagoon entrance	Wrinklers Beach Day Use Areas Extensive Vehicle parking and beach access/lagoon entrance Toilet Bus shelter Signage
13	Scamander Conservation Area Wrinklers Beach North of Byatt Ct	Parking at cul-de-sac and access pathways to beach East of private properties
14	Scamander Conservation Area Wrinklers Beach Accessed by Lagoon Esplanade	Wrinklers Beach Day Use Areas Parking and beach access (across bridge) Signage Council reserve/playing field north of Thomas St
15	Scamander River Southern/western side of bridge	Parking area Picnic shelter Picnic tables (2)



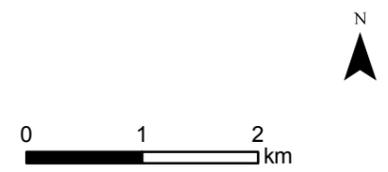
	Bridge Esplanade	Bins Parking
16	Scamander River Southern/western side of bridge Bridge Esplanade	Boat ramp and jetty Parking area Picnic tables (2)
17	Scamander River Southern/eastern side of bridge Tasman Hwy	SLSC Skate Park Playground Picnic Shelters Picnic Tables Toilets Car park Bins Information Signage
18	Winifred Curtis Reserve Accessed from Tasman Hwy	Coastal/Nature walks through to Steels Beach Information signage Informal parking Improved directional signage required
19	Four Mile Creek Conservation Area Henderson Point/entrance to Henderson Lagoon Falmouth	Signage Toilet Picnic tables? Access to lagoon/swimming
20	Four Mile Creek Conservation Area Tasman Hwy	Very limited opportunity for stopping of vehicles and few access tracks
21	Falmouth coastline	Limited coastal access - Rocky, steep and inaccessible





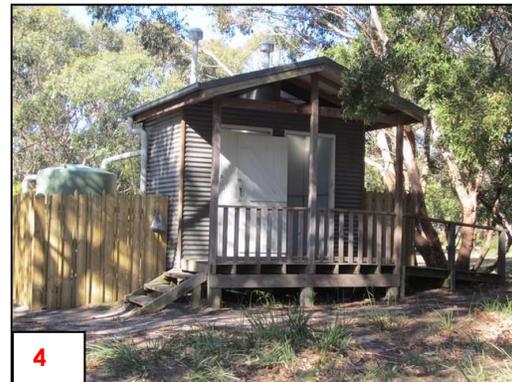
Break O' Day Council Coastal Plan
 Map K: Assets Inventory- Ironhouse Point Bay Survey Area

Break O' Day Council Map Reference: 8 & 9
 Data Source: Break O' Day Council, LIST, Environmental Services & Design,
 Niche Environment and Heritage



**Table 7: Major Assets Inventory
Ironhouse Point Survey Area (Maps K)**

Ref No.	Area/Locality	Asset/Facility & Comments
1.	Four Mile Creek Tasman Hwy North of Four Mile Creek Road	Parking area/viewing point: Eastern side of Tasman Hwy
2	Four Mile Creek End of Four Mile Creek Road	Signage Bin Large Parking area (unsealed) Small Boat ramp Playground Beach access track (swimming beach) Pedestrian Bridge over creek to dwellings
3	Little Beach Conservation Area Tasman Highway	Day access only Parking - informal unsealed driveway No facilities
4	Lagoons Beach Conservation Area Tasman Highway	Two access driveways in (northern one better) Camping - well maintained 1 toilet block (2 toilets) Access to beach No water No rubbish removal



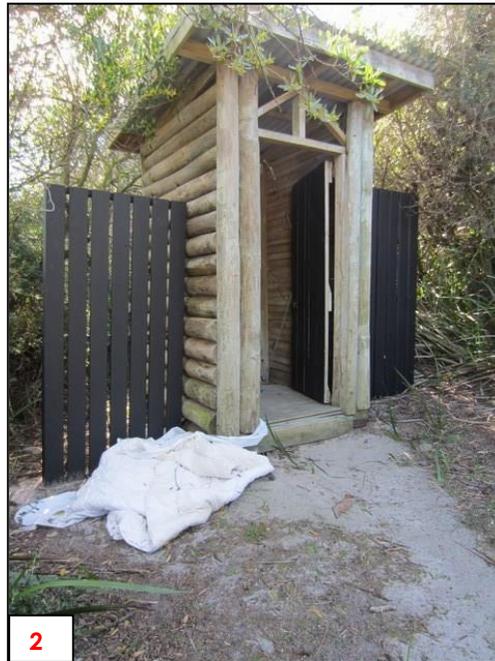


Break O' Day Council Coastal Plan
 Map L: Assets Inventory- Douglas River Survey Area

Break O' Day Council Map Reference: 10 & 11
 Data Source: Break O' Day Council, LIST, Environmental Services & Design,
 Niche Environment and Heritage



Table 8: Major Assets Inventory Douglas Survey Area (Map L)		
Ref No.	Area/Locality	Asset/Facility
1	Denison Conservation Area Tasman Hwy	Car park Stair access path over dunes to beach
2	Denison Conservation Area Tasman Hwy, just north of bridge	Car park - regrading/sealing required Single toilet



8 Coast Park Concept Plan: Issues Analysis and Project Outcomes



This section identifies the key issues and outcomes identified in this Coastal Plan relevant to the Break O'Day coastal zone, having regard to the Vegetation Management issues raised by ES&D, community consultation outcomes, field work, and following review of the various studies, plans and policies reviewed for this Plan.

The broader issues relevant to the coastal zone and associated recommended management measures are identified in this section. A summary of the broader recommendations of this section are also presented in Section 9: Action Plan), in addition to specific recommendations for each of the Survey Areas.

8.1 The Importance of the Coastal Zone

The coastline and wider coastal zone is considered to be the key asset of the Break O'Day Municipality. Not only is it visually spectacular and environmentally significant, the coast has social and economic importance to residents, and impresses the many visitors to the area.

The importance to the entire coastline of Tasmania is also recognised in state-wide Strategic documents, most succinctly embodied in the Vision Statement of the 'draft Tasmanian Coastal Policy Statement'

"Tasmania's coast is planned and managed to ensure its sustainable use and development to achieve important economic and social benefits for current and future generations, while conserving its diverse and distinctive natural and cultural values."

The following four broad goals identified to achieve that Vision are reflected in the multitude of studies, reports and plans prepared in relation to the coastal zone (state, regional and local):

1. *"to facilitate the sustainable development of the coast to maximise the economic and social benefits, while protecting the environment;*
2. *to conserve and enhance the coast's significant natural and Aboriginal and historic heritage values;*
3. *to manage risk from coastal processes and present and future coastal hazards, to enable coastal processes and existing activities to continue, and permit new activities to occur;*
4. *to ensure that the coast is accessible and available for recreational use by the public."*

The ongoing protection, conservation, enhancement and management of the coastline is required to ensure that this important asset is enjoyed by existing and future generations.

8.2 The Economic and Aesthetic Value of the Coastal Zone

As indicated above, the spectacular coastline of Break O'Day contributes significantly to the local and regional economy. ES&D (p43, 47) also acknowledged that tourism is a major economic driver for Break O'Day Council, and noted that "it is essential to recognise that the principle attraction of tourists to the area is the natural environment, of which the vegetation is a major component. Loss of vegetation means loss of visual appeal. Loss of appeal leads to loss of tourists, and so on." ES&D also recommended that "the 'value' of vegetation should take into account the ecological value as well as the aesthetic and timber resource value. The value should be considered in terms of its connectivity, type, and abundance, increasing the ecological health of the flora and fauna community that reside in habitats, and the local tourism and forestry industries. This 'value' assessment should be implemented into environmental resource management strategies."

Forestry and associated vegetation management issues are not the only coastal zone matters relevant to the local and regional economy. The Economic Development Strategy (McA, 2013) recommended the expansion of the seafood sector (including the development of port infrastructure at St Helens). The recreational fishing is also an important economic activity for Break O'Day. Improvements to marine infrastructure should be subject to strict environmental controls (water quality, shoreline management) to ensure water quality protection. As identified by ES&D, loss of natural resource quality will impact on this economy (and associated important tourism industry). McA also recommended the following key strategies and actions to the coastal area to facilitate and increase the tourism sector (and potential increased resident population) which would further contribute to the economy:

- investment in tourism infrastructure needs to improve at major destinations such as Stieglitz, Binalong Bay, St Helens and Scamander.
- Waterfront (St Helens) - development of facilities covering the wharf area, marina, and the precinct. Activate the area while ensuring it is maintained as a commercial port.
- Extend bike paths and develop mountain bike trails and walking tracks to link areas and to utilise national park areas.
- Better linking of the coastal experience and activities – food trails, cycling, walking trail, regional diving trail, golf trails, fishing experiences, etc.
- Addressing gaps in tourism infrastructure and services including accommodation options, cafes and restaurants, port area, other facilities and attractions.
- Specific to St Helens – waterfront area/boardwalk, access to marina and port area, café options on the water, bike track access.
- Improvements to make St Helens more attractive for visitors: waterfront area/boardwalk; access to marina and port area; cafe options on the water; and bike track access.

It is recommended Break O'Day Council recognise the importance of natural resources (vegetation, water quality) in its implementation of economic development strategies. This will assist in ensuring the long term aesthetic and ecological quality of the coast which is essential to the region's economy, in particular tourism.

8.3 Land Tenure and Aesthetic and Ecological Values

Reserved Land

The Reserves and Environmental Values Maps presented earlier in this section shows the areas of reserved and state forest (in pink). The majority of the coastline is publicly owned reserved land, including National Parks and Reserves (zoned Environmental Management under the Break O Day Interim Planning Scheme 2013). ES&D (2013, p42) recognised that the extensive reserved land was "pertinent to the coastline north of St Helens, but to the south only isolated coastal areas and narrow strips have ecological protection. Forestry land has very limited protection. The result of this is seen in the degree of clearing that has been performed to the south of Scamander, and the subsequent effect on the tourism potential of that area. Reserves are often formed over land that has aesthetic values, e.g. a waterfall, a beach, a mountain, a chasm, or a "pretty" area of forest. It is of note that some areas of the Break O'Day coastline have areas of less visual attractiveness in reserves, as they are ecologically important, rather than tourist attractions."

Private Land - Can be Threatened Ecosystems and Habitat

ES&D (p42) also recognised that a number of ecologically significant areas are on private land, mainly in terms of remnant forests, riparian lines and coastal lagoons and that Council and State have some influence on the preservation of this land, but noted that the competing priorities for employment, economic development and growth may limit this preservation of this privately-owned land. A number of locations have identified environmentally sensitive values, some which are located on private land. The well known RAMSAR site of Jocks Lagoon is just one of a number of similar (or better) lagoon sites along the Break O'Day coastline. Importantly, some of the less well recognised ecosystems have not been protected, despite them having essential roles to play in the region. ES&D provide as an example the loss of one or more "islands" of large eucalypts can have a devastating effect on migrating birds, which move along the coast. Using the axiom that in natural systems "everything is related to everything else", loss of a single habitat to a development that was not properly assessed can have a major effect on wildlife for many surrounding kilometres.

8.4 Land Tenure and Management

ES&D (p47) also noted that the capacity of Break O'Day Council to manage the coastal strip is limited by tenure and capacity. Tenure control is limited by the fact that the entire coastline, and much of the hinterland, is managed by Parks & Wildlife, and a smaller proportion of the hinterland is freehold land. Capacity to manage the coast is also limited by:

- Financial capacity: the cost to council to completely eradicate weeds, install camping areas, serviced toilet facilities, seal roads, provide waste collection etc would be prohibitive. This is particularly relevant whilst Parks and Wildlife do not currently charge a fee for camping area use.
- Planning scheme restrictions: Lot sizes, zonings and some other restrictions are possibly unable to be changed easily.
- Political impediments: Restricting tourist numbers (and therefore impact), enforcing or imposing some regulations e.g. strict dog control, tree clearance, can be politically difficult.

ES&D (p48) recommended that Break O'Day Council could be providing some services in reserved land, including waste collection, on-site effluent disposal, and some road maintenance, as they directly benefit from the facilities currently managed and funded by Parks and Wildlife. This could release State funds for park maintenance services such as weed control and walking rack maintenance, and increase the amenity of the reserves and result an advantageous for Council, State Government, the environment and the public.

It is absolutely essential that proper management of coastal vegetation and infrastructure and planning and development needs to be undertaken with full cooperation of the stakeholders, principally Parks & Wildlife, but also such organisations as DIER and Ben Lomond Water.

This 'Integrated Management' approach is a key outcome of the 1995 document 'Marine and Coastal Management Strategy: Dorset, Break O'Day and Glamorgan/Spring Bay Councils Summary Report' (Coastal Management Project Steering Committee) which identified that "no one manages the coast....individual agencies manage aspects of it." The follow-up document in 2000 'Action Plan for Marine and Coastal Management in east and north-east Tasmania' and the formation of the Coastlink group was a demonstrated example of how Integrated Coastal Management could operate in practice. Forty-nine actions for coastal management of the region were included in the document over a five year implementation period. This approach is an ideal model for regional management of the coastline and is based on sound management principles and strategies. However as evidenced in this document, it is largely dependent on significant financial (and associated political) support, in particular from Federal and State Governments, for the coordination and implementation of actions. As evidenced by the abolition of Coastlink and a national approach for integrated coastal zone management (and associated funding) and associated absence of similar regional/integrated resource management approaches, it is a difficult model to sustain without ongoing committed monetary and legislative support. The Coastlink experience, however, has contributed to an ongoing approach of improved coordination and collaboration (eg. that is occurring with the *George Catchment and Bay Water Quality Improvement Plan* currently under preparation, where engagement of a wide cross section of stakeholders has commenced).

As the recommended actions within this Coastal Study are principally the responsibility of Break O'Day Council and the Parks and Wildlife Service, it is recommended that the collaborative 'integrated management' approach be implemented by these agencies through existing and improved proactive consultation mechanisms, for example through streamlined communication channels with identified appropriate officers and stakeholders. In addition, it is recommended Break O'Day Council lobby for State and Federal funding for the provision of facilitated management and associated supported legislation for the achievement of integrated coastal management outcomes, including such as that proposed in the 1995 document 'Marine and Coastal Management Strategy and 2000 'Action Plan for Marine and Coastal Management in east and north-east Tasmania' for the regional outcomes.

8.5 Need for Consistency of Legislation

State and Federal Acts and policies include the Federal *Environmental Protection and Biodiversity Conservation Act 1999*, and at a State level the *Water Management Act 1999*, *Threatened Species Protection*

Act 1995, Nature Conservation Act 2002, Land Use Planning & Approvals Act 1993, Environmental Management and Pollution Control Act 1994, Weed Management Act 1999, the Forest Practices Code, and the State Coastal Policy.

Some of this legislation has conflicting aims and policies, such as the necessity to clear vegetation under the Building Act but restricting the clearing of vegetation under the Nature Conservation Act, and allowing the clearing of 1 hectare per year under the Forestry Practices Code without permit, but requiring permits for tree removal by Planning Schemes (ES&D, p42).

It is recommended that the Federal and State Government review its legislation to ensure consistency and ensure that the provisions of Planning Schemes for Local Councils are consistent with the reviewed State and Federal Acts and policies.

8.6 Assessment Requirements for Development Proposals

ES&D (p47) noted that "the available vegetation data is not (and is unlikely ever to be) adequate to make proper decisions on the sensitivity of land proposed for development on a lot by lot or even subdivisional basis" and recommends that a flora/fauna assessment that takes local and regional considerations into account should be made mandatory for development applications on land that has not been cleared as at 1 June 2014 (time of preparation of this draft report).

8.7 Break O'Day Policy - Amendments and New Policy Recommendations

ES&D (p48) recommended the following amendments to existing Break O'Day Policy/Planning Scheme provisions:

- "The minimum lot size for sustained environmental sustainability is much greater than the minimum planning scheme required lot size of 2 hectares. This should be considered in future planning schemes.
- Break O'Day Council's Tree Policy does not encourage the retention of trees. The policy allows the removal of trees for such reasons as firewood, perceived safety, or disease, without permit. A charge is made for inspection or Application Permit by Council. Strong planning controls should be put in place to ensure that vegetation is retained and in particular, a multi-dimensional in canopy structure, to ensure that suitable habitat is available for numerous species that require different habitat niches."

ES&D also recommended preparation of a fire management policy which includes a concept of limits of burn frequency for various vegetation types and conditions, subdivisional and residential clearing, campfires and access to residences in vegetated areas. For instance; a concentration of structure fire resistance rather than trying to limit, combat or reduce fires is a logical approach. On this matter, ES&D noted that vegetation management needs to take into account the conflicting but overlapping requirements of protection of life and property from fire, and protection of natural ecology from fire. Refer also section 8.8.1 below.

8.8 Key Threats and Impacts

The Coastal Vegetation Management Constraints and Opportunities report (ES&D, 2013) identified that over-burning for fire management, in addition to weed control, waste disposal and destruction of vegetation were the key issues faced within the coastal zone. Specific issues associated with coastal vegetation were also identified. These key issues are consistent with that identified in other studies of coastal lands reviewed for this Plan, and ES&D's outcomes (p44-47) are reproduced below:

8.8.1 Fire: Over-burning

In ES&D's opinion, many areas appear to be very frequently burnt. Whilst there is a necessity to "reduce fuel" and to protect lives and property, there is a common tendency to burn off every few years no matter what the vegetation type, climate/microclimate, location or fuel load. "Natural" fire frequency, historically (according to tree ring data) has been as frequent as 5 years in coastal heath vegetation, or up to 350 years or more in wet forests. It is a common fallacy that the bush "needs" burning to survive – vegetation rarely needs a fire to propagate, but some plants tolerate it and are more adapted to fire than others.

Fire does occur naturally, but it is estimated that over 85% of fires result from human activity. When many types of bush burns, the regrowth is often dense and short-lived, leaving a high fuel load until it mulches down. Frequent burning kills off less tolerant vegetation, leaving the more fire prone, more tolerant species. Regrowth is all of the same age, leaving a thick (ie fuel rich) layer. Subsequently, frequent burning means that more frequent burning is both likely and in fuel load terms, more "necessary".

Many areas on the east coast show the effects of frequent fire, from species distribution and absence of some species.

A discussion about fire defence and burn frequency is not the role of this report, but a sensible approach to fire defence is to build fire resistant structures, rather than to try to prevent fires."

8.8.2 Detractions – Weeds, Waste, Destruction of Vegetation

Weed growth is always a major issue when naturally vegetated areas are encroached upon by human activity. "Edge Theory" shows that most major impacts occur at boundaries of conditions; the spread of weeds encroaches into reserves via roadways, extensions of agriculture, and surrounds of residences. Weed control is the bane of many Councils.

Weeds detract from natural values by a huge number of factors including precluding access, degrading visual amenity, overtaking native species, increasing erosion rates, and reducing natural food sources and habitat. Weeds include seemingly innocuous garden plants which may be toxic, to extreme degrading infestations such as broom, gorse and marram grass.

Waste disposal is a major issue for most Councils. Litter in the form of plastic and paper, along with cans and glass, were noted in many reserve camping sites and beach areas. Septic wastes require disposal using appropriate methods that are suited to coastal environments, with shallow groundwater and porous soils, plus nutrient intolerant vegetation.

Examples of destruction of vegetation from campsite clearing and track “braiding” are numerous both in and out of reserves. Obvious loss of larger trees from firewood gathering and loss of ground cover from fuel reduction fire has had an impact on some areas. These impacts result from the unsustainable over use of the natural environment, detract from the area's tourism value.

Destruction of vegetation has occurred by developments. Roads and services require space, but it is possible by developing suitable policies and procedures, to minimise the impacts.

An example is a renewed sewerage pump station, at Scamander. At the main approach to a beach walk and lagoon, and close to a major bird rookery site, an area of coastal vegetation was cleared and a replacement pump station installed (refer Figure 2). The overflow drain was constructed so that any effluent would flow directly into the estuary, a major feeding ground for the rookery. Whilst the pump station is an essential unit, a vegetation screen could have been planted and clearing minimised. A surge pond may have been designed to contain overflow.



Figure 2: Before and after a sewage pumping station at Scamander
Source: ES&D (2013, p45)

8.8.3 Vegetation: Key Issues

a) Vulnerability of foreshore fringing vegetation and habitat

- From over-use, camping and day use.
- From previous clearing of adjacent vegetation mainly in agricultural areas.
- From encroachment by adjoining owners and their introduced species where residences abut, or are nearby the coastal reserve.
- Strip development of residential subdivisions and tourist developments parallel to coastal reserve.
- Weed invasion and changes to dune structure by species such as Marram Grass.
- Sea level rise and coastal erosion particularly of dune vegetation.
- Preservation of threatened species habitat for Little Penguins, Fairy Terns and Hooded Plover, by means of; appropriate signage, dog management, and control of invasive species.

b) Importance and vulnerability of coastal lagoons, river and stream estuaries

- Sensitive environments and habitats and of ecological significance.
- From over-use, camping and day use.
- Pollution from adjacent urban and agricultural areas
- Manipulation of natural systems such as artificial openings to the sea.
- Encroachment by suburbia and land clearing by adjoining owners.
- Fish farming in area such as Georges Bay and maybe Ansons Bay in the future on seagrass beds.
- Sea level rise and climate change.

c) Remnant natural vegetation

- Strengthen regulatory control and compliance in regard to the clearing of vegetation and the removal of trees, particularly in residential areas.
- Using all available data, from sources such as; TasVeg 2.0, DPIPWE and the maps attached to this report, to prioritise protection of important and threatened remnant vegetation, in line with the *Threatened Species Protection Act 1995* and the *Environment Protection and Biodiversity Conservation Act 1999*, and apply controls on clearance in accordance with the *Tasmanian Nature Conservation Act 2002*.
- When proposing to undertake works or developments, use appropriate tools to identify known locations for threatened flora and ensure protection in accordance with the *Tasmanian Threatened Species Protection Act 1995* and the *Commonwealth Environment Protection and Biodiversity Conservation Act 1999*.
- Identify areas of significant habitat for threatened fauna and apply controls on vegetation clearance in accordance with the above Acts.

d) Revegetation priorities

- Adjacent to the coastal reserve where vegetation has been reduced to a narrow coastal fringe in order to increase the width of the coast-line vegetation.

- Around the periphery of lagoons and wetlands where the original vegetation has been previously cleared or impacted.
- Along creek lines and streams particularly where they pass through paddocks where the original vegetation has been previously cleared for farming in order to achieve improved connectivity between coastal reserve and the wooded and forested hinterland.
- As corridors through previously cleared farmland to link remaining remnants of the original vegetation where no creeks are present.

The Maps and Action Plan at Section 9 of this Study identify priority areas for vegetation to be protected and areas for revegetation.

8.9 Reserve and Campsite Management

Impacts from the use of reserved land by humans (and their pets), in particular the within the various Reserves within the Break O'Day Council Area managed by Parks and Wildlife (including in particular Mt William National Park, Bay of Fires Conservation Area, Humbug Point Nature Recreation Area, St Helens Point, Scamander, Little Beach, and Lagoons Beach Conservation Areas).

The North-east Tasmania Sustainable Coastal Camping Strategy (2000) examines why the free coastal campgrounds of north-eastern Tasmania are not being effectively managed for sustainable use, and what causal factors are responsible for them becoming increasingly degraded, with natural and cultural values compromised. The Strategy identified that approximately 655 camping sites are available within the study area, and are particularly popular in the peak times of Summer/Christmas holidays and Easter.

The Strategy sets out a vision for camping in North Eastern Tasmania and describes the issues at campgrounds at that time (noting that the Strategy was prepared pre-Bay of Fires popularity and does not address some current trends and issues). However, many coastal camping issues are still very relevant today and it is recommended that the following list of solutions and recommendations derived from the Strategy still require implementation.

- *The expansion of camping sites to be addressed by:* education; coercion by on the spot fines by rangers; camper self education/regulation; better site designation by boundary markers and numbering; prevention of overcrowding; rehabilitation of degraded areas).
- *Damage to flora from firewood collection:* ban on fires unlikely to solve problem; enforce fuel stove only; provision of firewood by donation or for sale; provision of large logs; education (long term) by schools, brochures etc; signage indicating illegality; on the spot fines by rangers; encouragement to bring own; rehabilitation of degraded areas.
- *Camper waste disposal:* rubbish (education and signage to take all away, and indicate closest locations; handing out bags); toilet waste (provision of quality toilets, preferably compost; long term aim each campground to be no more than 200m away from toilet); grey water (disperse, preferably to sand and not waterways, and use soap, not detergents).

- *Proliferation of tracks*: close off all but the required ones by large rocks/barriers, and discourage/police illegal trail bike use; signage; encourage to report illegal use; rehabilitate degraded tracks.
- *Damage to Aboriginal heritage values*: accept and implement TALC recommendations; include funding for ongoing aboriginal input; attempt to foster more widespread understanding of aboriginal perspectives.
- *Impacts on threatened species*: research and identify threatened species when making site plans or proposing changes to a campground; minimise likely impacts on threatened species; signage to inform public about sensitive areas and need to avoid impacts; vehicles off beaches; keep cats out of campgrounds and dogs away from breeding areas, preferably a no dogs rule; campers spread the word about shorebird habitat.
- *Vehicles on beaches*: provide education strategies that confirm that it is discouraged/illegal and limit to certain allowable areas (to be publicised); include beach driving on demerit system and increase fines; occasional police blitz; block access with accompanying signage; disallow motorbikes from campsites by providing parking areas at entry.
- *Lack of pet control*: education and coercion (on the spot fines); no pets campgrounds (retain some pet-friendly ones); tighter definition of control (eg within sight of owner/restrained).
- *Inappropriate or irresponsible campfire management*: education; appropriate firewood sources; coercion - rigorously enforce total fire ban days; fuel stove only; official communal fireplaces and/or gas BBQs; appropriate training and supervision of machine operators;
- *active intervention by authorised personnel to stop antisocial activities*;
- *Limit Spread of phytophthora fungus*: by discouraging vehicle use off authorised tracks.
- *Education and promotion*: publish a vehicle access camping code; camping code signage at each campground; expanded summer ranger program.
- *Zoning*: specifying areas for particular activities or types of camping to provide for different needs (eg. tent-only, mobile home/caravan sites; permitted fires, pets etc).

More specific and updated analysis of the most popular day use and camping areas within the Study Area (and therefore areas experiencing the most pressure and impacts), was undertaken in the *Bay of Fires Conservation Area and Humbug Point Nature Recreation Area Site Plan (Inspired Place, 2011)*. This document was prepared for NRM North and the Tasmanian National Parks and Wildlife Service with the Study Area encompassing the reserved lands from Policeman's Point to the Georges River within the Bay of Fires Conservation Area and Humbug Point Recreation Area (with small sections of Coastal reserve near Gardens Lagoon Beach and Break Yoke Beach also included). Refer to Appendix 1 for a review of this document. The document notes the increasing interest from visitors to the Bay of Fires - with the profile of the as a tourism destination largely driven by marketing from the Bay of Fires Walk and inclusion of the Bay of Fires within Lonely Planet's world's number one tourist destination in 2009 (p1). The Plan establishes four existing key day-visitation sites within the Bay of Fires area (including Binalong Bay, Sloop Rock Point, Taylors Beach South, Northern Point of The Gardens Road)) to be developed, with associated site plans to guide their sustainable development and management (Refer **Appendix 6**). It recommends some existing camping areas be rationalised and be used for day-use only and specific management measures are provided for some of the more popular camping areas experiencing high usage and impacts. The recommendations of this Plan are supported and

are reflected in the Action Plan at Section 9 of this Study. It is noted that some of the works within the Taylors Beach South Site Plan have been implemented.

Other coastal management issues identified that also ally to coastal reserve areas (not only camping areas) include:

- Completing fencing and revegetation of waterways, wetlands and lagoon edges;
- Revegetation and continued weed control of the coastal vegetation;
- Track improvement (including rationalisation) and erosion controls;
- improvements to access and parking areas;
- Installation of picnic tables;
- Litter control;
- Installation of interpretive signage;
- Landscaping of public areas with local native species;
- Sediment, stormwater, nutrient and chemical impacts on the waterways;
- Impact of pets on wildlife (especially shorebird nests), and loss of habitat and habitat connectivity;
- impacts of climate change, including changes to rainfall, temperature and sea level, an increased risk of erosion;
- chytrid fungus;
- *Phytophthora cinnamomi*.

Where relevant, the Action Plan at Section 9 and associated maps identify priority areas for these management issues to be addressed within the Survey Areas of the Break O'Day Municipality.

Many of the above broader management issues identified within the Study Area are addressed in *The Tasmanian Coastal Works Manual - A Best Practice Management Guide for Changing Coastlines* (Leah Page and Veronica Thorp, December 2010) which is a comprehensive document for coastal land managers such as parks and reserves managers and local council works crews. The manual aims to ensure that future work undertaken on fragile coastal areas will have minimal impact on environmental values. It is recommended that any works undertaken by P&W and Council be in accordance with this Manual - which will encourage more consistent use of best practice management techniques; and improve the resilience of the coastline to sustain future effects of climate change and sea level rise.

8.10 Shorebird Management

As identified in some of the existing threats and impacts to the coastal zone, (including within campsite areas), shorebird habitat is under threat by human activities and disturbance. This is particularly the case for recreational beach use (including 4WD vehicles and dog access) and camping (particularly illegal camping) during the summer months, which is the local breeding season for many shorebirds. The document 'A Review of Shorebird Management in Tasmania Discussion Paper 2013' (Isabel Axio, University of Queensland, November 2013) indicated that, while good community engagement and management strategies (eg fencing of breeding areas) exists in the Break O'Day coastline regarding shorebirds, there is still a need to

educate and inform the public during events and peak holiday times regarding shorebirds. Some locals still see shorebird management as a threat to their recreational rights. Enforcement is also required to ensure success of habitat protection, which required increased funding for this role. The Discussion Paper also recommends better coordination of shorebird management, in particular a state-wide policy approach, in addition to regional measures, to be implemented by P&WS and Local Council (NRM staff).

8.11 Coastal/Foreshore Parklands

The highly used camping areas within the Bay of Fires Conservation Area and Humbug Point Recreation Area has been identified in the section above, in particular since the growth of popularity by visitation to the Bay of Fires coastline in recent years. There is also a recognised need for improvements to day use facilities within the existing main destinations by visitors to Binalong Bay and the larger township of St Helens, being the main commercial and population centre of the Municipality.

As identified in the Economic Development Strategy (McA, 2013) and several other studies [including the St Helens Tourism Development Strategy (Adam Saddler Consulting, 2012), the St Helens and Surrounds Structure Plan (Urbis), the St Helens Traffic Study (Bitzios Consulting, 2013) and the Binalong Bay Foreshore Masterplan (WAX, InfraPlan, 2014)], there is opportunity to capitalise on the scenic beauty of the Binalong Bay and St Helens surroundings, including the existing parklands/reserved foreshore land the Bay of Fires and Georges Bay. The three priority projects that are recommended for improvements to existing foreshore parklands that will significantly improve amenity for visitors and residents, and better meet the demands and pressures by the community on the sensitive foreshore landscape are:

- Development of the St Helens Waterfront Parklands, including activation, new playground equipment, improved access and parking, and marina/port improvements. Refer to concept plan at **Appendix 7**;
- Construction of a boardwalk/shared walking/bicycle track linking the St Helens Marina and Foreshore Park with Lions Park, with an extension to Akaroa (on the eastern side of Georges Bay). This will provide a "destination" activity for the township of St Helens and surrounding suburbs. The concept plans at **Appendix 8** also include improved recreation nodes at Beauty Bay, Kirwins Beach and Lions Park, revised parking provisions and traffic management to improve safety and accessibility and integrated stormwater management.
- Improvements to the Binalong Bay Foreshore lands. The key projects proposed by the Masterplan (refer Plan at **Appendix 9**) are to be linked by a new continuous pedestrian foreshore walk and cycling lane and involve improvements to: the entrance car park; cafe car park; village green; boat ramp and shacks; Boat Harbour Point ('People's Park'); Grants Lagoon, central beach access and Skeleton Bay Road and car park.

These projects are considered to be high priority works that will provide substantial benefits to these key destinations. Refer also to Section 9 (Action Plan).

8.12 Potential Areas for Future Development

Developments such as tourism, residential, industrial or agricultural uses all require land. Given the high reliance by Break O'Day on tourism, and the necessity for consideration of aesthetic values to attract tourists, vegetation retention and enhancement are seen as significant issues for any development proposal.

As much of the land in the coastal area of Break O'Day is either already under reserve status, has moderate to poor agricultural soil, or has poor primary extraction potential, the agricultural areas already cleared are seen as the only available land. Many areas, such as north of Scamander, are significant fire hazard areas and would require significant vegetation clearance to minimise this risk, with subsequent loss of aesthetic and ecological values.

Areas of land that have degraded ecological value, and are subsequently potentially suited to development along the coast (subject to detailed assessment on all issues of consideration, including environmental, social, economic impacts), include:

- West of Policemans Point, Ansons Bay: This large area of freehold has been over-cleared, with little remnant vegetation. It is elevated but moderately sloped, has sandy soils ideal for effluent disposal, fire impact resistance and reasonable access. Residential or tourism development in this area would have minimal environmental impact, and may act as a transition away from the sea level rise impacted portions of Ansons Bay Township.
- The Gardens: This area has been heavily impacted by agricultural activity, but has excellent potential for development in terms of proximity to natural aesthetic values, aspect, elevation, fire impact resistance, effluent disposal potential, and access.
- West of St Helens: This area is the natural growth areas for St Helens, having elevation, proximity to services and transport linkages. The important wetlands in the river and estuary, limits the development potential to the north. South of the river, potential for semi rural development exists but has reduced potential for high density residential purposes due to access and proximity to services.
- Southern Scamander: This area has been over developed (in terms of environmental capacity) due to the minimum 2 hectare lot size. Subsequently, increases in residence density would have minimal environmental effects on the already mostly cleared subdivisions in this area.
- Most of the coastal land south of Falmouth east of Douglas Aspley National Park: Provided that development occurs to the west of the existing highway, most of the area could be developed with minimal environmental effect as the majority has already been degraded by agricultural activity.

9 Coast Park Concept Plan - "Actions For Our Coastal Future"

The vegetation management plan, assets inventory and issues identification presented in earlier sections of this report have informed as to how the coastal zone within Break O'Day Municipality should be planned and managed in the future.

Together with the recommended overall coastal management measures provided in the previous section, this section identifies through further maps and tables for each Survey Area of the Break O'Day Municipality:

- sensitive areas which are to be protected and managed;
- areas which have potential for greater level of use;
- areas where improved public access such be encouraged and those areas where public access should be minimised; and
- infrastructure improvements/needs for coastal reserves and parklands.

Unless otherwise indicated in the tables, all actions are to be administered by Tasmanian Parks and Wildlife Service (where within a Reserve under their jurisdiction, which is the majority of the study area) or Break O'Day Council.

The Action Plan references and consolidates into one plan the excellent work already undertaken by previous plans and studies within the coastal zone.

Key to Action Table Coding, and example:

Each recommended action for the Survey Areas (Tables 10-15) is categorised into **High, Medium, or Low** priority. Each recommended action (or group of actions) within the table is also categorised and coded as follows:

- Ongoing Management (**OM**)
- Land Use Planning/Masterplanning (**LUP**)
- Infrastructure/Asset upgrade (**I**).

For instance, refer to **bold text** within table *example* below for explanation of categorisation and priority which

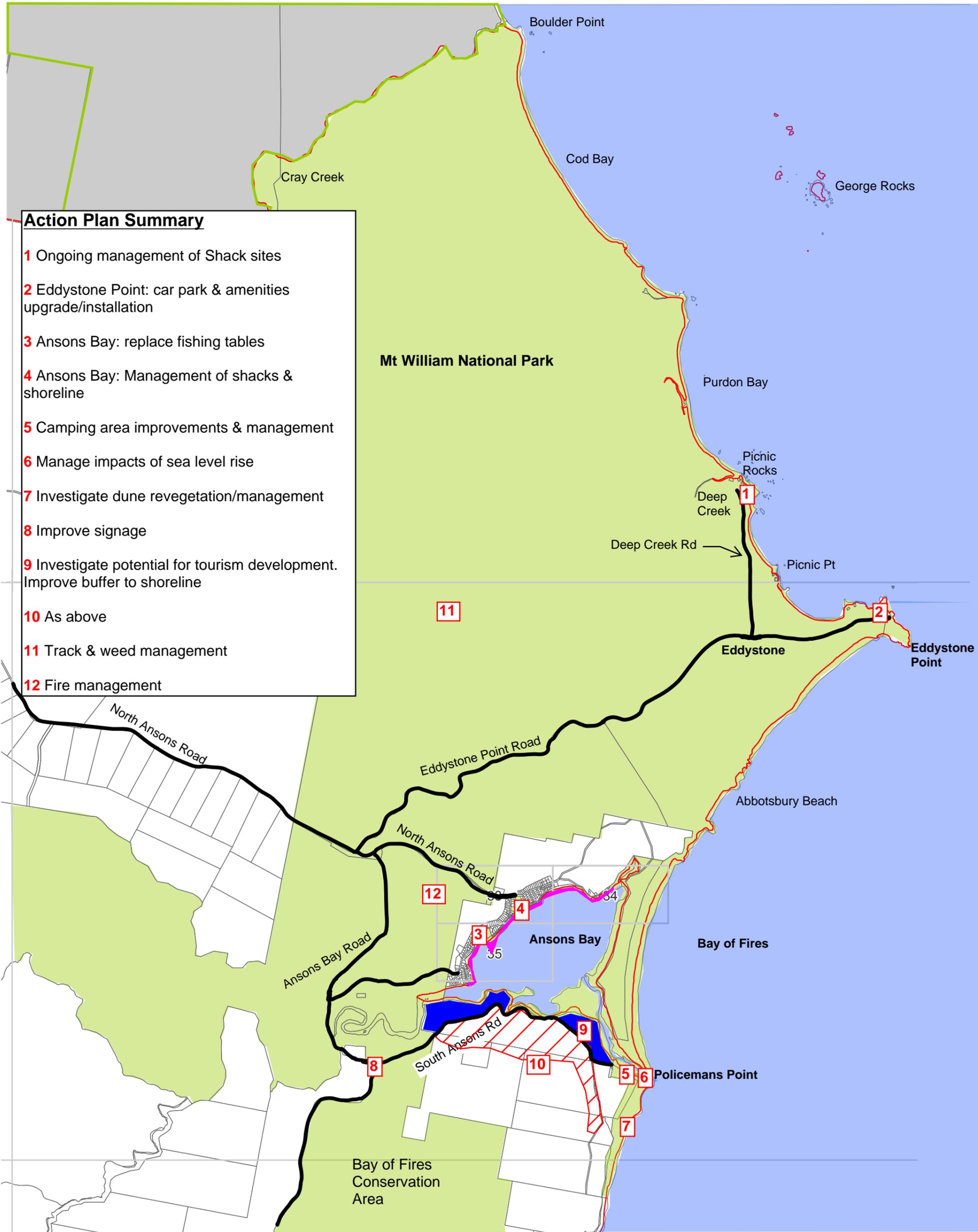
Map Ref No.	Area/Locality	Recommended Actions
2	Eddystone Point End of Deep Creek Road (on the point)	Regrade car park (I: Med) - Infrastructure/asset category with Medium Priority Upgrade/replace toilet. (I: High) - Infrastructure/asset category with High Priority
4	Ansons Bay Foreshore	Management of impacts from shack residents on vegetation, including riparian vegetation and water quality of Bay: vegetation clearance, pets, weed infestation, domestic wastewater and stormwater runoff impacts. (OM: Med) - Ongoing Management Issue with Medium Priority
10	South Ansons Bay Potential increased development	Private land south of South Ansons Road currently lacks environmental attributes and area could be investigated for increased development, if demand warranted. (LUP: Med-Low) - Land Use Planning Issue with Medium to Low Priority

Table 9: Action Plan Recommended Coastal Management Measures (General)	
Strategic Issue	Recommended Action (ongoing priority)
Importance of Coastal Zone	The ongoing protection, conservation, enhancement and management of the coastline is required to ensure that this important asset is enjoyed by existing and future generations.
Assessment of the Coastal Zone	<p>"Values assessment" should be implemented into environmental resource management strategies and should assess the ecological, aesthetic and timber resource value. This value should also be assessed in terms of connectivity, type, and abundance, in addition to increasing the ecological health of the flora and fauna community that reside in habitats, and the local tourism and forestry industries.</p> <p>Recognise the importance of natural resources (vegetation, water quality) in the implementation of economic development strategies, to assist in ensuring the long term aesthetic and ecological quality of the coast which is essential to the region's economy, in particular tourism.</p>
Land Tenure and Management	<p>Integrated management of coastal vegetation and infrastructure needs to be undertaken with full cooperation of all stakeholders, principally Parks & Wildlife, but also such organisations as DIER and Ben Lomond Water.</p> <p>Break O'Day Council consider the provision of some services in reserved land, including waste collection, on-site effluent disposal, and some road maintenance. State (P&WS) funds released by this arrangement could be utilised for park maintenance services (eg. weed control and walking track maintenance, to increase the amenity of the reserves).</p>
Legislative consistency	Encourage Federal and State Governments to review legislation to ensure consistency and ensure that the provisions of Planning Schemes for Local Councils are consistent with the reviewed State and Federal Acts and policies.
Development Application requirements	Make the submission of a flora/fauna assessment (that takes local and regional considerations into account) mandatory for development applications on land.
Break O'Day Policy Amendments (eg. Planning Scheme)	<p>The following amendments to existing Break O'Day Policy/Planning Scheme provisions be considered:</p> <ul style="list-style-type: none"> ▪ the <u>minimum lot size</u> of 2 hectares should be increased to for sustained environmental sustainability; ▪ ensure that <u>vegetation</u> is retained and in particular, a multi-dimensional canopy structure, to ensure that suitable habitat is available for numerous species that require different habitat niches. ▪ <u>fire management policy</u> which includes a concept of limits of burn frequency for various vegetation types and conditions, subdivisional and residential clearing, campfires and access to residences in vegetated areas.
Ongoing Management	Management measures must consider the impact on vegetation, including the negative impacts of weeds; waste disposal and vegetation destruction from various human activities.
Vegetation Management Considerations	<p>Vegetation Management (policy preparation and development assessment) needs to address:</p> <ul style="list-style-type: none"> ▪ Vulnerability of foreshore fringing vegetation and habitat ▪ Importance and vulnerability of coastal lagoons, river and stream estuaries ▪ Remnant natural vegetation by: <ul style="list-style-type: none"> ○ Strengthening regulatory control and compliance in regard to the clearing of vegetation and the removal of trees, particularly in residential areas. ○ Using all available data, from sources such as; TasVeg 2.0, DPIWVE and the maps attached to this report, to prioritise protection of important and threatened remnant vegetation, in line with the <i>Threatened Species Protection Act 1995</i> and the <i>Environment Protection and Biodiversity Conservation Act 1999</i>, and apply controls on clearance in accordance with the <i>Tasmanian Nature Conservation Act 2002</i>. ○ using appropriate tools in development assessment to identify known locations for threatened flora and ensure protection in accordance with the <i>Tasmanian Threatened Species Protection Act 1995</i> and the <i>Commonwealth Environment Protection and Biodiversity Conservation Act 1999</i>. ○ Identify areas of significant habitat for threatened fauna and apply controls on vegetation clearance in accordance with the above Acts. ▪ Revegetation priorities (adjacent to narrow coastal fringe vegetation including lagoons wetlands and creeklines; and to improve coast-hinterland connectivity particularly through farmland). <p>The Maps and Action Plan for each Study Area also identify priority areas for vegetation to be protected and areas for revegetation.</p>

**Table 9: Action Plan
Recommended Coastal Management Measures (General)**

Strategic Issue	Recommended Action (ongoing priority)
Coastal Management Issues	<p>Any works undertaken by coastal land managers such as P&WS reserves managers and local council works crews should be in accordance with <i>The Tasmanian Coastal Works Manual - A Best Practice Management Guide for Changing Coastlines</i> (Leah Page and Veronica Thorp, December 2010).</p> <p>Coastal management programs needs to address/include the following works/issues (in addition to Campsite management - see below):</p> <ul style="list-style-type: none"> ▪ Completing fencing and revegetation of waterways, wetlands and lagoon edges; ▪ Revegetation and continued weed control of the coastal vegetation; ▪ Track improvement (including rationalisation) and erosion controls; ▪ improvements to access and parking areas; ▪ Installation of picnic tables; ▪ Litter control; ▪ Installation of interpretive signage; ▪ Landscaping of public areas with local native species; ▪ Sediment, stormwater, nutrient and chemical impacts on the waterways; ▪ Impact of pets on wildlife (especially shorebird nests), and loss of habitat and habitat connectivity; ▪ impacts of climate change, including changes to rainfall, temperature and sea level, an increased risk of erosion; ▪ control of chytrid fungus; ▪ control of <i>Phytophthora cinnamomi</i>.
Campsite Management	<p>The recommendations the <i>The North-east Tasmania Sustainable Coastal Camping Strategy</i> (2000) and <i>Bay of Fires Conservation Area and Humbug Point Nature Recreation Area Site Plan</i> (<i>Inspired Place</i>, 2011) should be implemented, including the following key management issues:</p> <ul style="list-style-type: none"> ▪ <i>The expansion of camping sites to be addressed by:</i> education; coercion by on the spot fines by rangers; camper self education/regulation; better site designation by boundary markers and numbering; prevention of overcrowding; rehabilitation of degraded areas). ▪ <i>Damage to flora from firewood collection:</i> ban on fires unlikely to solve problem; enforce fuel stove only; provision of firewood by donation or for sale; provision of large logs; education (long term) by schools, brochures etc; signage indicating illegality; on the spot fines by rangers; encouragement to bring own; rehabilitation of degraded areas. ▪ <i>Camper waste disposal:</i> rubbish (education and signage to take all away, and indicate closest locations; handing out bags); toilet waste (provision of quality toilets, preferably compost; long term aim each campground to be no more than 200m away from toilet); grey water (disperse, preferably to sand and not waterways, and use soap, not detergents). ▪ <i>Proliferation of tracks:</i> close off all but the required ones by large rocks/barriers, and discourage/police illegal trail bike use; signage; encourage to report illegal use; rehabilitate degraded tracks. ▪ <i>Damage to Aboriginal heritage values:</i> accept and implement TALC recommendations; include funding for ongoing aboriginal input; attempt to foster more widespread understanding of aboriginal perspectives. ▪ <i>Impacts on threatened species:</i> research and identify threatened species when making site plans or proposing changes to a campground; minimise likely impacts on threatened species; signage to inform public about sensitive areas and need to avoid impacts; vehicles off beaches; keep cats out of campgrounds and dogs away from breeding areas, preferably a no dogs rule; campers spread the word about shorebird habitat. ▪ <i>Vehicles on beaches:</i> provide education strategies that confirm that it is discouraged/illegal and limit to certain allowable areas (to be publicised); include beach driving on demerit system and increase fines; occasional police blitz; block access with accompanying signage; disallow motorbikes form campsites by providing parking areas at entry. ▪ <i>Lack of pet control:</i> education and coercion (on the spot fines); no pets campgrounds (retain some pet-friendly ones); tighter definition of control (eg within sight of owner/restrained). ▪ <i>Inappropriate or irresponsible campfire management:</i> education; appropriate firewood sources; coercion - rigorously enforce total fire ban days; fuel stove only; official communal fireplaces and/or gas BBQs; appropriate training and supervision of machine operators; ▪ <i>active intervention by authorised personnel to stop antisocial activities;</i> ▪ <i>Limit Spread of phytophthora fungus:</i> by discouraging vehicle use off authorised tracks.

Table 9: Action Plan Recommended Coastal Management Measures (General)	
Strategic Issue	Recommended Action (ongoing priority)
	<ul style="list-style-type: none"> ▪ <i>Education and promotion</i>: publish a vehicle access camping code; camping code signage at each campground; expanded summer ranger program. ▪ <i>Zoning</i>: specifying areas for particular activities or types of camping to provide for different needs (eg. tent-only, mobile home/caravan sites; permitted fires, pets etc).
Coastal/Foreshore Parklands	<p>Implement the following three priority projects that are recommended for improvements to existing foreshore parklands to improve amenity for visitors and residents:</p> <ul style="list-style-type: none"> ▪ Development of the St Helens Waterfront Parklands, including activation, new playground equipment, improved access and parking, and marina/port improvements. Refer to concept plan at Appendix 7; ▪ Construction of a boardwalk/shared walking/bicycle track linking the St Helens Marina and Foreshore Park with Lions Park, with an extension to Akaroa (on the eastern side of Georges Bay). Refer to Plans at Appendix 8. ▪ Improvements to the Binalong Bay Foreshore lands as proposed by the key projects proposed by the Masterplan (refer Plan at Appendix 9).
Potential Areas for Future Development	<p>All stakeholders (including Council and State Government Agencies) to consider the following areas of land (as described further in this Plan and accompanying maps) that have degraded ecological value, and are potentially suited to development along the coast (<u>subject to detailed analysis/assessment on all issues of consideration, including environmental, social, economic impacts</u>) include:</p> <ul style="list-style-type: none"> ▪ West of Policemans Point, Ansons Bay ▪ The Gardens ▪ West of St Helens: ▪ Southern Scamander ▪ Most of the coastal land south of Falmouth east of Douglas Aspley National Park.

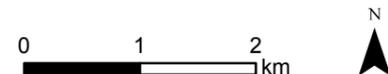


Action Plan Summary

- 1** Ongoing management of Shack sites
- 2** Eddystone Point: car park & amenities upgrade/installation
- 3** Ansons Bay: replace fishing tables
- 4** Ansons Bay: Management of shacks & shoreline
- 5** Camping area improvements & management
- 6** Manage impacts of sea level rise
- 7** Investigate dune revegetation/management
- 8** Improve signage
- 9** Investigate potential for tourism development. Improve buffer to shoreline
- 10** As above
- 11** Track & weed management
- 12** Fire management

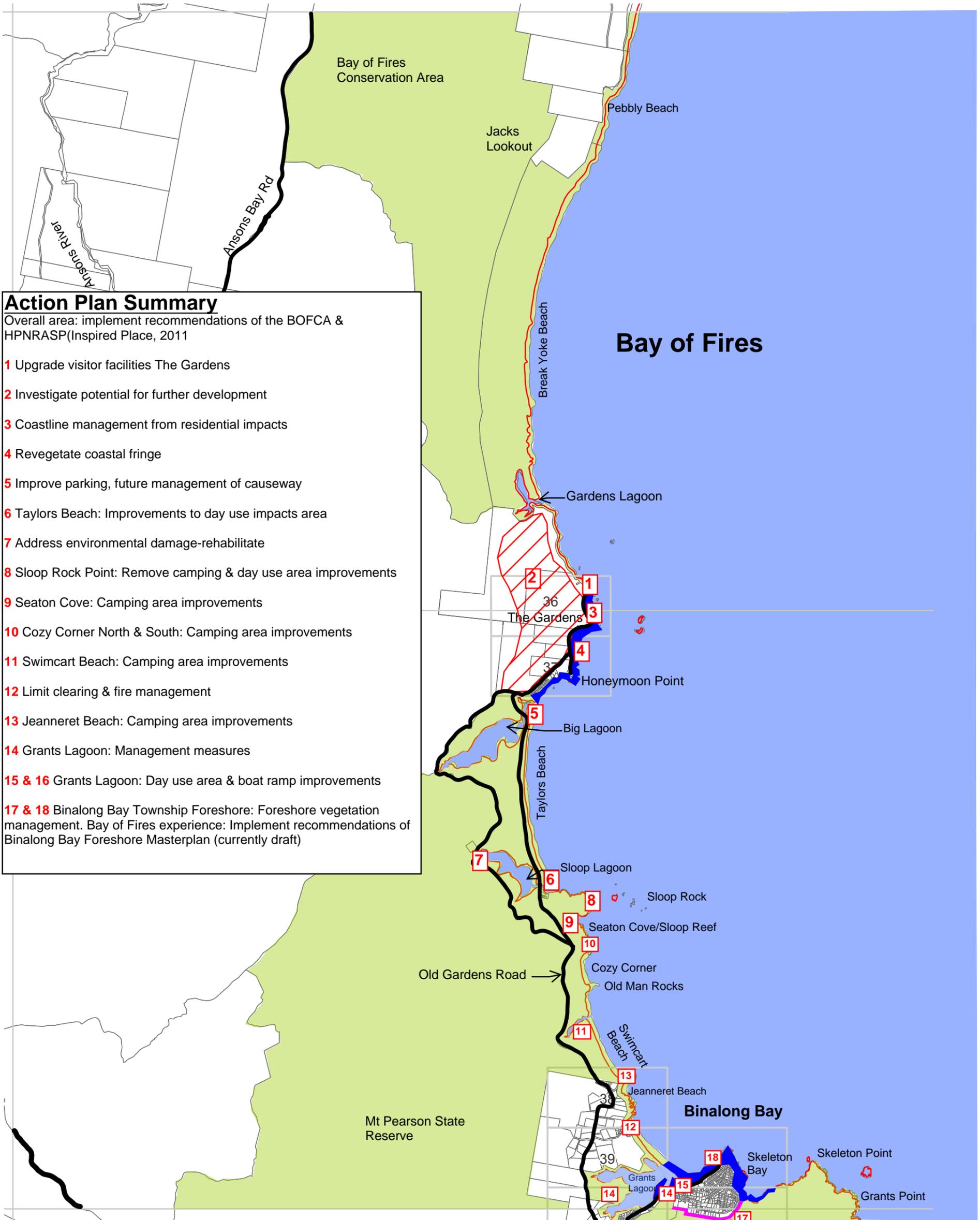
Break O' Day Council Coastal Plan
 Map M: Action Plan- Ansons Bay Survey Area

Break O' Day Council Map Reference: 1 & 2
 Data Source: Break O' Day Council, LIST, Environmental Services & Design,
 Niche Environment and Heritage



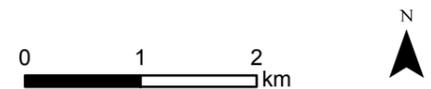
**Table 10: Action Plan
Ansons Bay Survey Area (Map M)**

Map Ref No.	Area/Locality	Recommended Actions
1	Shack Sites North of Eddystone Lighthouse Mt William National Park	Ongoing management required: Introduced animals , firewood sourcing, effluent disposal effects, solid waste disposal, encroachment by clearing outside of boundaries, access. (OM: Med)
2	Eddystone Point End of Deep Creek Road (on the point)	Regrade car park. (I: Med) Upgrade/replace toilet. (I: High) Small timber building adjacent to car park- Consider utilisation of structure , eg. conversion to picnic structure (I: Med) Install fish cleaning table (I: High)
3	Ansons Bay Boronia Street (via AcaciaSt)	Replace fishing tables -(I: Med).
4	Ansons Bay Foreshore	Ongoing management: from sea level rise (erosion, shoreline recession, shoreline vegetation loss (<i>Melaleuca ericifolia</i>) and rocky shoreline) (OM: Med) Management of impacts from shack residents on vegetation, including riparian vegetation and water quality of Bay: vegetation clearance, pets, weed infestation, domestic wastewater and stormwater runoff impacts. (OM: Med) Issues identified in the Ansons Bay Shack Sites Assessment (Sinclair Knight Merz, November 2000) should be addressed including the following key matters: <ul style="list-style-type: none"> ▪ Wastewater Management: the preferred approach is a combination of treatment systems including septic tank systems, composting toilets, and aerated wastewater treatment systems; ▪ Pollution in Mallinsons Creek: testing was inconclusive but could be associated with inadequate septic systems for shacks. ▪ Appendix F of the Assessment Report is a Botanical Survey of the Crown Land Shack Sites (Phillip Cullen, Botany and Geomorphology Services, August 1999) and recommends areas supporting Coastal Poa Swamp forest and Depauperrate coastal paperbark forest should be managed for conservation. ▪ A detailed study of the geomorphology and erosion hazard should be undertaken and a management plan developed to address the erosion problem. ▪ No shacks should be sold until the problems of erosion and foreshore management have been addressed. (OM: Med)
5	Bay of Fires Conservation Area Policeman's Point Policemans Point Road Camping Area	Better utilise/manage information board. (I: Med) Provide fish cleaning table. (I: High) Implement recommendations within the <i>Bay of Fires Conservation Area and Humbug Point Nature Recreation Area Site Plan</i> (Inspired Place, 2011, Section 5.4.3 Which include the following high priority works: <ol style="list-style-type: none"> 1. Undertake management of the roads within the camping area. 2. Where possible install fence and rehabilitate remnant foreshore vegetation. 3. Install a two-stall unisex toilet (composting or pump out system).. (OM/I: High)
6	Policemans Point Entry to Ansons Bay	Long term management of sea level rise with configuration changes (possibly of closure of bay from sedimentation). (I: Low)
7	Beaches south of Policemans Point	Investigate revegetation/management of dunes in recession that are planted with Marram Grass which are currently unsuitable for the colonisation by shorebirds. (OM: Med)
8	Intersection of South Ansons Road and Ansons Bay Road	Improve signage at intersection (Sth Ansons Road) to indicate where Policemans Point camping area and signage heading south from north (Policemans Point). Junction (I: High)
9	South Ansons Bay Potential residential/tourism development area	Investigate potential for development of private land for tourism development and/or residential development. Must involve optimal buffer and revegetation to shoreline/foreshore conservation area. Requires detailed analysis/assessment on all issues of consideration, including environmental, social, economic impacts and consideration by all stakeholders and relevant government agencies. (LUP: Med-Low)
10	South Ansons Bay Potential increased development	Private land south of South Ansons Road currently lacks environmental attributes and area could be investigated for increased development, if demand warranted. Requires detailed analysis/assessment on all issues of consideration, including environmental, social, economic impacts and consideration by all stakeholders and relevant government agencies. (LUP: Med-Low)
11	Mt William National Park	Management of vehicular tracks and spread of <i>Phytophthora</i> . (OM: Med)
12	Mt William National Park	Management of fire protection measures within National Park in proximity of settlements. (OM: High)



Break O' Day Council Coastal Plan
 Map N: Action Plan- The Gardens & Binalong Bay Survey Area

Break O' Day Council Map Reference: 3 & 4
 Data Source: Break O' Day Council, LIST, Environmental Services & Design,
 Niche Environment and Heritage



**Table 11: Action Plan
The Gardens and Binalong Bay Survey Areas (Map N)**

Map Ref No.	Area/Locality	Recommended Action
	Overall Area Bay of Fires Conservation Area and Humbug Point Nature Recreation Area	<p>Implement recommendations within the <i>Bay of Fires Conservation Area and Humbug Point Nature Recreation Area Site Plan</i> (Inspired Place, 2011), including:</p> <p>General recommendations for camping areas;</p> <ul style="list-style-type: none"> ▪ individual recommendations for each campsite (Policemans Point; Seatons Cove, Cosy Corner North and South; Swimcart Beach; Jeaneret Beach; Dora Point; and Grants Lagoon – refer detail in Appendix 1 'Document Review of this Study'); ▪ development of the three Site Plans (refer Appendix 6 of this study) at Sloop Rock Point and Taylors Beach South and The Gardens Road; ▪ consideration of prohibiting camping at Sloop Rock Point and Taylors Beach South to allow for rehabilitation of these site and improve for day use; ▪ introduce sustainable actions such as above-ground only fire use and associated fine for campfires; ▪ enforce prohibition of quad/trail bikes unless allowed in a management plan; ▪ introduce a fee for camping; ▪ option of rubbish pick-up for a small fee; trialling rotational use of camp sites; ▪ investigate potential for small number of walk-in only camp sites; ▪ prepare a camping strategy for the study area. <p>Implement the Action Plan which sets out the recommended actions for the delivery of the Bay of Fires experience. The priorities are:</p> <ol style="list-style-type: none"> 1. Adoption of the <i>Bay of Fires Conservation Area and Humbug Point Nature Recreation Area Site Plan</i>. 2. Undertake Reserve Activity Assessments for each of the selected sites managed by Parks and Wildlife Service including background research and further consulting with key stakeholders. 3. Determine available funding sources and clarify management and maintenance responsibilities for the infrastructure associated with delivery of the Bay of Fires experience. 4. Submit development application for any development (e.g. construction of facilities) of the proposed Bay of Fires experience to the Break O' Day Council as required under the planning scheme and LUPAA process. 5. Undertake basic site rehabilitation/revegetation for each of the selected sites. This includes fencing around native vegetation/dunes, site rehabilitation of degraded areas, revegetation with native species etc (order of priority Binalong Bay, The Gardens; Taylors Beach; Sloop Rock Point). 6. Develop the thematic interpretative material for the selected sites consistent with the interpretation strategy, along with self-guided brochure and dedicated website of the Bay of Fires destination. 7. Install and construct the visitor infrastructure required for each of the selected sites including car parking, pedestrian paths, park furniture, interpretation, toilets and signs (order of priority Binalong bay, The Gardens; Taylors Beach; Sloop Rock Point – refer plans at Appendix 6 of this study). 8. Design, make and install directional signage as listed in Section 5.3. <p>(I/OM: Med)</p>
1	Bay of Fires Conservation Area Northern end of The Gardens Road, The Gardens	<p>Install arrival/directional signage. (I: High) Install Bins. (I: High)</p> <p>Implement recommendations within the <i>Bay of Fires Conservation Area and Humbug Point Nature Recreation Area Site Plan</i> (Inspired Place, 2011) for the northern end point of the Gardens Road (currently accessed by visitors to reach 'end point' and extensive views). Site Plan (refer Appendix 6) includes:</p> <ul style="list-style-type: none"> ▪ extending the car park slightly to allow for a better layout and greater capacity; ▪ formalise the car park, concrete wheel stops, turning area, landscaping. ▪ investigate purchase or lease of adjoining private land if more space is required in the future. ▪ develop an interpretation/arrival node, including interpretive material and information signage. ▪ formalise pedestrian access from the car park to a rest node via compacted gravel path (at disabled access gradient). ▪ formalising and rationalising pedestrian access from the rest node via a compacted sand pathways forming a short circuit around the site. ▪ create a decision point with directional signage and a basic trail map.

**Table 11: Action Plan
The Gardens and Binalong Bay Survey Areas (Map N)**

Map Ref No.	Area/Locality	Recommended Action
		<ul style="list-style-type: none"> ▪ develop a small lookout at the selected elevated position providing views along the Bay of Fires away from the developed shacks to the south. ▪ fencing and rehabilitating the degraded dune area. ▪ rehabilitating informal paths, including disused vehicle tracks. ▪ investigate the potential to formalise pedestrian access north along the foreshore to the next beach (may involve consulting with the private landowner and constructing steps on a steep section down to the beach). ▪ installing signage regarding shorebird impacts minimisation. <p>(OM: Med)</p>
2	The Gardens Northern end of The Gardens Road, west of road	<p>Potential for further development (previously cleared farmland). Must be low impact, consideration of Aboriginal heritage and revegetation, maintenance and enhancement of vegetation corridors to enhance scenic and environmental values. Requires detailed analysis/assessment on all issues of consideration, including environmental, social, economic impacts and consideration by all stakeholders and relevant government agencies. Avoid southern slopes of The Gardens headland at outflow point of Big Lagoon.</p> <p>(LUP: L)</p>
3	The Gardens Strip residential development east of The Gardens Road,	<p>Manage the negative effects of residential development so close to coastline: limits to public access, rationalise multiple tracks to beach, effluent disposal and visual impact/revegetation.</p> <p>(OM: Med)</p>
4	The Gardens coastline	<p>Revegetate existing narrow coastal vegetation fringe around headland, and widen vegetation on coastal reserve.</p> <p>(OM: Med)</p>
5	Big Lagoon entrance/Northern Taylors Beach	<p>Parking Areas - On northern side of The Gardens Road (eastern and western sides): restrict uncontrolled access to beach from parking areas – it is noted that this was underway at the time of site survey and may be complete.</p> <p>(I: Low)</p> <p>Potential Future Management from Bridge/causeway: impedes flow, scouring and channel development issues, impedes access of some species, impact from sea level rise. (I: Low)</p>
6	Bay of Fires Conservation Area Taylors Beach Southern end of Taylors Beach	<p>Implement recommendations within the <i>Bay of Fires Conservation Area and Humbug Point Nature Recreation Area Site Plan</i> (Inspired Place, 2011) for The southern end of Taylors Beach beside the Sloop Lagoon inlet Signage advising no camping, day use, no dogs and coastline safety is required.</p> <p>Site Plan (refer Appendix 6 of this Plan) includes:</p> <ul style="list-style-type: none"> ▪ restrict access to day use only to minimise environmental damage and improve public access (<i>Note: some improvements works have been undertaken</i>) ▪ formalise vehicular access and parking, using bollards to delineate parking spaces and picnic nodes and to define Y turning area; resurfacing road and parking and compacted gravel; ▪ fencing the visitor area to minimise disturbance to vegetation and allowing rehabilitation and revegetation; ▪ install a unisex single stall above ground toilet (visually screened and on existing disturbed area); ▪ two picnic nodes each with two picnic tables and rubbish bins on compacted gravel surface; ▪ install interpretive signage including information on shorebirds; ▪ install sign indicating day use only and facilities available; and ▪ Close and rehabilitate/revegetate various access points long beach and maintain extensive northern and southern access, and one in the middle, with shorebird information signs at these main entry points to the beach. (I/OM: Med)
7	Bay of Fires Conservation Area Sloop Lagoons	<p>Address environmental damage: Prohibit/limit/formalise 4WD access and camping. Rehabilitate and stabilise former quarry to address visual and siltation issues</p> <p>(BOD Council and Mineral Resources. I/OM: Med)</p>
8	Bay of Fires Conservation Area Sloop Rock	<p>Implement recommendations within the <i>Bay of Fires Conservation Area and Humbug Point Nature Recreation Area Site Plan</i> (Inspired Place, 2011) for Sloop Rock Point to the north of Seaton Cove (currently used for informal camping and day use). Site Plan (refer Appendix 6) includes:</p> <ul style="list-style-type: none"> ▪ remove camping and manage the site as day use area only to minimise impacts. ▪ create a smaller car park with designated parking spaces (reduce, rehabilitate

**Table 11: Action Plan
The Gardens and Binalong Bay Survey Areas (Map N)**

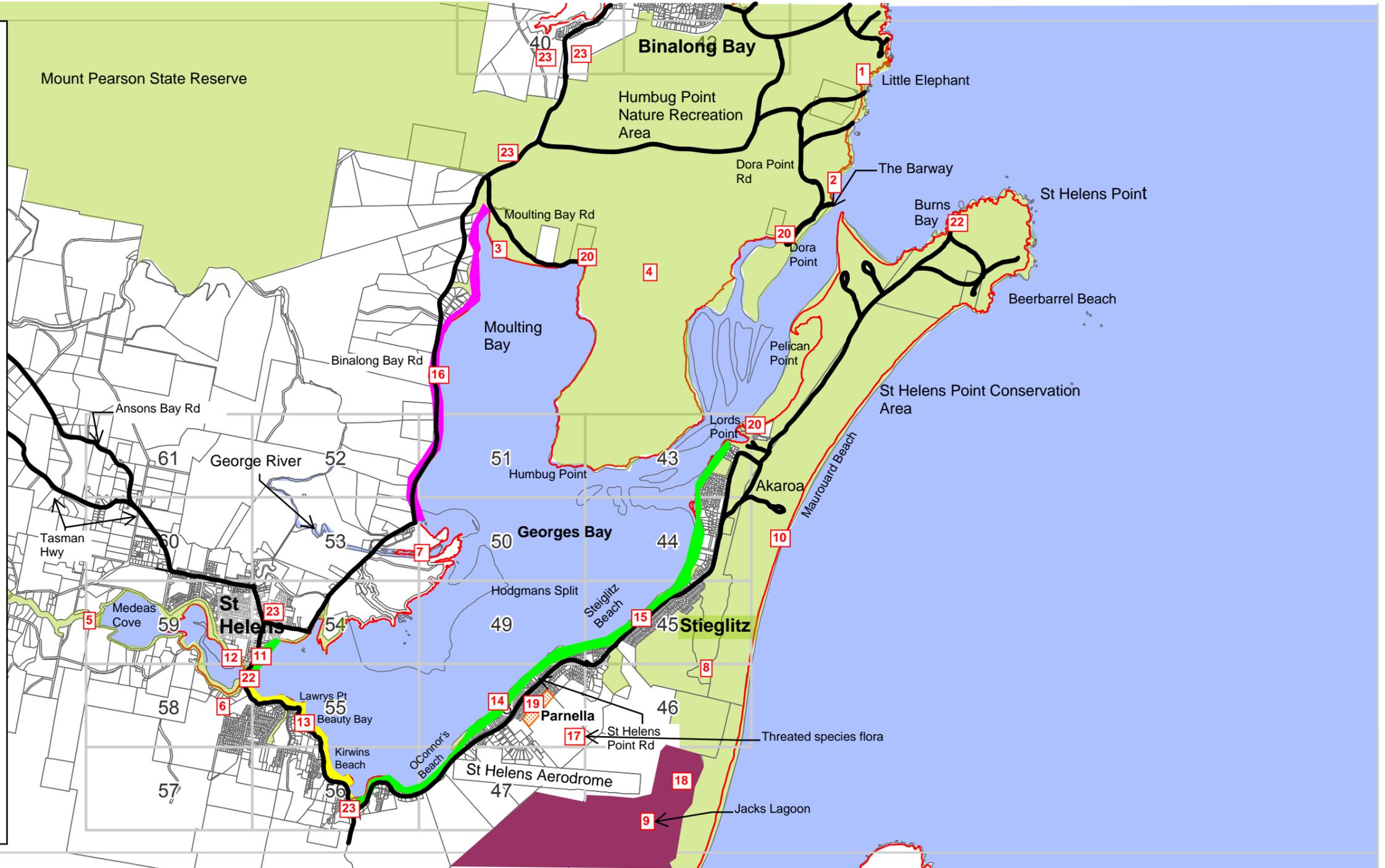
Map Ref No.	Area/Locality	Recommended Action
		<p>and revegetate large impacted areas currently used for camping).</p> <ul style="list-style-type: none"> ▪ small interpretation node/lookout which connects to existing walking track to beach. ▪ picnic node with 2 picnic tables. ▪ formalise pedestrian access to protected beach (including sand ladders and erosion control). ▪ signage informing of nearest toilet location (Cosy Corner/Seatons Cove - once installed). (I/OM: Med)
9	<p>Bay of Fires Conservation Area</p> <p>Seaton Cove Camping Area</p>	<p>Implement recommendations within the <i>Bay of Fires Conservation Area and Humbug Point Nature Recreation Area Site Plan</i> (Inspired Place, 2011) for Seaton Cove camping area, which include the following High Priority recommendations:</p> <ol style="list-style-type: none"> 1. Rehabilitate foreshore vegetation 2. Bollard lower campsite to identify vehicle parking area 3. Close lower informal foreshore camping site 4. Install a toilet within the camping area (I: High)
10	<p>Bay of Fires Conservation Area</p> <p>Cosy Corner North & South Camping Areas</p>	<p>Review recommendations within the <i>Bay of Fires Conservation Area and Humbug Point Nature Recreation Area Site Plan</i> (Inspired Place, 2011) for Cosy Corners North and South camping area, which include the following High Priority key recommendation: Maintain the existing footprint of the campsite, and investigate the potential to increase the carry capacity of the site by further formalisation (eg use of fencing, bollards or revegetation to designate spaces). (I: High)</p> <p>Review also with recommendations within <i>North-Eastern Tasmania Sustainable Coastal Camping Strategy (Coastcare, 2000) Case Study</i> for Cosy Corner South. Develop final recommendations and implement. (High)</p>
11	<p>Bay of Fires Conservation Area</p> <p>Swimcart Beach Camping area</p>	<p>Implement recommendations within the <i>Bay of Fires Conservation Area and Humbug Point Nature Recreation Area Site Plan</i> (Inspired Place, 2011) for Swimcart Beach, including the following key high priority issues:</p> <ol style="list-style-type: none"> 1 Establish a 'motorhome and caravan preferred' camping area in the vegetated area defined by the main Swimcart campsite access roads (west of the existing toilet). 2 Dedicate the Swimcart foreshore camping area to 'low impact' tent camping only 3 Rehabilitate the foreshore camping area along Swimcart Beach. (I: High)
12	Residential development north of Binalong Bay (2 ha lots)	Regularise and limit clearing for fire control. Ensure eastern allotments do not clear beyond property boundaries so as not to impact on coastal vegetation and wildlife. Pet control. (LUP: Med)
13	<p>Bay of Fires Conservation Area</p> <p>Jeanneret Beach Camping Area</p>	<p>Implement recommendations within the <i>Bay of Fires Conservation Area and Humbug Point Nature Recreation Area Site Plan</i> (Inspired Place, 2011) for Jeanneret Beach Camping area, including the following management intent:</p> <ul style="list-style-type: none"> ▪ Maintain the 'freedom camping' and intimate appeal of the site, by imposing only minimal campsite infrastructure and formalisation, and encouraging use by tent campers rather than caravans or motorhomes; ▪ Maintain the existing footprint of the overall camping area, and minimise any further encroachment of individual campsites into native vegetation; ▪ Improve environmental management of the immediate foreshore; ▪ Provide improved day use amenity; and ▪ Minimise maintenance requirements, and communicate a 'low-impact ethos'. (I: Med-High)
14	<p>Bay of Fires Conservation Area</p> <p>Grants Lagoon Camping Area</p>	<p>Implement recommendations within the <i>Bay of Fires Conservation Area and Humbug Point Nature Recreation Area Site Plan</i> (Inspired Place, 2011) for Grants Lagoon, including the following:</p> <ul style="list-style-type: none"> ▪ Above-ground fires only; ▪ Generators permitted in the some areas of the site; ▪ Trail/quad bikes prohibited; ▪ Portable toilets encouraged. (OM: Med)
15	Grants lagoon Accessed from Binalong Bay Road Binalong Bay	Day use area (accessed from Binalong Bay Road) refer to recommendations of <i>Binalong Bay Foreshore Masterplan</i> (prepared by WAX Design and Infraplan dated April 2014) (I: High)
16	<p>Bay of Fires Conservation Area</p> <p>Grants Lagoon</p>	Boat Ramp refer to recommendations of <i>Binalong Bay Foreshore Masterplan</i> (prepared by WAX

**Table 11: Action Plan
The Gardens and Binalong Bay Survey Areas (Map N)**

Map Ref No.	Area/Locality	Recommended Action
		Design and Infraplan dated April 2014) (I: High)
17	Binalong Bay Township edges	Manage and regularise degradation of vegetation at edge of township and encroachment of vegetation clearing into reserve. Foreshore vegetation management – maintenance of larger tree species required (many in decline or dead). (OM: High)
18	Humbug Point Nature Rec Area Binalong Bay Foreshore Area Northern side of MainRoad	<i>Identified in the Bay of Fires Conservation Area and Humbug Point Nature Recreation Area Site Plan (Inspired Place, 2011) and St Helens Tourism Precinct Development Plan as a gateway site to the Bay of Fires experience and has been developed into the Binalong Bay Foreshore Masterplan (prepared by WAX Design and Infraplan dated April 2014).</i> Now adopted by Council in principle, the recommendations of this Masterplan should be implemented. Key projects are new continuous pedestrian foreshore walk and cycling lane and involve improvements to: the entrance car park; cafe car park; village green; boat ramp and shacks; Boat Harbour Point ('People's Park'); Grants Lagoon, central beach access and Skeleton Bay road and car park. (I: High)

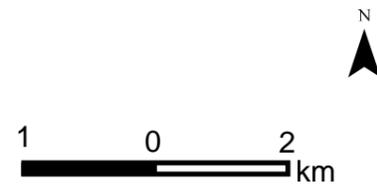
Action Plan Summary

- 1 Upgrade carpark
- 2 Camping area: Management Improvements
- 3 Camping area: Management & day use facility improvements
- 4 Promote walking trails
- 5 Manage impacts on wetlands
- 6 Throughout locality: Protect Eucalyptus globulus species
- 7 Address/manage impacts of weeds & nutrients river entrance
- 8 Promote walking trails
- 9 Address/manage threats & impacts to Jacks Lagoon
- 10 Manage & maintain coastal wetlands & dune system. Limit 4WD access
- 11 Redevelop Foreshore Park
- 12 Replace damaged picnic facilities
- 13 Develop Foreshore Multi-User Track (St Helens to Lions Park)
- 14 Develop Foreshore Multi-User Track (Lions Park to Stieglitz)
- 15 Improvements to Stieglitz Boat ramp/jetty
- 16 Protect existing & revegetate foreshore vegetation
- 17 Protection threatened flora species
- 18 Increase width of coastal reserve
- 19 Investigate infill development potential
- 20 Manage impacts of isolated foreshore residential areas
- 21 Improve parking arrangements at Burns Bay Boat ramp
- 22 Improvements to St Helens Wharf & parking
- 23 Improve directional signage (various locations)



Break O' Day Council Coastal Plan
Map O: Action Plan- St Helens Survey Area

Break O' Day Council Map Reference: 5
Data Source: Break O' Day Council, LIST, Environmental Services & Design, Niche Environment and Heritage

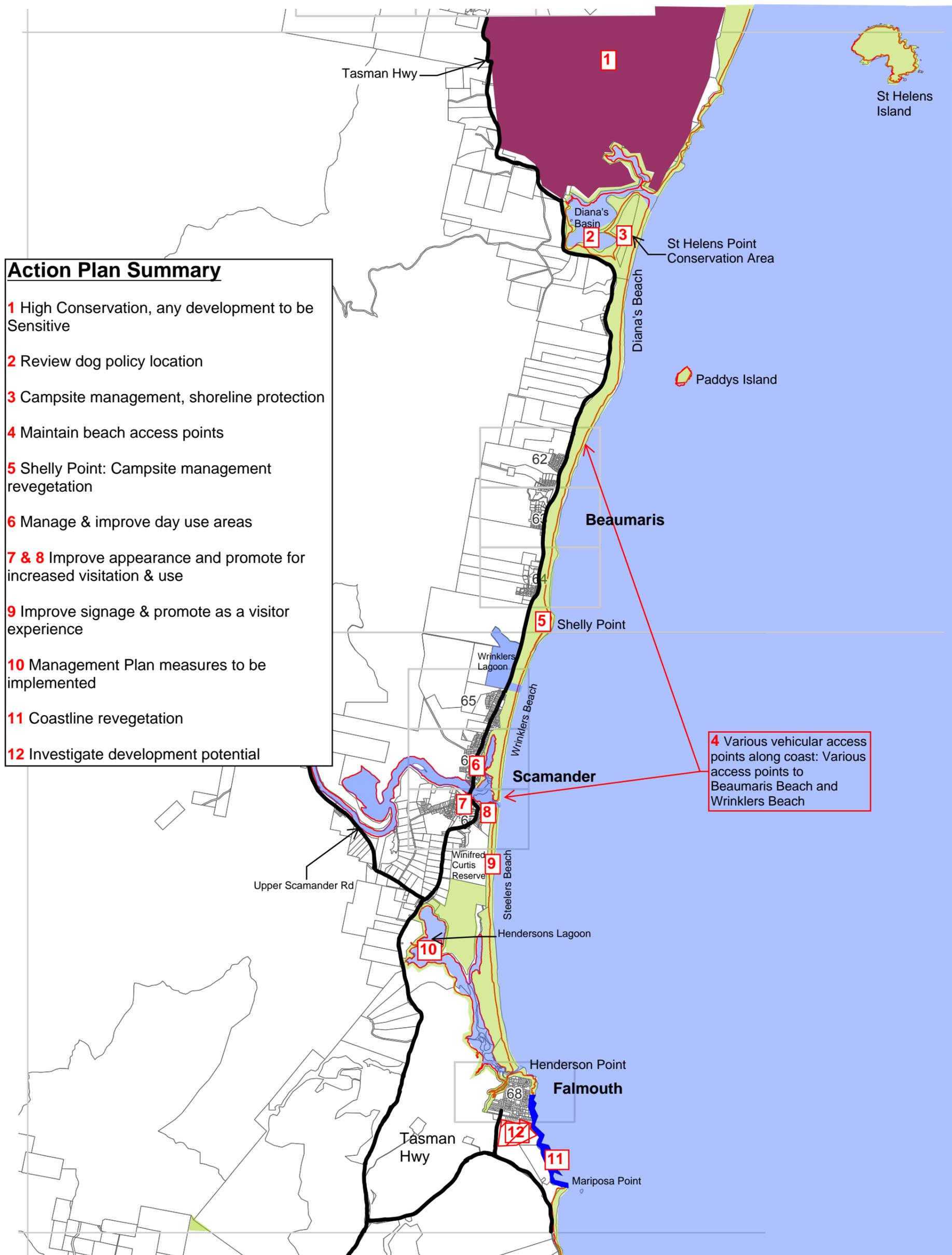


**Table 12: Action Plan
St Helens Survey Area (Map O)**

Map Ref No.	Area/Locality	Recommended Action
1.	Humbug Point Nature Reserve Little Elephant	Upgrade car park/turnaround area (I: Med)
2	Humbug Point Nature Reserve Dora Point Camping Area	Implement recommendations within the <i>Bay of Fires Conservation Area and Humbug Point Nature Recreation Area Site Plan</i> (Inspired Place, 2011) for Dora Point camping area, including the following management intent: <ul style="list-style-type: none"> ▪ Maintain the existing footprint of the overall camping area, and minimise any further encroachment of individual campsites into native vegetation; ▪ Maintain as a relatively informal site, with limited infrastructure and development; ▪ Improve environmental management of the site through rehabilitation of native vegetation, and formalisation of parking areas; ▪ Provide for a mixture of camping experiences, with areas suitable for large groups, motorhomes and other large vehicles, as well as more intimate spaces for smaller ten- based campers; and ▪ Provide increased ranger presence during the peak season. (OM/I: Med)
3	Humbug Point Nature Reserve South Moulting Bay	Improve Car park/turning area; (I: Med) Relocate 1 picnic table ; (I: High) Camping area; protect vegetation (in good condition). (OM: High)
4	Humbug Point Nature Reserve South	Promote coastal and reserve walking trails. (OM: Med)
5	St Helens Region Wetlands	Wetlands require management in a regional context regarding impacts from: <ul style="list-style-type: none"> ▪ siltation (from erosion of sediments from unrehabilitated gravel pits west of St Helens), which can impact on flood water storage, agricultural uses ▪ residential uses ▪ increased runoff ▪ domestic pets ▪ unrestricted tracks (in reserves) ▪ litter ▪ over clearing ▪ Increase shoreline vegetation to provide habitat ▪ Address impacts from sea level rise (including urban area) (OM: Med)
6	Throughout St Helens area	Protect <i>Eucalyptus globulus</i> – important habitat for the threatened Swift parrot. (OM: High)
7	Aquaculture Drive North of St Helens Georges River	South of aquaculture: entrance to Rivermouth to Bay. Address/manage impacts from weed infestation and nutrient release. (OM: High)
8	St Helens Point Conservation Area North of Jocks Lagoon	Walking trails (various)-promote (OM: Med) Accessed from Diana's Basin and from St Helens Point Road.
9	Jocks Jagoon	Address the following key threats identified in <i>the Ecological Character Description for the Jocks Lagoon RAMSAR Site</i> (Lloyd Environmental Pty Ltd, 2011): off-road vehicles; climate change; alien species introductions; fire; chytrid fungus; <i>Phytophthora cinnamomi</i> ; sand mining; weeds; acid sulphate soils; neighbouring developments; slashing. (OM: High)
10	St Helens Point Conservation Area Perons Dunes, accessed via St Helens Point Road	Limit and manage 4WD access to Maurouard Beach. (OM: High) Maintain and manage coastal wetlands, and dune system (issues: vehicle impacts, litter, weeds, animals, overcrowding, garden escapes, airport impacts). (OM: Med-High)
11	St Helens Waterfront East of Georges Bay Esplanade and Cecelia Street (Percy Steel Reserve)	Redevelop Foreshore Park in accordance with adopted plan (once adopted) by Jennifer Binns (refer Appendix 7 of this Study). Implement the St Helens Waterfront Project (Break O'Day Council Strategic Project). (I/LUP: High)
12	St Helens Medeas Cove Esplanade	Replace broken picnic facilities. (I: High)
13	St Helens to Lions Park and St Helens Point (includes Lawrys Point,	Coastal walk - Interrupted by driveways to industry etc, address Lawrys Point Unsafe sight entry/egress. Develop St Helens-Georges Bay Foreshore Multiuser Track by Jennifer Binns (refer Appendix 8).

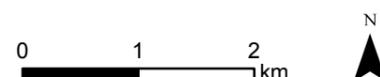
**Table 12: Action Plan
St Helens Survey Area (Map O)**

Map Ref No.	Area/Locality	Recommended Action
	Beauty Bay, Kirwin's Beach, Lions Park)	Consistent furniture and signage. (I: High)
14	O'Connors Beach to Stieglitz Foreshore track	Improve foreshore access and amenities. Develop St Helens-Georges Bay Foreshore Multiuser Track by Jennifer Binns (refer Appendix 8). (I: Med-High)
15	Stieglitz Beach	Boat ramp, jetty- investigate options to improve access at low tide & improve all weather access & shelter from North/Northeast winds. Consideration be given to additional lane. (ECMIS/MAST) (I: Med)
16	Western Foreshore of Georges Bay Stieglitz and Akaroa	Protect existing vegetation and Revegetate narrow foreshore reserve. (OM: Med)
17	Crown Land between Aerodrome and Chimney Lagoon, east of Parnella	Concentration of threatened species of flora – future protection and consideration of conservation status to be addressed. (OM: Med)
18	Freehold land between Stieglitz & Dianas Basin	Increase width of coastal reserve and incorporate lagoon area north of Diana's Basin.
19	East of Existing Urban Area of Stieglitz	Investigate infill development potential. Requires detailed analysis/assessment on all issues of consideration, including environmental, social, economic impacts and consideration by all stakeholders and relevant government agencies. (OM: Med)
20 (3 Place s)	Isolated residential development: Shoreline of Georges Bay (Dora Point, Moulting Bay, Lords Point)	Manage impacts of isolated residential areas (litter, weeds, domestic animals, unrestricted track and beach usage). (OM: Med-High)
21	Burns Bay Boat Ramp	Improve parking arrangements & provide waiting facility (ECMIS/MAST). (I: Med)
22	St Helens Wharf St Helens	Replace wharf with inclusion of floating marina berths. Optimise parking arrangement through dedicated trailer parking (ECMIS/MAST) . (I: Med)
23	Directional signage improvements	Improve directional signage (including distances to destination and consistent graphics/tourist/Bay of Fires interpretation). <ul style="list-style-type: none"> • Tasman Highway northbound before Lions Park/St Helens Point Road intersection); • Binalong Bay Road & The Gardens Road. (I: High)



Break O' Day Council Coastal Plan
Map P: Action Plan- Scamander Survey Area

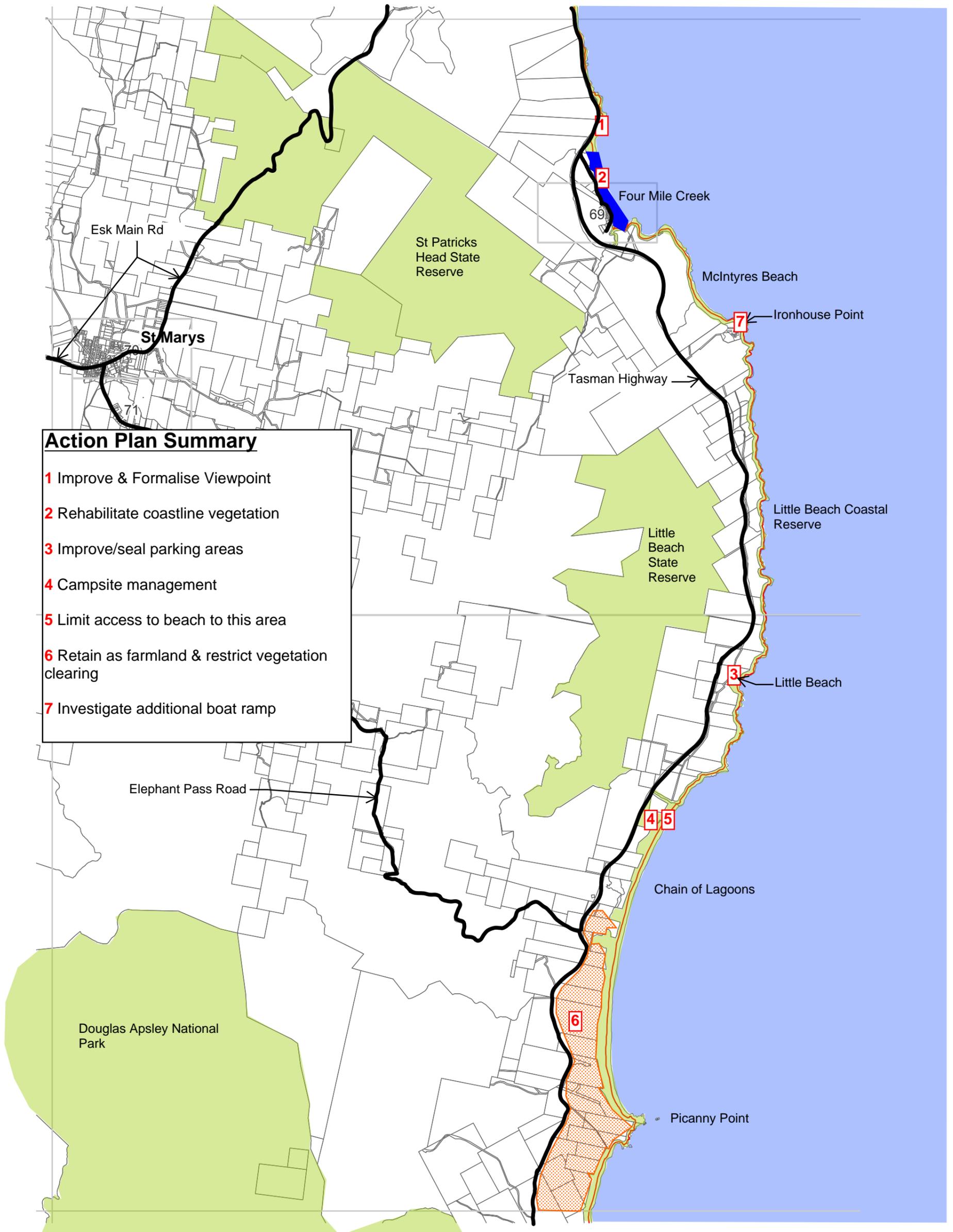
Break O' Day Council Map Reference: 6 & 7
Data Source: Break O' Day Council, LIST, Environmental Services & Design,
Niche Environment and Heritage



**Table 13: Action Plan
Scamander Survey Area (Map P)**

Map Ref No.	Area/Locality	Recommended Action
1	Freehold land north of Diana's Basin	High conservation values and adjacent to RAMSAR wetland. Ideally expand reserved land, providing a wider linkage between Diana's Basin (especially area directly north of the Basin and east to coastline). Alternatively, any development proposed for this site should be restricted to low density, low impact residential with sensitive ecological design requirements. Requires detailed analysis/assessment on all issues of consideration, including environmental, social, economic impacts and consideration by all stakeholders and relevant government agencies. Freehold land north of Dianas Basin has a significant area of threatened vegetation community <i>Melaleuca ericifolia</i> forest. (LUP: Low)
2	Diana's Basin	Review dog-on lead permit in this area and associated signage – lagoon shoreline is permitted dog on lead area, however beach is prohibited. Shoreline should also be prohibited dog area. (OM: High)
3	St Helens Point Conservation Area Diana's Basin	Address impacts of Camping: Revegetate impacts to vegetation Ensure protection of threatened shoreline vegetation communities <i>Eucalyptus globus</i> and <i>Eucalyptus ovate</i> (OM: High)
4	Scamander Conservation Area Various access points to Beaumaris Beach and Wrinklers Beach	Do not increase access points to coastline. Maintain/existing access and car park areas. Monitor vegetation for sight distance safety. Regrade driveways and car parks where necessary. (OM: Med)
5	Scamander Conservation Area Shelly Point	Camping Revegetate impacts to vegetation. (OM: Med)
6	Scamander Conservation Area Wrinklers Beach Accessed by Lagoon Esplanade	Wrinklers Beach Day Use Areas. Parking and beach access (across bridge). Potential to develop Council reserve/playing field north of Thomas St as an active day use area. Will need to be managed with adjacent residential areas. (LUP/I: Low)
7 & 8	Scamander River Southern/western side of bridge Bridge Esplanade Southern/eastern side of bridge Tasman Hwy	Main areas Increased landscaping and general appearance upgrades. Good facilities - Promote for visitors. (I: Med)
9	Winifred Curtis Reserve Accessed from Tasman Hwy	Promote this reserve for tourism, following analysis/assessment on all issues of consideration of intensification of visitor use, including environmental, social, economic impacts and consideration by all stakeholders and relevant government agencies, and preparation of a Management Plan. A model for coastal reserve management. Improve directional signage. (OM: Med)
10	Four Mile Creek Conservation Area Henderson Lagoon Falmouth	Continue to implement <i>Henderson's' Lagoon Management Plan</i> (Action list in section 5 and tabled in Appendix 8) Management directions include monitoring, community education and on-ground works, discussions with relevant authorities over planning and legislation changes. Key on-ground actions recommended in section 7 include; <ul style="list-style-type: none"> ▪ Completing fencing and revegetation of waterways, wetlands and the lagoon edge; ▪ Revegetation and continued weed control of the coastal vegetation; ▪ Track improvement and erosion controls; ▪ Installation of picnic tables; ▪ Clean up of litter; ▪ Installation of interpretive signage; and ▪ Landscaping of public areas with local native species. To assist management: Increased awareness and knowledge of the natural values and management issues is required. Develop information networks. (OM: Med)
11	Falmouth coastline	Limited coastal access - Rocky, steep and inaccessible. Eroding coastline, beaches in recession. Coastal reserve requires revegetation between township and Mariposa Point. (I: Med)

Table 13: Action Plan Scamander Survey Area (Map P)		
Map Ref No.	Area/Locality	Recommended Action
12	Falmouth township	Potential for future development towards the south and Mariposa Point. Requires detailed analysis/assessment on all issues of consideration, including environmental, social, economic impacts and consideration by all relevant stakeholders and government agencies. (LUP: Low)

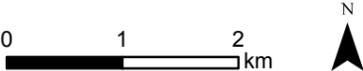


Action Plan Summary

- 1** Improve & Formalise Viewpoint
- 2** Rehabilitate coastline vegetation
- 3** Improve/seal parking areas
- 4** Campsite management
- 5** Limit access to beach to this area
- 6** Retain as farmland & restrict vegetation clearing
- 7** Investigate additional boat ramp

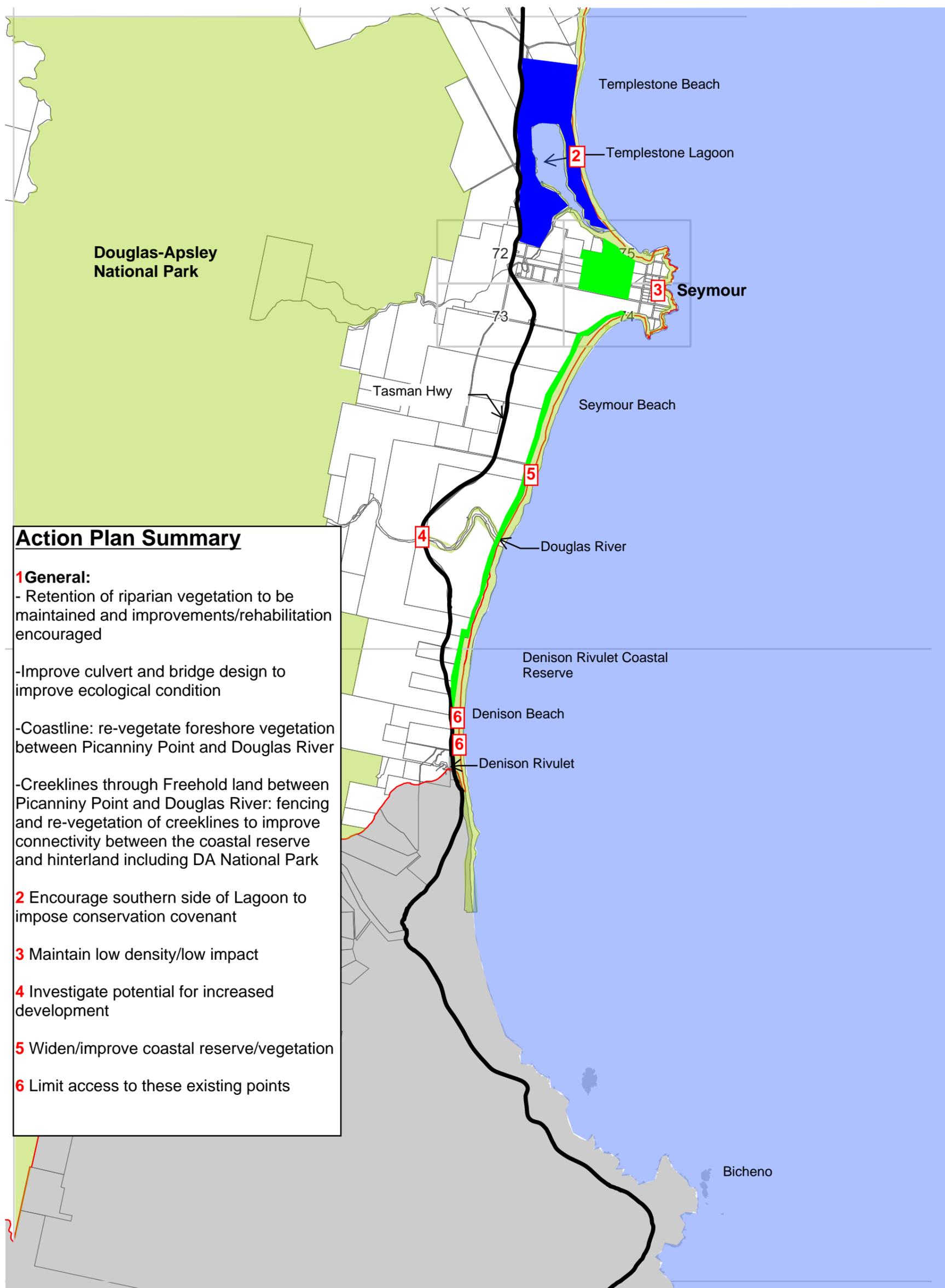
Break O' Day Council Coastal Plan
 Map Q: Action Plan- Ironhouse Point Survey Area

Break O' Day Council Map Reference: 8 & 9
 Data Source: Break O' Day Council, LIST, Environmental Services & Design,
 Niche Environment and Heritage



**Table 14: Action Plan
Ironhouse Point Survey Area (Maps Q)**

Map Ref No.	Area/Locality	Recommended Action
1.	Four Mile Creek Tasman Hwy North of Four Mile Creek Road	Parking area/viewing point: Eastern side of Tasman Hwy Develop/Improve/formalise and promote the excellent coastal view. (I: High)
2	Four Mile Creek End of Four Mile Creek Road	Minimise further clearing of native vegetation close to the coastline. Rehabilitate where possible to provide habitat for a range of species. (OM: Med)
3	Little Beach Conservation Area Tasman Highway	Day access only. Parking - informal unsealed driveway. No facilities – consider toilet provision. (I: Med)
4	Lagoons Beach Conservation Area Tasman Highway Camping area	Camping Area: continue to well-manage camping area and access tracks to beach. (OM: Med)
5	Lagoons Beach Conservation Area Lagoon Beach	Limited access to northern end should remain. (OM: Med)
6	Coastline from Chain of Lagoons to Piccaninny Point	Should be retained as farming and/or low density residential with restrictions on further vegetation clearing. (LUP: Low)
7	Ironhouse Point	An additional boat ramp is required on the coastline between Scamander and Bicheno. Investigate potential for upgrade and increased public use of existing ramp at Brewery site (private land). Assessment to consider environmental, social, economic impacts and consideration by all stakeholders and relevant state government agencies. ECMIS rec: investigate upgrade of existing boat ramp. (ECMIS/MAST) (I: Med)



Action Plan Summary

- 1 General:**
 - Retention of riparian vegetation to be maintained and improvements/rehabilitation encouraged
 - Improve culvert and bridge design to improve ecological condition
 - Coastline: re-vegetate foreshore vegetation between Picanniny Point and Douglas River
 - Creeklines through Freehold land between Picanniny Point and Douglas River: fencing and re-vegetation of creeklines to improve connectivity between the coastal reserve and hinterland including DA National Park
- 2** Encourage southern side of Lagoon to impose conservation covenant
- 3** Maintain low density/low impact
- 4** Investigate potential for increased development
- 5** Widen/improve coastal reserve/vegetation
- 6** Limit access to these existing points

Break O' Day Council Coastal Plan
 Map R: Action Plan- Douglas River Survey Area

Break O' Day Council Map Reference: 10 & 11
 Data Source: Break O' Day Council, LIST, Environmental Services & Design,
 Niche Environment and Heritage



**Table 15: Action Plan
Douglas River Survey Area (Map R)**

Map Ref No.	Area/Locality	Recommended Action
1	General	Retention of riparian vegetation to be maintained and improvements/rehabilitation encouraged. Improve culvert and bridge design throughout area to improve ecological condition. Coastline: revegetate foreshore vegetation between Picanniny Point and Douglas River. Creeklines through Freehold land between Picanniny Point and Douglas River : fencing and re-vegetation of creeklines to improve connectivity between the coastal reserve and hinterland including Douglas Apsley National Park. (OM/I: Med)
2	Templestone Lagoon	The freehold land on the southern side of the Lagoon has an existing covenant. Encourage the remaining freehold land to impose a covenant. (LUP: Low) Undertake fencing and revegetation around Lagoon and along creeks (particularly Doctors Creek). (I/OM: Med) Re-establish linkages of vegetation from coastal reserve to the Douglas Apsley National Park to the west. (OM: Med)
3	Long Point/Seymour	Limit impact to remnant vegetation at Long Point/Seymour (ie. retain as low density and potentially low impact tourism). (LUP: Low)
4	Douglas River settlement	Potential for increased development, subject to incorporation of increased width of coastal reserve via revegetation and revegetation of a riparian corridor along Douglas River and minor tributaries and assessment on all issues of consideration, including environmental impacts and consideration by all relevant stakeholders and state government agencies. (LUP: Low)
	Access to Seymour Beach and Denison Beach	Maintain limited access (due to freehold land ownership). (OM: Med)
6	South Denison Beach	Limit access to existing tracks. (OM: Med)

References

Vegetation Management Plan section: sourced from the 'Break O'Day Coastal Vegetation Management Constraints and Opportunities 2012' prepared by Environmental Service and Design Pty Ltd (ES&D) (Final Version dated 29 September 2013)

as listed in Section 3.1 'Identification of existing data' (p7).

- Break O'Day NRM Strategy 2012
- Break O'Day Draft Interim Planning Scheme 2011
- Effects of Repeated Fires on Dry Sclerophyll (*E. sieberi*) Forests in Eastern Tasmania
- Final Coastal Adaptation Pathways - Georges Bay Report
- Integrated Coastal Management Framework – National
- Jocks Lagoon RAMSAR Site
- Lower George River Flood Risk Plan
- National Land and Water Audit March 2005
- North Region Land Use Strategy 2011
- NRM 2011-2012 Annual Report
- Break O'Day: Review of Settlement Strategy 2008
- Sharples: The Changing Coast – Providing Room - Natural Adjustments
- Break O Day Strategic Plan - Further Information - North East Bioregional Network - Land use Plan
- Tasmanian Coastal Works Manual – Vegetation Management
- Tasmanian State Coastal Policy 1996 Revised
- Tourism Development Strategy 2012-2017
- Wetland Strategy for Tasmania
- Natural Values Atlas, DPIPWE, Hobart, www.naturalvaluesatlas.tas.gov.au
- TASVEG 2.0, DPIPWE, Hobart. Accessed through the Natural Values Atlas
- DPIPWE website, www.dpipwe.tas.gov.au Threatened Species and Weeds.
- GoogleEarth on-line.
- www.thelist.tas.gov.au
- A Census of the Vascular Plants of Tasmania, Tasmanian Herbarium Website, www.tmag.tas.gov.au/Herbarium/TasVascPlants
- Morgan H & Povey A, Bushways Environmental Services, 24 April 2009. *Falmouth & Hendersons Lagoon, Environmental Management Plan*
- North Barker Ecosystem Services, December 2009, *Break O'Day Coastal Lagoon Assessment*.
- Cadastral, Transport Vegetation, Infrastructure, Threatened Species, and other datasets for MapInfo or Arcview, provided by Break O'Day Council.

Land Use Planning and Approvals Act 1993

State Coastal Policy 1996

Draft Tasmanian Coastal Policy Statement (Department of Premier and Cabinet, 2013)

State Policy on Water Quality Management 1997

National Environmental Protection Measures

Tasmanian Coastal Works Manual - A Best Practice Management Guide for Changing Coastlines (Leah Page and Veronica Thorp, December 2010)

Vision East 2030 – The East Coast Land Use Framework (December 2009)

Regional Land Use Strategy of Northern Tasmania (Northern Tasmania Development and JMG Engineers and Planners, 2011)

Report to consider revisions to the Regional Land Use Strategy of Northern Tasmania – Rural Living, Urban Mixed Use and Major Tourism zones (Working Group of the Northern Region Planning Initiative Management Committee, March 2013)

Northern Tasmania Regional Model Planning Scheme Template

East Coast Marine Infrastructure Strategy 2013 (GHD for Dept Economic Development, Marine and Safety Tasmanian and Local Councils, 2013)

Break O'Day Strategic Plan 2011-2015

Break O'Day Tourism Development Strategy 2012-2017 (Adam Saddler Consulting, June 2012)

Break O'Day Natural Resource Management Strategy (Tasmanian Government, NRM North and BODC Partnership, 2012)

Break O'Day Settlement Strategy (Break O'Day Council, November 1996)

Review of Break O'Day Settlement Strategy - Recommendations for Future Action (Planet Planning Pty Ltd, November 2008)

Break O'Day Interim Planning Scheme 2013 (Final Version submitted to the Planning Commission February 2013)

Tasmanian Coastal Adaption Pathways Project – Georges Bay (SGS Economics and Planning, July 2012);

Break O'Day Coastal Inundation Vulnerability (Pitt and Sherry, 2011);

St Helens and Surrounds Structure Plan (Urbis, March 2013);

Ansons Bay Shack Sites Assessment (Sinclair Knight Merz, November 2000)

Report to Council on the Ansons Bay Shack Sites Assessment Final Report (Tony Walker, Environmental Health Officer, November 2000)

Ecological Character Description for the Jocks Lagoon RAMSAR Site (Lloyd Environmental Pty Ltd, 2011)

Falmouth and Hendersons Lagoon Environmental Management Plan (Bushways Environmental Services, Moran and Povey, 2009)

Bay of Fires Conservation Area and Humbug Point Nature Recreation Area Site Plan (Inspired Place, 2011)

North-Eastern Tasmania Sustainable Coastal Camping Strategy (Coastcare, 2000)

Tasmanian Reserve Management Code of Practice 2003

Economic Impact Analysis: Tourism in Tasmania's East (REMPAN and Department of Economic Development, Tourism and the Arts, June 2013)

Binalong Bay Foreshore Master Plan Consultation Report (Break O' Day Council, WAX, infra Plan, May 2013)

Economic Development Strategy (MCA, Sept 2013)

Airstrip Feasibility Investigations (MCA and Aurecon, October 2013)

Responding to Climate Change Report (EMC)

Community Infrastructure and Design Guidelines (Architects Edmiston Architects, 2014)

Break O'Day Council Stormwater Management Plan (Northrop, 2014)

A Review of Shorebird Management in Tasmania Discussion Paper 2013 (Isabel Axio, University of Queensland, November 2013)

Marine and Coastal Management Strategy: Dorset, Break O'Day and Glamorgan/Spring Bay Councils Summary Report 1995 (Coastal Management Project Steering Committee)

An Action Plan for Marine and Coastal Management in east and north-east Tasmania (Coastlink, 2000)

'Briefs for Strategic Projects' document dated December 2013 (St Helens Waterfront and St Helens Foreshore-Georges Bay Multi-User Track)

(Source:http://www.bodc.tas.gov.au/sites/all/files/breakoday/documents/resources/brief_package_-_december_2013_-_with_plans.pdf)

St Helens Foreshore Redevelopment (Concept Plan)

(Source:http://www.bodc.tas.gov.au/sites/all/files/breakoday/documents/resources/foreshoreconcept_redevelopment_proposal-march_2014.pdf)

Skyline Tier Restoration Project (http://www.et.org.au/skylinesite_learmore).

Appendix 1: Document Review

This section is to provide an overview and review of the content, outcomes and recommendations of existing local, regional and state-wide studies, strategies, documents and maps (including review of existing planning provisions) previously prepared, which are of relevance to the Coastal Plan. The following key documents have been reviewed and where considered appropriate, have been incorporated in the recommendations of the Coastal Plan.

National And State Legislation, Plans and Policies

Land Use Planning and Approvals Act 1993

The Land Use Planning and Approvals Act 1993 is the overarching state wide planning act which governs land use planning and development within Tasmania. All state policies, regional strategies and local planning schemes and policies must be consistent with this document. The Break O'Day Interim Planning Scheme has been prepared having regard to the provisions of the Northern Tasmania Regional land Use Strategy and in a manner which provides for coordinated and consistent zoning across municipal boundaries, which is consistent with the requirements of the Act.

State Coastal Policy 1996

The State Coastal Policy applies to land within 1km of the high water mark (i.e. the 'Coastal Zone'). Three main principles guide Tasmania's State Coastal Policy, being:

- Natural and cultural values of the coast shall be protected;
- The coast shall be used and developed in a sustainable manner; and
- Integrated management and protection of the coastal zone is a shared responsibility.

The Policy provides a series of outcomes that embody the principles under the following four sections:

1. Protection of Natural and Cultural Values of the Coastal Zone;
2. Sustainable Development of Coastal Areas and Resources;
3. Shared Responsibility for Integrated Management of Coastal Areas and Resources; and
4. Implementation, Evaluation and Review.

This Policy is under review (see below).

Draft Tasmanian Coastal Policy Statement (Department of Premier and Cabinet, 2013)

(Source: http://www.dpac.tas.gov.au/divisions/policy/Coastal_Protection_and_Planning_Framework)

The aim of the Coastal Protection and Planning Framework project is to address the issues identified with current arrangements and provide a blueprint for the planning and management of the State's coast now and into the future. The project is being led from within the Policy Division in the Department of Premier and Cabinet.

The Framework will comprise a Tasmanian Coastal Policy Statement and an Implementation Plan outlining how the Policy Statement will be given effect through existing and/or new policy instruments and processes, and integrated with the RMPS. The Tasmanian Coastal Policy Statement will articulate key policy principles and goals, an approach to defining the coast, and high level roles and responsibilities of different levels of government and private parties. A draft Tasmanian Coastal Policy Statement was released for public consultation on 5 July 2013.

A draft Tasmanian Coastal Policy Statement was released for public comment on 5 July 2013 as a key step in developing a Coastal Protection and Planning Framework. The draft Coastal Policy Statement proposed a long-term vision for Tasmania's coast, along with the key goals, policy directions and principles for decision making and action. The draft Tasmanian Coastal Policy Statement has the following Vision for Tasmania's Coast:

"Tasmania's coast is planned and managed to ensure its sustainable use and development to achieve important economic and social benefits for current and future generations, while conserving its diverse and distinctive natural and cultural values."

The following Guiding Principles were proposed in the draft Policy document:

1. Balanced, evidence and risk-based decision making, including application of the precautionary principle;
2. Minimal regulation, where necessary;
3. Equity of access and opportunity;
4. Collaborative planning and management.

The following four broad goals (each with more detailed policy directions) are proposed to achieve the vision:

1. to facilitate the sustainable development of the coast to maximise the economic and social benefits, while protecting the environment;
2. to conserve and enhance the coast's significant natural and Aboriginal and historic heritage values;
3. to manage risk from coastal processes and present and future coastal hazards, to enable coastal processes and existing activities to continue, and permit new activities to occur;
4. to ensure that the coast is accessible and available for recreational use by the public.

Key stakeholders and interested members of the community were invited to have their say to help ensure that future coastal policy reflects the priorities and issues that need to be addressed now and into the future. The consultation process was completed in August 2013. Following the consultation process, the Department of Premier and Cabinet developed a Consultation Report on the draft Tasmanian Coastal Policy Statement, documenting the range of public responses to the draft Policy Statement, both generally and in relation to specific elements. The Government will now consider the most appropriate way of incorporating the feedback into a revised Policy Statement and progress its implementation.

State Policy on Water Quality Management 1997

The State Policy on Water Quality Management 1997 regulates water quality management of all surface waters, including coastal waters, and groundwaters (excluding privately owned waters that are not accessible to the public and are not connected to waters that are accessible to the public and waters in any tank, pipe or cistern). The Policy aims to achieve water quality objectives that further the objectives of Tasmania's Resource Management and Planning System, manage sources of water pollution, ensure efficient monitoring programs are conducted and facilitate integrated catchment management.

Part 4 of the Policy specifies outcomes to achieve water quality objectives under the following divisions:

- Division 1 – Measures to Achieve Policy Objectives;
- Division 2 – Management of Point Sources of Pollution;
- Division 3 – Management of Diffuse Sources of Pollution.

National Environmental Protection Measures

National Environment Protection Measures (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 Authority. They are developed under the National Environmental Protection Council (Tasmania) Act 1995 and outline nationally common objectives to protect or manage aspects of the environment relating to any one or more of the following:

- ambient air quality;
- ambient marine, estuarine and fresh water quality;
- the protection of amenity in relation to noise (including motor vehicle noise and emissions);
- general guidelines for the assessment of site contamination;
- environmental impacts associated with hazardous wastes; and
- the re-use and recycling of used materials.

Tasmanian Coastal Works Manual - A Best Practice Management Guide for Changing Coastlines (Leah Page and Veronica Thorp, December 2010)

Source: <http://dpiwwe.tas.gov.au/conservation/coastal-and-marine-environment/managing-the-coast/tasmanian-coastal-works-manual>

The Tasmanian Coastal Works Manual has been produced by The Coastal and Marine Branch, EPA Division, Department of Primary Industries, Parks, Water and Environment (DPIPWE), with funding support from the Australian Government's Caring for Our Country program. The manual is a comprehensive tool for coastal land managers such as parks and reserves managers and local council works crews. The manual aims to increase knowledge and awareness on a wide range of coastal land management issues to ensure that future work undertaken on fragile coastal areas will have minimal impact on environmental values.

The manual will encourage more consistent use of best practice management techniques; and improve the resilience of Tasmania's coastline to sustain future effects of climate change and sea level rise.

Manual topics cover the broad spectrum of coastal land management activities and include Aboriginal heritage management, vegetation management, maintenance of facilities, coastal roads, access ways and tracks, climate change and sea level rise adaptation and response, working with the community, coastal processes and geomorphology, and protection of wildlife.

The manual is organised into 15 chapters and a suite of 25 guidelines (some with check-lists) that cover works typically undertaken by those with responsibility for coastal management.

Regional Policies and Plans

Vision East 2030 – The East Coast Land Use Framework (December 2009)

The Vision East 2030 document is the land use framework for the east coast of Tasmania. This document not only encompasses Break O'Day, including adjoining municipalities of Glamorgan Spring Bay, Tasman and Sorell. The document provides guidance for the implementation of new planning schemes to provide consistency across the East Coast region. The aim of Vision East 2030 seeks to enhance the community and economic potential of the East Coast, to manage its natural assets, set up a settlement hierarchy and investigate transport links between these settlements.

The Vision for the Framework for the Break O Day Municipality is to “*promote St Helens as one of the sub-regional service centres and improve tourist accessibility whilst maintaining a sense of seclusion to protect the iconic coastal landscapes*”. The Framework classifies St Marys as an existing and proposed ‘Township’ with a medium growth scenario. Scamander is recognised as a ‘Village’. ‘Planning Actions’ to ensure that each settlement fulfils the role and function identified in the Settlement Hierarchy are provided and includes identification of a settlement boundary, preparation of a structure plan and a commercial centre strategy, as well as provide detailed requirements for built form.

The document acknowledges that urban settlements have generally developed in coastal locations and it is expected that household size will decline and the population will continue to be dominated by the older cohorts. This will demand a range of housing types. Many of the issues for the future within the document relate to coastal areas.

The Framework does not specify heritage sites and places, however notes the various protection legislation and mechanisms, and identifies that sites can be at risk from inappropriate development. The long term viability of many of the region's industries (including mining and forestry) is recognized as an issue for the future. With respect to transport linkages the Framework indicates that other transport options (including sustainable options) within the region are limited. Road and road condition is noted as the primary issue for the region. The Framework document indicates that Infrastructure is limited to main settlements.

The document also refers to an alternative road hierarchy to that currently used (specifically primary arterial roads), however no improvements to these road linkages are proposed. Key policies within the Framework are to “*ensure the roads are managed in accordance with their classification in the road hierarchy and the*

state's Road and Rail Asset Schedule" and to "ensure roads service the higher order centres (district towns, towns and tourist precincts) in the Settlement Hierarchy as a priority".

Regional Land Use Strategy of Northern Tasmania (Northern Tasmania Development and JMG Engineers and Planners, 2011)

The Regional Land Use Strategy of Northern Tasmania, which includes Break O'Day Municipality, was prepared by Northern Tasmania Development and JMC Engineers & Planners as a final document in September 2011. The document is a 20 year strategic plan for the region's future development and planning to 2032 for integrated infrastructure, land use development and transport planning based upon economic, social and environmental strategies.

The purpose of the RLUS is to create the regional strategic planning land use policy intent for the future planning directives of the development of Northern Tasmania, derived from the vision for the State as outlined in by Tasmania Together, objectives of the Tasmanian Resource Management and Planning System (RMPS), and the Land Use Planning and Approvals Act 1993. The desired regional policy outcomes are integrated and holistic and appear in the document under the following headings:

- Regional Settlement Network;
- Regional Activity Centre Network;
- Regional Infrastructure Network;
- Regional Economic Development;
- Social Infrastructure and Community;
- Regional Environment.

Population projections are provided, based upon municipality or Council area only. Break O'Day is expected to experience a 1.6% annual growth rate to 2032. The Regional Land Use Framework provides the strategic context at a regional level for planning schemes within the region and contains strategies for the future use and development of land within the region. The various settlements are given to a hierarchy, where St Helens (including Stieglitz, and St Helens Point) are classed as a District Centre, while St Marys is classed as a Rural Town and Fingal and Scamander as Rural Villages (p45). Part 4.5 'Regional Activity Centres Network' identifies a town and village hierarchy for Break O'Day Municipality.

This Strategy has been completed, however a report has recently been produced by the Working Group of the Northern Region Planning Initiative Management Committee which reconsiders some of the Strategy recommendations (see below).

Report to consider revisions to the Regional Land Use Strategy of Northern Tasmania – Rural Living, Urban Mixed Use and Major Tourism zones (Working Group of the Northern Region Planning Initiative Management Committee, March 2013)

This report reconsiders some of the Strategy recommendations, due to the inconsistencies between different Council Draft Interim Planning Schemes produced since the Strategy was prepared. This report considers revisions to the RLUS that articulate the northern region's strategy in development and application of the

relevant zones. This is necessary to clarify those matters that reasonably further the objectives of the RLUS through the development of planning schemes. These comments have been recently made available for public comment (March 2013), however feedback from these comments had not been provided at the time of writing this report. The review of this document will have significant implications for the review of Council's Planning Scheme and directly identifies changes which may be recommended as part of the Land Use and Development Strategy.

In summary the document addresses:

- Rural and Environmental Living zones as part of the residential suite of zones;
- Urban Mixed Use Zone as a transition area for commercial uses to urban activity centres and as a reflection of historical township land use patterns;
- Major Tourism as a new zone to reflect the potential significance of particular tourism activities, and;
- The Furneaux group of islands (unrelated to Break O'Day Municipality).

Northern Tasmania Regional Model Planning Scheme Template

Northern Tasmania Regional Planning Scheme Template (referred to in Section 30E of the Land Use Planning and Approvals Act 1993) specifies mandatory common (designated in green) and common optional (designated in blue) provisions, then allows for local provisions (designated in red) where justified.

The Break O'Day Interim Planning Scheme is based on the Regional Model Planning Scheme, which is derived from the Regional Land Use Framework. This provides the mechanism by which land use strategies for sustainable economic, environmental and social outcomes are delivered at a regional level, through the appropriate allocation of zones and the inclusion of regionally consistent development controls for use and development.

The application of zoning responds to the unique circumstances of the Northern Region with the settlement hierarchy reflected in some zones only being relevant to the population densities of Launceston urban area and the principal use of the Rural Resources Zone reflecting the highly dispersed and variable nature of the Region's productive rural resources. Each of the zones contains regionally consistent core elements in the provisions that respond to the regional strategies.

East Coast Marine Infrastructure Strategy 2013 (GHD for Dept Economic Development, Marine and Safety Tasmanian and Local Councils, 2013)

The East Coast Marine Infrastructure Strategy (ECMIS) aims to deliver a regional approach to provision of and investment of a practical, economic, and efficient network of marine infrastructure and supporting land facilities to address the identified needs of recreational and commercial users. This includes identification of a priority programme over the next 10 years from 2012-2022 for the upgrade of existing infrastructure and for proposed new infrastructure, including land based facilities and priority opportunities for major new private sector investment.

Policy and strategic framework

The vision that was developed for this strategy within the East Coast Region which responds to the feedback received from the community, councils and other stakeholders.

"To develop a effective network of marine infrastructure that provides for the short and long term needs of both recreational and commercial users by siting to respond to coastal vulnerability and sea level rise, maximizing the effective use of existing infrastructure, supporting land based facilities and realizing identified opportunities for major new private sector investment."

Section 1.2 of the ECMS addresses the needs of the 'North East Coast: Eddystone to Wineglass Bay' area which encompasses the Study Area of this Coastal Plan. This section of the Study states "the North East sub region (Table 3) needs as identified below predominately relate to trailer boating, game fishing, and tourism demand as well as supporting St Helens as a marine precinct/hub and safe haven location." This table is reproduced below which identifies the upgrade recommendations for the jetties and boat ramps within the study area. The Study also states:

"No recreational cruising opportunities are identified as this area of the coast is exposed. Once outside Georges Bay it is a long passage in the open sea of 50+Nm (8 or so hours at normal cruising speed) to the next sheltered anchorage or port. Yachts usually pass St Helens on an ocean passage north or south and would generally only stop for repairs or supplies if really necessary. The St Helens barway is a significant constraint to deeper draft vessels. Several reports have been prepared in relation to issues associated with improvements to the St Helens barway however there are no cost effective solution. A technical report on options to improve barway access and a Social and Environmental impact assessment can be found at: <http://www.mast.tas.gov.au/publications>."

Source: Table 3: North East Coast Recommendations ECMIS		
Facility	Recommendation	Rationale
St Helens Wharf	St Helens Wharf replacement with possible inclusion of floating marina berths to increase berthing capacity for charter boats or shallower draft recreational boats.	St Helens wharf and marina comprises the commercial, recreational, tourist and maritime focus for the town. The St Helens Bar way and channel entrance are a constraint to deeper shaft vessels.
	Optimize parking arrangements through dedicated trailer parking.	Opportunity to foster the image as game fishing capital through provision of quality marine facilities particularly in St Helens.
Burns Bay Boat Ramp	Improve parking arrangements and provide waiting facility in consultation with Parks and Wildlife Service, Councils, Fishing Clubs and MAST.	Open ocean outside the St Helens bar way offers nationally recognized game fishing for 9 months of the year. Due to popularity the parking overflow is impacting on the recreational reserve.
Binalong Bay Boat Ramp/Jetty	Improve parking and access arrangements in consultation with Parks and Wildlife Services	Existing reported trailer parking congestion during peak periods. Tourist opportunity to leverage off international image and the Bay of Fires brand.
Stieglitz Boat Ramp	Investigate options to improve accessibility at low tide and improve all weather access with shelter from N and NE winds. Consideration to be given to a further lane on the ramp.	Georges Bay also offers sheltered family friendly boating with diverse fishing options with 29 known fish species in the Bay.
Scamander/Bicheno	Additional public ramp- investigate Iron house Brewery as option subject to adequate access	Only notable gap in the even distribution of public boat facilities along the East coast.
Bicheno Boat Ramp / Jetty and Landing	Extend walkway to increase berthing capacity. Master plan for the redevelopment of a marine/tourism precinct around the Gulch.	Opportunity to leverage off planned golf club/residential and to provide a focus of tourism and fishing including professional and recreational fishing, diving and departure point for penguin tours.

Appendix A of the ECMS 'Facility Inventory' was also reviewed and the cross referenced on site.

Marine and Coastal Management Strategy: Dorset, Break O'Day and Glamorgan/Spring Bay Councils Summary Report 1995 (Coastal Management Project Steering Committee)

This report provides a summary of Coastal and Marine Management Strategy for the three Council areas of Dorset, Break O' Day and Glamorgan/Spring Bay on the north east and east coasts of Tasmania. The purpose of the strategy is to provide Councils, Governments and local communities with practical tools to manage the use and development of resources in one of Australia's premier coastal and marine environments.

The strategy has been prepared in accordance with the principles of Integrated Local Area Planning. These principles seek to bring community resources to bear on management in an integrated and holistic way and to provide the tools to produce real and practical results. The test of its success will be whether the resources of coastal and marine areas are managed for long term sustainability.

There is widespread evidence that many of these resources are not being adequately managed. The responsibility for management falls on all resource users, and not just on Councils and Governments. The management focus is on influencing the practices and behaviour of resource users to achieve better management outcomes.

This project was funded by the Federal Department of Environment Sports and Territories and was a National Pilot for coastal zone management. The proposals here are applicable in other regions and provide practical means of putting in place effective management of coastal and marine resources.

The components of the strategy are:

1. An overview of the resources and values of the coastal zone in the Dorset, Break O' Day and Glamorgan/Spring Bay local government areas;
2. A statement of the objectives for management-i.e. what is to be achieved through management;
3. An evaluation of current management and its strengths and weaknesses, and an assessment of resource management issues;
4. A statement of the guidelines principles and specific management guidelines to be applied through the strategy;
5. An outline of the management tools to be used; and
6. A statement of the structures proposed for management.

The document explored the current management (in 1995) of resource management in Tasmania which identified that "despite the fact that resource management and planning system implies a greater level of horizontal integration in management, this is unlikely to be achieved under present arrangements. Ultimately, the question of who manages the coastal zone remains unanswered, even with the significant and positive improvements in the resource management capacity of individual agencies and Local government. The fundamental issue is that no one manages the coast. Individual agencies manage aspects of it" (p12).

In evaluating the implementation of the identified range of management measures, the Strategy indicated that "local government should adopt a much more integrated approach both within and between councils

to achieve broadly agreed management ends. The facilitation model provides the best opportunity to produce a truly integrated approach to management of coastal resources in the study area."

The Strategy notes that the capacity of existing managers requires upgrading and strengthening by the following:

- Integration of approvals by local government;
- Use of better approval instruments and mechanisms;
- Enforcement of existing regulations;
- Establishing cost recovery for management;
- Improving the information base for managers
- Implementing management policies and codes of practice; and
- Improving co-ordination between existing agencies.

Facilitating Better Management: The Strategy proposes that a well resourced, pro-active and competent facilitation capacity be established. The best way to achieve this is through a group which can provide a means for all stakeholders to participate in management, but which is able to operate independently of the statutory responsibilities of State and local government.

Adequate resourcing of a coastal management program was identified as an issue, with revenue possibly being generated from a number of sources, such as the following:

- A specific coastal management levy
- Visitor charges
- Fees for Service
- User charges for specific facilities

An Action Plan for Marine and Coastal Management in east and north-east Tasmania (Coastlink, 2000)

The action plan set out tasks to implement an integrated strategy of regional coastal and marine management of the east-north-east of Tasmania. It follows the Marine and Coastal Management Strategy developed previously (in 1995), recapping its approach and adding a list of actions to be undertaken in coming years.

The fundamental problem identified for the coast is that 'coastal managers' are not operating as a team to avoid and resolve coastal management issues. Actions in the Plan focus on regional solutions that coordinate and integrate the diverse roles and influences of the community, industry, councils and state government agencies.

The broad aims of the Plans were to:

- Improve, or maintain, natural biological and physical resources of the coast
- Conserve natural, economic and quality-of life values and opportunities enjoyed by the community
- Cooperative management with shared responsibility, costs and benefits.

The Plan was developed from recent community input and progress since the Marine and Coastal Management Strategy was released in 1995. Implementation will require a joint approach, led by Coastlink, a regional partnership between community, industry and government for focused and coordinated

management of coastal and marine values in the east and north-east of Tasmania, facilitated through a group representing key coastal managers in the region. The Plan includes steps that involve the public in reviewing the outcomes and direction of the Strategy and Action Plan, with a view towards on-going action to cooperatively sustain and protect coastal and marine resources while providing quality-of-life and economic benefits.

Actions: Central to this Plan is a table of 49 coastal management actions. This list of actions provides a basis for the region to plan annual works programs and coordinate funding and resources from participating stakeholders and other sources. The actions are described at a moderate level of detail; specification of actions, their resources requirements and implementation tasks will occur when developing annual Operational Plans. Some of the priority actions listed are

- *Regional Coordination*: Developing a cooperative policing and enforcement program.
- *Planning for coastal management*: Coastal Open-Space Strategy; Joint Application Process for developments requiring Crown and Council approvals; Plan for the possible effects for global climate change.
- *Managing the coast*: Coastal values (vegetation, habits and geomorphology) assessment and coordinated management priorities; Local management plans for Bridport Wildflower Reserve, Coles Bay and Steiglitz Foreshore; Regional coastal landscape mapping and management manual; Regional Response Plan for new marine pests.
- *Awareness, knowledge and skills*: Coastal management training courses; Best-practice management information communicated to foreshore reserve neighbours; Coastal information Web Site; Coastal Management volunteer award.
- *Information and monitoring*: Acquire accurate data and maps of tenure of foreshore lands; Establish regional 'Coastal Atlas'

This Plan focuses on coastal problems and solutions at regional scale and Coastlink, as a forum for cooperative action across the region, will play a leading role in implementing it. Partnerships will be required to implement some actions where they address issues of particular importance and relevance to others. For instance some actions tackle priorities and strategies from local areas or across a wider regional scale. Others are common to goals and priorities from other natural resources management programs in the region, such as for improving water quality in catchment and reducing soil erosion.

Strategic programs: The actions in the table that follows are built around a strategic framework for the Plan of five core management programs. These programs reflect the approach for managing the coast set out in the 1995 Marine and Coastal Management Strategy, with the addition of regional coordination capacity as a management action in its own right.

Regional Coordination

The Regional Coordination program includes recurrent activities

- Coastlink group support and administration
- Communication tasks from the Awareness, Knowledge and Skills program
- Coastal data and expertise tasks from the Information and Monitoring program
- Responding to issues and opportunities of priority that arise in the region.

These provide on-going capacity to coordinate and integrate coastal and marine management roles in the region. They are not explicitly included in the table of actions below. Ensuring this regional capacity is in place and resourced is a role of the Coastlink group.

Resourcing coastal management: Future resourcing of this Plan, and the Strategy in the longer term, will depend on three developing factors, predominantly funding by Federal and State governments.

Local Plans and Policy Documents

Break O'Day Strategic Plan 2011-2015

The Break O'Day Strategic Plan draws on an extensive community consultation process undertaken in 2011 to guide future direction. The document links closely with the Tasmania Together 2020 Vision statement, ensuring consistency with all levels of government to benefit the Break O'Day community.

The Plan identifies 5 key result areas with 5 key goals to ensure Council fulfils its Mission Statement, to be addressed by Council to 2015. The key result areas, their goal and the relevant Tasmania Together 2020 objectives are shown in the table 3 below:

Extract from the Break O'Day Strategic Plan 2011-2015, pg 11		
Key Result Area	Key Goals	Tasmania Together 2020
1. Community Building	Build capacity to improve community spirit and enhance a sense of wellbeing.	Vibrant, inclusive and growing communities where people feel valued and connected.
2. Environment and Planning	Ensure sustainable management of natural and built resources is respectful to our unique location.	Built and natural heritage that is valued and protected
3. Leadership and Governance	Provide strong and informed leadership and effective management of community resources, empowering and involving the community at all levels.	Open and accountable government that listens and plans for a shared future
4. Economic Development	Achieve sustainable economic development	Thriving and innovative industries driven by a high level of business confidence
5. Asset Management	Ensure the efficient and effective provision of appropriate community assets	A reasonable lifestyle and standard of living for all Tasmanians

Of specific relevance to the Coastal Strategy is the following Strategy under the "Asset Management" Goal: "Strategy: Provide a strategic framework for Council to manage, maintain, enhance and develop open space and associated public realm areas for the benefit of residents and visitors" to be achieved by the Activity of "Prepare Municipal Management Plan (MMP) that incorporates the following components: - Coastal Park Concept Plan; and Coastal Park vegetation Management Plan." The other components of the MMP project are also identified in this Strategy.

Break O'Day Tourism Development Strategy 2012-2017 (Adam Saddler Consulting, June 2012)

The Strategy was developed through Community and Stakeholder consultation and an analysis of industry data both nationally and locally. It is intended that the document and action plan will form the basis of Council's strategic direction for both management and development over the next 10 years.

The purpose of the Strategy is to identify clear and achievable strategies to establish Break O'Day Council area as a key tourist destination and business investment centre. The document focuses on the economic benefits of tourism and its inter-relationships with the community's sense of place and environmental values.

The Strategy provides for:

- Forward planning - investments, change facilitation, brandings;
- Visitor Services – Visitor Information Centre, info points, other information mechanisms including publications, website, etc; and
- Council infrastructure – new, upgrading, maintenance.

Of relevance to this Coastal Strategy, the Action Plan recommends the following under the Strategy "Destination Development":

- Create an infrastructure Development Plan and Investment Prospectus: undertake an audit and needs analysis of tourism infrastructure within the Municipality and prepare a brief.
- Enhance Visitor experiences: completion of the St Helens Boardwalk; identify funding sources to complete the boardwalk to the first jetty on St Helens Point Road; capitalise on nature-based assets, eg. trails, walks;
- Establish authentic 'green' credentials: identify existing or planned projects that will enhance the environmental reputation of the destination and identify funding which can be acquired to implement projects.
- Undertake a caravan and RV impact study: of the positive and negative impacts of 'free camping' on the municipality in a broader regional context.
- Maintain awareness of potential National Park development: maintain a watching brief on the potential development of the BODC and BOF National Parks.

Break O'Day Natural Resource Management Strategy (Tasmanian Government, NRM North and BODC Partnership, 2012)

This Strategy has recently been endorsed by the NRM Special Committee and the Break O'Day Council. The strategy is an important document for guiding positive natural resource outcomes in Break O'Day. The Natural Resource Management Strategy aims to support the long term sustainable use and enjoyment of the region's land and natural assets. The Strategy sits within the NRM North Strategy. The Strategy documents the various values and physical aspects of the region, including climate, resources, geology, water catchments, and atmospheric conditions, as well as land tenure and demographic profile. The Strategy identifies objectives, goals and actions for managing (a) biodiversity, (b) the coastal and marine environment, (c) soil, and (d) water.

Break O'Day Settlement Strategy (Break O'Day Council, November 1996)

Council's current adopted Settlement Strategy sets out matters to inform the Break O'Day Planning Scheme 1996, with the underlying principle that all development should be economically, socially and environmentally sustainable. A vision was developed for each township, as well as direction for rural development, urban design, town centres roads, major tourist developments, forestry, farming and reserves. A settlement strategy map was established which demonstrated areas of resource management, and resource production across the region. Detailed investigations including natural resource assets, and population projects were included to inform the planning scheme.

Review of Break O'Day Settlement Strategy - Recommendations for Future Action (Planet Planning Pty Ltd, November 2008)

This review of Council's Settlement Strategy recommended that Council:

- Complete Urban Design Frameworks for St Helens CBD, Binalong Bay and Ansons Bay that provide an integrated approach to land use, built form and movement and clarify the local and regional roles of these places and the need for improvements to both public and private space.
- Consolidate urban development in St Helens and Scamander that maximises existing infrastructure and defines the growth boundaries of urban settlements.
- Develop Local Area Plans for St Marys, Fingal and other towns to identify assets, values and objectives to guide the future development of these towns.
- Propose to introduce a Mixed Use Zone to stimulate investment in shopping centres.
- Prepare a Public Open Space Strategy for urban areas which should consider open space links between settlements.
- Encourage housing diversity and choice in population centres that have social infrastructure and services required by an ageing population.

This review did not include a survey of commercial zones within town centres, however, made various specific recommendations based on field observations relating to major commercial centres, specifically St Helens, Scamander, St Marys, Binalong Bay and Ansons Bay which will be used to inform the Land Use and Development Strategy.

Break O'Day Interim Planning Scheme 2013 (Version 7 dated February 2014)

This document has superseded the Break O'Day Council Planning Scheme 1996. Prior to adoption the Tasmanian Planning Commission (TPC) provided feedback to the draft Interim Planning Scheme and a Final Draft scheme was then endorsed by Council in February 2013, with changes made to the document as a result of the TPC's comments.

The vast majority of the Break O'Day immediate coastline is zoned Environmental Management (which includes all National Parks and Reserves), with the remaining areas within the 1 kilometre of the coastline being predominantly Environmental Living or Rural Resources, except for the townships which are zoned General Residential or Low Density (and General Business in the case of St Helens only). Some pockets around

Georges Bay are zoned Port and Marine. Existing waterfront shack sites on small freehold titles (~530sqm down to 250sqm) at Ansons Bay are zoned Particular Purpose.

Each zone is provided with mandatory objectives under the Template, with Councils able to include additional local objectives. Specific objectives are provided for:

- Settlements;
- Resource Development;
- Environmental Protection;
- Transport and Infrastructure;
- Commercial and Industrial Development.

The Scheme provides for the inclusion of Local Area Objectives under each land use zone, some of which were included in the largely based on the existing Objectives for the Urban Zone under the current planning scheme and are aimed at providing guidance for achieving the Zone Purpose. The Objectives include direction to avoid creating ribbon development along the coast, protect residential amenity in terms of visual and acoustic impacts, overlooking and overshadowing, protect coastal environmental values and historic resources and promote innovative urban design.

The Planning Scheme provides Codes of development for the following land constraints:

- Bushfire hazard Code
- Potentially contaminated land Code
- Landslip Code
- Road and railway Code
- Flood prone areas Code
- Car parking and sustainable transport Code
- Scenic management Code
- Biodiversity Code
- Water quality Code
- Open space and recreation Code
- Environmental impacts and attenuation Code
- Airports impact management Code
- Heritage Code
- Coastal Code
- Sign Code
- Onsite wastewater management Code

The Scheme also allows local Councils to include Specific Area Plans which may apply within a locality. The Scheme in its current form does not contain any Specific Area Plans.

The Scheme contains a significant tree register. These were identified in the previous Planning Scheme, however, the Scheme does not identify any Heritage Precincts.

Tasmanian Coastal Adaption Pathways Project – Georges Bay (SGS Economics and Planning, July 2012);

This report informs the St Helens and wider Georges Bay and Break O' Day community about coastal risks in light of sea level rise resulting from climate change. It also considers ways to respond to risks while considering the values of the local community and the wider benefits of this coastal area.

In the case of Georges Bay, there are a number of adaptation options that are potentially relevant to the impacts identified:

- Raise land levels in St Helens township and other low lying residential areas;
- In combination with the previous measure, a dyke or levee around St Helens over the long term (likely after 2100);
- Raise roads and services of key infrastructure including Binalong Bay Road or alternative route (which would involve a long ridge), section of Tasman Hwy and of St Helens Point Rd, the sewage treatment plant and pumping stations;
- An alternative route for Binalong Bay Road, instead of raising and building a bridge at Binalong Bay Road, Reids Rd could be upgraded to become the main road connection to Binalong Bay. Similarly, it may be possible to build a new road further land inward to replace St Helens Point Rd in the long term, if any environmental values can be managed appropriately;
- Seal the sewer system;
- Improve the drainage capacity to more effectively drain water from St Helens streets (possibly in combination with the next option);
- Implement a water retention area to drain water to from St Helens streets;
- Retreat or protection of properties prone to inundation or redevelopment of structures in less vulnerable form (higher floor levels).

In preparation for community consultation, a number of different adaptation pathways for responding to climate change were developed for four locations:

- a) The identified pathways for the Lower George River mouth are;
 - Pathway 1- Retreat and establish an alternative route to Binalong Bay Road
 - Pathway 2- Maintain Binalong Bay Road as long as practical
 - Pathway 3- Long term protection of Binalong Bay Road with significant engineering
- b) The identified pathways for St Helens town centre are:
 - Pathway 1- Long term relocation of town centre
 - Pathway 2- Long term protection of town centre
- c) The identified pathways for the southern coast of the Bay (Tasman Hwy and St Helens Pt Rd) are:
 - Pathway 1- Let nature take its course and retreat development to allow natural process
 - Pathway 2- Attempt to intervene to manage the types of ecosystems that develop
 - Pathway 3- Some development while protecting important natural values.

Recommendations:

1. Understanding of current and expected hazards and adaptation works

- To include modelling of local peak rainfall dynamics in St Helens in conjunction with sea level rise to better identify flood risk, as well as modelling drainage capacity in potentially flood affected areas that are developed or proposed for development.
- To undertake additional analysis of erosion and the mobility of the George River mouth and the realistic options for erosion protection works (for both Binalong Bay Rd and the northern edge of the town of St Helens) including their likely effectiveness and impacts.
- To inform the community about significant environmental values that have been identified, and to explain why they are important to both the local and wider community.

2. *A better knowledge of the environment*

- That an assessment is undertaken to more accurately estimate the likely costs of adaption options, and also to consider who benefits from different adaption options. Priority should be given to options for Binalong Bay Rd and a possible retreat to the alternative rout of Reids Rd.
- That an approach be formulated to identify the budget required and the sources of funds to raise the money required. It is considered that this should be done on a staged basis over a period of about 5 years, with priority given to identification of and responding to road flooding and stormwater drainage.

3. *Local community and wider community values and objectives*

- To work with the state government to develop a framework for the development of coastal adaptation plans that have state backing and recognition, and balance the priorities of both the local and wider community

Break O'Day Coastal Inundation Vulnerability (Pitt and Sherry, 2011);

This project provides an indication of potential inundation levels that may be anticipated to occur within the Georges Bay area. The assessment incorporates consideration of river flood volumes estimated for George River contributing freshwater inputs to the Bay and consequently elevating surface levels if coincident with incoming tides restricting outflow from the bay. The potential impact of projected changes in rainfall intensity as a result of climate change was incorporated into projections of potential future inundation levels for 2050 and 2100. The project also assessed the potential impact of storm surge tides and additional set-up due to wind wave effects that may be experience with the bay. The potential impact of projected changes in sea levels as a result of climate change was also incorporated.

St Helens and Surrounds Structure Plan (Urbis, March 2013);

The St Helens and Surrounds Structure Plan was commissioned by the Break O'Day Council and the Department of Economic Development, Tourism and the Arts to ensure that the town's future is planned and managed in a coordinated manner. The Study Area includes the coastal plains and lower slopes of the hills surrounding Georges Bay and includes the townships of St Helens, Stieglitz, Arakoa, Binalong Bay and The Gardens. The Plan comprises four documents:

1. Background report: provides an analysis of a number of aspects of the town including township profile; community and population profile; natural features; cultural features; land uses; economy of the region and strategic contact.

2. A Strengths, Weaknesses, Opportunities and Threats (SWOT) Report that identified issues grouped around the themes of State and regional matters; natural features; the community; community facilities; movement network; infrastructure; heritage; the town centre; the waterfront; residential land uses; tourism land uses.
3. Community Views Report: comprises a detailed table including the comments received during the public exhibition of the draft document and responses by Urbis.
4. Structure Plan Report outlines a Vision for St Helens, provides a land use and community needs assessment for the various land uses within the study area. The Structure Plan provides local area objectives and desired future character statements for each of the zones, and objectives and actions for the town centre, waterfront, and land uses and movement network. An Implementation Plan was also provided.

The following sections of the Structure Plan are of relevance to the Coastal Strategy:

Open Space demand: no further provision of open space is required except to ensure that there is access to local open space to residents within new subdivisions. Improvements could be made to the existing areas of open space.

Regional Framework Plan: Figure 7 is a plan of the area showing the following key recommendations of the Strategy:

1. Protect the Bay of Fires foreshore and continue to provide camping facilities (see Section 4.8)
2. Develop Bay of Fires interpretation materials (see Section 4.8)
3. Retain vegetated buffer between road and dwellings (see Section 4.9)
4. Potential tourism development sites (note that potential tourism development on these and other proposed sites will need to address the criteria in Section 4.8 to be considered for approval)
5. Investigate long term access options between St Helens and Binalong Bay (see Section 4.11)
6. Potential long term residential development site with access road linking Douglas Court and Leaside Drive (see Section 4.6)
7. Potential long term rural lifestyle development growth fronts (see Section 4.9)
8. Protect airport operations (see Section 4.11)
9. Link St Helens and Binalong Bay via shared paths (see Section 4.11)
10. Link St Helens and Akaroa via shared paths (see Section 4.11)

Section 4.5 The Coastline states the following:

"The coastline within the study area includes the St Helens port, boating facilities, aquaculture businesses, shack sites at Binalong Bay, the Percy Steel Reserve in St Helens, and a range of other foreshore parks and beaches including the Bay of Fires. These coastal areas are of significant importance, as they incorporate key economic and recreational facilities, and often contain priority habitat areas. To enable people to enjoy the coastline, public access should be provided at appropriate locations. It is noted that for Binalong Bay, public access to the coastline is being explored further through the Binalong Bay Foreshore Master Plan. The Master Plan is also addressing issues relating to the Binalong Bay boat ramp.

Reference should be made to the Tourism recommendations (Section 4.8) regarding camping facilities. Reference should also be made to the Natural Features and Hazards recommendations (Section 4.12), as any development in coastal areas needs to take into account impacts on the environment and natural hazards, in particular coastal flooding.

In this context, the following objectives and actions for the waterfront have been identified:

- Improve linkages between the urban areas and the waterfront areas, especially at the town centre of St Helens, and at Binalong Bay.
- Improve the appearance of the waterfront areas
- Ensure that the public can access the coastline and appropriate places
- Ensure all user groups are catered for in the waterfront areas.
- Support the continued operation of the port
- Support the continued operation of aquaculture operations."

The table below includes the relevant actions for implementation by the Structure Plan:

Implementation Plan (Source: St Helens and Surrounds Structure Plan, p49-57)				
Recommended Action	Responsibility	Timing	PS	MMP/ TMP
The Coastline				
Investigate improvements to the public realm at key waterfront locations through the St Helens Foreshore Master Plan and the Binalong Bay Foreshore Master Plan.	Council	2013-2014		✓
Investigate replacing the St Helens Wharf and potentially including floating marina berths for recreational boats as long as these do not impact on commercial boating facilities	Council, MAST	2013-2014		
Maintain and enhance public access (including disabled access) to the coastline.	Council, Parks and Wildlife Service	2013-2017+		
Optimise parking, access and waiting facilities at the St Helens Wharf and other boat ramps throughout the study area.	Council, Parks and Wildlife Service, MAST	2013-2017+		
Investigate options to improve low tide accessibility at Stieglitz Boat Ramp.	Council, MAST	2017+		
Ensure sea level rise is considered in relation to the landside buildings associated with the aquaculture operations.	Council, aquaculture operators	ongoing	✓	
Tourism Land Uses				
Continue developing and maintaining existing camping facilities in the Bay of Fires that encourage visitors to protect the environment (refer to Recommendation 1 on Figure 7)	Council, Parks and Wildlife Service, Tourism Tasmania	Ongoing		
Install Bay of Fires interpretation material in a range of locations. A location on the waterfront of Binalong Bay is identified on the Regional Framework Map (refer to Recommendation 2 on Figure 7) as the most appropriate location for this; should be further explored in the Binalong Bay Foreshore Master Plan. Other appropriate locations should also be explored	Council, Tourism Tasmania	2013-2014		✓
Install wayfinding directional signage throughout the study area with a Bay of Fires theme.	Council	2013-2014		
Ensure the planning scheme is supportive of the use of private properties for bed and breakfast accommodation	Council	Ongoing	✓	
Encourage tourism accommodation options to be located close to the waterfront and/or take advantage of key view corridors.	Council	Ongoing	✓	

Implementation Plan (Source: St Helens and Surrounds Structure Plan, p49-57)				
Recommended Action	Responsibility	Timing	PS	MMP/ TMP
Potential tourism accommodation sites are identified on the Regional Framework Map (refer to Recommendation 4 on Figure 7) and Town Centre Structure Plan Map (Figure 8)				
Provide for limited appropriately located and designed tourism and recreation-related structures and buildings on the Binalong Bay foreshore	Council	2013-2017+		✓
Investigate whether a charge should be introduced for the Bay of Fires campsites.	Council, Parks and Wildlife Service	2013-2014		
Ensure the planning scheme is facilitative of the development of tourism accommodation and attractions in appropriate locations by requiring applications for developments outside the urban boundary to address the following criteria and to prove a net benefit in order to be progressed for more detailed consideration:	Council, Tasmanian Planning Commission	Ongoing	✓	
Environmental <ul style="list-style-type: none"> ▪ Whether on the balance development within 1km of the coastline would be appropriate ▪ Impacts on significant flora and fauna ▪ Impacts on vegetation ▪ Impacts on water quality ▪ Impact on Aboriginal culture heritage and historic heritage ▪ The use of any sustainable building features ▪ Any other criteria Council deem necessary in order to adequately assess the proposal 				
Social <ul style="list-style-type: none"> ▪ Visual impacts of building form, style, and siting, including whether it is an integrated part of its visual context ▪ Impacts on public recreational access ▪ Impacts on amenity (noise, dust etc) ▪ Proximity to services such as restaurants, supermarkets etc ▪ Impact on road network ▪ Any other criteria Council deem necessary in order to adequately assess the proposal 				
Economic <ul style="list-style-type: none"> ▪ Employment generation impacts ▪ Investment in local area ▪ Ability of site to be efficiently serviced either with reticulated or on-site infrastructure services ▪ Any other criteria Council deem necessary in order to adequately assess the proposal 				
Experiential <ul style="list-style-type: none"> ▪ Degree to which the proposal creates tourism facility that is different, innovative, authentic, and compelling 				
Natural Features and Natural Hazard Areas				
Adopt a flooding overlay that combines the regional flooding overlay with the 100 year flood line recently adopted by Council	Council	2013-2014	✓	
Utilise the Floodprone Areas Code in the new Planning Scheme to control the development of sites identified as being located in a floodprone area.	Council	Ongoing	✓	
Utilise the Landslip Code in the new Planning Scheme to avoid the development of sites identified as being located in a landslip area	Council	Ongoing	✓	
Utilise the Biodiversity Code in the new Planning Scheme to protect priority habitat areas	Council	Ongoing	✓	
Update the priority habitat areas overlay to ensure the Biodiversity Code in the new Planning Scheme is applied to all areas that require protection	Council	2014-2017	✓	
Utilise the Bushfire Code in the new Planning Scheme to reduce bushfire risks to properties	Council	Ongoing	✓	
If the Stieglitz sewage ponds are decommissioned, rezone the land Environment Management	Council	2013-2017+	✓	

Ansons Bay Shack Sites Assessment (Sinclair Knight Merz, November 2000)

This was an investigation and detailed assessment of 103 individual shack sites on Crown Land, located at Ansons Bay to inform the Department of Primary Industry, Water and Environment to determine the long term tenure of the shacks, in accordance with the relevant legislation. The key issues are summarised below:

- Foreshore erosion: is evident and has been accelerated by removal of native vegetation along the foreshore and numerous jetties and moorings in front of the shack sites. Certain shacks are at risk from erosion impacts.
- Access: many shacks have illegal access across private land, varied recommendations are made with respect to access;
- Flooding: some shacks are within the flood zone;
- Wastewater Management: the near pristine receiving waters of the bay was noted and the preferred approach is a combination of treatment systems including septic tank systems, composting toilets, and aerated wastewater treatment systems;
- Power: underground power provision was recommended but following consultation, the costs were considered too high and remote power (solar panels with back up diesel generators) was recommended.
- Pollution in Mallinsons Creek: testing was inconclusive but could be associated with inadequate septic systems for shacks.
- Appendix F is a Botanical Survey of the Crown Land Shack Sites (Phillip Cullen, Botany and Geomorphology Services, August 1999) and recommends areas supporting Coastal Poa Swamp forest and Depauperrate coastal paperbark forest should be managed for conservation, and no areas should be sold. A detailed study of the geomorphology and erosion hazard should be undertaken and a management plan developed to address the erosion problem. No shacks should be sold until the problems of erosion and foreshore management have been addressed.

The report recommends that 29 shacks not be converted to other tenure, and be removed (due to criteria such as foreshore public access, legal private access, erosion and stabilisation, aboriginal heritage and access, ecological impacts). The remainder of shacks were given various recommendations for land tenure (freehold, fixed leases, stratum title etc).

Report to Council on the Ansons Bay Shack Sites Assessment Final Report (Tony Walker, Environmental Health Officer, November 2000)

This report (intended for internal Council use) is critical of the Sinclair Knight Merz report and raises concerns with the recommendations.

Ecological Character Description for the Jocks Lagoon RAMSAR Site (Lloyd Environmental Pty Ltd, 2011)

(Newall, P.R., Lloyd, L.N. and Atchison, E.E. 2011. Ecological Character Description for the Jocks Lagoon Ramsar Site. Lloyd Environmental Pty Ltd Report (Project No: LE0930) for SEWPaC, Canberra, ACT. Final Report, August 2011)

The following except from the executive summary succinctly describes the content and outcomes of this document:

"This Ecological Character Description (ECD) has been developed following the National Framework and Guidance for Describing the Ecological Character of Australia's Ramsar Wetlands (DEWHA 2008) and contains information on the Jocks Lagoon Ramsar Site. This information includes: geographic and administrative details; the site's ecological character (including components, processes, benefits and services) at the time of Ramsar listing (1982) and currently; gaps in knowledge of the site and issues for management; actual or potential threats; changes that have occurred since listing; site monitoring needs; and communication, education and public awareness messages to facilitate management and planning.

Jocks Lagoon is a small, coastal freshwater lagoon, lying mostly on privately owned land and partly in the southern tip of the St Helens Point Conservation Area. It is one of a chain of lagoons, swamps and wetlands occurring along St Helens Point providing a freshwater resource in an otherwise dry coastal area. The site lies near a dune field and is 200 to 300 metres inland (westward) of the east coast of Tasmania (Figure E1).

Jocks Lagoon is approximately 150 metres wide and 650 metres long, with a north-south orientation. It receives water from a small drainage line with a catchment approximately three kilometres wide and one kilometre long and also from local groundwater. Although dark from tannins the waters of the lagoon are clear, low nutrient and acidic. This combination of clear, tannin stained waters with low nutrients and low pH (acidic) is referred to as 'dystrophic' and reflects substantial inputs of dissolved organic matter.

The northern half of Jocks Lagoon is mostly a large area of open water with isolated patches of emergent rush and sedge. In contrast, much of the southern half of the lagoon is covered with rush and sedge emerging from the water surface (Figure E2). The water level of the lagoon fluctuates with rainfall and reaches depths of two to three metres.

During a recent survey of the site, 51 species of vascular plant were identified. Approximately half of these were indicative of aquatic or damp habitat, with many of the remainder associated with the terrestrial vegetation communities, coastal woodland and Melaleuca forest. The aquatic flora of the lagoon is diverse and includes several rare species.

The key threats identified for Jocks Lagoon Ramsar Site are long standing and most of these threats would have been occurring prior to the time of listing. These threats include: off-road vehicles; climate change; alien species introductions; fire; chytrid fungus; *Phytophthora cinnamomi*; sand mining; weeds; acid sulphate soils; neighbouring developments; slashing;

Limits of acceptable change were derived for the following critical components, processes, benefits and services: wetland vegetation habitat types; rare plant species; hydrology; supporting biodiversity; water quality."

Baseline information, justification and comments for these limits are provided in Table E1 (of the document)."

Falmouth and Hendersons Lagoon Environmental Management Plan (Bushways Environmental Services, Moran and Povey, 2009)

The following except from the executive summary succinctly describes the content and outcomes of this document:

"Special values of Henderson Lagoon

Beauty, nature and heritage: Henderson Lagoon, near the township of Falmouth, is a beautiful nature area, highly valued by residents and visitors for its quiet character, views and opportunities for walking, swimming, fishing and nature watching. There are at least nine Aboriginal heritage sites in the area, which would have been highly valued by Aboriginal people for its abundant food resources. There is a long history of European settlement in the area, and several historic sites.

National Estate listed: The lagoon area is listed on the Register of the National Estate, and encompasses a diversity of coastal geomorphological features unusual in Tasmania. The area covers several significant conservation areas (Scamander Conservation Area, Four Mile Creek Conservation Area, and Winifred Curtis Scamander Reserve (which is protected under a Protected Areas on Private Land (PAPL) conservation covenant), as well as other private conservation covenanted areas). A recent subdivision further north includes a protected area of vegetation on private land (to be known as Scamander Sanctuary). Areas of remnant native vegetation on private land, including the Peat Marsh, are also protected under PAPL conservation covenants. Private lots northwest of the lagoon and over the Tasman Highway include some rural-residential areas, and recent larger subdivisions with some protections on native vegetation. Agricultural land covers the area southwest of the lagoon, and Falmouth township occupies the higher ground south of the lagoon outlet.

An estuary, which teams with wildlife: Natural and cultural values of the lagoon area are described in section 3. The lagoon is an intermittently open-closed lagoon (ICOLL), which is a highly variable estuarine system. As such, it is home to many species of flora and fauna, a productive fish nursery, and provides special habitat for migratory and shore birds.

Saltmarsh to forests, including threatened vegetation communities: Native vegetation communities in the area include saltmarsh, freshwater wetlands, coastal scrub, coast wattle scrub, coastal grassland, black peppermint coastal forest, ironbark forest (not on granite), white gum/blue gum coastal forest, and black gum forest. Other forest types exist in areas in the upper catchment. Threatened native vegetation communities in the area include wetlands, White Gum-Blue Gum coastal forest, Blue Gum dry forest and Black Gum forest.

Threatened species and shorebird nests: Nineteen species of threatened flora have been recorded within 5km of the lagoon. The lagoon and Scamander area is a key site for Tasmanian Smokebush, Lesser Guineaflower and Juniper Wattle. Devils Creek Bridge at Falmouth is also a key site for Soft Peppercross, and Shade Peppercross occurs under exotic trees in farmland near Falmouth.

This is the only known location in Tasmania of a species of crab, *Amarinus Paralacustris*.

Threatened fauna species recorded nearby include White-bellied Sea-Eagle, Little Tern, Fairy Tern, Swift Parrot, Tasmanian Devil, Spotted-tailed Quoll, Green and Golden Frog, Australian Grayling Giant, Velvet Worm, and Leatherly Turtle. It is possible that New Holland Mice also find habitat in the heath of Winifred Curtis Scamander Reserve. Migratory birds (protected under international agreements) found here include Bar-tailed Godwit, Red-necked Stint and Caspian Tern.

The threatened and declining Fairy and Little Terns and Hooded Plovers, as well as other shorebirds, sometimes nest here. This is of critical importance, as they have few breeding sites in Tasmania and are extremely vulnerable to disturbance. There are fewer than 10 pairs of Little Terns known in Tasmania, and sometimes Henderson Lagoon hosts a pair.

Management issues around Henderson Lagoon

Issues for management are discussed in section 5 of the plan. These include:

- Potential acid sulphate soils in the area.
- Pets, weeds and disease in the area including marine pests (Northern Seastar, European Greencrab, and others), environmental weeds (gorse, and others), and phytophthora rootrot (a disease which can devastate healthy vegetation).
- Loss and degradation of native vegetation (from urban development, garden expansion, fire hazard control, and plantation development), and fire management.
- Sediment, stormwater, nutrient and chemical impacts on the waterways and lagoon from various land-uses in the catchment have not been properly assessed.
- Wildlife may be affected by dogs and people (especially shorebird nests), and loss of habitat and habitat connectivity.
- Climate change may have many impacts on the lagoon, including changes to rainfall, temperature and sea level, an increased risk of erosion.
- Changing hydrology and water quality of the lagoon. These are complex due to the highly variable nature of the estuary and little is known about these scientifically. There is some local concern over impacts of occasional prolonged flooding, as well as concern over artificial opening of the sand barway which may disrupt natural systems. Land-uses in the catchment also affect water quality.
- Fire management is complex, with protection of life and property important, along with protection of natural values.
- Potential pressure of population, development and works on landscape character, access issues, and heritage values.

What Can be done about these issues

A number of actions are outlined (in section 5 and tabled in Appendix 8) to address the issues, through community involvement. Management directions include monitoring, community education and on-ground works, as well as discussions with relevant authorities over planning and legislation changes. Some of the key on-ground actions recommended in section 7 include;

- Completing fencing and revegetation of waterways, wetlands and the lagoon edge;
- Revegetation and continued weed control of the coastal vegetation;
- Track improvement and erosion controls
- Installation of picnic tables
- Clean up of litter
- Installation of interpretive signage; and
- Landscaping of public areas with local native species.

Increased awareness and knowledge of the natural values and management issues would greatly assist management of the lagoon area. Information networks should be developed, and community skills

developed through practical working bees, field days, organised walks, distribution of pamphlets etc. A stewardship ethic should be encouraged amongst residents and visitors, with active involvement in management activities.

Key indicators which could be monitored by community volunteers are outlined in section 6, including:

- Locations of shorebird nests,
- Numbers of waterbirds
- Presence of acid sulphate soils,
- Water levels
- Water quality,
- Fishkills,
- Algal blooms,
- Invasive species,
- Wildlife deaths and
- Phytophthora rootrot

The next step towards co-ordinating community involvement and action will be to form a Henderson Lagoon Environmental Management "steering group", representative of stakeholders and supported by land managers, to drive this plan."

Bay of Fires Conservation Area and Humbug Point Nature Recreation Area Site Plan (Inspired Place, 2011)

This document was prepared for NRM North and the Tasmanian National Parks and Wildlife Service with the Study Area encompassing the reserved lands from Policeman's Point to the Georges River within the Bay of Fires Conservation Area and Humbug Point Recreation Area (with small sections of Coastal reserve near Gardens Lagoon Beach and Break Yoke Beach also included). The purpose of the project was to "assess the recreation, natural and cultural values of the area and determine priorities for infrastructure, management, access and other matters as required to deliver a strong visitor experience that delivers on the brand for the local tourism precinct (p3)." The protection of natural and cultural values and sustainable management, identification of key day visitor sites, activities and infrastructure to enhance visitor experience, and providing guidance for the improved management of campsites were also key aims of the project. While the purpose of the Plan is to inform the management of the coastal areas defined in the document, it is not a management plan and has no statutory force.

The project methodology involved five stages, including a consultation plan and visitor survey, site investigations and preparation of a draft vision and site plans for public comment, noting involvement by Tasmanian Parks and Wildlife Service, local groups and residents, campers and shack owners.

The Plan establishes four key day-visitation sites within the Bay of Fires area, with associated site plans to guide their sustainable development and management. Key criteria for the selection of these areas included ease of access for the strong day visitor market, ability to use existing infrastructure where possible (eg. roads, parking areas and tracks) and the potential to minimise the impact of day visitation within the broader Bay of Fires Area by concentrating use to a small number of well-designed and managed sites.

The four day-visitor sites and key aspects of the site plans for each are as follows (refer **Appendix 6** of this Study):

- A foreshore park in **Binalong Bay** located to the east of the boat ramp facilities. Selected as "gateway to the Bay of Fires". A concept plan was prepared for the site under a separate planning process on behalf of Break O'Day Council (refer to Binalong Bay Foreshore Masterplan (refer **Appendix 9**);
- **Sloop Rock Point** to the north of Seaton Cove (currently used for informal camping and day use). This site offers extensive views, classic Bay of Fires landscape elements, has high Aboriginal cultural values. The Site Plan includes: remove camping and manage the site as day use area to minimise impacts; create a smaller car park with designated parking spaces (reduce, rehabilitate and revegetate large impacted areas currently used for camping); small interpretation node/lookout which connects to existing walking track to beach; picnic node with 2 picnic tables; formalise pedestrian access to protected beach (including sand ladders and erosion control); signage informing of nearest toilet location (Cosy Corner/Seatons Cove - once installed)
- The southern end of **Taylor's Beach** beside the Sloop Lagoon inlet (currently used for informal camping, day use and picnic area, easy access to southern end of Taylor's beach; important shore bird habitat threatened by camping and vehicle/human tramping;); numerous informal vehicle and human access points to Taylor's Beach is a management problem for P&WS. Degraded surrounds and pollution potential from lack of toilet facilities and litter. Signage advising no camping, day use, no dogs and coastline safety is required. The Site Plan includes: restrict access to day use only to minimise environmental damage and improve public access; formalise vehicular access and parking (note: some formalisation works have been undertaken already), using bollards to delineate parking spaces and picnic nodes and to define Y turning area; resurfacing road and parking and compacted gravel; fencing the visitor area to minimise disturbance to vegetation and allowing rehabilitation and revegetation; install a unisex single stall above ground toilet (visually screened and on existing disturbed area); two picnic nodes each with two picnic tables and rubbish bins on compacted gravel surface; install interpretive signage including information on shorebirds; install sign indicating day use only and facilities available; close and rehabilitate/revegetate various access points long beach and maintain extensive northern and southern access, and one in the middle, with shorebird information signs at these main entry points to the beach.
- The northern end point of the **Gardens Road** (currently accessed by visitors to reach 'end point' and extensive views). Already a popular destination, direct access to beach and Bay of Fires landscape experience, coastal walks to north. Degraded site, dune damage, multiple informal pathways and weeds. Lack of navigation for visitors. Parking not well-defined and has capacity limitation in current size and layout. The Site Plan includes: extending the car park slightly to allow for a better layout and greater capacity; formalising the car park, concrete wheel stops, turning area, landscaping; investigating purchase or lease of adjoining private land if more space is required in the future; developing an interpretation/arrival node, including interpretive material and information signage; formalising pedestrian access from the car park to a rest node via compacted gravel path (at disabled access gradient); formalising and rationalising pedestrian access from the rest node via a compacted sand pathways forming a short circuit around the site; creating a decision point with directional signage and a basic trail map; developing a small lookout at the selected elevated position providing views along the Bay of Fires away from the developed shacks to the south; fencing and rehabilitating the degraded

dune area; rehabilitating informal paths, including disused vehicle tracks; investigating the potential to formalise pedestrian access north along the foreshore to the next beach (may involve consulting with the private landowner and constructing steps on a steep section down to the beach); installing signage regarding shorebird impacts minimisation.

As indicated in the Executive Summary of the document "the four day-visitation sites are complemented by the existing camping experiences available within the Bay of Fires Conservation Area and the Humbug Point Nature Recreation Area. The popularity of camping in the area is recognised in the Plan, including an overview of the user conflict and environmental management issues are evident at some sites. Section 5.4 provides detail and on-ground management guidance for each of the main campsites within the study area. Development and improved management of the day visitor sites, in conjunction with the provision of quality campsites, provides the basis for strengthening the Bay of Fires experience in a sustainable manner. Focusing the development and management effort on selected key sites also allows for more strategic use of available funding. The Plan also acknowledges St Helens as the services hub of the Bay of Fires destination, supported by services and facilities at Binalong Bay."

The Plan proposes the following themes for the Bay of Fires Experience:

- The Bay of Fires is a place of stunning contrasts-remote yet easy to access; vast yet offering intimate encounters.
- The Beauty and presence of the Bay of Fires arouses a strong response in many people.
- The Bay of Fires is central to a rich, dynamic Tasmanian Aboriginal culture that is celebrated here in many ways by the Aboriginal community.

Given that the key strength of the Bay of Fires is its natural beauty, the Strategy recommends that the impact of interpretive signage is managed by containing signage to identified nodes and where possible, integrating it into or co-locating it with infrastructure such as handrails, seating and parking areas.

The strategy also recommends the use of technology as an interpretation delivery mechanism because it is low-impact and readily accessible at any stage of the visitor journey, particularly in advance of a visit.

Management priorities issues are identified in the Plan (to be addressed in a recommended overarching statutory management document), including

- Management Framework and Resourcing (funding issues; investigate management partnership options);
- Environmental Management (impact on cultural values; impact of rising sea levels on coastal access, camping and other activities;
- unregulated nature of camping and day visitation;
- adverse impact on natural values (vegetation disturbance and removal eg for campfires; disturbance of shore bird habitat; multiple informal vehicle and pedestrian access points; waste disposal issues resulting from lack of toilet facilities; potential for increased road kill and spread of weeds and plant diseases)
- concern regarding potential catastrophic fire event from unattended campfires

- siltation issues associated with disused quarry site near Big Lagoon which is in need of rehabilitation and stabilisation - support the efforts of BOD Council and Mineral Resources to do this;
- Management Resources: Investigate the opportunities to rationalise camping use and minimise impacts (e.g. restricting camping to areas that can be more easily serviced and are located in more robust situations to minimise environmental disturbance and long-term management requirements).
- Environmental Management: Determine priority camping sites in need of boundary fencing to prevent vegetation disturbance and continued unplanned expansion.
- Determine Phytophthora and weed 'hotspots', and priority sites in need of rehabilitation.
- Identify the management actions and resources required to rehabilitate the disused quarry behind Big Lagoon.
- Camping: Implement the recommendations relating to camping outlined in the current document, and illustrated on the site plans. In particular, consider prohibiting informal camping at Sloop Rock Point and Taylors Beach South, to allow for rehabilitation of these sites, and improvements for public day use.
- Prepare a camping strategy for the Bay of Fires Conservation area and Humbug Point Nature Recreation Area, which may be incorporated into the proposed overarching management document.
- Dog access and management was also identified as an issue but noted this is best addressed in Council's Dog Management Plan as the study area is zoned to allow dogs.
- Camping Issues and Impacts: the "freedom camping" experience has become increasingly popular and has led to environmental impacts and user conflict (eg. clearance of native vegetation, evidence of toilet waste; poor management of campfires and inappropriate disposal of rubbish). Camping at many sites is largely unregulated due to limited personnel and large areas. The main issues in the study area are: not compromising the camping experience for range of users; increased visitation in summer; unplanned campsite expansion; impact of camping on Aboriginal cultural heritage values; impacts and concerns relating to open fires; impact of motor homes; anti-social behaviour; presence of toilet waste and rubbish left behind; unauthorised semi-permanent camping.
- Overall recommendations for camping sites are provided, as well as individual recommendations for each campsite (Policemans Point; Seatons Cove, Cosy Corner North and South; Swimcart Beach; Jeaneret Beach; Dora Point; and Grants Lagoon - see below); consideration of prohibiting camping at Sloop Rock Point and Taylors Beach South to allow for rehabilitation of these site and improve for day use; introduce sustainable actions such as above-ground only fire use and associated fine for campfires; enforce prohibition of quad/trail bikes unless allowed in a management plan; introduce a fee for camping; option of rubbish pick-up for a small fee; trialling rotational use of camp sites; investigate potential for small number of walk-in only camp sites; prepare a camping strategy for the study area.

Key Management Directions for Individual Camp Sites (summary/adapted from Section 5.4.3 of the Bay of Fires Conservation Area and Humbug Point Nature Recreation Area Site Plan (Inspiring Place, 2011))		
Site Management Intent	Specific Use Restrictions	Recommended Actions (selected)
Policemans Point		
<ul style="list-style-type: none"> ▪ Maintain the 'freedom' camping experience, by imposing minimal campsite infrastructure or formalisation of camping spaces; ▪ Provide for a mixture of camping experiences, with areas suitable for large groups, motorhomes and other large vehicles, as well as more intimate spaces for smaller tent-based campers; ▪ Increase the capacity and amenity of the site, through revegetation works and subtle formalisation of spaces, particularly within the large, open grassed area (ie make the open area more attractive for camping by creating more interesting camping spaces); ▪ Maintain as an 'intensive' use camping site, given the robust nature in comparison to other areas within the Bay of Fires Conservation Area; ▪ Improve environmental management of the site through rehabilitation of native vegetation, particularly in the immediate foreshore areas; ▪ Minimise maintenance requirements, due to the relatively remote location, and limited on-ground staff capacity; and ▪ Maintain the recreational values of the site, including facilitating activities associated with traditional camping, such as fishing, walking, swimming and boating. 	<p>Generators permitted only in large grassed camping area Prohibit trail/quad bikes use within camping area Above-ground fires only Portable toilets encouraged.</p>	<p>High Priority (1-2 years)</p> <ol style="list-style-type: none"> 4. Undertake management of the roads within the camping area. 5. Where possible install fence and rehabilitate remnant foreshore vegetation 6. Install a two-stall unisex toilet (composting or pump out system)
Seafons Cove		
<ul style="list-style-type: none"> ▪ Maintain the 'freedom camping' appeal of the site, by imposing only minimal campsite infrastructure and formalisation, and encouraging use by tent campers rather than caravans or motorhomes; ▪ Maintain the existing footprint of the overall camping area, and minimise any further encroachment of individual campsites; ▪ Improve environmental management of the immediate foreshore, including clearer separation of parking spaces from camping areas; ▪ Provide improved amenity for day users at the site; and ▪ Minimise maintenance requirements, and communicate a 'low-impact' 'ethos' 	<p>Fuel stove only Trail bikes prohibited Generators prohibited Not suitable for large vehicles Portable toilets encouraged</p>	<p>High Priority (1-2 years)</p> <ol style="list-style-type: none"> 5. Rehabilitate foreshore vegetation 6. Bollard lower campsite to identify vehicle parking area 7. Close lower informal foreshore camping site 8. Install a toilet within the camping area
Cosy Corner (North and South)		
<p>The management intent for this site is to: Continue to manage and maintain this site as a 'semi-developed', intensive use campsite, with a higher level of formalisation, infrastructure and servicing in comparison to other sites within the Bay of Fires Conservation Area, including the provision of public toilet facilities; Encourage 'low impact' tent camping at Cosy Corner South, rather than caravan and motorhome camping; Provide for a mixture of camping experiences, with designated areas for motorhomes and other large vehicles, as well as more intimate spaces for tent-based campers and smaller groups; Maintain infrastructure, facilities and amenities to higher standard in comparison to other campsites in the area; Trial the introduction of other campsite services (eg the introduction of rubbish collection for a fee), and the introduction of a camping fee; and Increase ranger presence at this campsite during the peak season.</p>	<p>Above-ground fires only Generators permitted only in some designated areas Trail/quad bikes prohibited</p>	<p>High Priority (1-2 years)</p> <ol style="list-style-type: none"> 1. Maintain the existing footprint of the campsite, and investigate the potential to increase the carry capacity of the site by further formalisation (eg use of fencing, bollards or revegetation to designate spaces),

Swimcart Beach		
<p>The management intent for this site is to: Develop this site as a formalised, 'intensive' use campsite, with a higher level of infrastructure and servicing, comparable to that of Cosy Corner; Improve the environmental management of this site- in particular minimising the impact of camping on the foreshore and dune system; Minimise the visual impact of camping at this site from surrounding areas, including Binalong Bay; Provide for a mixture of camping experiences, with designated areas for motorhomes and other large vehicles, as well as intimate space for tent-based campers and smaller groups; Increase the capacity of the site through improved formalisation of camping areas, and strategic development of limited new camping areas, if required; Maintain infrastructure, facilities and amenities to higher standard in comparison to other campsites in the area; and Provide increased ranger presence during the peak season.</p>	<p>Above-ground fires only Generators permitted in motorhome/large vehicle area (only during certain times)</p>	<p>High Priority (1-2 years)</p> <p>4 Establish a 'motorhome and caravan preferred' camping area in the vegetated area defined by the main Swimcart campsite access roads (west of the existing toilet).</p> <p>5 Dedicate the Swimcart foreshore camping area to 'low impact' tent camping only</p> <p>6 Rehabilitate the foreshore camping area along Swimcart Beach.</p>
Jeanerett Beach		
<p>The management intent for this site is to: Maintain the 'freedom camping' and intimate appeal of the site, by imposing only minimal campsite infrastructure and formalisation, and encouraging use by tent campers rather than caravans or motorhomes; Maintain the existing footprint of the overall camping area, and minimise any further encroachment of individual campsites into native vegetation; Improve environmental management of the immediate foreshore; Provide improved day use amenity; and Minimise maintenance requirements, and communicate a 'low-impact ethos'.</p>	<p>Fuel stove only Generators prohibited Not encouraged or suitable for large groups Portable toilets encouraged</p>	
Dora Point		
<p>The management intent for this site is to: Maintain the existing footprint of the overall camping area, and minimise any further encroachment of individual campsites into native vegetation; Maintain as a relatively informal site, with limited infrastructure and development; Improve environmental management of the site through rehabilitation of native vegetation, and formalisation of parking areas; Provide for a mixture of camping experiences, with areas suitable for large groups, motorhomes and other large vehicles, as well as more intimate spaces for smaller ten- based campers; and Provide increased ranger presence during the peak season</p>	<p>Above-ground fires only Generators permitted in some areas of the site Trail/quad bikes prohibited</p>	
Grants Lagoon		
<p>Above-ground fires only Generators permitted in the some areas of the site Trail/quad bikes prohibited Portable toilets encouraged</p>		

Finally, an Action Plan sets out the recommended actions for the delivery of the Bay of Fires experience. The priorities are:

1. Adoption of the Bay of Fires Conservation Area and Humbug Point Nature Recreation Area Site Plan.
2. Undertake Reserve Activity Assessments for each of the selected sites managed by Parks and Wildlife Service including background research and further consulting with key stakeholders.
3. Determine available funding sources and clarify management and maintenance responsibilities for the infrastructure associated with delivery of the Bay of Fires experience.
4. Submit development application for any development (e.g. construction of facilities) of the proposed Bay of Fires experience to the Break O' Day Council as required under the planning scheme and LUPAA process.
5. Undertake basic site rehabilitation/revegetation for each of the selected sites. This includes fencing around native vegetation/dunes, site rehabilitation of degraded areas, revegetation with native species etc (order of priority Binalong bay, The Gardens; Taylors Beach; Sloop Rock Point)
6. Develop the thematic interpretative material for the selected sites consistent with the interpretation strategy, along with self-guided brochure and dedicated website of the Bay of Fires destination.
7. Install and construct the visitor infrastructure required for each of the selected sites including car parking, pedestrian paths, park furniture, interpretation, toilets and signs. (order of priority Binalong bay, The Gardens; Taylors Beach; Sloop Rock Point)
8. Design, make and install directional signage as listed in Section 5.3

North-Eastern Tasmania Sustainable Coastal Camping Strategy (Coastcare, 2000)

The *North Eastern Tasmania Sustainable Coastal Camping Strategy (2000)* examines why the free coastal campgrounds of north-eastern Tasmania are not being effectively managed for sustainable use, and what causal factors are responsible for them becoming increasingly degraded, with natural and cultural values compromised. It sets out a vision for camping in North Eastern Tasmania:

- Coastal camping ideally includes a wide variety of types of experiences and is accessible to all. This means there should be camping places for people with dogs, disabilities, with caravans and boats and all sorts of vehicles. It should encompass those who want to have campfires, and be able to accommodate both small and large groups.
- It should be low cost and informal, which normally means minimal facilities and only essential infrastructure.
- It can offer natural surroundings in which people can enjoy safe camping and choose to be social or secluded.
- It ought to function as an educational experience where people learn about coastal ecosystems and cultural heritage values, and about low impact camping practices.
- It needs to continually strive to move towards being a sustainable activity so that it may continue into the future and does not disappear or become degraded, exclusive or formalised. Achieving sustainability may require alterations or sometimes closure of certain areas for rehabilitation or protection of values.
- People should feel that the campgrounds belong to them and be encouraged to take pride in helping maintain and improve them.

The Camping Strategy describes the issues at campgrounds at that time (noting that it is pre-Bay of Fires popularity and does not address some current trends and issues) and provides possible solutions and recommendations for dealing with issues such as:

- *The expansion of camping sites:* by education; coercion by on the spot fines by rangers; camper self education/regulation; better site designation by boundary markers and numbering; prevention of overcrowding; rehabilitation of degraded areas)
- *Damage to flora from firewood collection:* ban on fires unlikely to solve problem; enforce fuel stove only; provision of firewood by donation or for sale; provision of large logs; education (long term) by schools, brochures etc; signage indicating illegality; on the spot fines by rangers; encouragement to bring own; rehabilitation of degraded areas.
- *Camper waste disposal:* rubbish (education and signage to take all away, and indicate closest locations; handing out bags); toilet waste (provision of quality toilets, preferably compost; long term aim each campground to be no more than 200m away from toilet); grey water (disperse, preferably to sand and not waterways, and use soap, not detergents).
- *Proliferation of tracks:* close off all but the required ones by large rocks/barriers, and discourage/police illegal trail bike use; signage; encourage to report illegal use; rehabilitate degraded tracks.
- *Damage to Aboriginal heritage values:* accept and implement TALC recommendations; include funding for ongoing aboriginal input; attempt to foster more widespread understanding of aboriginal perspectives.
- *Impacts on threatened species:* research and identify threatened species when making site plans or proposing changes to a campground; minimise likely impacts on threatened species; signage to inform public about sensitive areas and need to avoid impacts; vehicles off beaches; keep cats out of campgrounds and dogs away from breeding areas, preferably a no dogs rule; campers spread the word about shorebird habitat.
- *Vehicles on beaches:* education that it is discouraged/illegal and limit to certain allowable areas (to be publicised); include beach driving on demerit system and increase fines; occasional police blitz; block access with accompanying signage; disallow motorbikes from campsites by providing parking areas at entry.
- *Lack of pet control:* educations and coercion (on the spot fines); no pets campgrounds (retain some pet-friendly ones); tighter definition of control (eg within sight of owner/restrained).
- *Inappropriate or irresponsible campfire management:* education; appropriate firewood sources; coercion - rigorously enforce total fire ban days; fuel stove only; official communal fireplaces and/or gas BBQs; appropriate training and supervision of machine operators;
- *active intervention by authorised personnel to stop antisocial activities;*
- *Limit Spread of phytophthora fungus:* by discouraging vehicle use off authorised tracks.
- *Education and promotion:* publish a vehicle access camping code; camping code signage at each campground; expanded summer ranger program.
- *Zoning:* specifying areas for particular activities or types of camping to provide for different needs (eg. tent-only, mobile home/caravan sites; permitted fires, pets etc).

Various Management models were discussed, with the recommended management structure being introduction by P&WS to establish a campground management body with the community (with appropriate State government funding) to jointly implement the recommendations of the document. The report recommends active public lobbying for the government to do this. Funding options were also considered, including user fees for camping through P&WS and adequate and secured ongoing funding by State Government to P&WS for the purpose of campground management. A full time position for coordination of campground management, in addition to employment of a summer ranger solely for the purpose of camper education.

Three Case Studies are provided for recommendations of Campgrounds, including Cosy Corner South, which includes:

- provision of firewood in a way that will not encourage large fires or consideration of alternatives (eg. BBQs);
- prevent foredune damage by closing track to southern end of campground. Close and barricade off foredune campsites;
- prevent multi-track beach access: close unnecessary tracks and erect signs at selected access track;
- more frequent presence of rangers at peak periods;
- designate campsites to avoid expansion;
- improve signage and information on camping code, rubbish disposal, fines for offences.
- Other recommendations: camping area rotation to regenerate certain areas; close off unsuitable areas.

Tasmanian Reserve Management Code of Practice 2003

(Source: <http://www.parks.tas.gov.au/index.aspx?base=7154>)

The Tasmanian Reserve Management Code of Practice (the Code) is the result of a commitment under the Tasmanian Regional Forest Agreement (RFA) to develop and implement a code of practice to cover all environmental practices in reserves. The Code is seen as an important element in the framework for protecting conservation values encompassed by the Comprehensive, Adequate and Representative (CAR) reserve system, which was expanded under the RFA to meet agreed reservation targets for wilderness, old growth forest and biodiversity.

In the absence of an approved statutory management plan, the Bay of Fires Conservation Area is managed by the Tasmanian Parks and Wildlife Service under the Tasmanian Reserve Management Code of Practice 2003.

The Tasmanian Reserve Management Code of Practice 2003 also provides guidance on activity assessment, managing reserve values, the provision of visitor services and infrastructure, recreational codes of conduct, and the approval process and statutory powers.

Economic Impact Analysis: Tourism in Tasmania's East (REMPLAN and Department of Economic Development, Tourism and the Arts, June 2013)

This report assesses the economic benefits of tourism (retail, accommodation, food services, cultural and recreational services) in the east coast of Tasmania and covers the combined local government areas of Break O'Day and Glamorgan/Spring Bay. Demographic and economic datasets were utilised in the assessment.

Key findings of the assessment include:

- the tourism sector employs 600 people in the east coast, which represents 19.8% of total employment in the region (more than 2.5 times higher than the State average);
- the vast majority of these (506) are in the accommodation and food services area;
- the economic output is estimated to be \$102.7 million;
- an increase in tourism would provide flow-on benefits.

Binalong Bay Foreshore Master Plan Consultation Report (Break O' Day Council, WAX, infra Plan, May 2013)

The Break O' Day District Council engaged WAX Design and Infraplan to develop a strategic and long term planning direction for the Binalong Bay Foreshore exploring the existing influences created by community needs, tourism demands and the resulting pressures on unique landscapes and environments along the foreshore.

The Consultation Report was prepared as a prelude to the Binalong Bay Foreshore Masterplan Report and was publicly exhibited on Council's website in late 2013. The final Masterplan has been adopted in principle by Council. The Consultation Report summarises the findings and analyses information gathered during a 'Planning for Real' consultation that was undertaken on the 6th February to 9th February 2013. Through review of the community's responses and knowledge a detailed assessment process has led to a series of planning principles and potential projects which are offered as a conclusion to the report.

The following key potential projects were identified that would bring together the intent of the planning principles, illustrating a future vision of the Binalong Bay foreshore. The projects focus on delivering best practice outcomes focusing on the needs of the community and visitors.

- Interpretation and visitor look out
- Connected pedestrian network
- Village green upgrade

Proposed Break O'Day Council Projects

Council has recently exhibited some key projects relevant to the Coastal areas and scope of this Coastal Plan as detailed below. Both the St Helens Foreshore- Georges Bay Multi-User Track and St Helens Foreshore Redevelopment have been recommended in various other plans, strategies and documents and the progression of these projects is supported.

Strategic Projects Priority List

Council has also developed a Strategic Projects priority list detailing those projects that Council sees as most needed to move the region forward in an effort to secure funding for these projects and includes:

- 1 [St Helens Waterfront](#)
- 2 [St Helens Foreshore-Georges Bay Multi-User Track](#)
- 3 St Marys Arts, Culture and Heritage Precinct
- 4 Burns Bay Car Park Development
- 5 Transport Master Plan-Strategic Infrastructure
- 6 St Helens Aerodrome Redevelopment
- 7 Binalong Bay Access-Raising Causeway
- 8 St Helens-Pelican Point and Barway Marine Infrastructure Project
- 9 St Helens Sport and Recreation Ground
- 10 Upgrading and Sealing of Ansons Bay Road From Priory to Musselroe
- 11 Proposed Site for New St Helens District Hospital

Of relevance to this Coastal Plan is the St Helens Waterfront Project and the Georges Bay Multi-User Track. The following are excerpts from the 'Briefs for Strategic Projects' document dated December 2013

(Source:http://www.bodc.tas.gov.au/sites/all/files/breakoday/documents/resources/brief_package_-_december_2013_-_with_plans.pdf)

1. [St Helens Waterfront](#)

The St Helens Foreshore is suffering from erosion due to flooding from the St Helens Central business District and from abnormal high tides (extreme or surge tides). The assessment confirms that the foreshore is deficient now and implementation of foreshore hardening strategy is necessary. By Council undertaking these proposed works, the outcome of such will be to improve the amenity of the St Helens Foreshore precinct.

The aim of the redevelopment of this area is to:

- Secure the foreshore area with a structure which is designed and constructed to withstand 1:20 year storm and climate change impacts;
- Restore the foreshore area using design to minimise the need for future rock wall maintenance and sand replacement;
- Provide opportunities for improved amenity and passive recreation opportunities;
- Reinststate a sandy beach to provide active recreation such as swimming and fishing; and
- Minimise the risk of environmental harm/nuisances.

The Briefing document recommends that Council supports the upgrade of the St Helens Foreshore, particularly the provision of sea wall, rock hardening along with pedestrian pathways at an estimated cost of \$2,164,500.

2. [St Helens Foreshore- Georges Bay Multi-User Track](#)

Issue: This brief summarises the upgrade and extension of the existing multi-user track from St Helens to Akaroa.

Background: The existing multi-user track is an important area of open space for the community of Break O' Day as well as tourists who visit our municipality. The current track provides a scenic route to the town centre, a recreational area for families and relaxing location for residents to appreciate the natural beauty of the

area. The recreation value of the foreshore is significant in that it provides not only access to Georges Bay but also offers a variety of recreational opportunities such as swimming, boating, walking, fishing, cycling, bird watching, picnicking and sightseeing.

Discussion: There are many benefits of multi user tracks: they make our communities more liveable; improve the economy through tourism and township improvement; preserve and restore open space; and provide opportunities for physical activity to improve fitness and mental health. Multi-user tracks promote natural resource management strategies that ensure environmental preservation, quality of life and economic development.

The Briefing document recommends that Council upgrade and extend the existing multi-user track from St Helens to Akaroa at an estimated cost of \$17,267,561.

St Helens Foreshore Redevelopment (Concept Plan)

(Source:http://www.bodc.tas.gov.au/sites/all/files/breakoday/documents/resources/foreshoreconcept_redevelopment_proposal-march_2014.pdf)

In November 2013 Council released the proposal plan for the playspace redevelopment, and received supportive comments from the community. Following on Council has now prepared the draft for the overall waterfront upgrade to incorporate this playspace. Forming this Concept redevelopment plan Council has paid particular focus to the following points:

- That there are multiple user groups which must have their rights and safety maintained at all times-commercial, fishing, boat launching, playing and parking.
- Ensuring the new layout works for events such as the Regatta, game fishing competitions and wood chopping.
- The current layout sees vehicles driving between and playground and skate park, which is not safe sustainable option for a children's access between the commercial area and passive areas
- Including outdoor recreation facilities that cater to all ages of children (particularly the 8-15 age group), including more challenging climbing structures and basketball and netball rings
- Lighting up the spaces for security and to provide additional use house, and including shading and seating that works for all user groups
- Increasing and formalising car parking spaces for the marina, hotels and restaurants use as well as boat trailer parking and overflow areas for peak season.
- Identifying parking areas for Motor homes and other long vehicles

The details of the proposed redevelopment plan were exhibited on Council's website in March 2014.

Municipal Management Plan Reports

The outcomes and recommendations of the various strategies and studies completed or under preparation as part of the Municipal Management Plan project have also been considered in the preparation of this Coastal Plan.

Economic Development Strategy (MCa, Sept 2013)

The Economic Development Strategy outlines major indicators and trends, and identifies key issues for the region and for future economic development. In summary, the Strategy focuses on the following as key priorities:

- maintaining and diversifying agribusiness (including value added processing);
- maintaining fishing activity, developing the port and further developing aquaculture;
- developing light industry linked to regional markets;
- redeveloping the tourism market; and
- maintaining the regional role of St Helens (retail, business services, government funded services -health, education).

This requires a broader regional approach (to economic development, business attraction and tourism). The Strategy has a long term horizon of 15-20 years, however it also needs to address short and medium term issues to provide a foundation for sustainable growth. This is consistent with the goals of the broader regional strategy for the Northern Region prepared by Department of Economic Development, Tourism and the Arts (DEDTA).

The Strategy identifies a slow-down in the regional economy over the last 5-6 years by the two of the major drivers of the regional economy (population and tourism). The Strategy identifies there is a clear two-way linkage between population growth and jobs. A loss of jobs and no replacement jobs encourages people/families to move out of the area to other locations that offer job prospects. This outmigration slows the overall growth of the population (and the local market) and has feed-back impacts on local demand for services. The lack of jobs also discourages persons (other than retirees) from moving into the area. In summary:

- Services - the major areas of employment are in-person services that are servicing a local population (eg. retail, education, health and community services etc.)
- Much of industry located in the industrial areas (mainly in St Helens) is light industry servicing local and regional industries (eg. linked to agriculture, mining, building and construction, fishing/boating) or servicing the regional population.
- Tourism is important for St Helens and other locations in the LGA. However the sector has been under pressure with declining visitor numbers (particularly interstate visitors). The sector remains highly dependent on the summer and Easter peak periods.

The following is a brief overview of strategies and actions from the Economic Development Strategy relevant to the Coastal Strategy:

Seafood sector

- Need to maintain and expand the sector, specifically maintain and encourage St Helens as a commercial port for fishing activity.
- Encourage the region as a recreational fishing hub and major centre for fishing; develop port infrastructure.

Tourism

- Tourism is a significant economic activity and investment in tourism infrastructure needs to improve at major destinations such as Stieglitz, Binalong Bay, St Helens and Scamander.

- Waterfront (St Helens) - development of facilities covering the wharf area, marina, and the precinct. Activate the area while ensuring it is maintained as a commercial port.
- Extend bike paths and develop mountain bike trails and walking tracks to link areas and to utilise national park areas.
- DEDTA has partnered with Marine and Safety Tasmanian (MaST), Tasman, Sorell, Glamorgan Spring Bay and Break O'Day Councils to develop an East Coast Marine Infrastructure Strategy.
- Better linking of the coastal experience and activities – food trails, cycling, walking trail, regional diving trail, golf trails, fishing experiences, etc.
- Addressing gaps in tourism infrastructure and services including accommodation options, cafes and restaurants, port area, other facilities and attractions.
- Specific to St Helens – waterfront area/boardwalk, access to marina and port area, café options on the water, bike track access.

Town Centres

- Improvements to make St Helens more attractive for visitors: waterfront area/boardwalk; access to marina and port area; cafe options on the water; and bike track access.

Airstrip Feasibility Investigations (MCA and Aurecon, October 2013)

The purpose of this report is to investigate options for the upgrade of existing airside infrastructure/facilities at St Helens Aerodrome, including the runway (and associated lighting), taxiway and apron, in order to achieve compliance with Civil Aviation Safety Authority (CASA) regulations for existing and future aircraft operations. The report identifies specific site or aerodrome engineering constraints that may impact on undertaking the detailed design and construction works associated with potential infrastructure/facility upgrades in the future. The report provides a market assessment and highlights some issues in relation to demand for air flights to the region; for game and ocean fishing and for tourist related activities. The report considers the environmental impact (including noise) and the appropriateness of the existing St Helens Aerodrome site, taking into account local Land Use Planning Regulations. It also considers the appropriateness of the existing St Helens Aerodrome site to accommodate the future expansion of St Helens (including access).

Of relevance to the Coastal Plan, the assessment identified that:

- there is no current potential to develop regular direct passenger services via St Helens Aerodrome;
- the size of the fishing market may not be of the scale to maintain regular charter flights. However there may be the potential to develop special packages for the premium market during the peak season;
- the aerodrome has the potential for ad-hoc charters or special event charters (eg. scenic flights) and needs to be maintained and developed to support these aviation uses.

Responding to Climate Change Report (EMC)

The objectives of the Responding to Climate Change Study (response to Climate Change) are to:

- a) Establish Council's approach to climate change as a future challenge to the Municipality and its community.
- b) Identify and communicate Council's concerns, aims and strategies for responding to climate change related issues and plan priorities for action.

- c) Build on Council's early response since 2008 including leadership, business adaptation, corporate sustainability and Lower George Flood Risk Plan.
- d) Provide a strategy which is in line with identified principles being governance and leadership, research and innovation, advocacy and awareness, infrastructure and planning/regulation.

Also relevant to this study is flood mapping recently completed for St Helens adopted by Council and included in the new planning scheme, and ongoing involvement in the Tasmanian Climate Adaption Project (TCAP).

The report builds on the previous work and incorporates input from Council and the community to identify and quantify the risks that a changing climate poses to Break O'Day. Strategies have been suggested to reduce and manage those risks that are identified as high or extreme. These risks will change over time with regard to the likelihood and consequence of specific events. This means that risks will have to be re-evaluated regularly. The best way to ensure this occurs is to include climate change risks in BODC existing risk processes. The key changes to climate within Break O'Day (relevant to the Coastal Strategy) are:

- Annual average temperatures are projected to rise by between 1 to 1.5°C by 2070.
- The number of days per year above 25°C will double by 2100 and the temperature of very hot days will increase by 3-4°C.
- Summer and spring rainfall will decrease by up to 10% by 2070. Rainfall intensity and associated flooding may increase, and there may be longer periods between rain events.
- An increase in fire-weather risk is likely with warmer and drier conditions.
- East coast water temperatures are projected to increase by up to 2 to 3°C by 2070 relative to 1990 levels.
- By 2100, the sea level may have risen by as much as 76 cm relative to 2010 levels putting over 550 homes at risk in Break O'Day.

The key risks identified include:

- Temporary or permanent loss of access to towns and surrounding areas.
- Changes to primary production both in terms of agriculture, fisheries and aquaculture.
- Flooding of the pumps and ponds of the sewage treatment works in St Helens.
- Sea level rise affecting the Bay of Fires and related tourism.
- Inundation of homes and loss of property value.

A treatment option was proposed for each High and Extreme risk to reduce either the likelihood or consequence until the residual risk was acceptable. The treatment of each risk formed the basis of a climate change action plan. For the plan to be effective suitable resources need to be allocated and a person within BODC made responsible for maintaining and executing the plan. The climate change action plan will have a bearing on many parts of BODC business implying a team approach will be necessary. Resources are always in demand for local councils both in terms of people, finances and skills. There is strong interest in the community to contribute to addressing climate change. Individuals and groups in the community combined with State and Federal organisations can be drawn on to reduce the burden on Council.

Specifically the following immediate list of Actions identified are of some relevance to the Coastal Strategy:

List of Actions from Responding to Climate Change Study (Source: Table 6: EMC, 2013)	
Flooding - Access	Identify alternate route to airstrip If necessary protect the land required for an alternate route to the airstrip through planning restrictions Identify alternate route or methods of raising and hardening Binalong Bay causeway Budget for future roads works for causeway hardening and alternate route development
Flooding – Property damage	Change planning restrictions to reduce the number of new properties being exposed to future risks such as temporary flooding, permanent inundation and erosion risks Develop longer term resettlement plan for properties at risk of permanent inundation (Ansons Bay, Grants Lagoon, Binalong Bay and Georges Bay)
Risks	Work with the Tasmanian Department of Primary Industries, Parks, Water and Environment to identify any threatened, vulnerable and endangered species. Develop a set of local actions to reduce the risks to these species.

Community Infrastructure and Design Guidelines (Architects Edmiston Architects, 2014)

The community infrastructure Design Guide aims to establish a manual for the selection and placement of urban infrastructure within the different townships of the Break O' day region. The guide is to provide consistency and specification for items including public seating, picnic tables, signage, bike racks, street signs, bollards etc. The guide outlines the issues and priorities of existing infrastructure items in regard to their placement and/or upgrade. The following key aspects of the Guide are provided (excerpts from Executive Summary):

2.2 Investigation: An inventory of existing items was undertaken to establish the issue and priorities of each township. The inventory and community consultation helped to identify themes within the regions of the Break O' Day municipality, which informed the identity and character of the design choices. Analysis of recent national trends assisted in producing relevant and informed design outcomes.

2.3 Guide Outcomes: The infrastructure selection process is to be streamlined to ensure quality and visual coherency to the product choices. The placement and upgrades to proprietary infrastructure is to be read in accompaniment with the Open Space and Recreation Management Plan 2013. Opportunities for custom and bespoke items are to be considered in line with those options documented in the Arts and Cultural Strategy 2013.0

The infrastructure Design Guide has been developed to address key public infrastructure issues in the Break O' Day. The guidelines are designed to assist in the establishment of, a marketable regional identity, universal accessibility to public open space and to create consistency in the selection and implementation of community infrastructure throughout the Region.

Identity: Broad themes of the Coast and Country have been developed to incorporate the large cross section of natural, industrial, cultural and social backgrounds of the Break O' Day. Community recognition and adoption of these themes will assist in creating a region that can be promoted and marketed for increased tourism and investment in the Break O' Day.

Consistency: The Style Guides developed for each of the themed catchment areas provides consistency of materials and colour of infrastructure items. The style guides utilise the materials and colour palettes of the existing infrastructure for the integration of future infrastructure choices.

Accessibility: The Guidelines for each of the specified infrastructure items incorporates the above-mentioned style and siting arrangement within public open space. The siting and selection of infrastructure is to cater for a variety of ages and abilities. Universal access to infrastructure items extends use of public space to a wider cross-section of the community that includes the elderly, the disabled and less mobile. An integrated approach to the accessible upgrade of public open space will facilitate connections across broad sections of the community of increased liability and future proofing of public space for a shifting population.

This document in conjunction with the Break O' Day Recreation & Open Space Plan and the Economic Development Study, has developed a framework for the upgraded and improvement to Public Open Space within the Break O' Day Municipality.

Break O'Day Council Stormwater Management Plan (Northrop, 2014)

This Plan focused the following two aspects of work:

- analysis of current stormwater planning, design and approvals processes (including the identification of stormwater management values and eight guiding principles for stormwater management); and
- identification of physical stormwater management and drainage problems (including provision of a priority works and budget to amelioration works).

Key Values and Objectives relevant to the Coastal Strategy issues include:

- Maintain stormwater runoff quality: stormwater pollution control;
- protect people and property from flooding: establish flood-free levels for development;
- protect habitats, maintain environmental flows and support the natural water cycle: stormwater pollution control; maintain 'pre-developed' runoff conditions
- respond to the potential effects of climate change.

Appendix 2: Vegetation Mapping within Study Area (TasVEG)

Source: TasVeg Mapping provided in ES&D (2013) Appendix 5

LEGEND

Dry Eucalypt Forest and Woodland

-  **DAC** *Eucalyptus amygdalina* coastal forest and woodland
-  **DAD** *Eucalyptus amygdalina* forest and woodland on dolerite
-  **DAI** *Eucalyptus amygdalina* inland forest and woodland (undifferentiated)
-  **DAM** *Eucalyptus amygdalina* forest and woodland on mudstone
-  **DAS** *Eucalyptus amygdalina* forest and woodland on sandstone
-  **DAZ** *Eucalyptus amygdalina* inland forest and woodland on Cainozoic deposits
-  **DNF** *Eucalyptus nitida* Furneaux forest
-  **DNI** *Eucalyptus nitida* dry forest and woodland
-  **DDE** *Eucalyptus delegatensis* dry forest and woodland
-  **DBA** *Eucalyptus barberi* forest and woodland
-  **DCO** *Eucalyptus coccifera* forest and woodland
-  **DCR** *Eucalyptus cordata* forest
-  **DGW** *Eucalyptus gunnii* woodland
-  **DDP** *Eucalyptus dalrympleana* - *Eucalyptus pauciflora* forest and woodland
-  **DGL** *Eucalyptus globulus* dry forest and woodland
-  **DKW** King Island *Eucalypt* woodland
-  **DMO** *Eucalyptus morrisbyi* forest and woodland
-  **DMW** Midlands woodland complex
-  **DOB** *Eucalyptus obliqua* dry forest and woodland
-  **DPU** *Eucalyptus pulchella* forest and woodland
-  **DOV** *Eucalyptus ovata* forest and woodland
-  **DOW** *Eucalyptus ovata* heathy woodland
-  **DPD** *Eucalyptus pauciflora* forest and woodland on dolerite
-  **DPE** *Eucalyptus periniiana* forest and woodland
-  **DPO** *Eucalyptus pauciflora* forest and woodland not on dolerite substrates
-  **DRI** *Eucalyptus risdonii* forest and woodland
-  **DRO** *Eucalyptus rodwayi* forest and woodland
-  **DVG** *Eucalyptus viminalis* grassy forest and woodland
-  **DSC** *Eucalyptus amygdalina* - *Eucalyptus obliqua* damp sclerophyll forest
-  **DSG** *Eucalyptus sieberi* forest and woodland on granite
-  **DSO** *Eucalyptus sieberi* forest and woodland not on granite substrates
-  **DTD** *Eucalyptus tenuiramis* forest and woodland on dolerite
-  **DTO** *Eucalyptus tenuiramis* forest and woodland on sediments
-  **DVC** *Eucalyptus viminalis* - *Eucalyptus globulus* coastal forest and woodland
-  **DVF** *Eucalyptus viminalis* Furneaux forest and woodland
-  **DTG** *Eucalyptus tenuiramis* forest and woodland on granite
-  **DVS** *Eucalyptus viminalis* shrubby/heathy woodland

Wet Eucalypt forest and woodland

-  **WDU** *Eucalyptus delegatensis* wet forest (undifferentiated)
-  **WDB** *Eucalyptus delegatensis* forest with broadleaf shrubs
-  **WDR** *Eucalyptus delegatensis* over rainforest

-  **WDL** *Eucalyptus delegatensis* forest over *Leptospermum*
-  **WRE** *Eucalyptus regnans* forest
-  **WBR** *Eucalyptus brookeriana* wet forest
-  **WDA** *Eucalyptus dalrympleana* forest
-  **WGG** *Eucalyptus globulus* King Island forest
-  **WGL** *Eucalyptus globulus* wet forest
-  **WSU** *Eucalyptus subcrenulata* forest and woodland
-  **WVI** *Eucalyptus viminalis* wet forest
-  **WOU** *Eucalyptus obliqua* wet forest (undifferentiated)
-  **WOB** *Eucalyptus obliqua* forest with broadleaf shrubs
-  **WOR** *Eucalyptus obliqua* forest over rainforest
-  **WOL** *Eucalyptus obliqua* forest over *Leptospermum*
-  **WNL** *Eucalyptus nitida* forest over *Leptospermum*
-  **WNR** *Eucalyptus nitida* over rainforest
-  **WNU** *Eucalyptus nitida* wet forest (undifferentiated)

Rainforest and related scrub

-  **RKP** *Athrotaxis selaginoides* rainforest
-  **RKF** *Athrotaxis selaginoides* - *Nothofagus gunnii* short rainforest
-  **RPW** *Athrotaxis cupressoides* open woodland
-  **RKS** *Athrotaxis selaginoides* subalpine scrub
-  **RKX** Highland rainforest scrub with dead *Athrotaxis selaginoides*
-  **RPF** *Athrotaxis cupressoides*/*Nothofagus gunnii* short rainforest
-  **RPP** *Athrotaxis cupressoides* rainforest
-  **RMT** *Nothofagus* - *Atherosperma* rainforest
-  **RCO** Coastal rainforest
-  **RFE** Rainforest fernland
-  **RFS** *Nothofagus gunnii* rainforest and scrub
-  **RHP** *Lagarostrobos franklinii* rainforest and scrub
-  **RLS** *Leptospermum* with rainforest scrub
-  **RML** *Nothofagus* - *Leptospermum* short rainforest
-  **RMS** *Nothofagus* / *Phyllocladus* short rainforest
-  **RSH** Highland low rainforest and scrub

Non-Eucalypt Forest and Woodland

-  **NAD** *Acacia dealbata* forest
-  **NAF** *Acacia melanoxydon* swamp forest
-  **NAL** *Allocasuarina littoralis* forest
-  **NAR** *Acacia melanoxydon* on rises
-  **NAV** *Allocasuarina verticillata* forest
-  **NBA** *Bursaria* - *Acacia* woodland and scrub
-  **NBS** *Banksia serrata* woodland
-  **NCR** *Callitris rhomboidea* forest
-  **NLA** *Leptospermum scoparium* - *Acacia mucronata* forest

-  **NLE** *Leptospermum* forest
-  **NLM** *Leptospermum lanigerum* - *Melaleuca squarrosa* swamp forest
-  **NLN** Subalpine *Leptospermum nitidum* woodland
-  **NME** *Melaleuca ericifolia* swamp forest
-  **NNP** *Notelaea* - *Pomaderris* - *Beyeria* forest

Saltmarsh and Wetland

-  **AWU** Wetland (undifferentiated)
-  **AHF** Fresh water aquatic herbland
-  **AHL** Lacustrine herbland
-  **AHS** Saline aquatic herbland
-  **ASF** Fresh water aquatic sedgeland and rushland
-  **ASS** Succulent saline herbland
-  **AUS** Saltmarsh (undifferentiated)
-  **ARS** Saline grassland

Scrub, heathland and coastal complexes

-  **SCH** Coastal heathland
-  **SSK** Scrub complex on King Island
-  **SSW** Western subalpine scrub
-  **SCW** Heathland scrub complex at Wingaroo
-  **SCK** Coastal complex on King Island
-  **SSC** Coastal Scrub
-  **SCA** Coastal scrub on alkaline sands
-  **SHL** Lowland sedgy heathland
-  **SHS** Subalpine heathland
-  **SHG** Heathland on granite
-  **SHF** Heathland scrub mosaic on Flinders Island
-  **SHC** Heathland on calcarenite
-  **SHW** Wet heathland
-  **SHU** Inland Heathland (undifferentiated)
-  **SMM** *Melaleuca squamea* heathland
-  **SBM** *Banksia marginata* wet scrub
-  **SBR** Broadleaf scrub
-  **SMP** *Melaleuca pustulata* scrub
-  **SMR** *Melaleuca squarrosa* scrub
-  **SLW** *Leptospermum* scrub
-  **SQR** Queenstown regrowth mosaic
-  **SRC** Seabird rookery complex
-  **SRI** Riparian scrub
-  **SWW** Western wet scrub
-  **SDU** Dry scrub
-  **SAC** *Acacia longifolia* coastal scrub

Highland treeless vegetation

-  **HHE** Eastern alpine heathland
-  **HCH** Alpine coniferous heathland
-  **HCM** Cushion moorland
-  **HSE** Eastern alpine sedgeland
-  **HUE** Eastern alpine vegetation (undifferentiated)
-  **HSW** Western alpine sedgeland/herbland
-  **HHW** Western alpine heathland

Moorland, Sedgeland, Rushland and Peatland

-  **MBR** Sparse buttongrass moorland on slopes
-  **MBE** Eastern buttongrass moorland
-  **MBP** Pure buttongrass moorland
-  **MBS** Buttongrass moorland with emergent shrubs
-  **MBU** Buttongrass moorland (undifferentiated)
-  **MBW** Western buttongrass moorland
-  **MSW** Western lowland sedgeland
-  **MSP** Sphagnum peatland
-  **MRR** Restionaceae rushland
-  **MGH** Highland grassy sedgeland
-  **MDS** Subalpine *Diplarrena latifolia* rushland
-  **MAP** Alkaline pans

Native Grassland

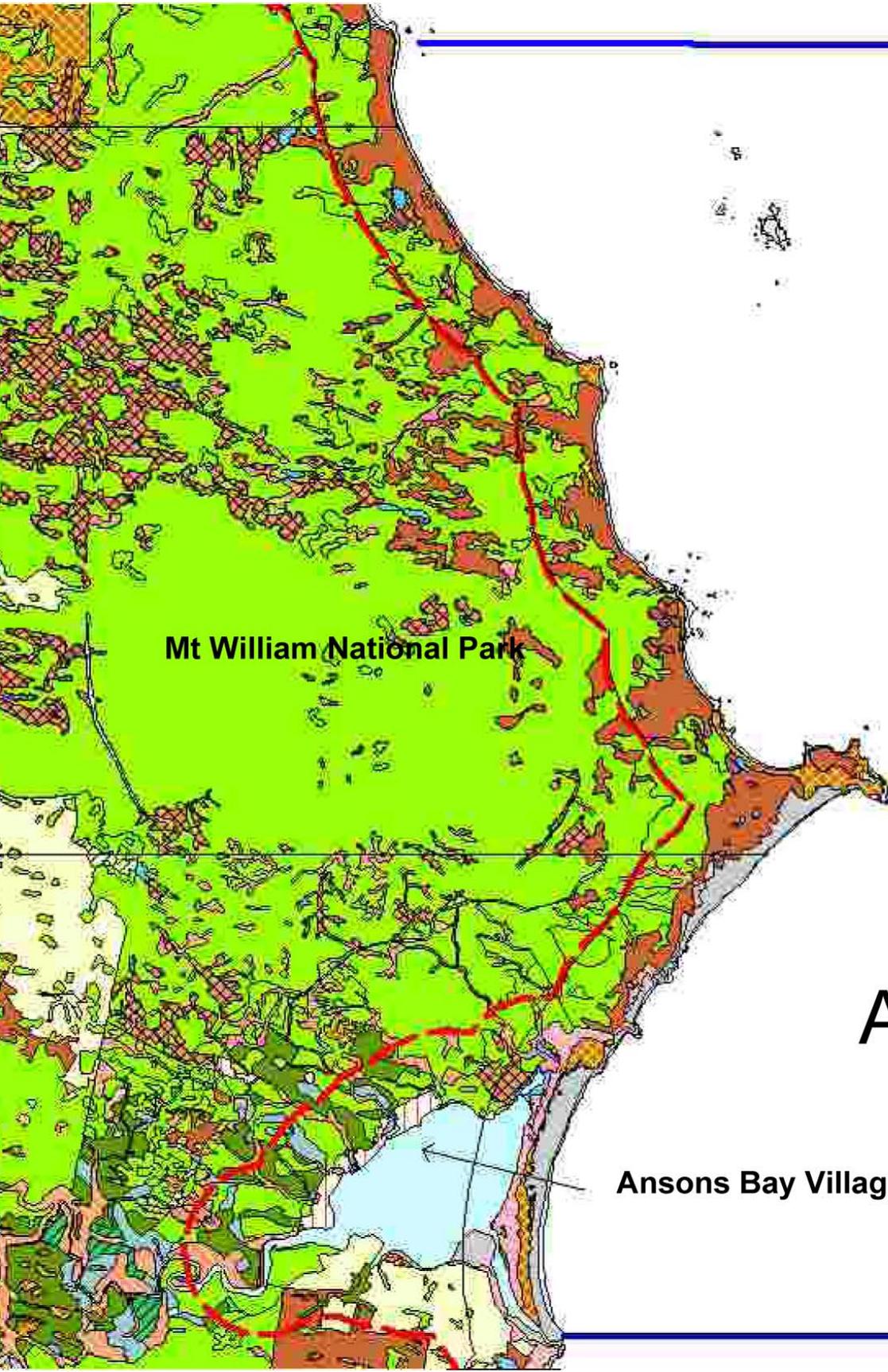
-  **GCL** Lowland grassland complex
-  **GHC** Coastal grass and herbfield
-  **GPH** Highland *Poa* grassland
-  **GPL** Lowland *Poa labillardierei* grassland
-  **GRP** Rockplate grassland
-  **GSL** Lowland sedgy grassland
-  **GTL** Lowland *Themeda* grassland

Agricultural, Urban and Exotic Vegetation

-  **FAG** Agricultural land
-  **FPF** *Pteridium esculentum* fernland
-  **FMG** Marram grassland
-  **FRG** Regenerating cleared land
-  **FSM** *Spartina* marshland
-  **FPL** Plantations for silviculture
-  **FWU** Weed infestation
-  **FPE** Permanent easements
-  **FUM** Extra-urban miscellaneous
-  **FUR** Urban areas

Other Natural Environments

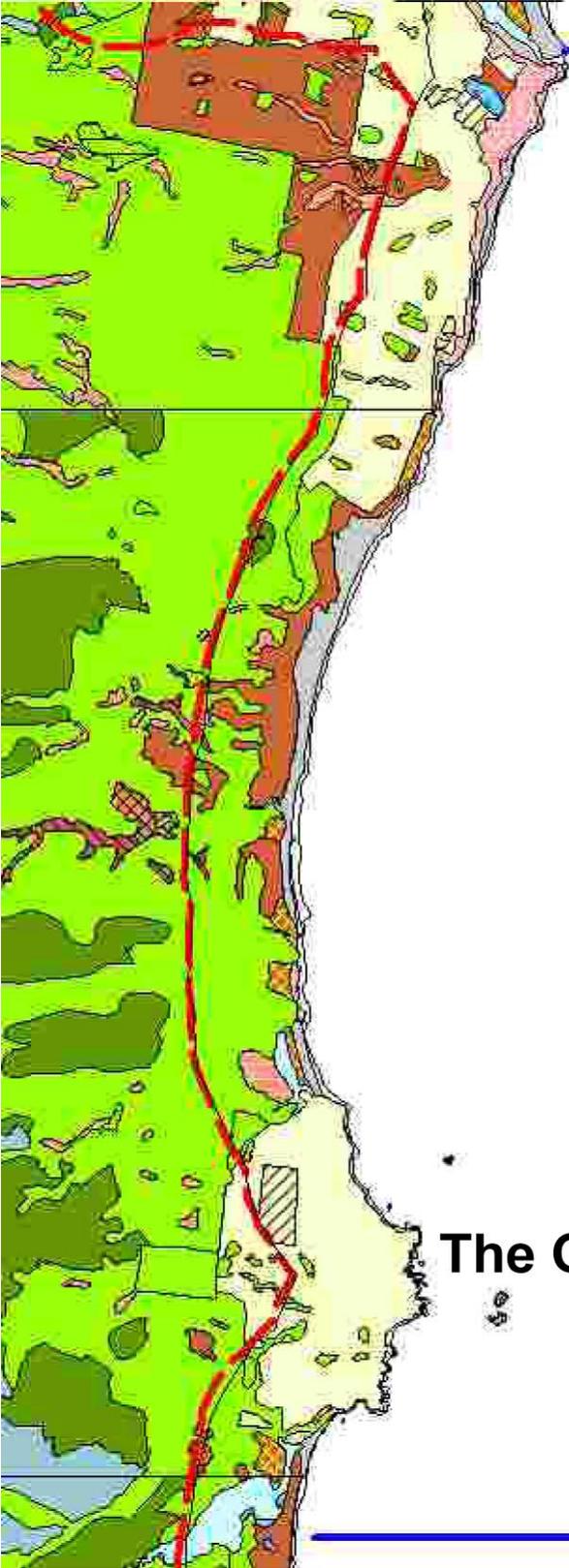
-  **OAQ** Water, sea
-  **ORO** Rock (cryptogamic lithosere)
-  **OSM** Sand, mud



Mt William National Park

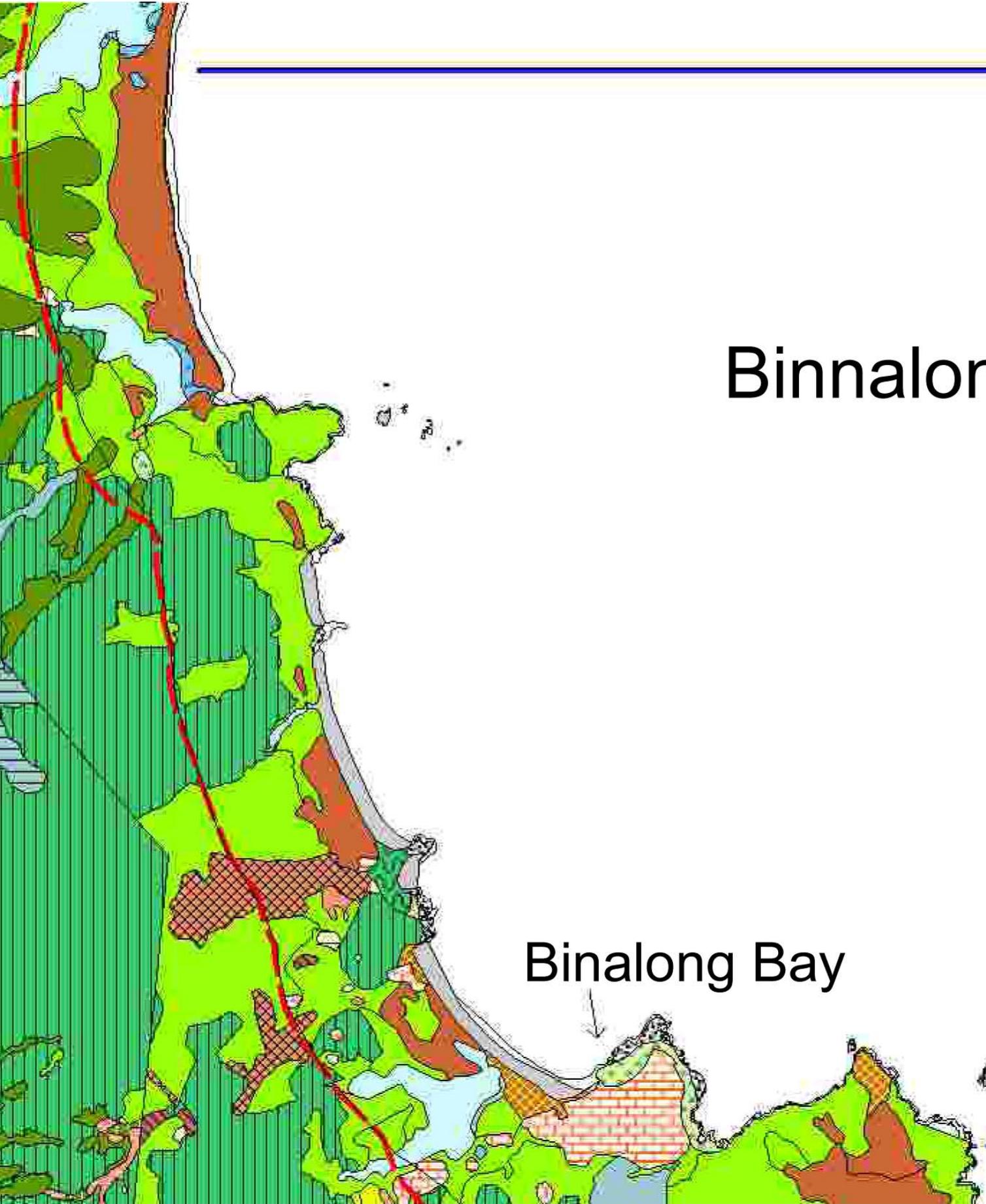
Ansons Bay

Ansons Bay Village



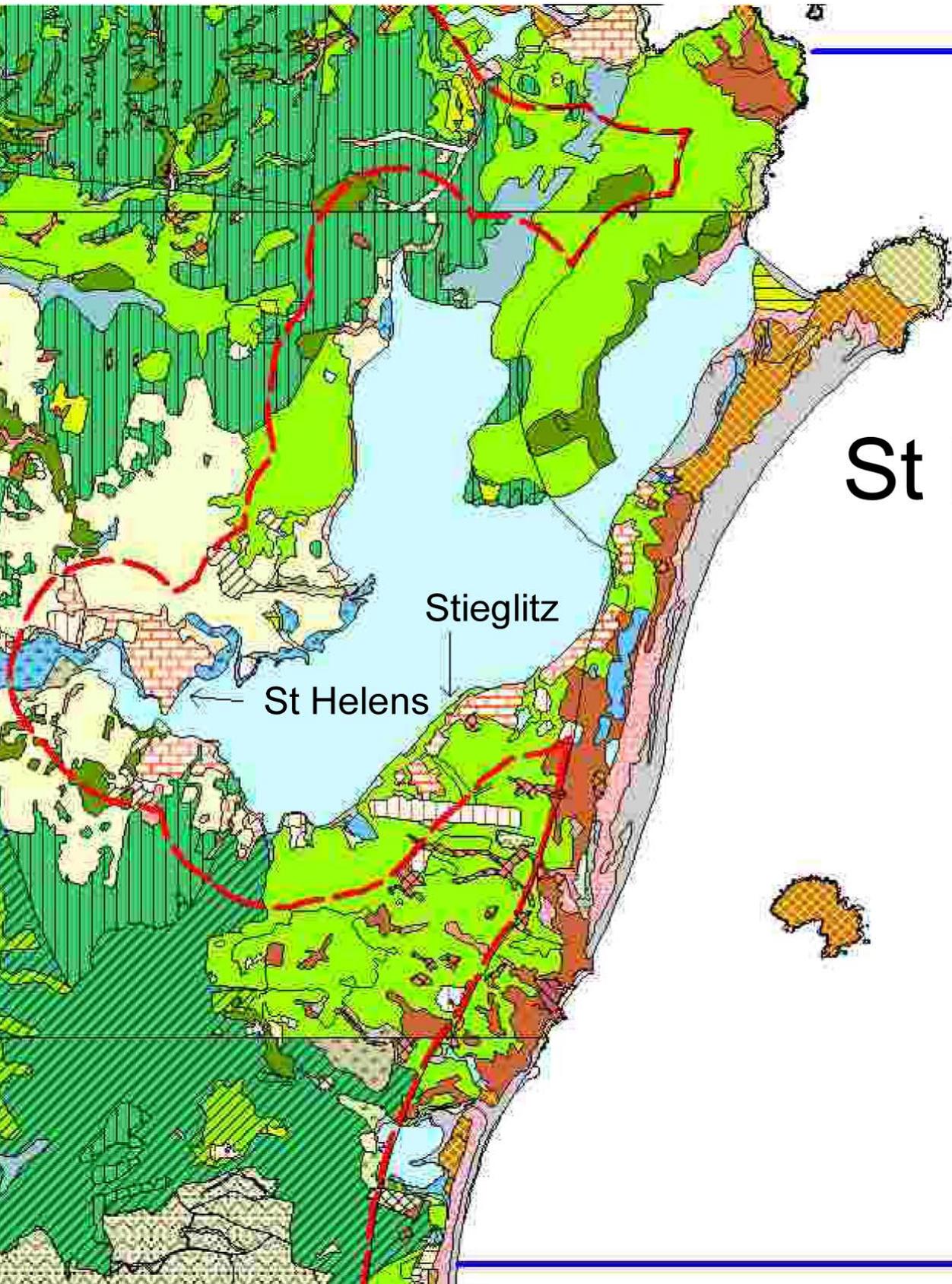
The Gardens

The Gardens



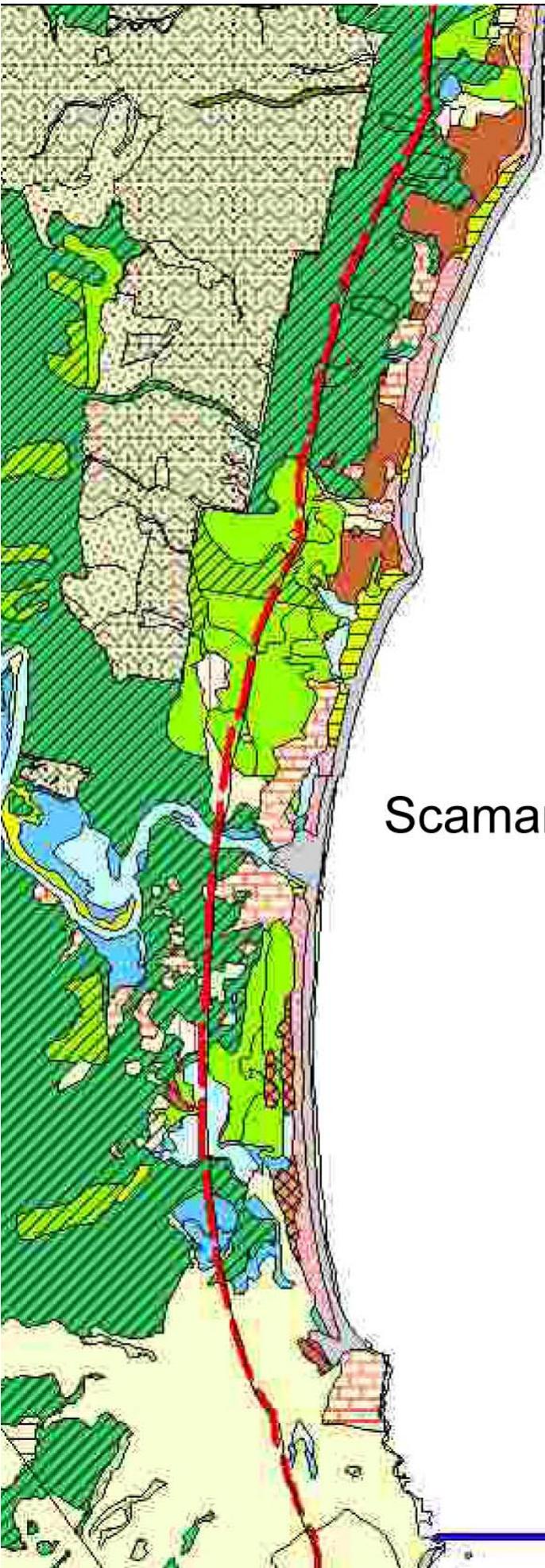
Binnalong

Binalong Bay



St Helens

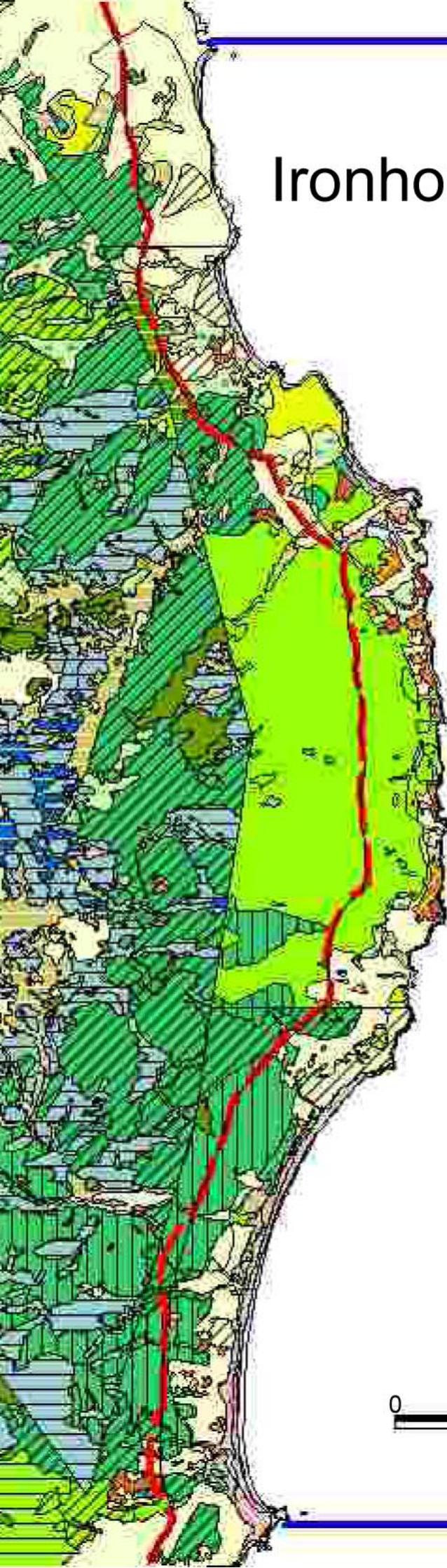
Stieglitz
St Helens



Scamander

Scamander

Ironhouse Point



Douglas



Appendix 3: Significant Vegetation in the Coastal Zone



Table 16: THREATENED VEGETATION COMMUNITIES				
VEGETATION COMMUNITY	TASVEG CODE	MAPPING COLOUR	CONSV. STATUS	FREQUENCY & OCCURRENCE & KEY LOCATIONS
<i>Allocasuarina littoralis</i> Forest	NAL	Olive green with diagonal white lines	R	Small & scattered localized occurrences on hills and slopes mainly north of The Gardens. Ansons Bay and Mt William NP. Localised adjacent to St Helens airport.
<i>Eucalyptus amygdalina</i> Forest & Woodland on Sandstone	DAS	Bright green with diagonal lines	V	Small remnants along creek-lines near Douglas River.
<i>Eucalyptus globulus</i> Dry Forest & Woodland	DGL	Pale green with "z"	V	Scattered & very localized occurrences. Binalong Bay township and Grants Point. St Helens & Georges Bay. Dianas Basin, Falmouth hinterland, Chain of Lagoons, Piccaninny Swamp. Significant occurrences around and to the west of Four Mile Creek.
<i>Eucalyptus ovata</i> Forest & Woodland	DOV	Green with vertical white lines	E	Small localized occurrence near Dianas Basin.
<i>Eucalyptus viminalis</i> – <i>Eucalyptus globulus</i> Coastal Forest & Woodland	DVC	Medium green with "z"	R,V	Patch west of Burial Point near Four Mile Creek, and at Chain of Lagoons
<i>Melaleuca ericifolia</i> Swamp Forest	NME	Olive green with "z"	R,E	Localized occurrences along lower reaches of streams, shorelines of sheltered waters & swampy areas. Ansons Bay, Georges Bay and creeks which flow into the bay, Medea Cove Jocks Lagoon, Dianas Basin, Chain of Lagoons, Piccaninny Swamp,
Riparian Scrub	SRI	Pink with diagonal yellow lines	V	Middle reaches of creeks and streams around Ansons Bay. Significant patches along the Ansons River.

Table 16: THREATENED VEGETATION COMMUNITIES

VEGETATION COMMUNITY	TASVEG CODE	MAPPING COLOUR	CONSV. STATUS	FREQUENCY & OCCURRENCE & KEY LOCATIONS
Wetlands (undifferentiated)	AWU	Medium blue	V	Localized but widespread along the coastal zone. Near Eddystone Point. Margin of Ansons Bay, margin of Georges Bay, St Helens Point CA and adjacent to but outside of the CA, Dianas Basin, Scamander River estuary, Hendersons Lagoon, Templestoe Lagoon,

Table 17: VEGETATION COMMUNITIES OF CONSERVATION SIGNIFICANCE

VEGETATION COMMUNITY	TASVEG CODE	MAPPING COLOUR	CONSV. VALUE	FREQUENCY, OCCURRENCE & KEY LOCATIONS
HEATHLAND VEGETATION				
Coastal Heathland	SCH	Brown	High species diversity. High value	Bay of Fires CA. Mt William NP and south of Ansons Bay. North of The Gardens. Between Big Lagoon & Sloop Lagoon, Humbug Point SRA, St Helens Point Ca, small remnants near Douglas River,
Inland Heathland	SHU	Orange with "z"	High species diversity, High value.	North of Eddystone Point,
Lowland Sedgy Heathland	SHL	Pink	Limited occurrence. High value	Localized in St Helens Point CA,
Wet Heathland	SHW	Orange with "x"	High species diversity. High value.	Inland from Eddystone Point, Localized patches near and south of Ansons Bay, localized patch in St Helens Point CA,
SCRUB COMMUNITIES				
Broad-leafed Scrub	SBR	Cerise with vertical lines	Akin to a rainforest community. High value with limited occurrence on east coast.	Along middle reaches of creeks and fire protected gullies around Ansons Bay.
DRY EUCALYPT FOREST				
<i>Eucalyptus amygdalina</i> Coastal Forest & Woodland	DAC	Bright green	Old-growth of high value.	Widespread particularly north of St Helens and within Mt William NP.
<i>Eucalyptus amygdalina</i> Forest & Woodland on Dolerite	DAD	Bright green with vertical lines	Old-growth of high value	Mainly south of Piccaninny Point
<i>Eucalyptus obliqua</i> Dry Forest	DOB	Dark green	Old-growth of high value	Around the Ansons Bay settlement, Humbug Point NRA, scattered patches around St Helens.
<i>Eucalyptus pulchella</i> Forest & Woodland	DPU	Dark green with horizontal white lines	Old-growth, Limited occurrence. high value	Only on the slopes to the west of Four Mile Creek

Table 17: VEGETATION COMMUNITIES OF CONSERVATION SIGNIFICANCE				
VEGETATION COMMUNITY	TASVEG CODE	MAPPING COLOUR	CONSV. VALUE	FREQUENCY, OCCURRENCE & KEY LOCATIONS
<i>Eucalyptus sieberi</i> Forest & Woodland not on Granite	DSO	Medium green with diagonal lines	Old-growth of high value	Widespread in Break O'Day
<i>Eucalyptus sieberi</i> Forest & Woodland on Granite	DSG	Medium green with vertical lines	Old-growth of high value	Widespread in Break O'Day
<i>Eucalyptus viminalis</i> Grassy Forest & Woodland	DVG	Medium green	Old-growth. Limited occurrence Of High value	One patch west of Burial Point (Four Mile Creek)
WET EUCALYPT FOREST				
<i>Eucalyptus obliqua</i> Wet Forest (undifferentiated)	WOU	Blue	Old-growth of high value	North of St Helens and Georges Bay
NON-EUCALYPT FOREST & WOODLAND				
<i>Allocasuarina verticillata</i> Forest.	NAV	Olive green with "x"	Limited Occurrence of High value	St Helens Point, smaller area in Humbug Point SRA.
NATIVE GRASSLANDS				
Coastal Grass & Herbfield	GHC	Yellow with horizontal lines	Limited occurrence High value	Mouth of Georges Bay, north of Beaumaris
Lowland Grassland Complex	GCL	Yellow	Limited occurrence High value	Localized area in Humbug Point NRA, Scamander River estuary. Significant area south of Four Mile Creek (Burial Point).
Lowland <i>Themeda triandra</i> Grassland	GTL	Yellow with "z"	Very limited occurrence High value	Small localized patch near Four Mile Creek.
Lowland Grassy Sedgeland	GSL	Yellow with "x"	Very limited occurrence High value	Small patch south of Little Beach
SALTMARSH & WETLANDS				
Succulent Saline Herbfield	ASS	Medium blue with "x"	Very localized High value	Small patch on eastern side of Georges Bay. Lagoon at mouth of Scamander River.
Saltmarsh (undifferentiated)	AUS	Medium blue with "z"	Localized & sensitive to disturbance High value	Policemans Point, near mouth of Georges Bay & entrance + whole of Medea Cove, Wrinklers Lagoon, lagoon at mouth of Scamander River, Swamp to south of Hendersons Lagoon.

Table 18: SENSITIVE VEGETATION COMMUNITIES AND HABITATS				
VEGETATION COMMUNITY	TASVEG CODE	MAPPING COLOUR	CONSV. VALUE	FREQUENCY & OCCURRENCE
SCRUB COMMUNITIES				
Coastal Scrub	SSC	Brown with "x"	Vulnerable to natural and human impacts, incl. sea level rise	Common along the coastal fringe and dunes

<i>Acacia longifolia</i> Coastal Scrub	SAC	Pink with diagonal yellow lines	Vulnerable to natural & human impacts, incl sea level rise.	Common along the coastal fringe and dunes.
<i>Melaleuca squarrosa</i> Scrub	SMR	Cerise with diagonal lines	Usually associated with wetlands and drainage systems. Vulnerable to disturbance	North of Eddystone Point. North of Jocks Lagoon, Hendersons Lagoon & Hendersons Point. tiny remnants near Templestoe Lagoon,
SALTMARSH & WETLANDS				
As described above.				
COASTAL LAGOONS & SURROUNDS	N/A	N/A	Vulnerable to natural and human impacts. All are sensitive environments	Big Lagoon, Sloop Lagoon, Gardens Lagoon, Grants Lagoon, Wrinklers Lagoon, Hendersons Lagoon, Dianas Basin, Chimneys Lagoon, Jocks Lagoon and other lagoons within the St Helens Point CA, Chain of Lagoons, Templestoe Lagoon,
RIVERS, STREAMS & ESTUARIES	N/A	N/A	All sensitive environments	Ansons River, Scamander River estuary & lagoon. Georges River. Four Mile Creek, Lower Marsh Creek, Piccaninny Creek and swamp, Douglas River,
SHORELINES AND TIDAL FLATS OF LARGER ENCLOSED COASTAL WATERS	N/A	N/A	All sensitive environments	Ansons Bay, Georges Bay & Medea Cove,

CONSERVATION STATUS CODE: R: Rare; V: Vulnerable; E: Endangered

COASTAL ZONE DEFINITION:

Within one kilometre of the coastal shoreline and including a one kilometre width around coastal lagoons and enclosed coastal waters such as Georges Bay and Ansons Bay.

NOTE:

No mapping data is available for the occurrence and extent of Eucalypt Forest communities in the Municipality which are defined as OLD-GROWTH FORESTS. All old-growth forests are considered to be of high conservation value.

The data in this report is derived from TasVeg 2.0 mapping data and from field surveys undertaken from 22nd of November 2012.

Appendix 4: Vegetation Communities, Threatened Flora and Environmental Weeds



The following Table of 'Vegetation Communities, Threatened Flora and Environmental Weeds' provides the following information for each Survey Area:

- The vegetation communities as mapped by TASVEG Version 2.0 and occurring within the one kilometre wide coastal zone with notes on the occurrence of each community within the specific survey area. Threatened vegetation communities which are listed under the Tasmanian *Nature Conservation Act 2002* are highlighted in red e.g. "**Vulnerable**".
- The occurrence of threatened species of flora. Records of species dated prior to 1900 have not been included. Under the conservation status column those species listed under the Tasmanian *Threatened Species Protection Act 1995* are noted in lower case e.g. "**vulnerable**" and those listed under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* are noted in capitals e.g. "**VULNERABLE**".
- Environmental weeds recorded within each survey area are also presented.

A. Ansons Bay Survey Area

Table 19: Vegetation Communities, Threatened Flora, and Environmental Weeds Ansons Bay Survey Area			
Vegetation Community			
VEGETATION COMMUNITY	TASVEG CODE	CONSV. STATUS	EXTENT IN SURVEY AREA
Coastal Heathland	SCH	Non-threatened community of conservation significance	Widespread along and within 1km of the coastline. Large area to the south of Ansons Bay.
Wet Heathland	SHW	Non-threatened community of conservation significance	Near the northern shoreline of Ansons Bay
Coastal Scrub	SSC		Common within 500 metres of the shoreline
<i>Acacia longifolia</i> Coastal Scrub	SAC		Common within 500 metres of the shoreline
<i>Leptospermum</i> Scrub	SLW		Scattered patches near Ansons Bay
Broadleaf Scrub	SBR		Linear patches along creek-lines and soaks within and adjacent to the Ansons Bay settlement.
Riparian Scrub	SRI	Vulnerable	Linear patches along creek-lines and soaks within and adjacent to the Ansons Bay settlement.
Wetland (undifferentiated)	AWU	Vulnerable	Localised patches around northern shoreline

			of Ansons Bay. Some within the coastal reserve and some within the settlement area. 5 small lagoons near Eddystone Point.
Saltmarsh	AUS	Non-threatened community of conservation significance	One localized area to SW of Policemans Point.
<i>Eucalyptus amygdalina</i> Coastal Forest & Woodland	DAC	Forests in an old-growth condition are of conservation significance	Most widespread community within the Mt William NP. Extends along ridgelines to the west of Ansons Bay within and outside of the settlement area.
<i>Eucalyptus obliqua</i> Dry Forest & Woodland	DOB	Forests in an old-growth condition are of conservation significance.	Patches to the west of Ansons Bay along the valleys of the creeks both within and outside of the settlement area.
<i>Eucalyptus obliqua</i> Wet Forest	WOU	Forests in an old-growth condition are of conservation significance	Patches to the west of Ansons Bay along the valleys of the creeks both within and outside of the settlement area.
<i>Melaleuca ericifolia</i> Swamp Forest	NME	Rare & Endangered	Localised patches around the shoreline and soakage areas adjacent to Ansons Bay only within the settlement area. Also along the southern shoreline of the Bay and mouth of Ansons River.
Threatened Flora			
SPECIES	COMMON NAME	CONSV. STATUS	OCCURRENCE IN SURVEY AREA
<i>Acacia ulicifolia</i>	Juniper Wattle	Rare	Near Policemans Point
<i>Conospermum hookeri</i>	Tasmanian Smokebush	Vulnerable & VULNERABLE	North of Ansons Bay and near Eddystone Point within Mt William NP
<i>Hibbertia virgata</i>	Twiggy Guineaflower	Rare	North of Ansons Bay within Mt William NP.
<i>Parietaria debilis</i>	Shade Pellitory	Rare	Near Deep Creek within Mt William NP
<i>Phyllangium divergens</i>	Wiry Mitrewort	Vulnerable	Near Eddystone Point within Mt William NP
<i>Phyllota diffusa</i>	Heath Bushpea	Rare	North of Ansons Bay settlement
<i>Sowerbaea juncea</i>	Purple Rushlily	Vulnerable	North of Ansons Bay Settlement and near Policemans Point. Near Eddystone Point.
<i>Sporobolus virginicus</i>	Salt Couchgrass	Rare	Within the Ansons Bay Conservation Area, near Policemans Point and near Eddystone Point.
<i>Stellaria multiflora</i>	Rayless Starwort	Rare	Near Deep Creek within Mt William NP
<i>Stylidium despectum</i>	Small Triggerplant	Rare	Near Eddystone Point within Mt William NP.
Environmental Weeds			
SPECIES	COMMON NAME	STATUS	OCCURRENCE IN SURVEY AREA
<i>Rubus fruticosus</i>	Blackberry	Declared weed/ WONS	Recorded around Policemans Point

B. The Gardens Survey Area

Table 20: Vegetation Communities, Threatened Flora, and Environmental Weeds The Gardens Survey Area			
Vegetation Communities			
VEGETATION COMMUNITY	TASVEG CODE	CONSV. STATUS	OCCURRENCE IN SURVEY AREA
Coastal Heathland	SCH	Non-threatened community of conservation significance	Extends along coast within 500 metres of shoreline
Wet Heathland	SHW	Non-threatened community of conservation significance	Limited number of small patches
Coastal Scrub	SSC		Along shoreline, within 500 metres.
<i>Acacia longifolia</i> Scrub	SAC		Along shoreline within 200 metres northwards towards Policemans Point.
<i>Leptospermum</i> Scrub	SLW		A few small isolated patches.
<i>Melaleuca squarrosa</i> Scrub	SMR		One patch along Seal Lagoon Creek.
Wetland	AWU	Vulnerable	Gardens Lagoon located within but on the southern end of the conservation area north of The Gardens headland.
<i>Eucalyptus amygdalina</i> Coastal Forest & Woodland	DAC	Forests in an old-growth condition are of conservation significance	The most widespread Eucalypt community along this section of coast.
<i>Eucalyptus amygdalina</i> Forest & Woodland on Dolerite	DAD	Forests in an old-growth condition are of conservation significance	A few very small isolated patches within the cleared freehold land on The Gardens headland.
<i>Eucalyptus obliqua</i> Dry Forest & Woodland	DOB	Forests in an old-growth condition are of conservation significance	One or two small patches
<i>Melaleuca ericifolia</i> Swamp Forest		Rare & endangered	A single small patch isolated within cleared freehold farmland towards Policemans Point.
Regenerating Cleared Land	FRG		Area within the cleared farmland on The Gardens headland
Threatened Flora			
SPECIES	COMMON NAME	CONSERV. STATUS	OCCURRENCE IN SURVEY AREA
<i>Acacia ulicifolia</i>	Juniper Wattle	Rare	x7
<i>Lepidosperma forsythii</i>	Stout Rapiersedge	Rare	x2
<i>Pomaderris paniculosa</i> ssp. <i>paralia</i>	Shining Dogwood	Rare	x1
<i>Sporobolus virginicus</i>	Salt Couchgrass	Rare	x2
<i>Sowerbaea juncea</i>	Purple Rushlily	Vulnerable	x1
<i>Xanthorrhoea arenaria</i>	Sand Grasree	Vulnerable & VULNERABLE	x22
<i>Xanthorrhoea bracteata</i>	Shiny Grasree	Vulnerable & ENDANGERED	x1
Environmental Weeds			
No weeds are recorded on the Natural Values Atlas database between the Gardens and south of Policemans Point.			

C. Binalong Bay Survey Area

Table 21: Vegetation Communities, Threatened Flora, and Environmental Weeds Binalong Bay Survey Area			
Vegetation Communities			
VEGETATION COMMUNITY	TASVEG CODE	CONSV STATUS	OCCURRENCE IN SURVEY AREA
Coastal Heathland	SCH	Non-threatened community of conservation significance	Significant area extends between Big Lagoon and Sloop Lagoon. Further area along the shore of Binalong Bay.
Wet Heathland	SHW	Non-threatened community of conservation significance	Significant patch to West of Round Hut Point.
Lowland Sedgy Heathland	SHL	Non-threatened community of conservation significance	Single small patch to the SW of Round Hut Point
Coastal Scrub	SSC		Patch on northern side of Big Lagoon. Patch behind the beach of Binalong Bay.
<i>Leptospermum</i> Scrub	SLW		Very small isolated patches on the SW shore of Sloop Lagoon & north of the Lagoon
<i>Melaleuca squarrosa</i> Scrub	SMR		Very small isolated patch to NW of Binalong Bay.
Wetland Water	AWU OAQ	Vulnerable	3 significant lagoons, Big Lagoon, Sloop Lagoon & Hendersons Lagoon adjacent to Binalong Bay settlement.
Saltmarsh	AUS	Non-threatened community of conservation significance	Patches around the shorelines of Big Lagoon and Sloop Lagoon. Minor patches around Hendersons Lagoon.
Lowland Grassland Complex	GCL	Non-threatened community of conservation significance	Single small isolated patch to south of Sloop Lagoon
<i>Pteridium esculentum</i> Fernland	FPF		
<i>Eucalyptus amygdalina</i> Coastal Forest & Woodland	DAC	Forests in an old-growth condition are of conservation significance	Most widespread forest community in the survey area and particularly so north of Sloop Lagoon. Also the dominant forest community within the Humbug Point Nature recreation Area.
<i>Eucalyptus sieberi</i> Forest & Woodland on Granite	DSG	Forests in an old-growth condition are of conservation significance	A widespread forest community to the south of Sloop Lagoon. Also on the headland of Sloop Reef and the hill slopes to the west of Cosy Corner and behind Round Hut point.
<i>Eucalyptus obliqua</i> Dry Forest & Woodland	DOB	Forests in an old-growth condition are of conservation significance	Patches between areas of DAC to the north of Sloop Lagoon and between patches of DSG to the SW of Sloop Lagoon.
<i>Eucalyptus obliqua</i> Wet Forest (undifferentiated)	WOU	Forests in an old-growth condition are of conservation significance.	One large patch to the south of the Binalong Bay township.
<i>Eucalyptus globulus</i> Dry Forest & woodland	DGL	Vulnerable	Around the shoreline of the Binalong Bay township. Single very small patch to south of Sloop Lagoon.
<i>Eucalyptus viminalis</i> Shrubby / Heathy Woodland	DVS	Forests in an old-growth condition are of conservation significance	A single patch on Round Hut Point.
<i>Allocasuarina verticillata</i> Forest	NAV		A single patch on the southern side of The Gardens headland.

			Very small patch to south of Round Hut Point
Threatened Flora			
SPECIES	COMMON NAME	CONSV. STATUS	OCCURRENCE IN SURVEY AREA
<i>Acacia ulicifolia</i>	Juniper Wattle	Rare	One record north of Sloop Lagoon and 14 within 2 km of Binalong Bay township.
<i>Caustis pentandra</i>	Thick Twistsedge	Rare	10 records north of Sloop Lagoon, 11 records near Swimcart Beach and 24 records within 2 km of Binalong Bay township.
<i>Conospermum hookeri</i>	Tasmanian Smokebush	Vulnerable & VULNERABLE	10 records north of Sloop Lagoon, 3 near Swimcart Beach & 5 within 2km of Binalong Bay.
<i>Cyrtostylis robusta</i>	Large Gnat-orchid	Rare	4 records within the area of Binalong Bay settlement.
<i>Desmodium gunnii</i>	Southern Ticktrefoil	Vulnerable	5 records within 2 km of Binalong Bay.
<i>Euphrasia collina</i> subsp <i>deflexifolia</i>	Eastern Eyebright	Rare	3 records north of Sloop Lagoon
<i>Hibbertia virgata</i>	Twiggy Guineaflower	Rare	One record within 2.5 km of Binalong Bay
<i>Hierochloa rariflora</i>	Cane Holygrass	Rare	2 records in the area of Swimcart Beach
<i>Lepidosperma viscidum</i>	Sticky Swordsedge	Rare	One record within 2 km of Binalong Bay
<i>Lepilaena patentifolia</i>	Spreading Watermat	Rare	One record north of Sloop Lagoon, 3 records near Swimcart Lagoon.
<i>Lepilaena preissii</i>	Slender Watermat	Rare	One record north of Sloop Lagoon.
<i>Liparophyllum exalatum</i>	Erect Marshflower	Rare	One record north of Sloop Lagoon
<i>Microtidium atratum</i>	Yellow Onion-orchid	Rare	One record near Cosy Corner, one within 2 km & 5 within 2.5 km of Binalong Bay.
<i>Ruppia megacarpa</i>	Largefruit Seatassel	Rare	One record north of Sloop Lagoon
<i>Scutellaria humilis</i>	Dwarf Skullcap	Rare	One record within 2 km of Binalong Bay.
<i>Sporobolus virginicus</i>	Salt Couchgrass	Rare	5 records north of Sloop Lagoon, 3 records near Binalong Bay.
<i>Spyridium parvifolium</i> var <i>molle</i>	Soft Dustymiller	Rare	2 records in the Swimcart Beach area
<i>Stuckenia pectinata</i>	Spike Centuary	Rare	One record near Swimcart Lagoon
<i>Thelymitra antennifera</i>	Rabbit Ears	Endangered	One record within 2.5 km of Binalong Bay
<i>Thelymitra malvina</i>	Mauvetuft Sun-orchid	Endangered	2 records within 2 km of Binalong Bay
<i>Xanthorrhoea arenaria</i>	Sand Grasstree	Vulnerable & VULNERABLE	One record within 2 km of Binalong Bay
<i>Xanthorrhoea bracteata</i>	Shiny Grasstree	Vulnerable & ENDANGERED	One record within 2.5 km of Binalong Bay
Environmental Weeds			
SPECIES	COMMON NAME	STATUS	OCCURRENCE IN SURVEY AREA
<i>Achillea millefolium</i>	Yarrow		
<i>Asparagus asparagoides</i>	Bridal Creeper	Declared/WONS	
<i>Carduus tenuiflorus</i>	Winged Thistle		
<i>Erica lusitanica</i>	Spanish Heath	Declared	

D. St Helens Survey Area

Table 22: Vegetation Communities, Threatened Flora, and Environmental Weeds St Helens Survey Area			
Vegetation Communities			
VEGETATION COMMUNITY	TASVEG CODE	CONSV. STATUS	OCCURRENCE IN SURVEY AREA
Coastal Heathland	SCH	Non-threatened community of conservation significance	Patch near the northern headland of Humbug Point. Small to medium sized scattered patches through St Helens Conservation area near Stieglitz.
Wet Heathland	SHW	Non-threatened community of conservation significance	Small scattered patches through the St Helens Conservation Area near Stieglitz.
Coastal Scrub	SSC		Large patch near northern end of St Helens Point Conservation Area. Small patch near coastal headland of Humbug Point Nature Recreation Area.
<i>Acacia longifolia</i> Coastal Scrub	SAC		Near the entrance to Georges Bay and within the Peron Dunes and along the beach-line in the St Helens Point Conservation Area.
<i>Leptospermum</i> Scrub	SLW		Very small localized and scattered patches to the north of St Helens.
Wetland	AWU	Vulnerable	Significant lagoons and wetlands are located within and adjacent to the St Helens Point Conservation Area near Stieglitz, including Jocks Lagoon. Small area about 1km north of the town centre.
Saltmarsh	AUS	Non-threatened community of conservation significance	Medea Cove is a significant area of saltmarsh. The Georges Bay shoreline near St Helens Point. Shoreline flats of Georges Bay adjacent to the town centre.
Water	OAQ		The tidal flats and seagrass beds within Georges Bay are significant habitat for waterfowl and wading birds.
<i>Eucalyptus amygdalina</i> Coastal Forest & Woodland	DAC	Forests in an old-growth condition of conservation significance	Dominant community within Humbug Point NRA. Widespread along St Helens Point & within Conservation Area. North of town adjacent to Moulting Bay.
<i>Eucalyptus obliqua</i> Dry Forest & Woodland	DOB	Forests in an old-growth condition of conservation significance	Along the Georges Bay shoreline of Humbug Point NRA. Scattered remnant patches around St Helens urban area.
<i>Eucalyptus obliqua</i> Wet Forest	WOU	Forests in an old-growth condition of conservation significance	Two patches along interface of Humbug Point NRA and Mt Pearson SR. Third patch to the north of St Helens.
<i>Eucalyptus globulus</i> Dry Forest & Woodland	DGL	Vulnerable	Limited to a few very small patches on headlands near the town of St Helens including Kings Park.
<i>Eucalyptus sieberi</i> Forest & Woodland on Granite	DSG	Forests in an old-growth condition of conservation significance	North of the town and within Mt Pearson State Reserve. Remnant patches to the south of the town and larger areas south and west of St Helens.
<i>Eucalyptus sieberi</i> Forest & Woodland not on Granite	DSO	Forests in an old-growth condition of conservation significance	An area to the south of St Helens.
<i>Allocasuarina verticillata</i> Forest	NAV		The predominant community on St Helens Point. A smaller patch near the mouth of Georges Bay within the Humbug Point NRA.

Melaleuca ericifolia Swamp Forest	NME	Rare & Endangered	Around the shoreline of Medea Cove. Along a number of small creek-lines around the shoreline of Georges Bay. Along creek-line which flows into Moulting Bay (Within Humbug Point NRA.) Adjacent to Jocks Lagoon. Significant patch north of Dianas Basin.
Lowland Grassland Complex	GCL	Non-threatened community of conservation significance	Small localized patches only, southern end of Humbug Point NRA and scattered spots north of St Helens.
Coastal Grass & Herbfield	GHC	Non-threatened community of conservation significance	Significant area at the mouth of Georges Bay
Threatened Flora			
SPECIES	COMMON NAME	CONSV. STATUS	OCCURRENCE IN SURVEY AREA
<i>Acacia siculiformis</i>	Dagger Wattle	Rare	Within 2km of Medea Cove
<i>Acacia ulicifolia</i>	Juniper Wattle	Rare	Stieglitz area: Chimney Lagoon, and block FA080 towards aerodrome is a key location with 40+ records. A further 3 records towards Jocks Lagoon.
<i>Anogramma leptophylla</i>			One 1903 record within 1km of Moulting Bay.
<i>Austrostipa blackii</i>	Crested Speargrass	Rare	2 records within 2km of Medea Cove. 3 records within 1km of Fairlea and a further 2 within 2km.
<i>Baumea articulata</i>	Jointed Twigsedge	Rare	2 records at Jocks Lagoon Ramsar Listed Reserve. Stieglitz area: Lagoons within and outside of the St Helens Conservation Area
<i>Bolboschoenus caldwellii</i>	Sea Clubsedge	Rare	One records from lagoons within 2km of Stieglitz
<i>Brachyloma depressum</i>	Spreading Heath	Rare	One record within 2km of Medea Cove. One record within 2km of Fairlea.
<i>Caladenia caudata</i>	Tailed Spider-orchid	Vulnerable & VULNERABLE	One record within 2km of Fairlea. 2 records within Humbug Point NRA.
<i>Caladenia congesta</i>	Black-tongue Finger-orchid	Endangered	
<i>Caladenia filamentosa</i>	Daddy Longlegs	Rare	Probably locally extinct.
<i>Caladenia pusilla</i>	Tiny Fingers	Rare	
<i>Conospermum hookeri</i>	Tasmanian Smokebush	Vulnerable & VULNERABLE	Two 1930 records from within 2km of Medea Cove. Stieglitz area: block between Chimney Lagoon and aerodrome is a key location with 150+ records. Other records within 2km of Stieglitz and a further 9 records towards jocks Lagoon.
<i>Corunastylis nuda</i>	Tiny Midge-orchid	Rare	One record within 2km of Stieglitz.
<i>Cynoglossum australe</i>	Coast Houndstongue	Rare	One record within Humbug Point NRA. 11 records within grasslands at St Helens Point. (Blanche Point)
<i>Cyrtostylis robusta</i>	Large Gnat-orchid	Rare	One record within Humbug Point NRA.
<i>Desmodium gunnii</i>	Southern Ticktrefoil	Vulnerable	3 records within 2km of Moulting Bay. One record within 2km of Stieglitz.
<i>Deyeuxia densa</i>		Rare	One record within 2km of Stieglitz.
<i>Euphrasia collina</i> subsp <i>deflexifolia</i>	Eastern Eyebright	Rare	Stieglitz area: 7 records within 2km and 2 near Chimney Lagoon.
<i>Eutaxia microphylla</i>			One record within 2km of Stieglitz.
<i>Glycine microphylla</i>	Small-leaved Glycine	Vulnerable	One 1948 record from within 2km of Medea Cove
<i>Hibbertia virgata</i>	Twiggy Guineaflower	Rare	One record from within 2km of Medea Cove and 2 within 2km of Fairlea. Stieglitz area: block between Chimney Lagoon and aerodrome is a key location with 100+ records. One record within Humbug Point NRA. Other locations within 2km of Stieglitz and a further 4 records towards jocks Lagoon..

<i>Hierochloe rariflora</i>	Cane Holygrass	Rare	10 records within 2km of Medea Cove. 4 records within 1km of Fairlea and a further 7 within 2km.
<i>Hovea corrickiae</i>			4 records within 2km of Moulting Bay.
<i>Lachnagrostis robusta</i>	Tall Blowgrass	Rare	One 1959 record within 2km of Medea Cove
<i>Lepidium pseudotasmanicum</i>	Shade Peppergrass	Rare	23 records within 1km of Fairlea Key location.
<i>Liparophyllum exalatum</i>	Erect Marshflower	Rare	9 records from the lagoons within 2km of Stieglitz and a further 4 records near Jocks Lagoon.
<i>Lotus australis</i>			2 records near St Helens Point.
<i>Microtidium atratum</i>	Yellow onion-orchid	Rare	3 records within 2km of Medea Cove and 2 within 2km of Fairlea.
<i>Orthoceras strictum</i>	Horned Orchid	Rare	One 1930 record near St Helens Sports Complex. Likely to be locally extinct.
<i>Phebalium daviesii</i>	Davies Waxflower	Endangered & CRITICALLY ENDANGERED	6 records along the Georges River on freehold property now covered by a PAPL covenant to protect the species.
<i>Plantago debilis</i>	Shade Plantain	Rare	7 records within 2km of Fairlea.
<i>Pterostylis grandiflora</i>	Superb Greenhood	Rare	4 records from 1945 within 2km of Medea Cove. Probably locally extinct. 2 records within 2km of Stieglitz. One record within 1km of Fairlea and a further 2 early records (1940/45) within 2km..
<i>Ruppia megacarpa</i>	Largefruit Seatassel	Rare	One 1945 record from within 2km of Medea Cove
<i>Scleranthus brockei</i>	Mountain Knawell	Rare	One record within 2km of Fairlea.
<i>Schoenus brevifolius</i>	Zigzag Bogsedge	Rare	4 records from lagoons within 2km of Stieglitz.
<i>Sporobolus virginicus</i>	Sea Couchgrass	Rare	One record within Humbug Point NRA. 14 records around the headland of St Helens Point.
<i>Stenopetalum lineare</i>	Narrow Threadpetal	endangered	One record within Humbug Point NRA.
<i>Utricularia australis</i>	Yellow Bladderwort	Rare	One record within 2km of Medea Cove and one within 2km of Fairlea. 2 records from lagoons within 2km of Stieglitz.
<i>Xanthorrhoea arenaria</i>	Sand Grasree	Vulnerable & VULNERABLE	One 1945 record within 2km of Medea Cove. (probably locally extinct)
Environmental Weeds			
SPECIES	COMMON NAME	STATUS	OCCURRENCE IN SURVEY AREA
<i>Achillea millefolium</i>	Yarrow		Within 2km of Medea Cove
<i>Asparagus asparagoides</i>	Bridal Creeper		Near Fairlea
<i>Billardiera heterophylla</i>	Bluebell Creeper		Near Stieglitz,
<i>Cenchrus clandestina</i>	Kikuyu Grass		Near Medea Cove, Fairlea,
<i>Crysanthemoides monilifera</i> subsp <i>monilifera</i>	Boneseed		Near Stieglitz, Fairlea,
<i>Erica lusitanica</i>	Spanish Heath		Very common in survey area, Medea Cove, Moulting Bay, Fairlea, Jocks Lagoon, Humbug Point NRA,
<i>Genista monspessulana</i>	Canary Broom		Near Medea Cove, Stieglitz, Fairlea,
<i>Gomphocarpus fruticosus</i> subsp <i>fruticosus</i>	Narrowleaf Cotton Bush		Near Stieglitz,
<i>Lycium ferrocissima</i>	Boxthorn		Near Medea Cove, Fairlea,
<i>Marrubium vulgare</i>	Horehound		One record within Humbug Point NRA
<i>Polygala myrtifolia</i>	Myrtleleaf Milkwort		Near Fairlea.
<i>Reseda luteola</i>	Weld		Near Stieglitz,
<i>Rubus fruticosus</i>	Blackberry	Declared / WONS	Near Medea Cove, Moulting Bay, Stieglitz, Fairlea,
<i>Senecio jaceoides</i>	Ragwort		Near Medea Cove, Fairlea,
<i>Ulex europeus</i>	Gorse	Declared / WONS	Near Fairlea,

E Scamander Survey Area

Table 23: Vegetation Communities, Threatened Flora, and Environmental Weeds Scamander Survey Area			
Vegetation Communities			
VEGETATION COMMUNITY	TASVEG CODE	CONSV. STATUS	OCCURRENCE IN SURVEY AREA
Coastal Heathland	SCH	Non-threatened community of conservation significance	Patch to the north of Dianas Basin, larger patch about 2km south of Dianas Basin, 2 patches in the Beaumaris area north of Shelly Point & Wrinklers Lagoon.
Wet Heathland	SHW	Non-threatened community of conservation significance	Associated with patch of NME to the NW of Dianas Basin, and other small localized patches in the same locality.
Coastal Scrub	SSC		Patch on seaward side of Dianas Basin.
<i>Acacia longifolia</i> Coastal Scrub	SAC		Extends along coastline within 200m of shore between areas of GHC, from Dianas Basin to the Scamander River estuary.
<i>Leptospermum</i> Scrub	SLW		Small area along creek-line near Beaumaris.
<i>Melaleuca squarrosa</i> Scrub	SMR		One patch near the coast about 1.5km north of Dianas Basin.
Wetlands	AWU	Vulnerable	Key locations of wetland vegetation around Dianas Basin, 3 small coastal lagoons, Wrinklers Lagoon near Beaumaris and the Scamander River estuary & Lagoon area.
Saltmarsh	AUS	Non-threatened community of conservation significance	Small localized patch next to the lagoon on the Scamander River estuary.
<i>Eucalyptus amygdalina</i> Coastal Forest & Woodland	DAC	Forests in an old-growth condition of conservation significance	3 small patches south of Dianas Basin, larger area behind Shelly Point and Wrinklers Lagoon near Beaumaris and a further small patch south of the Scamander River mouth.
<i>Eucalyptus amygdalina</i> on Mudstone	DAM	Forests in an old-growth condition of conservation significance	Single patch within the area of DAC behind Shelly Point and Wrinklers Lagoon.
<i>Eucalyptus sieberi</i> Forest & Woodland not on Granite	DSO	Forests in an old-growth condition of conservation significance	Mainly around the Scamander settlement both north and south of the river, and the near coastal slopes from Dianas Basin south to Shelly Point near Beaumaris.
<i>Eucalyptus ovata</i> Forest & Woodland	DOV	Endangered	Single small localized patch along the southern shore of Dianas Basin
<i>Eucalyptus globulus</i> Dry Forest & Woodland	DGL	Vulnerable	2small localised patches on the western side of Dianas Basin.
<i>Melaleuca ericifolia</i> Swamp Forest	NME	Rare & Endangered	Significant patch NW of Dianas Basin.
Coastal Grass & Herbfield	GHC	Non-threatened community of conservation significance	Extends along the coastline within 200m of the shore between areas of SAC, from 2km south of Dianas Basin to the Scamander River estuary.
Lowland Grassland Complex	GCL	Non-threatened community of conservation significance	Patch extends around the wetland community on the Scamander River.
Regenerating Cleared Land	FRG		
Plantations	FPU		The hinterland and slopes in excess of 1km from the coast has been extensively cleared for plantations.
Threatened Flora			
SPECIES	COMMON NAME	CONSV. STATUS	OCCURRENCE IN SURVEY AREA
<i>Acacia ulicifolia</i>	Juniper Wattle	Rare	One record within 1km of Dianas Basin. One within 1.5km of Beaumaris. One within 1.5km of Wrinklers Lagoon. 6 within 1.8km of Scamander.
<i>Asperula subsimplex</i>	Water Woodruff	Rare	One within 1.8km of Scamander.
<i>Austrostipa blackii</i>	Crested	Rare	One next to Wrinklers Lagoon and a further

	Speargrass		record within 2km of Beaumaris.
<i>Brachyloma depressa</i>	Spreading Heath	Rare	One within 2km of Dianas Basin.
<i>Caladenia filamentosa</i>	Daddy Longlegs	Rare	3 records within 1.8km of Scamander including one on the foreshore.
<i>Conospermum hookeri</i>	Tasmanian Smokebush	Vulnerable & VULNERABLE	3 within 2km of Dianas Basin.
<i>Cynoglossum australe</i>	Coastal Houndstongue	Rare	5 within 1.5km of Wrinklers Lagoon
<i>Epilobium pallidiflorum</i>	Showy Willowherb	Rare	One within 1.5km of Wrinklers Lagoon.
<i>Euphrasia collina</i> subsp <i>deflexifolia</i>	Eastern Eyebright	Rare	One within 1.5km of Beaumaris and a further record within 1.5km of Wrinklers Lagoon.
<i>Hibbertia virgata</i>	Twiggy Guineaflower	Rare	One within 2km of Dianas Basin. 6 within 1.8 km of Scamander.
<i>Hierochloe rariflora</i>	Cane Holygrass	Rare	One record within 1.8km of Scamander.
<i>Hovea corrickiae</i>	Glossy Purplepea	Rare	4 within 2km of Beaumaris.
<i>Lachnagrostis billardierei</i> subsp <i>tenuiseta</i>	Small-awn Blown-grass	Rare	One within 2km of Beaumaris.
<i>Liparophyllum exalatum</i>	Erect Marshflower	Rare	One within 2km of Dianas Basin. 2 within 2km of Beaumaris.
<i>Plantago debilis</i>	Shade plantain	Rare	One record within 1km of Scamander
<i>Schenkia australis</i>	Spike Centuary	Rare	One record within 1.5km of Wrinklers Lagoon.
<i>Thelymitra malvina</i>	Mauve-tuft Sun-orchid	Endangered	One record within 1.5km of Wrinklers Lagoon.
<i>Ziera littoralis</i>	Downy Ziera	Rare	One record within 1.8km of Scamander.
<i>Ziera veronica</i> subsp <i>veronica</i>	Pink Ziera	Endangered	4 records adjacent to Wrinklers Lagoon
Environmental Weeds			
SPECIES	COMMON NAME	STATUS	EXTENT IN SURVEY AREA
<i>Asparagus asparagoides</i>	Bridal Creeper	Declared /WONS	Near Dianas Basin,
<i>Chrysanthemoides monilifera</i> subsp <i>monilifera</i>	Boneseed	Environmental	
<i>Erica lusitanica</i>	Spanish Heath	Declared	Near Dianas Basin, Beaumaris and Scamander.
<i>Onopordum acanthium</i>	Cotton Thistle		Near Scamander
<i>Rubus fruticosus</i>	Blackberry	Declared/WONS	Near Dianas Basin, Beaumaris and Scamander.
<i>Ulex europaeus</i>	Gorse	Declared/WONS	Near Dianas Basin, Beaumaris and Scamander.
<i>Watsonia meriana</i> var <i>bulbilifera</i>	Bulbil Watsonia	Environmental	Near Scamander.

F Ironhouse Point Survey Area

Table 24: Vegetation Communities, Threatened Flora, and Environmental Weeds Iron House Point Survey Area			
Vegetation Communities			
VEGETATION COMMUNITY	TASVEG CODE	CONSV. STATUS	OCCURRENCE IN SURVEY AREA
Coastal Heathland	SCH	Non-threatened community of conservation significance.	Small patch NW of Ironhouse Point. 2 patches on northern end of Little Beach CA. 2 very small remnant patches within cleared farmland north of Picaninny Point.
Wet Heathland	SHW	Non-threatened community of conservation significance	One patch north of Hendersons Lagoon and one patch to the south,
Coastal Scrub	SSC		Narrow remnant fringe around the coastal shoreline adjacent to Falmouth township. 5 small scattered patches on Ironhouse Point Headland. Along the shoreline within the Little Beach CA and near Little Beach itself. 3 very small remnant patches within cleared farmland to north of Picaninny Point.
<i>Acacia longifolia</i> Coastal Scrub	SAC		Along the coastline within 200 metres from the Scamander River mouth to the mouth of Hendersons Lagoon. Along McIntyres Beach near Ironhouse Point. Along coastal strip of the Chain of Lagoons CA. Around headland of Picaninny Point and along shoreline northwards.
Dry Scrub	SDU		One patch on Ironhouse Point headland. One small patch south of Ironhouse Point. One small patch near Wardlaws Point.
<i>Melaleuca squarrosa</i> Scrub	SMR		Small patch near the mouth of Hendersons Lagoon adjacent to the Falmouth township and a small patch to the west of the lagoon. Small patch NW of Wardlaws Point. Single small patch near lagoon on Picaninny Creek.
Wetland including Freshwater Aquatic Herbland and Freshwater Aquatic Sedgeland & Rushland	AWU AHF ASF	Vulnerable	Significant patches around Hendersons Lagoon. Significant area to the south of Hendersons Lagoon (Peat Swamp). Two localized areas to the SW of Falmouth. Important but unmapped wetlands within the Chain of Lagoons CA. Lagoon at mouth of Picaninny Creek.
Saltmarsh Including Succulent Saline Herbfield and Saline Sedgeland & Rushland	AUS ASS ARS	Non-threatened community of conservation significance	Significant area to the south of Hendersons Lagoon (Peat Swamp). Swampy area near Picaninny Point
<i>Eucalyptus amygdalina</i> Coastal Forest & Woodland	DAC	Forests in an old-growth condition of conservation significance	Extends behind the coastline vegetation to the north of Hendersons Lagoon. Predominant community on slopes and hinterland behind Ironhouse Point. 4 minor patches between Chain of Lagoons CA & Picaninny Point.
<i>Eucalyptus sieberi</i> Forest & Woodland on Granite	DSG	Forests in an old-growth condition of conservation significance	One small patch west of Ironhouse Point. The main forest community along the near coastal slopes and to the west of the cleared land between Chain of Lagoons CA and Picaninny Point.

<i>Eucalyptus sieberi</i> Forest & Woodland not on Granite	DSO	Forests in an old-growth condition of conservation significance	The main forest community on the near coastal slopes to the west of Hendersons Lagoon. On hills behind and to the west of Hughes Point. One patch on slopes behind Saltwater Inlet.
<i>Eucalyptus globulus</i> Dry Forest & Woodland	DGL	Vulnerable	Very small localized patch around the SW shoreline of Hendersons Lagoon. One good sized patch near Little Beach bisected by highway. 2 small patches NW of Ironhouse Point. 2 small but important patches within the Chain of Lagoons CA. Small patch behind Picaninny Point.
<i>Eucalyptus viminalis</i> – <i>Eucalyptus globulus</i> Coastal Forest & Woodland	DVC	Rare & Vulnerable	5 small localized patches around the SE and eastern shoreline of Hendersons Lagoon. One patch NW of Ironhouse Point. Significant patch within the Chain of Lagoons CA.
<i>Eucalyptus ovata</i> Forest & Woodland	DOV	Endangered	One small localized patch around NW shoreline of Hendersons Lagoon.
<i>Bursaria</i> – <i>Acacia</i> Woodland & Scrub	NBA		Remnant patches within cleared farmland to the south of Falmouth. 3 small patches on the Ironhouse Point headland. 2 small patches near Wardlaws Point.
<i>Melaleuca ericifolia</i> Swamp Forest	NME	Rare & Endangered	Limited occurrence around the shoreline of Hendersons Lagoon. Significant patch within Chain of Lagoons CA. Patch near lagoon on Picaninny Creek.
<i>Leptospermum lanigerum</i> – <i>Melaleuca squarrosa</i> Swamp Forest	NLM		Single very small remnant patch within cleared farmland to north of Picaninny Point.
Coastal Grass & Herbfield	GHC	Non-threatened community of conservation significance	Narrow strip along the coastal shoreline northwards from the mouth of Hendersons Lagoon. Patch south of Little Beach itself.
Lowland Grassland Complex		Non-threatened community of conservation significance.	Large area between Four Mile Creek and Ironhouse Point. Very small patch on Ironhouse Point.
Lowland Sedgy Grassland	GSL	Non-threatened community of conservation significance.	Patch on headland above Hughes Point.
Regenerating Cleared Land	FRG		
Threatened Flora			
SPECIES	COMMON NAME	CONSV. STATUS	OCCURRENCE IN SURVEY AREA
<i>Acacia ulicifolia</i>	Juniper Wattle	Rare	5 records within 1.5km of Hendersons Lagoon including Winifred Curtis Reserve.
<i>Blechnum cartilagineum</i>	Gristle Fern	Vulnerable	14 records along Tin Creek north of Ironhouse Point. 4 records along Little Beach Creek
<i>Caladenia caudata</i>	Tailed Spider-orchid	Vulnerable & VULNERABLE	One record near Chain of Lagoons CA.
<i>Caladenia filamentosa</i>	Daddy Longlegs	Rare	About 1km NW of Hendersons Lagoon.
<i>Calystegia soldanella</i>	Coastal Bindweed		2 Records near Little Beach
<i>Conospermum hookeri</i>	Tasmanian Smokebush	Vulnerable & VULNERABLE	3 records within 1km of Hendersons Lagoon including Winifred Curtis Reserve.
<i>Cyathea cunninghamii</i>	Slender Treefern	Endangered	2 records from Little Beach Creek.
<i>Cyathea Xmarescens</i>	Skirted Treefern	Endangered	One record from Little Beach Creek.
<i>Cynoglossum australe</i>	Coastal Houndstongue	Rare	3 records in Chain of Lagoons CA
<i>Desmodium gunnii</i>	Southern Ticktrefoil	Vulnerable	6 records within 2km of Ironhouse Point. One record from within 2km of Little Beach
<i>Euphrasia collina</i> subsp <i>deflexifolia</i>	Eastern Eyebright	Rare	

<i>Glycine microphylla</i>	Small-leaf Glycine	Vulnerable	9 records within 2km of Ironhouse Point. 2 records within 2km of Little Beach. 15 records within 2km north of Chain of Lagoons.
<i>Gratiola pubescens</i>	Hairy Brooklime	Vulnerable	1 record near Ironhouse Point
<i>Hibbertia virgata</i>	Twiggy Guineaflower	Rare	2 records within 500 metres and a further 2 within 1.5km including WinifredCurtis Reserve.
<i>Lepidium pseudotasmanicum</i>	Shade peppergrass	Rare	About 1km SW of Falmouth.
<i>Lotus australis</i>	Australian Trefoil	Rare	One record with 2km of Ironhouse Point
<i>Plantago debilis</i>	Shade Plantain	Rare	
<i>Pterostylis ziegeleri</i>	Grassland Greenhood (Orchid)	Vulnerable & VULNERABLE	2 Records near Chain of Lagoons CA.
<i>Scutellaria humilis</i>	Dwarf Skullcap	Rare	One record within 2km of Ironhouse Point.
<i>Sporobolus virginicus</i>	Salt Couchgrass	Rare	One record near Little Beach.
<i>Thelymitra malvina</i>	Mauve-tuft Sun-orchid	Endangered	One record within the Winifred Curtis Reserve.
<i>Tricoryne elatior</i>	Yellow Rushlily	Vulnerable	3 records within 2km of Ironhouse Point
<i>Viola caleyana</i>	Swamp Violet	Rare	One record within coastal reserve near mouth of Hendersons Lagoon.
<i>Ziera littoralis</i>	Downy Ziera	Rare	One record near Scamander.
Environmental Weeds			
SPECIES	COMMON NAME	STATUS	OCCURRENCE IN SURVEY AREA
<i>Ammophila arenaria</i>	Marram Grass	Environmental	Beach & dune weed. Present on the spit near Hendersons Lagoon.
<i>Asparagus asparagoides</i>	Bridal Creeper	Declared/ WONS	
<i>Cakile maritima</i>	Sea Rocket	Environmental	Foredune weed
<i>Chrysanthemoides monilifera</i> subsp <i>monilifera</i>	Boneseed	Declared / WONS	Relatively common
<i>Coprosma repens</i>	Mirror Bush	Environmental	Around Falmouth
<i>Erica lusitanica</i>	Spanish Heath	Declared	Widespread in survey area.
<i>Euphorbia paralias</i>	Sea Spurge	Environmental	Not yet established in the area
<i>Genista monspessulana</i>	Canary Broom	Declared/ WONS	Widespread. Around Falmouth.
<i>Leptospermum laevigatum</i>	Coast Teatree	Garden escape	Established within the shoreline vegetation around Falmouth township.
<i>Lycium ferocissimum</i>	Boxthorn	Declared / WONS	Around Falmouth
<i>Pinus radiata</i>	Radiata Pine	Environmental	
<i>Rubus fruticosus</i>	Blackberry	Declared / WONS	Widespread. Around Falmouth.
<i>Salix fragilis</i>	Crack Willow	Declared / WONS	Along creek-lines
<i>Ulex Europeus</i>	Gorse	Declared/ WONS	Relatively common. SW of Hendersons Lagoon and around Falmouth.
<i>Vinca major</i>	Periwinkle	Environmental	Around Falmouth

G. Douglas River Survey Area

Table 25: Vegetation Communities, Threatened Flora, and Environmental Weeds Douglas River Survey Area			
Vegetation Communities			
VEGETATION COMMUNITY	TASVEG CODE	CONSV. STATUS	OCCURRENCE IN SURVEY AREA
Coastal Heathland	SCH	Non-threatened community of conservation significance	4 very small remnant patches west of Templestoe Lagoon. 3 small remnant patches near the Douglas River.
Coastal Scrub	SSC		Single small patch near Long Point.
<i>Acacia longifolia</i> Coastal Scrub	SAC		Narrow coastal fringe along the length of the coastal shoreline with larger patches on the Long Point headland and around the Douglas River.
<i>Melaleuca squarrosa</i> Scrub	SMR		5 very small remnant patches within cleared farmland to the north of Templestoe Lagoon.
Wetland	AWU	Vulnerable	One small patch on north shore of Templestoe Lagoon.
<i>Eucalyptus amygdalina</i> Coastal Forest & Woodland	DAC	Forests in an old-growth condition of conservation significance	Single small remnant patch along the Douglas River.
<i>Eucalyptus amygdalina</i> Forest & Woodland on Dolerite	DAD	Forests in an old-growth condition of conservation significance	Widespread on slopes to the west and south of the Douglas River settlement.
<i>Eucalyptus amygdalina</i> Forest & Woodland on Sandstone	DAS	Vulnerable	Largely cleared. Small scattered remnants north of Douglas River and along creek-lines of Denison Rivulet and Templestoe Creek. Also on the lower slopes to the west of Douglas River settlement (over 1km)
<i>Eucalyptus sieberi</i> Forest & Woodland not on Granite	DSO	Forests in an old-growth condition of conservation significance	2 very small remnant patches within cleared farmland north of Templestoe Lagoon.
<i>Bursaria</i> – <i>Acacia</i> Woodland & Scrub	NBA		One very small patch south of Douglas River.
Regenerating Cleared Land	FRG		
Threatened Flora			
SPECIES	COMMON NAME	CONSV. STATUS	OCCURRENCE IN SURVEY AREA
<i>Bertya tasmanica</i> subsp <i>tasmanica</i>	Tasmanian Bertya	Endangered & ENDANGERED	Along Douglas River but probably locally extinct.
<i>Calystegia soldanella</i>	Sea Bindweed	Rare	Mouth of Douglas River within Denison Rivulet CA.
<i>Carex gunniana</i>	Mountain Sedge	Rare	
<i>Epacris grandis</i>	Tall Heath	Endangered & ENDANGERED	Along but upstream of the Douglas River
<i>Lotus australis</i>	Australian Trefoil	Rare	Mouth of the Douglas River
<i>Olearia hookeri</i>	Crimson tip Daisybush	Rare	
Environmental Weeds			
SPECIES	COMMON NAME	STATUS	OCCURRENCE IN SURVEY AREA
<i>Genista monspessulana</i>	Montpelier Broom	Declared / WONS	Occasional
<i>Erica lusitanica</i>	Spanish Heath	Declared	Widespread
<i>Juncus acutus</i>	Sharp Rush	Environmental	
<i>Lycium ferrocissimum</i>	Boxthorn	Declared / WONS	Common
<i>Onopordum acanthium</i>	Cotton Thistle	Environmental	Record from 1983
<i>Rubus fruticosus</i>	Blackberry	Declared / WONS	Common
<i>Salix fragilis</i>	Crack Willow	Declared / WONS	Along Streams
<i>Senecio elegans</i>	Purple Groundsel		Observed Denison Beach
<i>Ulex europeus</i>	Gorse	Declared /WONS	Common in survey area

Appendix 5: Reserved Land



Table 26: Reserved Land Within Study Area		
ANSONS BAY SURVEY AREA		
RESERVE NAME	CLASSIFICATION & STATUS	EXTENT IN SURVEY AREA
Mt William National Park	Dedicated Formal reserve	Covers all of the northern area of the municipality north of Ansons Bay and almost surrounds the settlement of Ansons Bay.
Eddystone Point Historic Site	Formal Reserve	Small area within the Mt William National Park.
Ansons Bay Conservation Area	Formal Reserve	Around the shoreline of Ansons Bay including the settlement area.
THE GARDENS SURVEY AREA		
RESERVE NAME	CLASSIFICATION & STATUS	EXTENT IN SURVEY AREA
Bay of Fires Conservation Area	Formal Reserve	Large area along coast and hinterland from The Gardens settlement north to the boundary of the cleared freehold land. Quite narrow around The Gardens headland and there is a break in the foreshore reserve towards Ansons Bay adjacent to the freehold property.
BINALONG BAY SURVEY AREA		
RESERVE NAME	CLASSIFICATION & STATUS	EXTENT IN SURVEY AREA
Mt Pearson State Reserve	Formal Reserve	Located to the north of the St Helens area.
Humbug Point Nature Recreation Area	Formal Reserve	Located on the northern side of Georges Bay.
St Helens Conservation Area	Formal Reserve	Parts of the southern shoreline of Georges Bay.
St Helens Point Conservation Area	Formal Reserve	Extends from St Helens Point along the coast to Dianas Basin. Width varies from all land between the sea and Georges Bay in the St Helens Point area to a coastal strip south of Jocks Lagoon. A larger patch is located adjacent to Dianas Basin. Includes St Helens Island off-shore.
Medea Cove Conservation Area	Formal Reserve	Protects the important fauna habitat of the Cove.
Kings Park	Break O'Day Council	An important parkland within the town of St Helens.
Private Reserve	PAPL Covenant	Good sized patch of freehold land to the north of the town.
Private Reserve	PAPL Covenant	A smaller patch upstream of Medea Cove.
Private Reserve	PAPL Covenant	On Georges River to protect population of <i>Phebalium daviesii</i>
ST HELENS SURVEY AREA		

RESERVE NAME	CLASSIFICATION & STATUS	EXTENT IN SURVEY AREA
Mt Pearson State Reserve	Formal Reserve	Located to the north of the St Helens area.
Humbug Point Nature Recreation Area	Formal Reserve	Located on the northern side of Georges Bay.
St Helens Conservation Area	Formal Reserve	Parts of the southern shoreline of Georges Bay.
St Helens Point Conservation Area	Formal Reserve	Extends from St Helens Point along the coast to Dianas Basin. Width varies from all land between the sea and Georges Bay in the St Helens Point area to a coastal strip south of Jocks Lagoon. A larger patch is located adjacent to Dianas Basin. Includes St Helens Island off-shore.
Medea Cove Conservation Area	Formal Reserve	Protects the important fauna habitat of the Cove.
Kings Park	Break O'Day Council	An important parkland within the town of St Helens.
Private Reserve	PAPL Covenant	Good sized patch of freehold land to the north of the town.
Private Reserve	PAPL Covenant	A smaller patch upstream of Medea Cove.
Private Reserve	PAPL Covenant	On Georges River to protect population of <i>Phebalium daviesii</i>
SCAMANDER SURVEY AREA		
RESERVE NAME	CLASSIFICATION & STATUS	EXTENT IN SURVEY AREA
St Helens Point Conservation Area	Formal Reserve	Extends along the coast from Dianas Basin to the mouth of the Scamander River including Wrinklers Lagoon near Beaumaris.
Scamander Conservation Area	Formal Reserve	Forms a continuum of the above along the coast from Dianas Basin southwards to Scamander.
Dianas Basin Conservation Area	Formal Reserve	Included in the above CA and covers the lagoon of Dianas Basin and immediate surrounds.
Paddys Island Nature Reserve	Formal Reserve	Small off-shore island
Private Reserve	PAPL Covenant	One of 5 conjoined freehold lots to the south-west of Dianas Basin.
Private Reserve	PAPL Covenant	As above.
Private Reserve	PAPL Covenant	As Above
Private Reserve	PAPL Covenant	As Above
Private Reserve	PAPL Covenant	As Above
IRONHOUSE POINT SURVEY AREA		
RESERVE NAME	CLASSIFICATION & STATUS	EXTENT IN SURVEY AREA
Scamander Conservation Area (Scamander Coastal Reserve)	Formal Reserve	Extends along the coastline from the mouth of the Scamander River to Falmouth
Four Mile Creek Conservation Area	Formal Reserve	Extends along the coastline both to the north and to the south from the Four Mile Creek settlement to Ironhouse Point.
St Patricks Head State Reserve	Dedicated Formal Reserve	Large reserve on the hinterland but extends to within 2km of the coast near the Four Mile Creek settlement.
Winifred Curtis Reserve	PAPL Covenant & Private Trust	Important private conservation area adjacent to Hendersons Lagoon.
Private Reserve	PAPL Covenant	Conserved property about 1.5km NW of Four Mile Creek Settlement.
Private Reserve	PAPL Covenant	Conserved property less than 1km Sw of the Four Mile Creek settlement.

Little Beach Conservation Area	Formal Reserve	Coastal reserve extending from Ironhouse Point and Little Beach southwards to the Chain of Lagoons CA.
Little Beach State Reserve	Dedicated formal Reserve	On the hills and hinterland to the west of highway 1 to 1.5 km from the coastline.
Chain of Lagoons (Lagoons Beach) Conservation Area	Formal Reserve	Follows the shoreline from Little Beach CA to Picaninny Point including the Chain of Lagoons. Widest at Chain of Lagoons but very narrow in places with cleared farmland on the landward side.
Forest Reserve	Informal reserve on state forest	Located to the west of Chain of Lagoons.
DOUGLAS RIVER SURVEY AREA		
RESERVE NAME	CLASSIFICATION & STATUS	EXTENT IN SURVEY AREA
Seymour Conservation Area	Formal Reserve	Around the Long Point headland near Seymour.
Denison Rivulet Conservation Area	Formal Reserve	Extends along the coastline in a narrow band from near Long Point to south of Douglas River. Also extends along the Douglas River for a short distance.
Douglas Apsley National Park	Dedicated Formal Reserve	Large National Park in the hinterland but within 2km of the coastline near Seymour and south of the Douglas River settlement.
Private Reserve	PAPL Covenant	Conjoined reserved property near Seymour and Templestone Lagoon
Private Reserve	PAPL Covenant	As Above
Private Reserve	PAPL Covenant	As Above

Appendix 6: Bay of Fires Site Plans

Bay of Fires Site Plans (Sloop Rock Point, Taylors Beach South, The Gardens Road): Figures 4.2, 4.3 and 4.4 of the *Bay of Fires Conservation Area and Humbug Point Nature Recreation Area Site Plan* (Inspired Place, 2011)



BAY OF FIRES SITE PLAN

Figure 4.2 SLOOP ROCK POINT SITE PLAN 1:500@A3





BAY OF FIRES SITE PLAN

Figure 4.3 TAYLORS BEACH SOUTH SITE PLAN 1:500@A3





BAY OF FIRES SITE PLAN

Figure 4.4 NORTHERN POINT OF THE GARDENS ROAD SITE PLAN 1:1000@A3



Appendix 7: St Helens Waterfront Concept Plan

St Helens Waterfront Concept Plan (Jennifer Binns, January 2014)

CONCEPT ONLY



st helens waterfront 01

break o' day council january 2014

jennifer binns

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north 1:1000 @ A3

Appendix 8: Georges Bay Foreshore Multi-User Track Plans

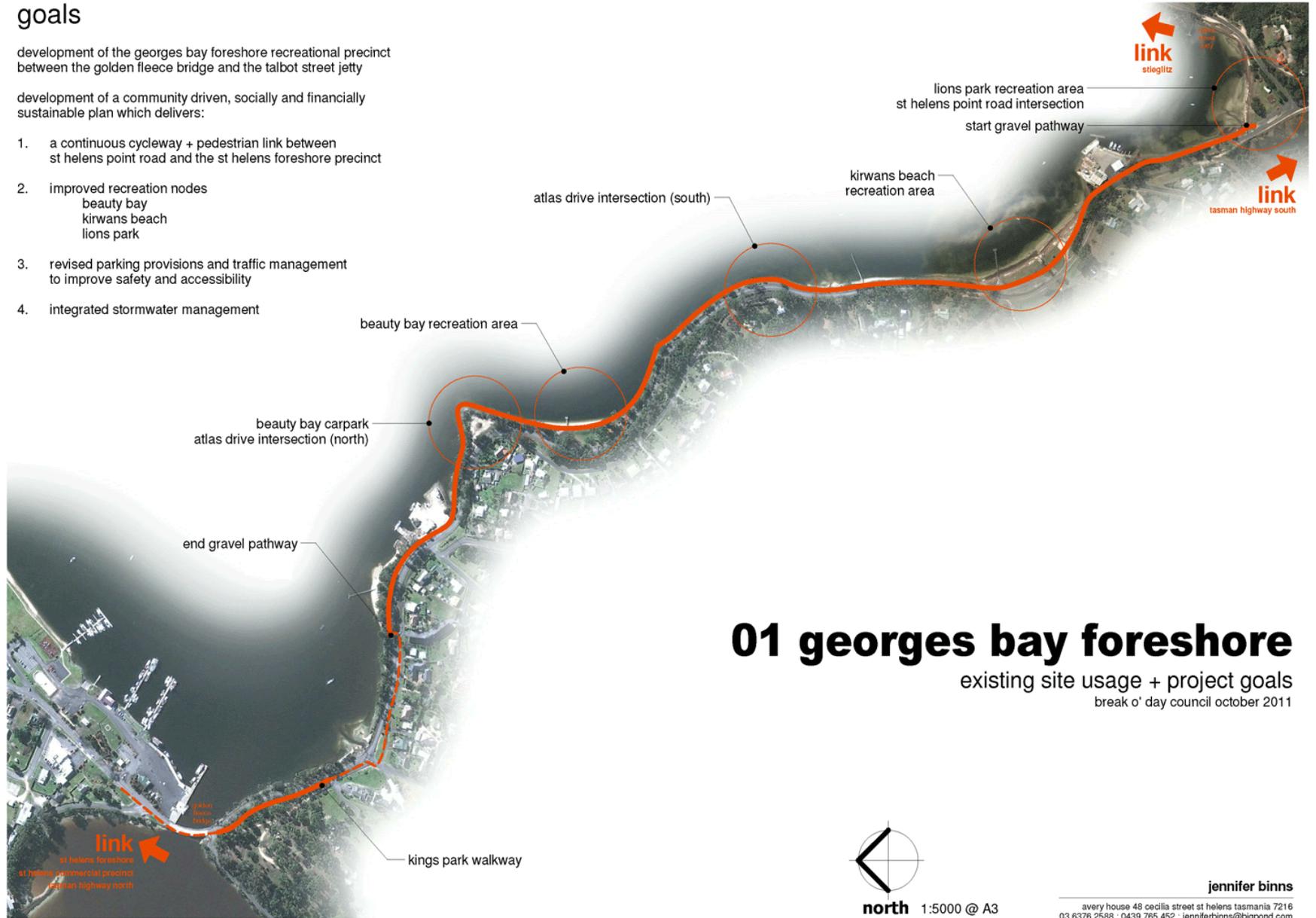
Georges Bay Foreshore Multi-user Track Plans, Plans 01-10 (Jennifer Binns, 2011-2013)

goals

development of the georges bay foreshore recreational precinct between the golden fleece bridge and the talbot street jetty

development of a community driven, socially and financially sustainable plan which delivers:

1. a continuous cycleway + pedestrian link between st helens point road and the st helens foreshore precinct
2. improved recreation nodes
beauty bay
kirwans beach
lions park
3. revised parking provisions and traffic management to improve safety and accessibility
4. integrated stormwater management



01 georges bay foreshore

existing site usage + project goals

break o' day council october 2011



02 lions park

existing layout
march 2012

gateway

visual gateway to st helens; approaching from the south the highway winds through the trees and opens to views of georges bay across the park

key 'pullover' opportunity at first sight of st helens with scope for wayfinding and visitor information

BBQ shelter located in line of sight to the bay; scope to improve visual appeal and wind protection for shelter

gateway to pedestrian + cycleway link; scope to improve access, signage and visual appeal

entrance statement sculpture planned for park

recreation

popular family recreation area: large BBQ shelter, playground, amenities, swimming, start of walking path + cycleway link to town centre, convenient parking + access

vegetation buffer to st helens point road

park open to carpark and tasman highway

no pedestrian access to jetty from park or cycleway

toilet block scheduled for replacement; scope to relocate

power poles and overhead powerlines through park

vehicle movement

traffic flow along main carriageway impeded by vehicles turning onto st helens point road from a single lane junction

traffic flow north into town centre impeded by cyclists choosing to stay on winding roadway rather than use cycleway; scope to increase use of cycleway

conflict between carpark + junction with st helens point road

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recreation

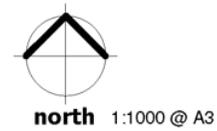
primary fishing jetty
 BBQ + seating; scope to provide shelter

promenade

key open space promenade; scope to improve amenity
 pedestrian + cycleway link;
 scope to improve access, signage and visual appeal

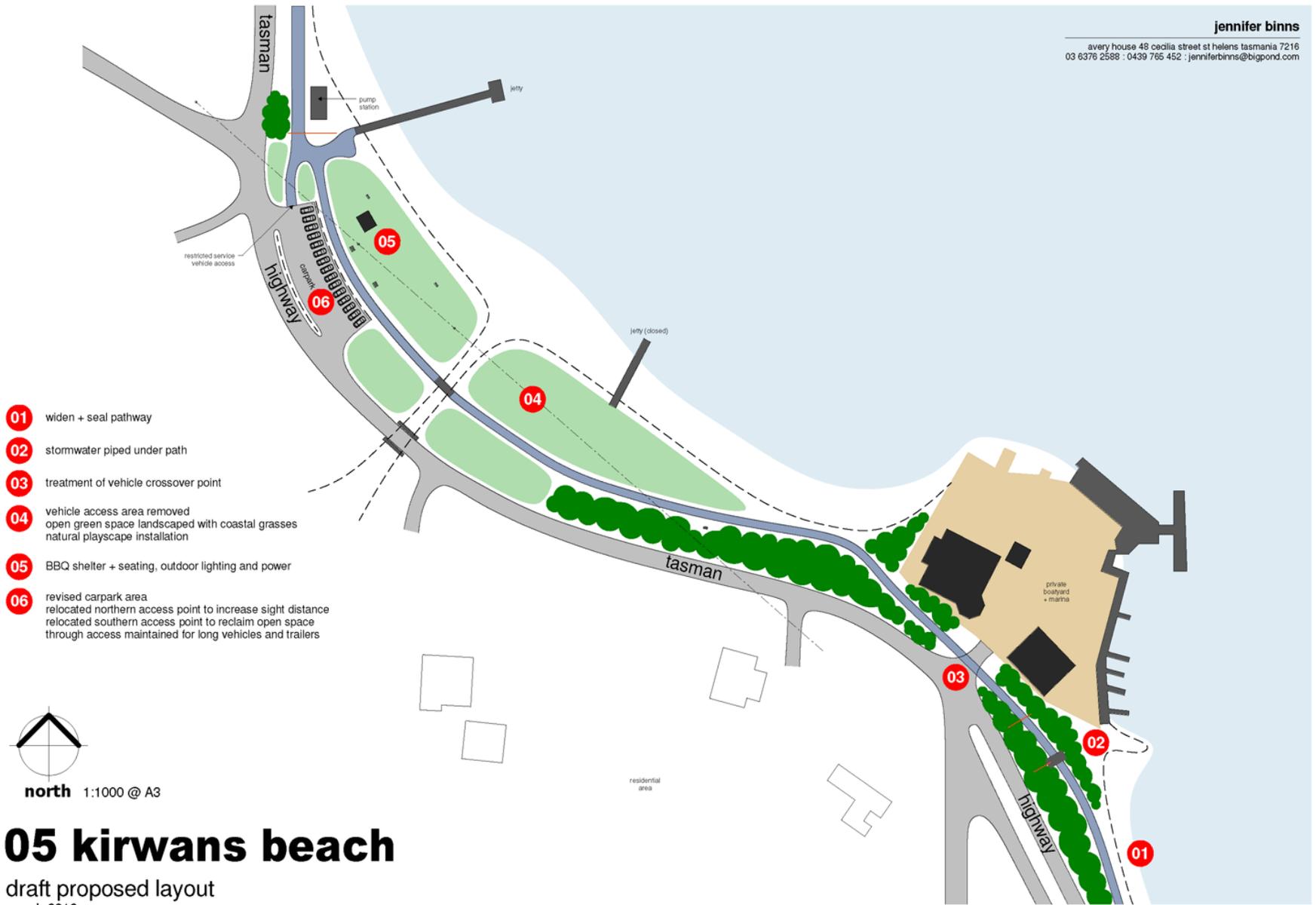
vehicle movement

key 'pullover' opportunity with open views over georges bay
 inadequate sight distance at northern access to carpark
 scope to rationalise size of carpark and vehicle movements to reclaim green space
 conflict between vehicles entering and leaving carpark, jetty access and pedestrians/cyclists using pathway



04 kirwans beach

existing layout
 march 2012



05 kirwans beach

draft proposed layout
march 2012





- 01 widen + seal pathway
- 02 stormwater piped under path
- 03 treatment of vehicle crossover point
- 04 road re-alignment to create safe junction at atlas drive
- 05 renewed access path + railing to lower picnic area
line of path adjusted to new road realignment
- 06 new amenities block with passive surveillance from road
sewer extension from existing sewer main at penelope street
- 07 revised carpark + upper picnic area
- 08 formed steps from upper picnic area to foreshore pathway

north 1:1000 @ A3

07 beauty bay

proposed draft plan
march 2012

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north 1:1500 @ A3

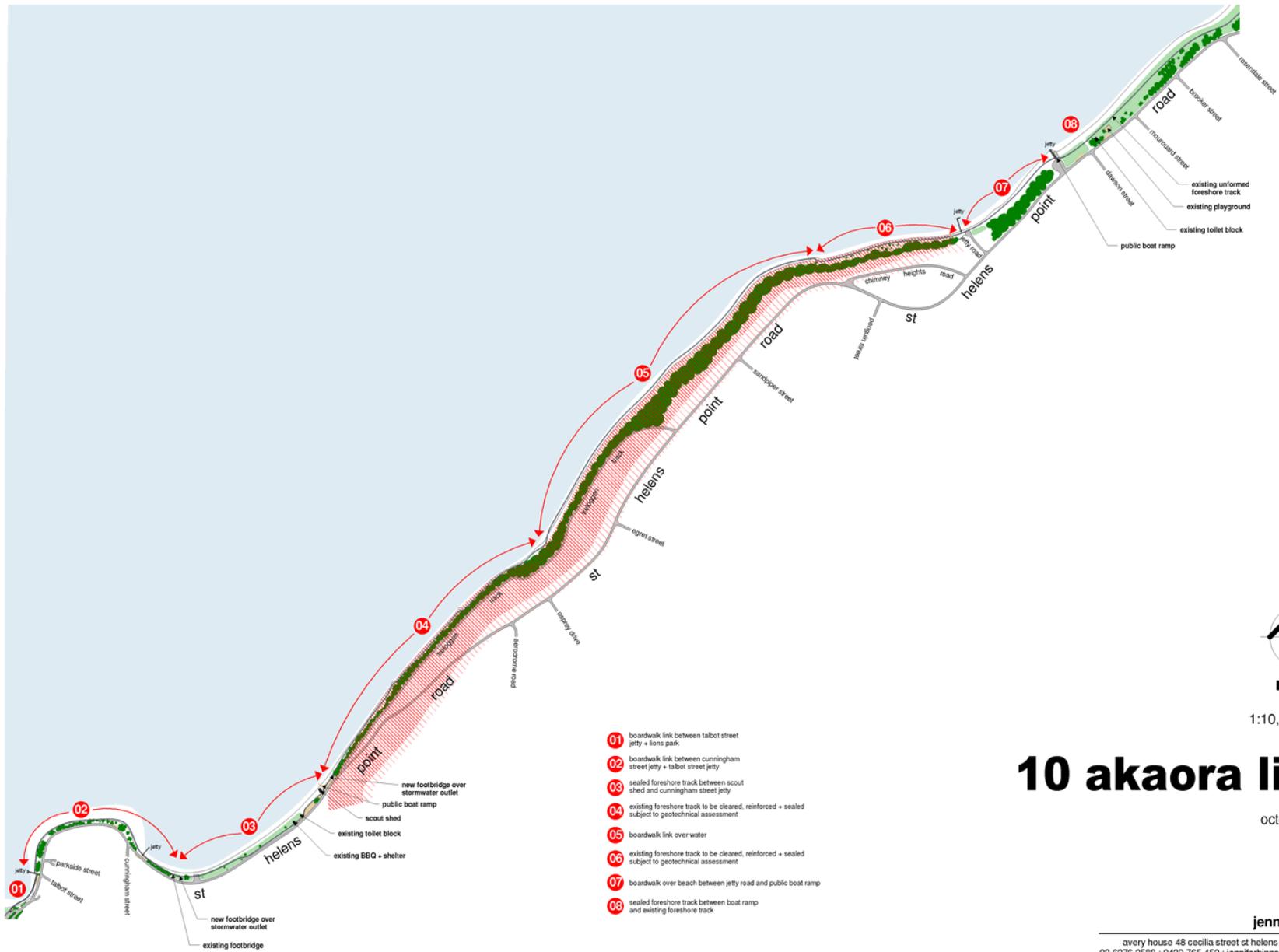
08 wharf link

existing layout
march 2012



09 wharf link

proposed draft plan
march 2012



- 01** boardwalk link between talbot street jetty + lions park
- 02** boardwalk link between cunningham street jetty + talbot street jetty
- 03** sealed foreshore track between scout shed and cunningham street jetty
- 04** existing foreshore track to be cleared, reinforced + sealed subject to geotechnical assessment
- 05** boardwalk link over water
- 06** existing foreshore track to be cleared, reinforced + sealed subject to geotechnical assessment
- 07** boardwalk over beach between jenny road and public boat ramp
- 08** sealed foreshore track between boat ramp and existing foreshore track



1:10,000 @ A3

10 akaora link

october 2012

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Appendix 9: Binalong Bay Foreshore Masterplan

Key Projects Plan (*Binalong Bay Foreshore Masterplan*, Break O' Day Council, WAX, Infracplan, April 2014, Section 7.3 p41-42)

7.3 KEY PROJECTS

KEY PROJECTS

The following key projects will be discussed in further detail in Section 8.0. Connecting the key projects is a continuous pedestrian foreshore walk and cycling lane.

- Foreshore pedestrian Link
- Entrance car park
- Cafe car park
- Village Green
- Boat Ramp and shacks
- Boat Harbour Point (People's Park)
- Grants Lagoon
- Central Beach Access
- Skeleton Bay road and car park

LEGEND

-  Connected Foreshore walk
-  Bike way (shared space access)
-  Vehicular access and parking
-  Interpretative signage
-  Improved amenities
-  Increased facilities
-  Beach access
-  Viewing platform / lookout
-  Upgraded playspace
-  Protect/promote natural environment
-  Boat launch
-  Commercial opportunity
-  Improved disability access
-  Cycling lane/connection
-  Pedestrian Foreshore walk
-  Improved beach access
-  Main road
-  Unsealed road





Village Green



Cafe Carpark



Entrance Car Park

Central Beach Access



Boat Ramp



Boat Harbour Point (People's Park)



Skeleton Bay

